

CHAPTER 3 - RESEARCH METHODOLOGY

3.1 INTRODUCTION

The purpose of this chapter is to describe the research methodology and techniques that were used to conduct the study. The survey research method was used and the study applied both quantitative and qualitative techniques in the gathering and analysis of data.

The aim of the study was to answer the question “how can a better understanding of the information needs and seeking patterns of SMMEs contribute to a strategy for successful delivery of sustainable business information services”. In order to address this question as outlined in Chapter 1 the objectives of the study were:

- To examine the information needs of SMMEs and the information seeking behaviour of SMMEs in Namibia;
- To examine business information services for the SMME sector in Namibia and identify existing and potential information gaps in the provider institutions;
- To determine the use of Information and Communication Technologies in the delivery and use of business information among SMMEs and business service providers; and
- To propose a strategy for the sustainable delivery of business information services in the SMME sector in Namibia.

This chapter outlines the methods used in the selection of the population, the research instruments used, the procedures followed in data collection and processing, analysis and interpretation.

A methodology is the underlying theory and analysis of how research should proceed and a method is the set of steps guided by methodology. According to Curran & Blackburn (2001:58) “there are an infinite number of permutations of the elements which make up a research design, but the character of the project often narrows the choices”. The final choice of the research design and methodology in this study was influenced by the

research objectives of the study. Furthermore, it was also suitable to have a combination of research techniques as they complement each other and increase the validity of the research being carried out.

Wilson (1999, 2000) argues that there have been too many studies that have used inappropriate quantitative approaches in information behaviour studies prior to the 1970s. From there on, Wilson notes, the shift has been towards qualitative methods that have drawn on theories from other social science disciplines and which have been applied to the study of information behaviour. This shift, according to Wilson (1999:250), has resulted in a number of theories and models in information behaviour (Dervin 1986; Ellis 1989; Kuhlthau 1991; Wilson 1996) that are now widely used as a basis for other studies in the field. This study uses Wilson's (1996) General Information Behaviour Model, which has been reviewed in chapter two.

In this study of the investigation of information needs and seeking patterns, which also examines the level of ICTs utilisation, it was found suitable to apply both qualitative and quantitative techniques. According to Case (2002), several studies on information needs and seeking behaviour have used both qualitative and quantitative techniques. While the survey research methodology has been the dominant method in studying information behaviour and needs, it encompasses a variety of methods of data collection which still makes it suitable for current and future studies in the field (Case 2002: 190).

Research in small businesses presents the most challenges in the fieldwork stage (Curran & Blackburn 2001). Finding and recruiting samples, collecting and processing data – the essential elements of fieldwork – all have specific challenges. The survey methodology was the most suitable for this study on information needs, seeking patterns and services for SMMEs in Namibia. It has been chosen as the most suitable methodology for this study as it selects a group from a much larger population. A prime advantage of the survey methodology is that it allows the simultaneous collection of both qualitative and quantitative data (Aldridge & Levine 2001).

3.2 RESEARCH PROCEDURE

The study used the survey research methodology to examine business information needs, information seeking patterns, business information services for small, medium and micro enterprises and the utilisation of ICTs in the use and delivery of business information in Namibia. A research strategy or research design has been defined as the general approach taken in an inquiry (Creswell 2003). The design of a survey is a pre-arranged programme for collecting and analysing the information needed to satisfy the study objectives at the lowest possible cost (Warwick & Lininger 1975). The final choice of research strategy in a research inquiry or project depends to a large extent on the type of research problem and questions to be addressed in an enquiry or study. The design finally chosen should be consciously tailored to the overall objectives of the study and the exact types of information needed, and should also take account of the various methods to be used in gathering this information, such as a personal interview, a mail questionnaire, or a telephone interview. According to Hoyle et al. (2002), the three main research strategies in research enquiries are the use of experiments, surveys or case studies. The use and choice of these research strategies depends, to a large extent, on what type of research questions a researcher is trying to address.

