

CHAPTER 5

RESEARCH DESIGN AND METHODOLOGY

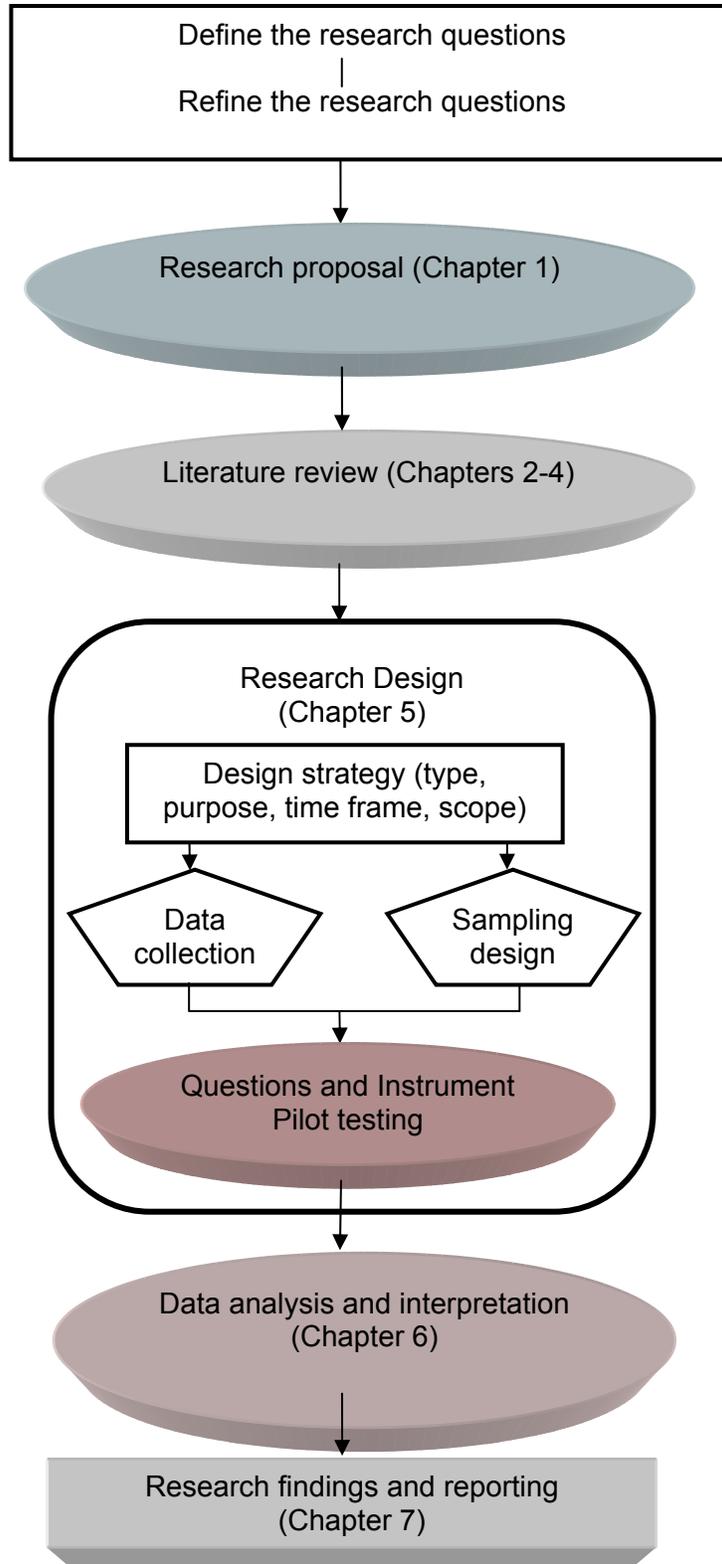
5.1 INTRODUCTION

There would be a cause for considerable concern and it would be contrary to the Government's efforts to create a favourable environment for small businesses in South Africa if the quality of services that small businesses in shopping centres receive from their landlords were found to inhibit their ability to survive and to grow. It is therefore justified to use a service quality model for assessing the services provided by shopping centre managers, because it would be an essential means to improve these services and make it more conducive for small businesses to survive.

This study is based on this issue and, the most important objective of this research study is to assess the service quality that small business tenants receive from landlords. In order to achieve this objective, a literature review was necessary and empirical research was conducted as well. The literature review was dealt with in Chapters 2, 3 and 4. This chapter will focus on the research design and methodology used to address the research objective. Figure 5.1 on the next page illustrates the research process as used throughout this study.

This research study made use of a formal research design to test the hypotheses formulated. In this chapter the research problem, objectives of the study, hypotheses and data collection methods will be presented. This chapter also describes how the research questionnaires were designed and measured to ensure that the researcher obtained valid responses from the respondents.

Figure 5.1: The research process of the study



Source: Adapted from Cooper and Schindler (2006:55)

The research proposal was summarised in Chapter 1, where the research problem and questions were stated. As explained in Figure 5.1, Chapter 6 takes an in-depth look at the research design, data collection and sampling design. In this chapter the data analyses and interpretation are presented and finally, in Chapter 7, the research findings are presented.

5.2 THE RESEARCH PROBLEM

From the literature review (addressed in Chapters 2, 3 and 4) it is evident that to develop and nurture businesses' current and future competitive advantages, it is of cardinal importance to consistently deliver high service quality. Like many businesses, landlords as property managers, are also being subjected to increased competitive pressures of the changing business environment. In several areas there is a significant amount of written evidence regarding poor service delivery by the landlords, where small business tenants, in particular, feel they are being victimised and bullied (Barrios, 2007; Carswell, 2008; Cockram, 2002; Nieman, 2000). Landlords increasingly realised that their tenants should be treated as valued customers and that it is very important that they should meet their needs (Pinder *et al.*, 2003:218). The issue of service quality is therefore of particular interest to them.

