

**Applicability of the SERVQUAL
Instrument Under South African
Conditions: An Assessment of Four
Situations**

THESIS

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Abstract

Applicability of the SERVQUAL Instrument Under South African Conditions: An Assessment of Four Situations

On-going research in recent years has shown quality of product and service, as perceived by customer, relative to competition, to be the single most important factor contributing to organizational well-being. Quality of product and service also presents one of the most significant opportunities for corporate differentiation. A major requirement for the successful management of quality is therefore effective measurement. In the case of physical goods, progress has been made over a long period. However, in the case of services, real advances have only occurred within the past decade. The importance of service quality is also highlighted by the fact that most businesses today are losing customers due to its inadequacy, rather than poor products. Indeed, from the customer's point of view, services and products probably do not exist in a dichotomy, but, rather, along a spectrum. Therefore, the measurement of service quality is critical, not only in traditional service organizations, but in manufacturing situations as well.

The development of the SERVQUAL questionnaire in 1988, offered researchers, perhaps for the first time, an apparently reliable and valid instrument for the measurement of service quality. However, to date the instrument has not been subjected to rigorous testing for reliability and validity in South Africa, across a range of service organizations, within a typology. In this study, the SERVQUAL instrument was used to measure service quality across a range of firms within the Larsson-Bowen contingency framework, under South African conditions. Its main objectives were to assess its reliability and validity in these circumstances.

It was found that SERVQUAL performed well across all organizations within the Larsson-Bowen framework, under South African conditions, with regard to reliability, convergent and nomological validity. Its construct validity proved to be less sound, and it was not found to possess discriminant validity. It is suggested that this is less attributable to South African circumstances than to the nature of the organizations. In cases of low diversity of demand, the instrument appears to capture the essence of service quality less effectively. Means of overcoming this in future studies are suggested, as well as other directions for research in the area of service quality measurement.

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APPLICABILITY OF THE SERVQUAL INSTRUMENT UNDER SOUTH AFRICAN CONDITIONS: AN ASSESSMENT OF FOUR SITUATIONS