Researchers will opt to employ a mixed quantitative –qualitative approach to gain some advantages of both. This has emerged as a common research design in small business research (Curran & Blackburn 2001) and in information science. This study also combines a quantitative survey (based on questionnaires) on information needs and seeking patterns of SMMEs, with a qualitative element (assessment/observation) of business information service provision within the SMME service providers. In effect, the quantitative elements add “bulk” to the findings; that is, they help support implicit/explicit claims to generalise that all research makes, while the qualitative elements concentrate on the “how” issue - the reasons or causes which might underlie the pattern of findings discovered.

The quantitative elements of the research design reassure those with a strong faith in numbers, particularly policy makers and politicians. The qualitative elements allow the

researchers to go beyond the inferences based on correlations which are all many quantitative designs can strictly claim to have established (Curran & Blackburn 2001:72)

In this study, the survey strategy was the most suitable to address the question of information needs and seeking patterns as well as carrying out the investigation on business information services in the SMME sector in Namibia. The survey proceeded through the following stages: reviewing the relevant literature based on the research questions of the study, selecting the population (i.e. units of analysis), designing research instruments, pilot testing and distribution of the questionnaires, carrying out an in-depth survey, and analysing the data collected from the target population.

The following sections outline in detail how the above-mentioned procedures were followed in carrying out the survey in the Windhoek and Oshana districts of Namibia between June 25 and July 31 2006, and how the data was collected.

3.2.1 Survey methodology

Survey research is the study of a portion or sample of a specific “population” (magazine subscribers, newspaper readers, television viewers, and the population of a community or state). If done according to statistical principles, generalisations can be made from the sample to the population with a certain degree of assurance or confidence (Severin & Tankard 2001:35). Survey research is also described as a set of orderly procedures specifying what information is to be obtained and from whom and how. It provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of the population (Creswell 2003:153). Survey research is said to differ from informal techniques because it tends to be a more systematic and impartial means of getting information. Backstrom & Hursch-Cesar (1981) list the following as the main characteristics of survey research:

- Systematic: it follows a specific set of rules, a formal and orderly logic of operations;
- Impartial: it selects units of the population without prejudice or preference;

- Representative: it includes units that together are representatives of the problem under study and the population affected by it;
- Theory based: relevant principles of human behaviour and mathematical laws of probability guide its operations;
- Quantitative: it assigns numerical values to non-numerical characteristics of human behaviour in ways that permit uniform interpretation of these characteristics; and
- Self-monitoring: its procedures can be assigned in ways that reveal any unplanned and unwanted distortions that may occur.

From the above it is clear that the survey research methodology has strong qualities and that it is a reliable tool in information science research. Case (2002:190) also notes that “survey research can make use of a variety of question types and techniques, such as asking the respondent to relate a “critical incident” that illustrates an important type of event or change in the life of the respondent or an organisation”.

The survey method has several strengths and weaknesses and these are outlined below.

3.2.1.1 The advantages of survey research

The survey research method has several advantages and these are:

- It is flexible;
- It is useful for the discovery of new insights as well as for pointing out typical responses;
- It can be applied to many people; and
- It provides data about the present, what people are thinking and anticipating.

The survey research method differs from other kinds of research in an important way: the survey can generalise about many people by studying only a few of them. Furthermore, when it is compared to other research approaches, the survey method is the best means

available for describing certain characteristics of large populations. These are personal characteristics that people provide about themselves, how they feel, what they think, what they know, and how they act. Until we find a substitute method of getting the same information without talking directly to the people themselves, the survey will remain the best means of describing these characteristics.