There are numerous models in the literature available to measure service quality. It is important that the right model is chosen to measure the service quality that landlords render to small business tenants in shopping centres. An extensive search of leading electronic journal databases, including EBSCOHost, Emerald, ScienceDirect, SABINET and Wiley Interscience, suggest that no academic research has been done specifically on the level of satisfaction of small business tenants in shopping centres regarding the service quality they receive from landlords. The application of any of the models as a service quality measurement model has consequently not been done in a landlord–small business relationship in shopping centres.

This study therefore sought, to address the following research questions:

- Are small business tenants in shopping centres generally satisfied with the quality of service they receive from landlords?
- Are the combined SERVPERF and FAIRSERV service quality models, in its original form, suitable for measuring the perceived service quality that small business tenants in shopping centres receive from their landlords?
- Are there any significant differences regarding the perception of service quality provided by landlords to small business tenants depending on their position in the business?
- Are there any significant differences regarding the perception of service quality received between small business tenants who have been a tenant in the centre for a short time and those who have been a tenant for long?
- Are there any significant differences regarding the perceived service quality received between small business tenants who have been a tenant in other shopping centres before and those who have never been a tenant in other shopping centres before?
- Are there any significant differences regarding the perceived service quality received between small business tenants who had no or little business experience prior to leasing in the shopping centre and those who had business experience?
- Are there any significant differences regarding the perception of service quality received by small business tenants, between landlords of different types of shopping centres in Pretoria?

5.3 THE RESEARCH OBJECTIVES

The primary and secondary objectives are presented here to illustrate and guide the direction of the research.

5.3.1 Primary objective

The primary objective of the study is to measure the perceived service quality that small business tenants in shopping centres receive from landlords.

5.3.2 Secondary objectives

The secondary objectives of the study are to:

- Determine whether the combined SERVPERF and FAIRSERV model of service quality, in its original form, will be suitable to measure the perceived service quality that small business tenants in shopping centres receive from landlords.
- Determine whether there are any significant differences regarding the perceived service quality provided by landlords to small business tenants depending on their position in the business.
- Determine whether there are any significant differences regarding the perception of service quality received between small business tenants who have been in the centre for a short time and those who have been in the centre for long.
- Determine whether there are any significant differences regarding the perceived service quality received between small business tenants who have been a tenant in other shopping centres before and those who have never been a tenant in other shopping centres before.
- Determine whether there are any significant differences regarding the perceived service quality received between small business tenants who had no or little business experience prior to leasing in the shopping centre and those who had business experience.

- Determine whether there are any significant differences regarding the perception of service quality received by small business tenants, between landlords of different types of shopping centres in Pretoria.

5.4 HYPOTHESES

This study states hypotheses rather than propositions. The reason for this is that several business research authors state that a hypothesis is a testable proposition (Cooper & Schindler, 2006:43; Saunders *et al.*, 2009:495; Struwig & Stead, 2004:4). A proposition is a statement about observable phenomena that may be judged as true or false. When a proposition is formulated for empirical testing, it is called a hypothesis (Cooper & Schindler, 2006:43; Struwig & Stead, 2004:4). A hypothesis is therefore a statement regarding a population or populations that may or may not be true (Diamantopoulos & Schlegelmilch, 2006:130). It is also stated that a proposition is a statement concerned with the relationships between concepts; an assertion of a universal connection between events that have certain properties (Zikmund, 2003:43).

The hypotheses are therefore stated below and the hypothesis testing is presented in Chapter 6. This indicates that the hypotheses will be tested empirically. The null hypothesis is always used for testing. It is important to note that the null hypothesis (H_0) indicates that there are no differences between groups or, no relationship between measured variables. The alternative hypothesis (H_a) indicates that there is a difference or relationship between measured variables.

From the research objectives, the following hypotheses were formulated:

- **H1o (Null hypothesis):** Small business tenants in shopping centres are in general not satisfied with the service quality that they receive from landlords.
- **H1a (Alternative hypothesis):** Small business tenants in shopping centres are in general satisfied with the service quality that they receive from landlords.

- **H2o:** The combined SERVPERF and FAIRSERV models of service quality, in its original form, will not be reliable to measure the perceived service quality that small business tenants in shopping centres receive from their landlords.
- **H2a:** The combined SERVPERF and FAIRSERV models of service quality, in its original form, will be reliable to measure the perceived service quality that small business tenants in shopping centres receive from their landlords.
- **H3o:** There are significant differences regarding the perceived service quality that small business tenants have of the landlords' service to them, irrespective of what the position of the respondent in the business is.
- **H3a:** There are no significant differences regarding the perceived service quality that small business tenants have of the landlords' service to them, irrespective of what the position of the respondent in the business is.
- **H4o:** There are no significant differences regarding the perception of service quality received between small business tenants who have been a tenant in the centre for a short time and those who have been a tenant for long.
- **H4a:** There are significant differences regarding the perception of service quality received between small business tenants who have been a tenant in the centre for a short time and those who have been in the centre for long.
- **H5o:** There are no significant differences regarding the perceived service quality received between small business tenants who have been a tenant in other shopping centres before and those who have never been a tenant in other shopping centres before.
- **H5a:** There are significant differences regarding the perceived service quality received between small business tenants who have been a tenant in other shopping centres before and those who have never been a tenant in other shopping centres before.

- **H6o:** There are no significant differences regarding the perceived service quality received between small business tenants who had no or little business experience prior to leasing in the shopping centre and those who had business experience.
- **H6a:** There are significant differences regarding the perceived service quality received between small business tenants who had no or little business experience prior to leasing in the shopping centre and those who had business experience.
- **H7o:** There are no significant differences, regarding the perception of service quality of small business tenants between landlords of different types of shopping centres in Pretoria.
- **H7a:** There are significant differences regarding the perception of service quality of small business tenants between landlords of different types of shopping centres in Pretoria.