Chapter 1

Introduction - Broad Objectives, and Key Concepts

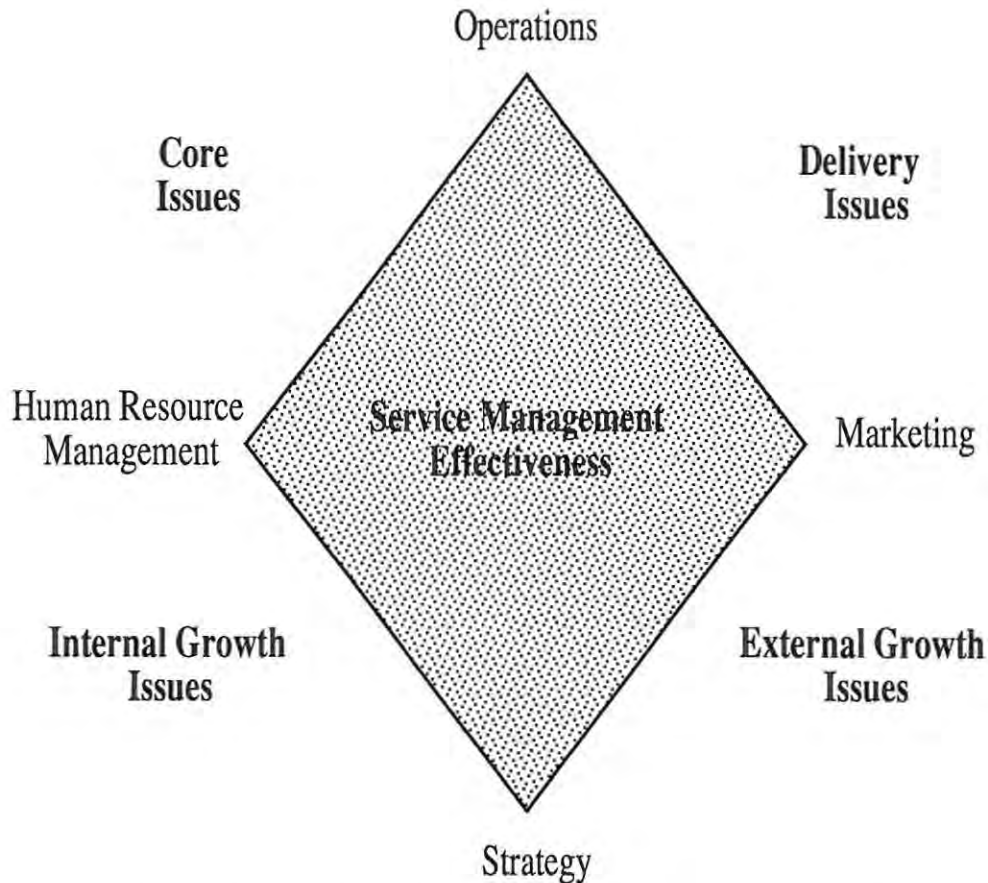
1.0 Introduction

The last five years of the 1980s and the first few years of the 1990s have seen a proliferation in the literature on the effective management of service organizations [Albrecht 1988; Carlzon 1987; Lovelock 1988; Mills 1986; Berry, Zeithaml and Parasuraman 1988; Zeithaml, Parasuraman and Berry 1990]. Rather than aid him or her, this multiplication has probably served more to confuse the concerned services manager. An almost bewildering array of variables must be considered. The dilemma has thus become one of focussing on the correct variables for managerial attention. This has certainly been highlighted by the competitive focus on service quality, which has probably dominated all of services literature since 1985 [Leonard and Sasser 1982; Berry, Zeithaml and Parasuraman 1985; Uttal 1987; Parasuraman, Zeithaml and Berry 1988; Langevin 1988; Lewis 1989]. A number of authors [Luchs 1986; Thompson, DeSouza and Gale 1985; Liswood 1989], have also highlighted that perceived higher service quality translates into substantially higher profits for services firms.

In order to make sense of the situation, services managers should be able to distinguish effectively between those variables common to successful competitive positioning in service organizations, and those linked to the implementation of specific competitive strategies. All service firms will need to address generic variables. However, managing variables specific to particular competitive strategies depends primarily on the careful articulation of desired competitive positions. The model depicted in Figure 1.1 considers the variables involved in four categories of strategic issues for decision making in service organizations: delivery issues, core issues and both internal and external growth issues. It will be obvious from the model that there is extensive interplay between functional and strategic areas within

service organizations. Indeed, this is so far more than is typically the case in manufacturing organizations. There are junctures between operations and marketing, operations and human resource management, human resource management and strategy, and strategy and marketing.

Figure 1.1
Types of Strategic Issues in Services Management [From Riddle 1990]



The primary reason services face unique strategic issues, is because of their intangibility - the one characteristic that fundamentally distinguishes them from goods. If the strategic issues of service quality as a tool for competitive advantage in the future are to be addressed, the focus must not only be on marketing and strategy issues, but also on the interplay between these issues and operational and human resource management issues. The primary concentration of this study is to consider the effects of organization structure on service quality measurement and its implications for strategy.

The development of the SERVQUAL instrument [Parasuraman, Zeithaml and Berry 1988] offered services marketers, perhaps for the first time, an apparently reliable, valid device for the measurement of service quality. If service quality is to be a mechanism for retaining competitive advantage by differentiation as proposed [Porter 1985; Day and Wensley 1988], then it has to be measured if it is to be managed. The rigorous development of the SERVQUAL instrument in the U.S.A. has led to its acceptance as a research tool in both academic and commercial applications. The scale development process involved, resulted in the identification of five broad dimensions of service quality, namely tangibles, reliability, responsiveness, assurance and empathy. However, recent work [for example, Carman 1990] has questioned some aspects of its general applicability, and more specifically facets of its validity.