3.2.1.2 The disadvantages of survey research

The study has its weaknesses, especially when it comes to applying structured questionnaires to a group of respondents that might have different needs. According to Babbie (2004), a key weakness in survey research is that it is very difficult to probe insights relating to the causes of, or processes involved in the phenomena being measured. The other weakness of survey research that has been identified is that by designing questions that will be at least minimally appropriate to all respondents, you may miss what is most appropriate to many respondents. In this sense, according to Babbie (2004), surveys often appear superficial in their coverage of complex topics. Although this problem can be offset through sophisticated analyses, it is inherent in survey research. According to Case (2002:194) “questionnaires cannot easily capture the complexity of information seeking, nor can they observe the influence of context (e.g. place, time, and situation) in the actual use of information. In-depth interviews and participant observation may be strong on capturing context, but they have their own drawbacks as well”

It has also been pointed out by Aldridge & Levine (2001), that it is always difficult to allow respondents to express themselves in their own words and that is simply not possible in survey design to have a large number of open-ended questions, where respondents are free to answer in whatever words they choose. Most questionnaires or interviews will inevitably consist of closed questions, where there are a series of choices from which respondents are asked to choose. It is from this weakness that critics point out that it is impossible to gauge the salience of issues to our respondents.

3.2.2 Research population

According to Babbie (2004) the population of a study refers to a set of objects which are the focus of the research and about which the researcher wants to determine some characteristics. It has also been referred to as the theoretically specified aggregation of the elements in a study and from which a sample is actually selected. According to Black (1999:111), a population is considered to be any group that shares a set of common traits. Why a researcher would specify a population will depend on to whom he or she wishes to extend his or her results; hence, by defining the population, the researcher is saying “this is the group from which I will select a representative sample for my study”.

Babbie (2004) states that it is generally much more economical in time, effort, and money to get the desired information for only some of the population elements rather than for all. Furthermore, when we select some of the elements with the intention of finding out something about the population from which they are taken, we refer to that group of elements as a sample. The sample is supposed to be representative of the population as a whole. The success of the study however depends to a large extent on how the sample is selected.

The population of this study was small, medium and micro enterprises owners or managers as well as managers within SMME business support organisations. A total of 308 SMME operators and 60 business support organisations were identified for the study and the sampling procedures used to select the respondents are discussed below.

3.2.2.1 Characteristics of the research population

3.2.2.1.1 Small, medium and micro enterprises

In Namibia, according to the Ministry of Trade and Industry (Republic of Namibia, Ministry of Trade and Industry 1997), the SMME sector is defined as any entity

employing less than ten people (in the manufacturing sector) and less than five in all other businesses. This definition was focused and geared towards enhancing the plight of previously disadvantaged groups, the majority of whose businesses are in the informal sector. The disadvantaged groups in Namibia are officially categorised as: all black people (male and female), all coloured people, white women and physically disabled persons. The table below provides the criteria that the Ministry of Trade and Industry used in their definition of SMMEs.

Table 6: Ministry of Trade & Industry (1997) determinants for SMME definition

Sector	Employment	Turnover less than (N\$)	Capital employed less than (N\$)
Manufacturing	Less than 10	1,000,000	500,000
Non-manufacturing	Less than 5	250,000	100,000

According to the JCC, Namibia has since registered changes in key indicators due to economic growth, which have necessitated a review of the definition to meet both local and international imperatives (JCC 2004). Accordingly, the definition used in this study is as follows:

- 0 - 10 employees – micro business
- 11- 25 employees – small business
- 26 -75 employees – medium business

The Joint Consultative Committee (JCC) and the Namibian Economic Policy and Research Unit (NEPRU), estimates that about 75% of the small businesses operate in the service and trade sector, while 25% of them are operating in the manufacturing sector. The SMME sector’s contribution to Gross Domestic Product (GDP) is reported to be rising and is estimated to be about 8.7% of GDP (Arnold et al. 2005). Many SMMEs in Namibia are characterised by their small size, survivalist approach to business, and they are household ventures operating with limited means.

3.2.2.1.2 Business support organisations

The business support organizations were drawn from the private and public sectors including financial institutions, government ministries and departments, Non-Governmental Organisations, donor agencies, chambers of commerce and industry, local and regional authorities and private companies. The business support organisations are mainly characterised by the provision of various services to SMMEs. These services include the provision of financial services, training in business management, business development, business linkages, marketing, production and technical know how, business mentoring and many others.

In Namibia, business support organizations have formed an umbrella body known as the Joint Consultative Council whose mandate is to coordinate the support activities of service providers for SMMEs. These joint activities have resulted in many projects, including the establishment of a Small Business Information Centre sponsored by private and public sector players.