5.4.1 Hypotheses testing

The purpose of hypothesis testing is to determine which of the null or alternative hypotheses is correct. The hypotheses testing procedure will be done in Chapter 6, where the null or alternative hypothesis will be accepted or rejected. The significance level is a critical probability in choosing between the null hypothesis and the alternative hypothesis (Cooper & Schindler, 2006:718; Zikmund, 2003:500). The level of significance determines the probability level that is to be considered too low to merit support of the null hypothesis. As no statement about a sample can be made with complete certainty, a chance that an error will be made always exists. These types of errors are referred to as Type I or Type II errors as depicted in Table 5.1 on the next page

Table 5.1 is presented on the next page.

Table 5.1: Type I and Type II errors in hypotheses testing

State of null hypothesis in the population	Decision	
	Accept Ho	Reject Ho
Ho is true	Correct – no error	Type I error
Ho is false	Type II error	Correct – no error

Source: Zikmund (2003:504)

Table 5.1 indicates that the null hypothesis can either be true or false and the statistical decision will be either to accept or to reject the hypothesis. When a Type I error (α) is committed, a true null hypothesis is rejected. This means it is stated that a statistically significant difference exists when in reality one does not exist. A Type II (β) error is made if the alternative hypothesis is true but the researcher indicates that the Ho should not be rejected.

In business problems, Type I errors are in general more serious than Type II errors and there is a greater concern with determining the significance level alpha (α) than with determining β .

5.5 RESEARCH METHODOLOGY

The research methodology presented in this section focuses on the research design, the methods and procedures for the collection, and measurement and analysis of data used in the study. The next section will explain the research design used in this study.

5.5.1 Research design

The research design is a blueprint for fulfilling objectives and answering questions. It constitutes the blueprint for collection, measurement and analysis of data (Cooper &

Schindler, 2006:71). It will be the general plan of how to go about answering the research question (Saunders *et al.*, 2009:136).

This research study is designed as a formal study. The objective of a formal research design is to test the hypotheses or answer the research questions posed (Cooper & Schindler, 2006:140). This study consists of a literature review and an empirical study. The literature review aims to survey the background on service quality and small business tenants in shopping centres in terms of:

- the concept of service;
- the concept of service quality;
- models for measuring service quality;
- the definition of a small business and the unique challenges they are faced with;
- shopping centres as retail locations; and
- the relationship between a small business tenant and the landlord in shopping centres.

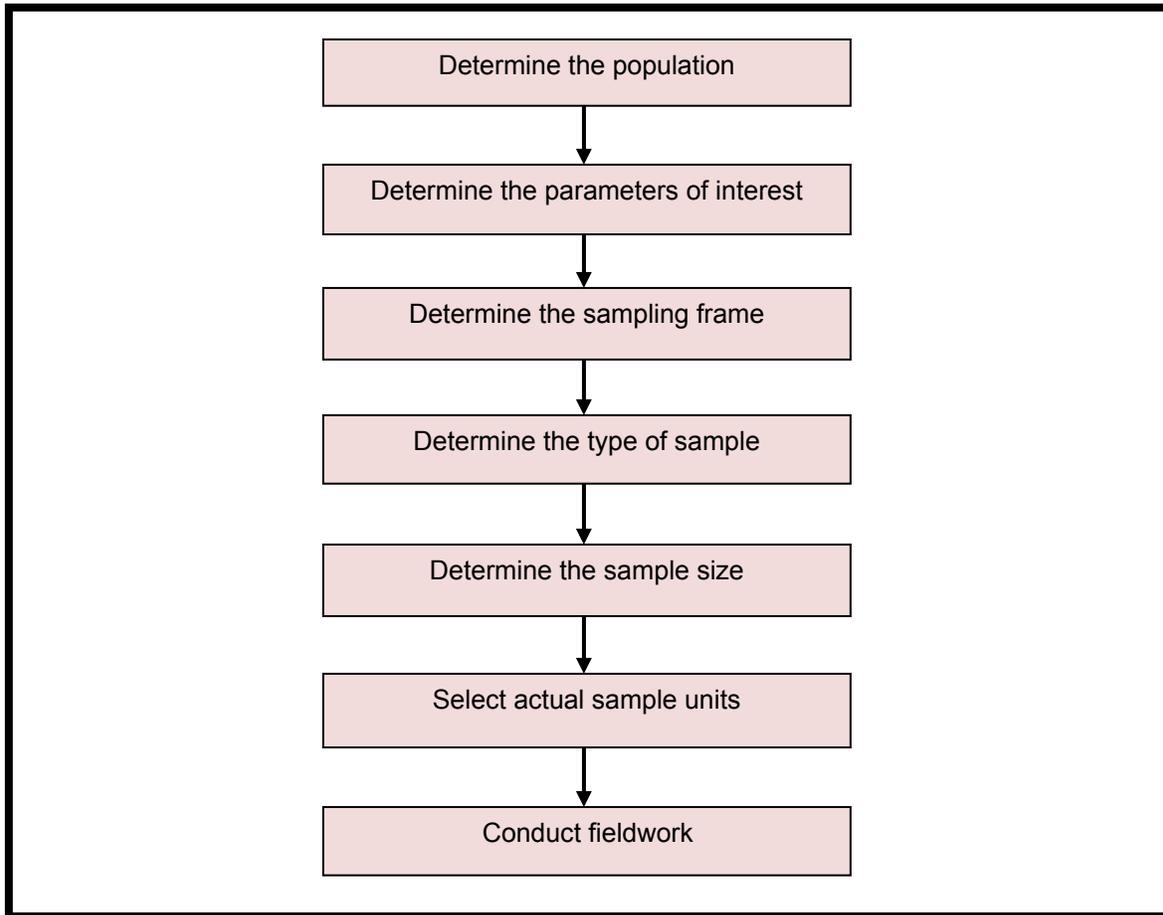
The literature review provides an insight and understanding into the research problem as well as the necessary background to guide the empirical part of the study.

The empirical part of the study focuses on the measurement of the perceived service quality that small business tenants in shopping centres receive from the landlord. The measurement is done by means of a questionnaire developed from dimensions of the SERVPERF (Cronin & Taylor, 1992) and FAIRSERV (Carr, 2007), service quality models.