The management of service quality is stationed within wider issues of organizational structure, philosophy and culture that can also influence service delivery and ultimately customer perceptions of service quality [Bowen and Schneider 1988; Gronroos 1984; Heskett 1987; Zeithaml, Berry and Parasuraman 1988]. This would seem to accentuate Carman's [1990] suggestion that SERVQUAL is not the last word on service quality measurement, and that much further work needs to be done in the field. There have as yet been no authoritative studies published as to the applicability of SERVQUAL outside the U.S.A. and with particular reference to this study, very few in South Africa [See for example Oosthuizen and Pitt 1991; Rigotti and Pitt 1992; Pitt, Bromfield and Nel 1991; Nel and Boshoff 1991].

1.1 Broad Objectives of this Study

As already referred to in Figure 1.1, there are continuous interfaces in service organizations between operations, marketing, human resource management and strategy. Far more so, indeed, than in most manufacturing organizations. Frequently in service operations, it is difficult to even distinguish between marketing activities, operations activities, and human resource activities. Many service industries and organizations are also characterised by the fact that customers play larger or smaller roles in the production and delivery of the service they themselves receive. This phenomenon has led to considerations in the classifications of service organizations. Again, conceivably, the quality of the service the customer receives will be much dependent on the kind of organization he or she receives it from. The broad objective of this study, therefore, is to consider the applicability of the SERVQUAL [Parasuraman, Zeithaml and Berry 1988] instrument in the measurement of service quality across different organizations, in a South African context.

1.2 Some Key Concepts

In order to conceptualise the major issues discussed in this work, it is necessary at this juncture to consider

some key concepts. The key concepts to be briefly expanded upon here are service, the characteristics of service, service quality, service quality measurement, and service organization typology.

1.2.1 Services

Services have been defined as those separately identifiable, essentially intangible activities, that provide satisfaction, and that are not necessarily tied to the sale of a product or another service. To produce a service may or may not require the use of tangible goods. However, when such use is required, there is no transfer of the title [permanent ownership] to these tangible goods [Stanton and Futrell 1987].

1.2.2 The defining attributes of services

Services possess certain attributes, or characteristics, which distinguish them from physical goods or manufactured products. The first defining attribute of services is that they tend to be *intangible*. Services are experiences, while products are objects that are possessed. Intangibility makes it difficult for management, employees and customers to assess the quality of a service. The second defining attribute of services, is that they tend to be *produced and consumed simultaneously*. There are thus no intermediate distribution linkages between the producer of a service and the customer in most instances. This is particularly true in the case of labour intensive services, where quality is created during the service encounter between the service provider and the customer. This simultaneity, or inseparability of services complicates the process of managing the supply of, and demand for services. It also means that frequently, low-paid, low-level operating staff in service organizations, such as customer contact personnel, bank tellers and hotel receptionists, play key roles in the company's overall effectiveness and the delivery of quality service. The third defining attribute of services is that *customers tend to participate in the production and delivery of the service* they consume. Service customers, therefore, act as producers as well as consumers. It is because customers perform these tasks that they have been labelled as "partial employees" of the service organization [Mills, Chase and Margulies 1983] or as part of the human resources mix of the services organization [Bowen 1986]. The participation of the customer thus makes it difficult to maximise the efficiency of the operation, or to offer and provide a consistent quality offering over time and across customers. This means that when active customers act as part-producers, services managers must control not only employees but also the behaviour of customers in order to operate effectively and deliver consistent service quality. In Chapter 3 the characteristics of services will be reconsidered in more detail.

1.2.3 Service quality

A common characteristic of the modern service quality literature, is that its attempts to define and model