3.3 SAMPLING PROCEDURES

The issue of sampling is important because it is rarely the case that a researcher has sufficient time and resources to conduct research on all those individuals who could potentially be included in a study (Bryman & Cramer 1994: 99). The sampling frame for the study was a consolidated list of SMME operators in Windhoek and Oshana districts provided by the Small Business Information Centre and the Ministry of Trade and Industry. One of the most difficult problems in small business research is accessing small businesses. According to Curran and Blackburn (2001:59), there are three main reasons for these difficulties. First, there are rarely up-to-date lists available of relevant small businesses to recruit a convincingly representative sample. Second, small business owners are busy people, often under considerable pressure and may not be sympathetic to requests from researchers for some of their time. Third, some business owners are sceptical about the relevance of research, especially academic research.

The data from the Ministry of Trade and Industry was drawn from the databases of new SMMEs registering with the ministry to start new operations. The list is, therefore, made up of existing and new SMMEs. It however, does not reflect those that are no longer in business. The other data from the Small Business Information Centre was based on SMMEs registered with the centre and who regularly visit to seek for information and other business advisory services. To overcome some of the challenges cited above, the researcher had to compile a final list from lists provided by the above mentioned service providers. The final list was made up of 1 540 SMMEs.

Random sampling, the most basic form of probability sampling was used to select small firms from the SMME sample frame. Probability samples provide assurance against misleading results through their ability to specify the likelihood that sample findings do not differ by more than a certain amount from the true population values. They also provide a guarantee that enough cases are selected from each relevant population stratum to provide an estimate for that stratum of the population (Hoyle, Harris & Judd 2002). The target sample size was 308 operators, based on the following formula (allowing reporting of results with 95% confidence and allowing 5% maximum error):

$$n = \frac{N}{1 + \left[\frac{N(L/100)^2}{1.96^2 p(1-p)} \right]};$$

Where N = total number of SME operators (in this case 1540)

L = maximum allowed error (in this case, 5%)

p = expected proportion of SMMEs that seek business information (in this case, 0.5, since there are no other previous studies done on this issue leading to the assumption that there is a 50-50 chance that SMMEs seek information)

n = sample size

Therefore,

$$n = \frac{1540}{1 + \left[\frac{(1540)(5/100)^2}{1.96^2(0.5)(0.5)} \right]} = 307.46 \approx 308$$

Random sampling was also used to select service providers from the 2005 JCC (Joint Consultative Council) membership list. The membership list provided had a total of 60 current members. The last Small and Medium Service Providers Directory was issued in 2003 and had a total listing of 99 service providers. However, in 2006 at the time of the survey, only 60 organisations were fully subscribed members to the Joint Consultative Council. This shows that the mortality rate among service providers is also high like in the SMME sector. The majority of service providers are donor-driven and any reduction in funding or change of focus of donors will result in their immediate closure.

3.4 RELIABILITY AND VALIDITY IN SURVEY RESEARCH

There are two standard measurement criteria for assessing the appropriateness of any measurement instrument: reliability and validity.

Reliability refers to the extent to which a scale produces consistent results if repeated measurements are made on the characteristics (Black 1999). As such, reliability has to do with the extent to which measures obtained by using a particular instrument are free from error. This means that a highly reliable test or set of observations conducted today will produce the same data tomorrow (assuming nothing has changed), or two observers using the same observation schedule will report the same data. There are a number of coefficients of reliability that can provide the researcher with a check on the quality of an instrument. An instrument that is reliable but not valid is of no use to the researcher as it would only measure reliably something other than what was intended.

According to Black (1999), the validity of a scale is the extent to which the scale captures all aspects of the construct to be measured. It focuses on whether a scale truly measures the construct of interest and not something else. Validity is a survey research design that

can be tested through: content validation, construct validation, criterion validation and face validation. Much of the evaluation of content validity will, by necessity, be a matter of evaluation of consistency and discussion among subject experts of what constitutes reasonable knowledge and skills for a subject and how adequately the questions sample this. Pilot testing of research instruments is normally used to test content validity and in this study instruments were pilot tested before the final survey was undertaken and any comments from the pilot tests were incorporated into the final research instruments.