5.5.2 Sampling design and data collection methods

Sampling basically means any procedure where, by selecting some of the elements in a population, conclusions can be drawn about the entire population (Diamantopoulos & Schlegelmilch, 2006:10; Cooper & Schindler, 2006:402). Decisions on several stages in the selection of a sample should first be done before a conclusion can be made of the sample to use. These stages are summarised in Figure 5.2 on the next page.

Figure 5.2: Stages in the selection of a sample



Source: Cooper and Schindler (2008:183-203)

The full set of elements about which one wishes to make some inferences is called the **population** (Cooper & Schindler, 2006:402; Diamantopoulos & Schlegelmilch, 2006:10; Saunders *et al.*, 2009:212). In this study the population is all the small business tenants in shopping centres in Pretoria, South Africa. According to Cooper and Schindler (2006:409), **parameters of interest** are summary descriptors of variables of interest in the population. For this study the parameter of interest is the following:

- The selected respondents must be the owner, manager or full time employee of the small business in the shopping centres.

Sampling frame refers to a list of elements from which a sample may be drawn (Cooper & Schindler, 2006:411; Saunders *et al.*, 2009:214). A list of small business tenants in each

shopping centre, obtained from the shopping centres' web sites, is used as the sampling frame for this research study.

In choosing the **type of sample** to be used, a distinction needs to be made between a probability and non-probability sample. According to Cooper and Schindler (2006:414) and Leedy and Ormrod (2010:205), a probability sample is a sample that has been selected through random selection in such a way that each unit in the population has an equal chance of being selected. A non-probability sample is a sample that has not been selected by a random selection method. The researcher has no way of forecasting or guaranteeing that each unit in the population will be represented in the sample (Leedy & Ormrod, 2010:211).

A summary of the various sample designs is depicted in Table 5.2.

Table 5.2: Types of sampling designs

Element Selection	Representation bias	
	Probability	Non-probability
Unrestricted	Simple random Each population element has an equal chance of being selected into the sample.	Convenience The sampling procedure used to obtain those units or people most conveniently available.
Restricted	Systematic Select an element of the population at a beginning with a random start and following the sampling fraction selects every k^{th} element.	Purposive or Judgement An experienced individual selects the sample based upon some appropriate characteristic of the sample members.
	Cluster Population is divided into internally homogeneous subgroups. Some are randomly selected for further study.	Quota The researcher classifies the population by pertinent properties, determines desired proportions of sample from each class, and fixes quotas for each interviewer.

Table 5.2 continues on the next page.

Table 5.2: Continued

Element Selection	Representation bias	
	Probability	Non-probability
Restricted	<p>Stratified Divides population into subpopulations or strata and uses simple random on each stratum. Results may be weighted and combined.</p>	<p>Snowball Initial respondents are selected by probability samples; additional respondents are obtained by referral from initial respondents.</p>
	<p>Double Process includes collecting data from a sample using a previously defined technique. Based on the information found, a subsample is selected for further study.</p>	

Source: Cooper and Schindler (2008:184, 199)

This study makes use of a non-probability, judgement sampling because the shopping centres (population element) that were selected for this study did not have an equal chance of being included in the sample. An effort was made though to include different types of shopping centres, owned by different landlords from different parts of the city in the study. The small business tenants in a specific shopping centre were also selected by making use of non-probability sampling as each of the population elements (small business tenants) did not have an equal chance of being included in the sample. It can be regarded as judgement sampling because the respondents were selected on the basis of their direct involvement with the landlords or centre management. They should in other words have been able to judge the perceived service quality they receive from landlords based on their involvement and experience with them.

When sample size is considered, Saunders *et al.* (2009:217) indicate that the larger the sample size, the lower the likely error in generalising to the population. The sample of this study consisted of 457 respondents from small business tenants of 27 different shopping centres throughout Pretoria, South Africa. The shopping centres that were part of the study included seven neighbourhood centres, seven community centres, four small regional centres/large community centres, three regional centres, one super regional centre, three

lifestyle centres and two value/strip centres. These 27 shopping centres are owned by 19 different landlords.

5.5.2.1 Sample error

An important consideration when selecting a sample is, the effect that excluded population elements are likely to have on the quality of the sample (Diamantopoulos & Schlegelmilch, 2006:12). Sampling in fact means that certain population elements will be excluded from the sample and this exclusion is known as sampling error. Sampling error is therefore the difference between a result based on a sample and that which would have been obtained if the entire population were studied (Diamantopoulos & Schlegelmilch, 2006:12).

5.5.2.2 Response rate

Saunders *et al.* (2009:587) explain that a response rate is the total number of responses divided by the total number in the sample after ineligible and unreachable respondents have been excluded. Table 5.3 on the next page indicates that a total of 510 questionnaires were issued to small business tenants in 27 different shopping centres in Pretoria between the period of December 2011 and March 2012. A total of 457 questionnaires were received back from the respondents. This represents a response rate of 89,61 percent. The relatively high response rate may be due to the fact that all questionnaires were delivered and later collected by the researcher, with the help of two field workers. The researcher and the field workers often had to go back to the small business tenants several times in order to collect the completed questionnaires. This diligence from them certainly paid off, as the high response rate indicates. Another reason for the high response rate may also have been that small business tenants in shopping centres might have been eager to fill in the questionnaire because they wanted to air their view on the important matter of service quality.

In Table 5.3 the response rate per shopping centre is indicated, bringing the total response rate to 89,61 percent.