service quality require interdisciplinary understanding. The definition of service quality requires knowledge from a number of disciplines apart from marketing - these include psychology, operations management, economics and business strategy. Not only is it necessary to contend with having to develop a definition of service or services, it is also required that the definition of quality be an adequate one. Quality has been defined in many ways, such as conformance to specifications, the degree to which customers' specifications are satisfied, a fair exchange of price and value, fitness for use, and doing it right the first time. Most of these concepts of quality have their foundations in goods-producing rather than services-producing businesses. Frequently these ideas about product quality are not always directly transferable to service quality, for as Parasuraman, Zeithaml and Berry [1985] point out, service quality is more difficult for the consumer to evaluate than goods' quality. Perceptions of service quality result from a comparison of the consumer's expectations, with actual service performance. Quality evaluations are, therefore, not made solely on the outcome of the service, but also involve evaluations of the "process" of service delivery. The customer obviously has fewer tangible cues when purchasing a service than when purchasing goods. Furthermore, definitions of service quality tend to differ by industry, and by the nature of the services provided. Perhaps the most widely recognized, and used definition of service quality today is that suggested by Parasuraman, Zeithaml and Berry [1985]. Essentially, they define service quality *from the customer's point of view, as a gap between the customer's expectations of a service and the customer's perceptions of the service received.*

1.2.4 Service quality measurement

A service-providing organization cannot evaluate service quality without reliable measures. Once the organization knows its relative competitive position with regard to service quality, it will be able to refine its service quality standards, design the service quality within the service delivery system to monitor and control service quality, and begin to use service quality as a competitive weapon. However, this will not be possible without having defined service and service quality parameters. While there may be some imposition in this process, this does not serve as an excuse for no measurement at all. Service managers must be able to quantify all [not only the tangible] attributes of the service package. As Crosby [1979] states: "*Anything can be measured if you have to do it.*" Researchers and practitioners may have to resort to using binary scales [yes or no] or ordinal scales [rank order] or even interval scales [in marketing research generally using ordinal scales assumed to have interval characteristics]. Whatever the approach, service quality must be measured if it is to be managed. There appears to be no simple definition of service quality measurement in the literature. However, having a definition of service quality and a definition of what measurement is, enables a fortuitous combination. Measurement has been defined as *the process of assigning numbers to objects to represent quantities of attributes* [Dillon, Madden and Firtle 1987]. The following definition of service quality measurement is thus proposed: *Service quality measurement is the process of assigning numbers to the difference[s] between the*

customer's expectations of the service of a provider, and the customer's perceptions of the actual service provided.

1.2.5 Service organization typology

A number of dimensions of service organizations have impact on the organization of work within those organizations. The shape of the organization and the nature of internal communication, structuring of jobs, the emphasis on continuity in contact with customers, and the means of support for frontline service, are typical dimensions which may be used to characterise and categorise service organizations. A *typology* is a multi-dimensional system of classification. It is generally the result of a series of statistical operations, through which subjects are compared with each other, and then grouped into a predefined number of categories - or "types". The differences inside the categories are minimised, and the differences across categories are maximised, according to pre-defined criteria. Typologies are thus useful ways of summarizing large amounts of information, and allow the researcher to reduce to manageable proportions, complex data sets [For a good brief discussion of typologies in marketing, see Alder 1991]. *Service organization typology for the purposes of this study, will refer to the kind of organization with which one is dealing, based on whatever characteristics are deemed relevant.*

1.3 Summary, and plan of the study

This chapter has served as an introduction to this study of the applicability of SERVQUAL, an instrument for the measurement of service quality, across a range of service organization typologies, with particular reference to the South African situation. A number of key concepts, including service, attributes of service, service quality, service quality measurement, and organization typology have been introduced and defined.

In the following chapters, the study will be expanded upon. Chapter 2 will provide the theoretical foundations for the development of the hypotheses to be tested in the study. In chapter 3 the applicable literature will be reviewed, with a focus on three areas: services marketing and service quality; the measurement of behavioural constructs in marketing with particular reference to the measurement of service quality; and, the various ways of classifying service organizations and the perspectives these propositions give the serious student of organization typology. Chapter 4 will focus on the statement of the problem, and the subsequent formulation of the hypotheses to be tested. The problem and hypotheses are [and will be] based in the literature, and a rationale for each will be given. Chapter 5 will describe the methodology to be used in the study and the rationale behind this. It will describe the sampling approach[es] to be used and the justification for these. It will also describe the use of the SERVQUAL instrument in the study, and the changes made to the original instrument for use under particular

Introduction - Broad Objectives, and Key Concepts

conditions. A brief description of the relevant statistical techniques to be used in the study, such as Coefficient Alpha [Cronbach 1951], factor analysis, and multiple regression, will be given, and the rationale behind their application in the study provided. The results of the study will be presented and discussed in Chapter 6. Finally, the study will be summarised in Chapter 7, recommendations made, and options for future research identified.