Construct validity is the degree to which a measure relates to other variables as expected within a system of theoretical relationships (Babbie 2004:144). Construct validity was ensured through the use of concepts in Wilson's Information Behaviour model in the design of the questionnaire. Criterion validity is the degree to which a measure relates to some external criterion. In this study the design of the research instruments was based on concepts in the International Trade Centre's "review of business information services" tools and the instrument used by Duncombe and Heeks (1999) in their survey of ICTs, Information and SMEs in Botswana. The International Trade Centre's business information review tools are widely used in developing countries in the design and improvement of trade information centres.

Reliability and validity of the data collected was also assured through the use of qualitative and quantitative techniques in data collection and that was the use of structured questionnaires and the in-depth assessment of business information services. The in-depth assessment helped to confirm some of the data collected through the structured questionnaires as the researcher had the opportunity to visit fifteen service providers and evaluate their business information services using a standard tool for all of them.

3.5 DATA COLLECTION INSTRUMENTS

Three data collection instruments were used in this study: two questionnaires and a qualitative assessment guide. The first questionnaire was for collecting data from SMME

operators, while the second one was for SMME service providers. A third instrument, a guide for the qualitative assessment of business information supply services was also used for the evaluation of services within the business support organisations' facilities. The development of questionnaires for both SMME operators and service providers was guided by concepts in the International Trade Centre's tools for conducting business information reviews in developing countries. The development of the questionnaire was also guided by concepts found in Wilson's Information Behaviour Model (1996).

3.5.1 Questionnaires

A questionnaire has been described by Babbie (2004) as a document containing questions and other types of items designed to solicit information appropriate for analysis.

Questionnaires are used primarily in a survey research but also in experiments, field research and other modes of observation. According to Black (1999: 215), questionnaires for quantitative research in the social sciences are usually designed with the intention of being operational definitions of concepts, instruments that reflect strength of attitudes, perceptions, views and opinions. Investigating what attitudes, beliefs and opinions groups of subjects with common traits hold, is of value simply because it is assumed that these attitudes will influence behaviour. What research into attitudes, opinions and beliefs can help us understand are tendencies: how do these tend to influence decisions and actions in groups of people who have some characteristics in common? There will always be exceptions, but one aim is to see if there are any traits or characteristics of specific identifiable groups. Surveys use either open ended and structured interview schedules or questionnaires for data collection (Fawcett 1992: 16).

3.5.1.1 Design of questionnaires

A major challenge with surveys is to get the subjects to return the questionnaire. To overcome these challenges questionnaires must be carefully worded, not too long and the appearance must be professional to enhance face validity. Two questionnaires were

designed to collect data on: information needs and seeking patterns of SMMEs and business information services for the SMME sector. The design of questionnaires used in the survey was based on concepts in the International Trade Centre instruments on “How to conduct business information reviews” in developing countries, the study by Duncombe and Heeks (1999) on ICTs, information and small enterprises in Botswana and concepts from Wilson’s 1996 Information Behaviour Model.

According to Case (2002: 190), survey research can make use of a variety of question types and techniques, such as asking the respondents to relate a “critical incident” that illustrates an important type of event or change in the life of the respondent or an organisation. They are characterised as closed questions and open ended questions. In this study both open-ended and closed questions were used. Closed questions are easy to use and code and they give the respondents the chance of choosing from two or more fixed alternatives. Their main disadvantage is that they create artificially forced choices and rule out the possibility of unexpected responses by the participants. Most closed questions use scaling to ensure uniformity in response and one of the most widely used are the Likert scales.