Table 5.3: Response rate (Time frame: December 2011 – March 2012)

Type of centre	Name of centre	Number of stores in centre	Number of questionnaires issued	Number of questionnaires received back	Response rate per centre (%)
Neighbourhood Centres	Doornpark Shopping Centre	24	14	14	100,00
	Madelief Shopping Centre	29	10	8	80,00
	Montana Corner	36	8	8	100,00
	Moreleta Plaza	50	13	8	61,54
	Silver Oaks Crossing	45	11	10	90,91
	Waverley Plaza	52	17	14	82,35
	Zambezi Junction	30	16	16	100,00
	Sub Total	266	89	78	87,64
Community Centres	Jakaranda Shopping Centre	54	11	7	63,64
	Glenfair Boulevard	45	10	8	80,00
	Glen Village North	41	24	24	100,00
	Glen Village South	41	16	16	100,00
	Mayville Shopping Centre	44	26	26	100,00
	Quagga Shopping Centre	56	8	7	87,50
	Waterglen Shopping Centre	45	15	15	100,00
	Sub Total	326	110	103	93,64
Small Regional Centres	Mall @ Reds	118	21	21	100,00
	Wonderboom Junction	79	9	4	44,44
	Wonderpark Shopping Centre	119	14	8	57,14
	Zambezi Mall	85	12	12	100,00
	Sub Total	401	56	45	80,36
Regional Centres	Brooklyn Mall	159	40	31	77,50
	Centurion Mall	217	47	47	100,00
	Kolonnade Shopping Centre	155	31	23	74,19
	Sub Total	531	118	101	85,59

Table 5.3 continues on the next page.

Table 5.3: Continued

Type of centre	Name of centre	Number of stores in centre	Number of questionnaires issued	Number of questionnaires received back	Response rate per centre (%)
Super Regional Centre	Menlyn Shopping Centre	300	86	86	100,00
	Sub Total	300	86	86	100,00
Lifestyle Centres	Brooklyn Design Square	35	12	8	66,66
	Lynnwood Bridge	29	14	11	78,57
	West End Life Style and Décor Centre	23	10	10	100,00
	Sub Total	87	36	29	80,56
Strip Centres	Montana Crossings	30	9	9	100,00
	Montana Value Centre	20	6	6	100,00
	Sub Total	50	15	15	100,00
	TOTAL	1 961	510	457	89,61

5.5.2.3 Data collection

Data can be collected in the form of primary or secondary data. Primary data refers to data that are collected with a specific purpose in mind, such as for the needs of a particular research project and, the researcher personally collects it (Diamantopoulos & Schlegelmilch, 2006:5; Saunders *et al.*, 2009:598; Struwig & Stead, 2004:40). Primary data can, amongst others, be collected by means of questionnaires, surveys, checklists, interviews, documentation review, observation, focus groups and case studies (Coldwell & Herbst, 2004:48-49). Secondary data, on the other hand, refers to data which has not been gathered expressly for the immediate study at hand but for some other purpose (Diamantopoulos & Schlegelmilch, 2006:5; Struwig & Stead, 2004:40), or as Cooper and Schindler (2006:77) put it: “secondary data have had at least one level of interpretation inserted between the event and its recording”. Diamantopoulos and Schlegelmilch (2006:5) identify several forms of secondary data, namely published statistics (by government departments, trade associations, chambers of commerce and research foundations), annual reports (published by business firms as well as non-profit organisations), abstracting and index services (covering thousands of periodicals, academic journals, books and newspapers), syndicated

services (providing regular detailed information on a particular country/industry/ product group) and database services (providing tailor-made mailing lists, allowing fast access to computerised information sources worldwide).

Data for the literature section of this research study was collected by means of a literature search using secondary data such as journals, textbooks, newspapers, databases and the Internet. This literature was presented in Chapters 2, 3 and 4.

The primary data for this study (measuring the service quality that small business tenants in shopping centres receive from their landlords) is collected by means of a self-administered questionnaire. The responses are anonymous and this confidentiality is respected within the study. This was considered to be the best option available in order to access data. The respondents were assured of their anonymity and that the data will be treated as confidential.

The questionnaires were distributed to and collected from small tenants in shopping centres by the researcher and two fieldworkers. Three of the respondents submitted the completed questionnaires via electronic mail or a facsimile. A covering letter and consent form (Annexure A) accompanied each questionnaire.

Saunders *et al.* (2009:362) state that questionnaires work best with standardised questions that can confidently be interpreted the same way by all respondents. Questionnaires can therefore be used for descriptive or explanatory research. Explanatory or analytical research will enable one to examine and explain relationships between variables.

5.5.3 Purpose of the study

The purpose of the study is to investigate whether small businesses in shopping centres are satisfied with the service quality they receive from landlords and, to determine whether the service quality dimensions of SERVPERF and the fairness dimension of FAIRSERV will be

suitable to measure the service quality in a landlord-small business relationship in shopping centres.

This study will inform and provide information to landlords of shopping centres and shopping centre management, acting as agents of the landlords, of the value of measuring service quality received by their small business tenants that could assist in sustaining a competitive advantage. The study can also be valuable to prospective small business tenants where the results of this study could help them to decide on a shopping centre to lease from.

5.5.4 Time dimension

Cooper and Schindler (2006:141) explain that cross-sectional studies are carried out once and represent a snapshot of one point in time. Saunders *et al.* (2009:155) concur with this explanation and add that cross sectional studies often seek to describe the incidence of a phenomenon or to explain how factors are related in different organisations. Bryman and Bell (2007:55) add further that in a cross sectional design, relationships are examined between variables and that there is no time order to the variables. The data on the variables is collected more or less simultaneously and the researcher does not manipulate any of the variables. The time dimension of this study is cross-sectional. The respondents were measured only once.

5.5.5 Topical scope

The topical scope of a study refers to the depth and breadth of a study (Cooper & Schindler, 2006:139). If a research study is designed for breadth rather than depth, it will be a statistical research study and, if it is designed for depth it will be based on a case study. The topical scope of this study was based on a statistical study in which the researcher attempts to capture a population's characteristics by drawing inferences from a sample's characteristics. According to Cooper and Schindler (2006:142) and Saunders *et al.* (2009:218), generalisations about the findings of a statistical study are based on the representativeness of the sample and the validity of the design.

5.5.6 The research environment

Cooper and Schindler (2006:142) state that research designs also differ as to whether they occur under actual environmental conditions (field conditions) or under staged or manipulated conditions (laboratory conditions).