Chapter 2

Theoretical Foundations of the Study

2.0 Introduction

This study is grounded in theory concerning three areas, namely services marketing, with particular reference to service quality as a major strategy for differentiation; service quality and its measurement, with particular reference to the development and use of valid, reliable instruments for measurement; and, typologies of service organizations, where the different approaches to classifying, categorizing, and understanding organizations from various perspectives are of concern. This chapter will provide the theoretical foundations for the development of the hypotheses to be tested in the study. Research propositions will be developed based on the relevant literature and these will be used to form more specific hypotheses in Chapter 4.

2.1 Services marketing and service quality

The service encounter - that transaction, episode, or experience that the consumer has of the service supplier - has been the focus of much debate in the academic [Leonard and Sasser 1982; Quinn and Gagnon 1986], and the popular literature [Russell, Grant and Szonskl 1987; Peters and Waterman 1982; Carlzon 1987]. Is the service good or bad? How does the customer evaluate service? Can managers strive toward the achievement of excellent service quality? And, does it matter at the end of the day?

One concept on which there is much concurrence in the literature is that excellent service quality is where most organizations in recent times and in the future, have and will gain a competitive advantage in the business environment. A recent study [Roth and Van der Velde 1988] of the financial services industry in the United States, concluded that service was seen as the most critical element in the market place for the 1990s; that bankers would place as much emphasis on maintaining good relationships with existing clients as they would in acquiring new ones; and, that quality programmes would be the dominant factor in their operations strategies. In many other industries as diverse as retailing and telecommunications, leisure, medical and legal services, the importance of competing on the basis of service quality is emphasised.

Even in the case of goods manufacturing firms, the technical quality of a product is not always easy for a customer to evaluate. In these instances, customers frequently depend on complimentary, peripheral, and supporting services that accompany the purchase of this product, to evaluate the overall purchase. Collier [1990] emphasises "that most customers can't and don't evaluate the technical quality of the

physical product but focus most of their attention on the facility, the people, and the service delivery process associated with the purchase. Service quality is where a competitive advantage is gained in the market place.” There is considerable evidence that service quality is directly related to a firm’s profitability. For service quality to be a key differentiation tool, it therefore has to be measured.

Delivering superior service quality appears to be a prerequisite for success if not survival of most businesses in the 1980s, 1990s and beyond [Parasuraman, Zeithaml and Berry 1988]. The intensification of competition, and the rapid deregulation occurring in most industries will lead companies to seek profitable ways of differentiating themselves. The delivery of high service quality will be a key differentiation strategy for most organizations [Rudie and Wansley 1985; Thompson, De Souza and Gale 1985]. Mechanisms must therefore be found for the definition and measurement of service quality, for it to be managed toward the achievement of competitive advantage and effective differentiation.

Research Proposition 1: That, despite features and characteristics that make the country, markets and particular business situations unique, service quality is of no lesser importance in South Africa. Therefore, instruments used to assess and manage service quality in other parts of the world, should be applicable in South Africa.

2.2 Service quality: Development of a construct

The recent practitioner interest in service quality, its definition and application has been paralleled by active researcher interest and work in the identification and measurement of service quality and its dimensions. As authorities in the area of goods quality [Crosby 1979; Garvin 1983] have suggested, the quality of manufactured products can be measured in a [relatively] more objective way by such indicators as durability, reliability, aesthetics, and the number of defects. Service quality is a much more abstract and elusive construct because of the features unique to service, namely intangibility, heterogeneity, and the inseparability of production and consumption. As Parasuraman, Zeithaml and Berry [1985] point out, the measurement of service quality is far less objective from a quantitative point of view. In the absence of objective measures, an appropriate approach for assessing the quality of a firm’s service is therefore to measure consumers’ *perceptions* of quality.