A Likert scale measures the extent to which a person agrees or disagrees with the question. The most common scale is 1 to 5. Often the scale will be 1=strongly disagree, 2=disagree, 3=not sure, 4=agree, and 5=strongly agree. The Likert scaling approach was widely used in the design of questionnaires. The scale allows, for example, for respondents to be asked to respond to the following: strongly agree, agree, disagree or strongly disagree or very often, often, not often and not at all (Bryman & Cramer 1994). The Likert scales are a widely used attitude scaling and in this study a four point scale was widely used in questionnaires for both enterprises and the business support organisations

Open-ended question items provide a frame for the respondent to answer without any restrictions. In other words they allow the respondents to write and explain their responses without being limited by preset categories of responses. Their inclusion in any

questionnaire is very critical because they cater for any lack of exhaustiveness and bias that might be in closed questions. The questionnaire for enterprises had one open ended question while for service providers there were six open-ended questions.

3.5.1.1.1 Questionnaire for SMME operators

The questionnaire for SMME operators addressed the research question on business information needs, the information seeking patterns and the utilisation of ICTs and the state of e-readiness in the SMME sector. The questionnaire consisted of seven sections, A to G with a total of 33 statements and one open ended question. The aim of section A was to collect the demographic data of the SMME operators such as age, gender, levels of education of the SMME operators. Section B collected data on the nature of the business operation such as the sector that the business is operating in, the number of years in operation, turnover, and number of employees and the nature of ownership of the business. It was believed that these factors are influential in studying information needs and seeking patterns.

Sections C was designed to collect data on business information needs of SMMEs. In order to establish the context of information needs the section collected data on the perceived constraints to business growth. It also collected data on the types of information needs of SMMEs, the importance of the different types of business information and the preferred sources and satisfaction with business information received.

Section D was designed to collect data on the information seeking habits of the SMME operators. In order to achieve this, the section focused on collecting data on sources used, the degree of difficulty and satisfaction in obtaining business information. It also collected data on languages used and preferred means to access business information and the strength and weaknesses of the business information services in Namibia.

Section E was designed to collect data on how SMMEs store and exchange business information i.e. how they keep data internally, how and what means they use to promote their products to customers and how they communicate within their business networks. Section F collected data on ownership and usage of ICTs as well as awareness of and use of e-business by SMMEs. The last section was G and was designed to collect data on SMMEs' present and future business climate. This was designed to provide concluding data on the role of information in the growth of the businesses as well as what the SMMEs see as the best approaches to business information delivery (See Appendix 3).

3.5.1.1.2 Questionnaire for business support organisations

The second questionnaire was designed for business support organisations. The questionnaire consisted of twenty-seven closed statements and six open-ended questions. This questionnaire was designed to address the research question on business information services that exist, the channels used and the use of ICTs to deliver business information to SMMEs. The questionnaire was made up of four sections. Sections A and B collected data on the nature of service providers in the SMME sector and the nature of business information services provided. The section also collected data on how the service providers communicate business information to SMMEs, including languages used, fees charged and the constraints faced in business information dissemination.

Section C of the questionnaire was designed to collect data on the level of ICT ownership and usage by the service providers. It also collected data on how the business support organisations use ICTs to provide business information services to SMMEs. Section D was designed to collect data on the nature of business information management services within the organisations. The data collected includes staff dedicated to business information services, level of business information coverage, staff training in handling business information storage, retrieval and dissemination to SMMEs, as well as the total budgets allocated to the running of business information services. It also collected data on the type of business information networking existing among service providers. And lastly

the instrument had an open-ended section with five questions designed to collect data on how the service providers envisage improving business information services to SMMEs (See Appendix 4).

3.5.2 Qualitative assessment of business information supply services' guide

The third instrument that was used in this study was a guide for the qualitative assessment of business information supply services within SMME service provider organisations (Appendix 5). The qualitative assessment complemented the data collected with the second questionnaire in that the researcher was able to carry out in-depth assessments of business information services and facilities. The qualitative assessment guide consisted of eight areas of assessment, namely:

- Information coverage and detail;
- Frequency of information updating;
- The value of information stored;
- The accessibility of the facilities to SMMEs;
- Usage of ICTs;
- Staff capacity and dedication;
- Information service management; and
- The dynamism of the organisations in managing and disseminating business information to SMMEs.