This research study will be conducted in a field environment in shopping centres in Pretoria, South Africa.

5.5.7 Participants' perceptions

The usefulness of a research design may be reduced when, participants in a disguised study perceive that research is being conducted and may behave differently as usual (Cooper & Schindler, 2006:142; Saunders *et al.*, 2009:156). With regard to this research study it may happen that the small business tenants would give an overly critical rating because they may think in doing so, management will pay more attention to service quality. On the other hand though, participants may give an overly positive rating because they may fear that the landlord may somehow know about their involvement with the study and could hold it against the small business tenant if they are too critical in their rating of the service. Cooper and Schindler (2006:143) therefore point out that participants' perceptions serve as a reminder to, firstly classify one's study by type, then to examine validation strengths and weaknesses and lastly, to be prepared to qualify results accordingly.

5.6 QUESTIONNAIRE DESIGN, VALIDITY AND MEASUREMENT

The questionnaire for this study was designed after a thorough literature review of several service quality models. After thorough deliberation, the SERVPERF model was used to conduct the assessment for this research study. Certain elements of the FAIRSERV model were also considered. A detailed discussion on several service quality models was done in Chapter 3.

5.6.1 Measurement of the research instrument

According to Cooper and Schindler (2006:309) and Diamantopoulos and Schlegelmilch (2006:22), measurement in research consists of assigning numbers to empirical events, objects or properties or activities in compliance with a set of rules. Measurement rules ensure that the relations between the numbers assigned reflect the actual relations between the objects with respect to the characteristic concerned.

The process structure (response strategies) that was used in the questionnaire consisted of the following questions (Table 5.4 on the next page):

- Multiple-choice, single-response questions;
- 5-point Likert scale summated rating question; and
- Free-response questions (open-ended, unstructured questions).

Different measurement rules result therefore in different types of measurement scales (Diamantopoulos & Schlegelmilch, 2006:23). Different types of measurement scales can be distinguished according to the level of measurement that these scales provide. Four major types of measurement scales can be distinguished, namely nominal, ordinal, interval and ratio (Cooper & Schindler, 2006:311; Diamantopoulos & Schlegelmilch, 2006:24). These types of measurement scales are outlined in Table 5.4.

According to Diamantopoulos and Schlegelmilch (2006:24) and Leedy and Ormrod (2010:26), an ordinal scale establishes an ordered relationship between persons or objects being measured. In ordinal scaling, numbers are used to indicate whether a person, object and so forth, has more or less of a given characteristic than some other person or object. They also add that an interval scale possesses all the characteristics of an ordinal scale and is also characterised by equality of intervals between adjacent scale values. The last scale, the ration scale, also has all the features of an interval scale plus an absolute zero point (also known as true or natural zero). All these scales were incorporated in the research questionnaire.

Table 5.4: Characteristics of response strategies used in the questionnaire

Characteristics	Multiple Choice	Checklist	Likert Scale	Free Response
Type of data generated (measurement scales)	Nominal and ordinal	Nominal	Interval (pragmatic view) and ordinal (purist view)	Nominal
Usual number of answer alternatives provided	Three to ten	Ten or fewer	Three to seven	None
Characteristics of data	Classification and order	Classification	Classification, order and distance	Classification

Source: Cooper and Schindler (2006:312)

The questions on the questionnaire (question 10.1 – 10.37), where respondents have to select from a 5-point Likert scale from strongly disagree to strongly agree, were set up according to the combined SERVPERF and FAIRSERV service quality models. The questions were divided into the five dimensions of the SERVPERF model (reliability, responsiveness, assurance, tangibles and empathy) as well as a sixth dimension that was based on the FAIRSERV model. The questions that were based on the SERVPERF model were asked exactly in the same way than what was suggested by the model. A few more questions, that were considered to be applicable to the specific relationship between landlords and small business tenants in shopping centres, were added. These questions, as well as the FAIRSERV questions, were sorted randomly.

The rationale behind the questionnaire questions are set out in Table 5.5 on the next page.

Table 5.5 Linking objectives with questions and proposed data analysis methods

Research Objectives	Research Concept/ Construct	Variables	Question component	Question type/ Measures	Anticipated Statistical analysis
1. Measure service quality of landlords' service to small business tenants	Service quality	Reliability Responsive-ness Assurance Empathy Tangibles Fairness	Q 10.1; 10.5; 10.7; 10.14; 10.21 Q 10.10; 10.13; 10.18; 10.29 Q 10.2; 10.11; 10.16; 210.3; 10.28; 10.33; 10.34; 10.35, Q 10.3; 10.8; 10.19; 10.22; 10.27; 10.32; 10.36 Q 10.4; 10.9; 10.17; 10.20; 10.24; 10.25; 10.31 Q 10.6; 10.12; 10.15; 10.26; 10.30; 10.37.	Interval scales (5-point Likert)	Standard deviation/ cronbach's coefficient alpha
2. Investigate whether SERVPERF/FAIRSERV dimensions are pertinent to the landlord-small business relationship in shopping centres	Relevance of SERVPERF/ FAIRSERV dimensions	Reliability Responsive-ness Assurance Empathy Tangibles Fairness	Q 10	Interval scales Nominal Ratio Open-ended	Factor analysis
3. Determine whether there are significant differences regarding the perceived service quality that small business tenants of different types of shopping centres receive from the landlords.	Measurement of perceived service quality	Type of shopping centre Reliability Responsive-ness Assurance Empathy Tangibles	Q 10;	Interval scales (5-point Likert)	ANOVA Mean performance scores/ correlation analysis/ Cronbach's coefficient alpha

Table 5.5 continues on the next page.