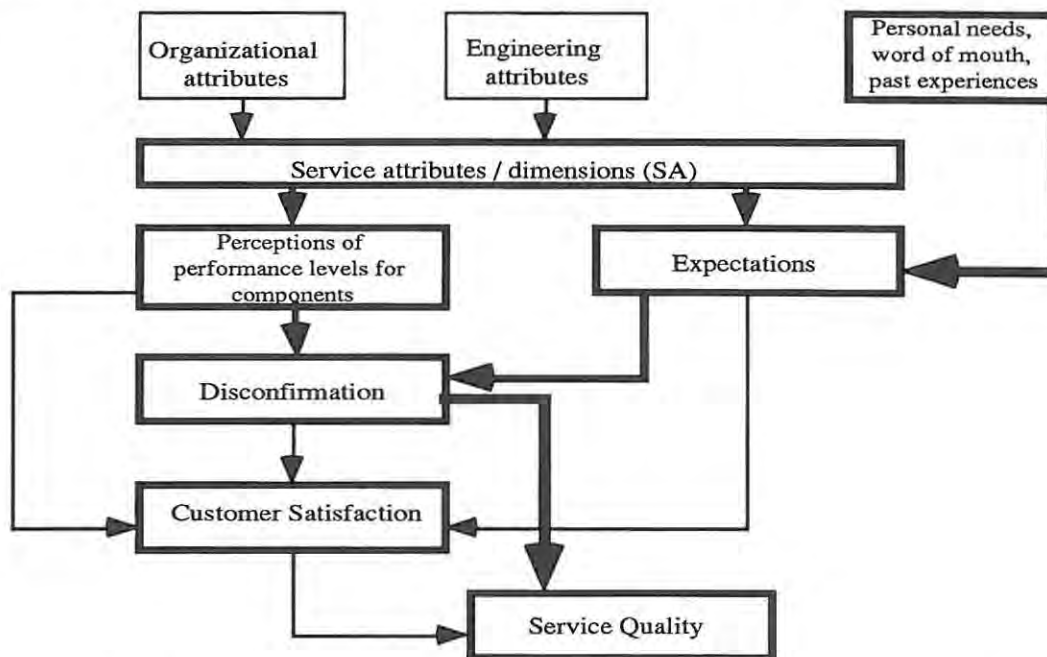
2.3 Customer satisfaction and service quality - some theoretical aspects

Recent literature [Holbrook and Corfman 1985; Olshavsky 1985] has distinguished between customers’ satisfaction with respect to a specific transaction and their overall, or global evaluation of a service. Satisfaction is characterised by the surprise a customer experiences after a purchase (service encounter), argues Oliver [1981]. This surprise eventually becomes an input, to a less dynamic “attitude”.

Satisfaction can, therefore, be considered to influence the customer's evaluation of service quality, purchase intentions and behaviour [La Barbera and Mazursky 1983].

Customer satisfaction or dissatisfaction according to the disconfirmation literature [Cardozo 1965; Oliver 1980; Olshavsky and Miller 1972; Olson and Dover 1976], is a function of the *disconfirmation* arising from discrepancies between prior expectations and actual performance. It is demonstrated that expectations and perceptions of performance levels affect customer satisfaction directly, as well as indirectly via disconfirmation. Tse and Wilton's [1988] experimentation showed that perceived performance exerts a direct influence on customer satisfaction or dissatisfaction, in addition to the influences from disconfirmation or expectations. These linkages are illustrated in Figure 2.1 by the thin solid lines.

Figure 2.1
Consumer Satisfaction and Service Quality [After Bolton and Drew, 1991a, adapted]



Expectations, performance evaluations, and disconfirmation do not necessarily have independent and additive effects for every product or service. As Churchill and Surprenant [1982] demonstrated, consumer satisfaction or dissatisfaction with a non-durable good is a function of all three constructs, whereas consumer satisfaction or dissatisfaction with a durable good is thoroughly a function of performance evaluations. Therefore, expectations, performance evaluations and disconfirmation are potential antecedents of consumer satisfaction or dissatisfaction with a service [Bolton and Drew 1991b]. Oliver [1989] suggests that customer responses concerning continuously provided services, or long lasting durables, are marked by passive expectations and, therefore, that disconfirmation will not operate

unless performance is outside the range of experience-based norms. Hence, customers' assessments of continuously provided services, such as public utilities or cable television, may depend on performance evaluations only [Bolton and Drew 1991a].