The use of the qualitative guide to carry out in-depth analysis of business information service provision was a deliberate measure to ensure the quality of the final product. Researchers in small businesses employ a mixed quantitative-qualitative approach to gain some of the advantages of both (Curran & Blackburn2001:72).

3.6 THE PILOT STUDY

In order to test the reliability of the research instruments, a pilot study was carried out before the final survey commenced. The testing of the research instruments was an important step in the study in order to establish the content validity of the questionnaires as well as the qualitative assessment instrument, and to improve questions, format and the scales (Creswell 2003:158).

The sample for the pilot study was drawn from the consolidated list of SMMEs provided by the Ministry of Industry and Trade, the Small Business Information Centre and the Joint Consultative Council. The sample size for the pilot study was twenty SMMEs and five service providers. The final comments received from the pilot study were used to finalise the structure of the final research instruments.

3.7 DATA COLLECTION PROCESS

The data collection process for the study followed the two steps described below. Two survey questionnaires were distributed to SMMEs and business support organisations while an in-depth assessment of business information within business support organisations was also carried out.

3.7.1 Administering the questionnaires

Due to time constraints and the slow postal system in Namibia as well as the size of the country it was decided to distribute questionnaires physically rather than use the conventional postal system. The researcher was assisted by four research assistants to distribute questionnaires to SMMEs and business support organisations in Oshana and Windhoek districts between 26th June and 12th August 2006. The first two weeks in each district were used for distributing the questionnaires while the second two weeks were used for collecting the completed questionnaires.

Two covering letters were included with the questionnaires: the first was from the researcher describing the research project and motivating the respondents to participate in the survey, the second was a support letter from the Windhoek-based Small Business Information Centre (SBIC) supporting the research project and encouraging both enterprises and business support organisations to participate in the project. A consent form to be signed by the participants was also distributed with the questionnaires.

3.7.2 The in-depth analysis of business information services

The researcher carried out an in-depth analysis of the information services facilities in fifteen organisations. This analysis involved the examination of information services in relation to the following criteria: business information coverage and detail, frequency of information updating, the value of information stored (in relation to its use by SMMEs), the accessibility of the facilities to SMMEs, the utilisation of ICTs in information management and dissemination to SMMEs and the dynamisms of the organisations in terms of growing information resources, personnel dedicated to information services and budgets for their maintenance. A total of fifteen organisations were visited during the in-depth analysis and this exercise was carried out over a four week period.

3.8 DATA PROCESSING AND ANALYSIS

The processing of the quantitative data collected from SMMEs and service providers was analysed with the statistical software, the Statistical Package for the Social Sciences (SPSS). Qualitative data from the in-depth analysis of business information services was analysed using content analysis.

3.8.1 Analysis of quantitative data

To ensure that data collected was of high quality, a process of data evaluation was carried out. This involved, going through all the questionnaires and questions and checking for

errors to responses and correcting them where possible. All the closed question responses in the SMMEs' and business support organisations' questionnaires were assigned code numbers. The open-ended responses were not coded and were analysed using content analysis as described below (section 3.9.2). All questionnaires were assigned a code number to allow the cross checking of the initial data entry in Excel as well as making corrections once that data were run through the SPSS programme.

In analysing the quantitative data, the researcher used a number of variables. According to Aldridge and Levine (2001: 5), the items of information gathered from the respondents are variables and these can be classified into three broad types, depending on the type of information they provide:

- Attributes – that is, characteristics such as age, sex, marital status, previous education;
- Behaviour – questions such as what? when? how often? and
- Opinions, beliefs, preferences, attitudes – questions on these four characteristics probe the respondent's point of view.

Furthermore, one of the main aims of much quantitative research in the social sciences is the demonstration of causality – that one variable has an impact upon another. The terms independent variable and dependent variable are often employed in this context. The independent variable denotes a variable that has an impact upon the dependent variable. The dependent variable, in other words, is deemed to be an effect of the independent variable (Bryman and Cramer 1994:7). In non-experimental research, where there is no experimental manipulation, the independent variable is the variable that logically has some effect on a dependent variable (Kerlinger 1986). And when researchers are not able to actually control and manipulate an independent variable, it is technically referred to as a status variable (e.g. gender, ethnicity, education, etc.). Even though researcher do not actually control or manipulate status variables, researchers can, and often do, treat them as independent variables (Heppner, Kivlighan and Wampold 1999).