Table 5.5: Continued

Research Objectives	Research Concept/ Construct	Variables	Question component	Question type/ Measures	Anticipated Statistical analysis
4. Determine whether there are significant differences regarding the perceived service quality between small business tenants who have been in the centre for a short period of time and those who have been in the centre for a long period of time	Measurement of perceived service quality	Period of time in centre Reliability Responsiveness Assurance Empathy Tangibles	Q 5 Q 10	Ratio Interval scales (5-point Likert)	ANOVA Mean performance scores/ correlation analysis/ Cronbach's coefficient alpha
5. Determine whether there are significant differences regarding the perceived service quality between small business tenants who had no or little business experience prior to leasing in the shopping centre and those who had business experience.	Measurement of perceived service quality	Business experience Reliability Responsiveness Assurance Empathy Tangibles	Q 7 Q 10	Ratio Interval-scales (5-point Likert)	ANOVA Mean performance scores/ correlation analysis/ Cronbach's coefficient alpha
6. Determine whether there are significant differences regarding the perceived service quality between small business tenants who have been a tenant in other shopping centres before and those who have never been a tenant in a shopping centre.	Measurement of perceived service quality	Tenant in other centres Reliability Responsiveness Assurance Empathy Tangibles	Q 8 Q 10	Ratio Interval-scales (5-point Likert)	ANOVA Mean performance scores/ correlation analysis/ Cronbach's coefficient alpha

Table 5.5 continues on the next page.

Table 5.5: Continued

Research Objectives	Research Concept/ Construct	Variables	Question component	Question type/ Measures	Anticipated Statistical analysis
7. Determine whether there are any significant differences regarding the perceived service quality that small business tenants depending on their position in the business receive from the landlords.	Measurement of perceived service quality	Position in business Reliability Responsive-ness Assurance Empathy Tangibles	Q 1 Q 10	Ratio Interval- scalses (5- point Likert)	ANOVA Mean performance scores/ correlation analysis/ Cronbach's coefficient alpha



5.6.2 Characteristics of sound measurement

A measuring instrument is sound if it is valid and reliable (Cooper & Schindler, 2006:318; Diamantopoulos & Schlegelmilch, 2006:24; Saunders *et al.*, 2009:273). Validity refers to the extent in which an empirical measure adequately reflects the real meaning of the concept under consideration. It asks the question: “does it measure what it intends to measure?” Reliability refers to whether a particular technique, applied repeatedly to the same object, yields the same result each time.

5.6.2.1 Validity of the measurement instrument

Cooper and Schindler (2006:318) and Leedy and Ormrod (2010:92) state that validity refers to the ability of a research instrument to measure what it is supposed to measure. They propose three widely accepted classifications of validity that consist of three major forms, namely **content validity**, **criterion-related validity**, and **construct validity**. Table 5.6 on the next page gives a summary of the validity estimates.

Since one of the research objectives of this study is to determine whether the SERVPERF service quality instrument can be used to measure the perceived service quality that small business tenants in shopping centres receive from landlords, the research questionnaire were compiled using the SERVPERF instrument’s dimensions. The exact same questions as suggested by the SERVPERF instrument were asked in the questionnaire (Table 3.3 on page 77). As discussed in the literature review section of this study, it has been found that the SERVPERF instrument is a valid instrument for the measuring of perceptions of service quality in a number of other industries (Andaleeb & Conway, 2006; Carrilat *et al.*, 2007:473; Olorunniwo *et al.*, 2006).

It can therefore be said that the measurement instrument has construct validity since the SERVPERF instrument was empirically tested by several researchers before and found to be a valid instrument.

Table 5.6: Summary of validity estimates

Type	What is measured	Methods
Content	Degree to which the content of the items adequately represents the universe of all relevant items under study	Judgemental or panel evaluation with content validity ration
Criterion related	Degree to which the predictor is adequate in capturing the relevant aspects of the criterion	Correlation
• Concurrent	Description of the present; criterion data are available at the same time as predictor scores	Correlation
• Predictive	Prediction of the future; criterion data are measured after the passage of time	Correlation
Construct	Answer the question, "What accounts for the variance in the measure?"; attempts to identify the underlying construct(s) being measured and determine how well the test represents it (them)	Judgemental Correlation of proposed test with established one Convergent-discriminant techniques Factor analysis Multitrait-multimethod analysis

Source: Cooper and Schindler (2006:319)

5.6.2.2 Reliability of the measurement instrument

Reliability is concerned with whether the measure is reliable to the degree that it supplies consistent results (Diamantopoulos & Schlegelmilch, 2006:34; Leedy & Ormrod, 2010:93). According to Diamantopoulos and Schlegelmilch (2006:34), if a measure is not reliable then it cannot be valid, but if it is reliable it may or may not be valid. To put it differently, a measure that is valid is also reliable but the reverse is not necessarily true. Reliable instruments are robust, that work well at different times under different conditions. This distinction of time and condition is the basis for frequently used perspectives on reliability, namely stability, equivalence and internal consistency as seen in Table 5.7 on the next page.

Table 5.7: Summary of reliability estimates

Type	Coefficient	What is measured	Methods
Test-retest	Stability	Reliability of a test or instrument inferred from examinee scores. Same test is administered twice to same respondents.	Correlation
Parallel forms	Equivalence	Degree to which alternative forms of the same measure produce the same or similar results	Correlation
Split-half, KR20, Cronbach's Alpha	Internal consistency	Degree to which instrument items are homogeneous and reflect the same underlying construct(s).	Specialised correlational formulas

Source: Cooper and Schindler (2006:322)

The Cronbach alpha (α) is most frequently used by researcher to determine a measuring instrument's reliability. According to Bryman and Bell (2007:164), Cronbach alpha calculates the average of all possible split-half reliability coefficients. A computed alpha coefficient will vary between 1 (denoting perfect internal reliability) and 0 (denoting no internal reliability). The figure 0,80 is typically employed as a rule of thumb to denote an acceptable level of internal reliability, though many authors accept a slightly lower figure. Eiselen, Uys and Potgieter (2005:114) state that the closer the alpha value (α) is to 1 the better the internal consistency (reliability) of the scale.

To test the internal consistency of this study's questionnaire, the Cronbach alpha test was done and indicates an excellent alpha value. This means that the reliability of the measuring instrument is sound.