The work of Parasuraman and his colleagues [Parasuraman, Zeithaml and Berry 1985; 1988; 1990] suggests that quality of service from the customer's point of view can be quantified by obtaining measures of expectations and perceptions of performance levels for service attributes. Then the difference between expectations and perceptions of actual performance can be calculated and averaged across attributes. They also propose that expectations are influenced by such factors as personal needs, word of mouth communication, last experiences, and communication by the marketer. These authors have not yet discussed what the determinants of perceptions in their model are. Certainly and obviously, they would be influenced by aspects of the service delivery process. The theoretical linkages proposed by Parasuraman and his colleagues, are illustrated by the thick lines in Figure 2.1. Consumer satisfaction or dissatisfaction, and perceived service qualities, have been postulated by Bolton and Drew [1991a], to be influenced by the gap between expectations and perceptions of performance (that is, disconfirmation). As they point out, however, the consumer satisfaction/dissatisfaction literature suggests a more complex model in which disconfirmation, expectations, and actual service performance levels affect customer satisfaction, which in turn becomes an input to the customer's perception of service quality. Figure 2.1 illustrates this. The implication is that customers' perceptions of service quality are directly affected by disconfirmation and indirectly affected by disconfirmation, expectations and actual performance levels [via customer satisfaction or dissatisfaction]. This means that the customers' levels of satisfaction or dissatisfaction, and indeed the customers' perceptions of service quality will be dependent not only on the actual service quality but on the organization providing the service. More specifically one would be concerned with the nature or typology of the organization providing the service. It would thus be imperative to consider organization typologies in any subsequent measure of service quality.

2.4 The SERVQUAL Instrument: Reliability and Validity

In most marketing and marketing research studies, the researcher is compelled to work with abstracts of real world phenomena. These abstracts are typically referred to as "constructs", so that a construct is the name given to characteristics that require measurement. In other words, a construct is the term given to an abstraction formed for a specific research purpose. So, for example, to talk in general terms of service quality, might mean that it has to do with how the consumer feels about the service he or she receives[d], or about whether it was more or less what he or she expected. However, when used in a research setting, service quality becomes a construct that must be specifically defined and measured by the researcher. Parasuraman, Zeithaml and Berry [1988] defined the service quality construct as the discrepancy, or gap, between the consumer's expectations of a service, and his or her perceptions of the service received.

They proposed a 22 item instrument, a questionnaire called SERVQUAL, as being suitable for measuring the construct of service quality.

After the construct has been constitutively defined, its measurement definition determines the specific questions to be asked, and how numbers are to be assigned. Because the conclusions drawn about the construct are ultimately determined by the responses to the questions asked, it is necessary to consider the properties of the measurement instrument itself. There are two standard measurement criteria: *reliability* and *validity*. Reliability indicates *the precision of measurement scores, or how accurately such scores will be reproduced with repeated measurement*. As such, reliability has to do with the extent to which measures are free from random error, and yield constant results. Coefficient alpha (α) [Cronbach 1951] is the most commonly accepted formula for assessing the internal consistency of a multi-item measurement scale. Computationally, α is given by:

$$\alpha = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum_{i=1}^k \sigma_i^2}{\sigma_T^2} \right)$$

where

k = the number of items in the measurement scale

σ_i^2 = variance of the i th item

σ_T^2 = variance of the entire measurement scale

Research Proposition 2: That, despite features and characteristics that make the country, markets and particular business situations unique, instruments used to assess and manage service quality in other parts of the world, and with demonstrated reliability, should maintain their reliability in South Africa.