Among the SMME operators various types of independent variables were considered and included age, gender, levels of education, nature of business operation and perceived constraints to business growth. The dependent variables that were considered are: perceived information needs, seeking patterns, use of various information sources and opinions about current business information services and how they can be improved. For the service providers the researcher considered the following independent variables: type of service organization, types of services provided, types of business information disseminated and the perceived constraints to SMME business growth. The dependent variables were the types of information sought by SMMEs, means of communicating business information, and how ICTs are used in the dissemination of business information services to SMMEs.

The responses from the questionnaires were coded and converted into an Excel file/database structure. This data was then exported into an SPSS programme for further analysis. The data processing was carried out with the assistance of the Statistics Department at the University of Namibia.

3.8.2 Content analysis

According to Struwig & Stead (2001:11) content analysis is the gathering and analysis of textual content. The content refers to messages, e.g. words, meanings, symbols and themes. The text can refer to that which is written, spoken or visualised. The aim of content analysis is to transform and classify the many words of the text into considerably fewer content categories (Severin & Tankard 2001). In this study, open-ended responses in the two questionnaires for SMME operators and business service providers were content analysed. The emerging and recurring themes were constructed into meaningful statements.

The qualitative data from the in-depth analysis of business information services facilities were also analysed using content analysis. Content analysis was used in these two sections as it was the most suitable to analyse the open-ended responses in the

questionnaires. General thematic guidelines provided in the qualitative guide were used for the content analysis and these included:

- Information coverage and detail;
- Frequency of information updating;
- The value of information stored;
- The accessibility of the facilities to SMMEs;
- Usage of ICTs;
- Staff capacity and dedication;
- Information service management; and
- The dynamism of the organisations in managing and disseminating business information to SMMEs.

The responses recorded in these thematic areas were analysed and common trends were established and further constructed into narrative statements representing the responses.

3.9 ETHICAL CONSIDERATIONS

According to Creswell (2003:64), “as researchers anticipate data collection, they need to respect the participants and sites for research”. Some of the ethical issues that arise during the research stage include:

- Not subjecting participants to risk and respecting the right to voluntary participation so that individuals are not coerced into the research study;
- Getting permission from authorities to study participants at a given research site;
- Avoiding disturbing sites and leaving them undisturbed after the research study;
- Giving due consideration to harmful information being disclosed during data collection.

A letter of introduction, introducing the researcher and his research assistants was obtained from the SBIC (Small Business Information Centre) prior to the commencement of the study. The researcher’s own introduction letter also served to introduce the subject

of the study to the participants and together with a “consent form” the respondents were asked to indicate their willingness to participate in the survey. A final approval of the research project was obtained from the University of Pretoria’s Faculty Committee for Research Ethics and Integrity in June 2006, and thereafter the survey commenced.

In the analysis and interpretation of both qualitative and quantitative data, issues of good ethics are also considered and these include:

- Protecting the anonymity of individuals, roles and incidents in the study project;
- Discarding of data after a given period of time so that it does not fall into the wrong hands;
- Providing an accurate account of the data analysed.

3.10 CONCLUSION

This chapter has outlined the methods and techniques that were used in investigating the information needs and seeking patterns of SMMEs as well as the business information services for the SMME sector in Namibia. The chapter has discussed the research design and the reasons for selecting the survey methodology over other enquiry techniques. It has been shown that the survey methodology is a type of research in which a sample of individuals is asked to respond to questions. The survey research methodology was described in full and its advantages and disadvantages were outlined. The questionnaires and the in-depth analysis instrument were fully outlined with regards to their contents and use. The research population was also discussed and so were the statistical and content analysis procedures followed in the analysis and interpretation of the data. The next two chapters present the data from the survey as well as the analysis and interpretation of the data.