Cooper and Schindler (2001:218) state that reliability can be improved by:

- Minimising external sources of variation;
- Standardising conditions under which measurement occurs (During this study this was attempted by the researcher as the measurement was done during the same time before the busy time of Christmas and shortly thereafter);
- Broadening the sample of measurement questions used by adding similar questions to the data collection instrument.

Factor analysis was furthermore executed to confirm the validity and reliability of the measuring instrument (questionnaire) used in this study and is explained in the next section.

5.6.2.3 Factor analysis

The main application of factor analysis techniques is firstly, to reduce the number of variables and secondly, to detect structure in the relationship between variables. The variables have to be classified. Variables that highly correlate with each other, as identified from the correlation matrix, are grouped together under a single factor. Each distinct grouping of highly correlated original variables represents a separate factor (Diamantopoulos & Schlegelmilch, 2006:216; Eiselen, *et al.* (2005:104). The principal component analysis method is used to identify the factors. The number of unique factors and the significant variables associated with each are identified by this approach. Each factor that is identified, describes a separate dimension embedded within the large set of variables. In statistical terms, each factor explains a certain percentage of the total variation between the original variables. As many factors as there are original variables can be identified by the principal components process (Cooper & Schindler, 2006:592; Leedy & Ormrod, 2010:282). All these factors can however, not explain a significant percentage of total variation within the original set of variables.

The significance of a factor is determined by its **eigenvalue**, which is generated by principal component analysis for each factor. In order to decide how many significant factors can meaningfully be used to describe the underlying dimensionality of the original set of variables, each eigenvalue should exceed 1 (the Kaiser criterion). This criterion can however, sometimes retain too many factors and therefore a graphical method, the **scree test**, is used to narrow down the factors. With the scree test, the eigenvalues are plotted in a simple line plot. The point where the smooth decrease of eigenvalues appear to level off to the right of the plot, is to be the cut-off point for factors. This test can sometimes retain too few factors and, the criterion which makes the best sense is to be taken into consideration. A factor can be seen as a new “generic” variable used to represent a subset of the original variables which highly correlate with it. If expressed in mathematical terms, each factor is a

linear combination of the original variables, X_{11} , X_{12} , X_{13} ,, X_{47} . The coefficients of the linear combination are a measure of the correlation between each variable and the given factor.

In general, further mathematical manipulation of the initial set of factors takes place. This process that is used to refine the associations between factors and variables is called **factor rotations**. To assist the process of interpreting factors, the principal components method also computes measures called factor loadings. A factor loading is a correlations measure (between a variable and a factor). A high factor loading (values close to 1) indicates a close association between a variable and a factor, while a low factor loading (values close to 0) indicates virtually no association between a variable and a factor. This makes it possible for a user to identify which variables are “explained” by, or relates to a given factor. By examining the nature of the variables that “load heavily” on a given factor, the factor can be labelled. Factor analysis is furthermore executed on variables to strengthen the reliability of the research questionnaire used in this study.

5.7 DATA PROCESSING AND ANALYSIS

Data processing generally begins with the editing and coding of data. According to Cooper and Schindler (2006:441), editing involves checking the data collection forms for omissions, errors, legibility and consistency in classification. The questionnaire of this study was scrutinised and the questions coded accordingly. The data were captured on an Excel spreadsheet by the Department of Statistics at the University of Pretoria. The captured data were scrutinised for possible mistakes and thereafter, it was processed by the Department of Statistics at the University of Pretoria. The BMDP statistical programme was used to compile the descriptive and inferential statistics. Data analysis usually involves reducing accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques. Scaled responses on questionnaires often require the analyst to derive

various functions as well as to explore relationships among variables (Cooper & Schindler, 2006:442).

5.7.1 Descriptive statistics

In quantitative research, data analysis is normally used to refer to the process of breaking down collected data into constituent parts in order to obtain answers to research questions. Descriptive statistics is the method used to describe characteristics of a population or a sample. It therefore aims at describing data by investigating the distribution of scores for each variable and by determining whether the scores on different variables are related to each other (Terre Blanche & Durrheim, 2002:105).

5.7.2 Inferential statistics

Inferential statistics is the method used to draw conclusions about the population itself. While the descriptive analysis allows the researcher to generalise from the sample to the population, inferential analysis allows the researcher to draw conclusions about the population on the basis of data obtained from samples (Terre Blanche & Durrheim, 2002:105). The following techniques, based on the distribution of the descriptive statistics obtained from this study, were used to perform the inferential analysis: frequency distribution, factor analysis, One-Way Analysis of Variance (ANOVA) and Post-Hoc test using least square means t-tests.

5.7.3 Statistical significance

Earlier in this chapter, the hypotheses were stated and it will be tested as well as either accepted or rejected in Chapter 6. Since any sample will almost certainly vary somewhat from its population, it must be judged whether these differences are statistically significant or insignificant (Cooper & Schindler, 2006:492). A method of presenting the results of a statistical test, reports the extent to which the test statistic disagrees with the null hypothesis. This method has become very popular because analysts want to know what percentage of

the sampling distribution lies beyond the sample statistic on the curve and, most reports the results of statistical tests as probability values (p values). The p value is compared to the significance level (α) and on that basis the null hypothesis is either rejected or not rejected. If the p value is less than the significance level (0.05 or 0.001) then the null hypothesis is rejected. If p is greater than, or equal to the significance level, the null hypothesis is not rejected.

5.8 CONCLUSION

In this chapter, a description of the methodology applied in this study was provided. The chapter focuses on the research question posed: whether small business tenants in shopping centres are satisfied with the quality of service they receive from their landlords. The data collection was primarily based on personal responses and was conducted in the form of the research questionnaire. The data processing and analysis attempt to answer the research question through the research findings which are presented in the following chapter.

The explanation of the statistical techniques preceded the actual tests carried out and is presented in Chapter 6. These techniques included frequency distribution, factor analysis, One-Way Analysis of Variance (ANOVA) and Post hoc tests using least square means t -tests.

The next chapter explains and interprets the most significant results yielded by executing the above techniques.