Broadly speaking, validity refers to *the extent to which differences in observed measurement scores reflect true differences in the characteristic being measured*, although, as will be indicated, there are a number of other important facets of validity which bear discussion.

Peter [1981] argues that construct validity is a necessary condition for theory development and testing because construct validity pertains to the degree of correspondence between constructs and their measure. His overview (and the procedure suggested by Churchill [1979]) of construct validity and construct validation have been followed by serious marketing researchers in recent years in the development of instruments for the measurement of marketing constructs. Peter indeed posits that

reliability is also an operational issue in the validation of constructs, and along with convergent validity, discriminant validity, and nomological validity are components of what he calls trait validity. Dillon, Madden and Firtle [1987] also suggest that content validity be considered. Any serious attempts at determining and testing the reliability and validity of measuring instruments in marketing should therefore assess these components.

Content validity is an indication of the representativeness of the content of a measurement scale. It focuses on whether the scale items adequately cover the entire domain of the construct under study. Convergent validity, is for purposes of this study a similar component, and is based on the correlation between responses to maximally different measuring methods of measuring the same construct. Content validity of the SERVQUAL instrument, for example, should be satisfied by this question: Does the SERVQUAL scale appear to measure what it is supposed to? Convergent validity should be answered by this question: Does a measure of service quality determined by SERVQUAL correspond with other measures of service quality?

Nomological validity refers to an observed relationship between measures purported to assess different (but conceptually related) constructs. If two constructs (C_1 and C_2) are conceptually related, evidence that purported measures of each (M_1 and M_2) are related, is usually accepted as empirical support for the conceptual relationship. Nomological validity in the case of the SERVQUAL scale is indicated if, in a factor analysis, items expected to load together, actually do so.

Discriminant validity is an indication of the extent to which the measurement scale is novel, and not simply a reflection of some other variable. Discriminant validity in the case of the SERVQUAL scale is indicated in a factor analysis, if the factors, and their items, are truly different from one another.

Research Proposition 3: That, despite features and characteristics that make the country, markets and particular business situations unique, instruments used to assess and manage service quality in other parts of the world, and with demonstrated convergent validity, should maintain their convergent validity in South Africa.

Research Proposition 4: That, despite features and characteristics that make the country, markets and particular business situations unique, instruments used to assess and manage service quality in other parts of the world, and with demonstrated nomological validity, should maintain their nomological validity in South Africa.

Research Proposition 5: That, despite features and characteristics that make the country, markets and particular business situations unique, instruments used to assess and manage service quality in other parts of the world, and with demonstrated construct validity, should maintain their construct validity in South Africa.

Research Proposition 6: That, despite features and characteristics that make the country, markets

and particular business situations unique, instruments used to assess and manage service quality in other parts of the world, and with demonstrated discriminant validity, should maintain their discriminant validity in South Africa.

In their rigorous development of the SERVQUAL scale, Parasuraman, Zeithaml and Berry [1988] subjected it to testing for reliability, and for the other dimensions of validity discussed above. In subsequent work in this regard, a number of authors [Carman 1990; Babakus and Boller 1991; Brensinger and Lambert 1990; Finn and Lamb 1991; and partially by Lewis 1991] have examined the reliability and validity of SERVQUAL under a variety of situations and in a number of industries. So far, however, no direct attempts and comparisons have been made to assess the reliability and validity of SERVQUAL across various types of service organizations, and there has been scant published work on these aspects of the instrument outside of the USA, and specifically, in South Africa.

2.5 The Effect of Service Organization Type on the Measurement of Service Quality

Several characteristics of service organizations impact on the organization of work within those organizations. Among the frequently used attributes to characterize service organizations are the shape of the organization and the nature of internal communication, structuring of jobs, the emphasis on continuity in contact with customers, and the means of support for frontline service. A service organization *typology* provides a way for service organizations to be compared with each other, and then grouped into a predefined number of categories - or "types". While hotels may be very different from each other individually, the simple typology "hotel" at least conveys the meaning of an organization whose primary business involves providing accommodation, meals and refreshments. So, while Hotel A (a luxury five star in a large city) may differ substantially from Hotel B (a 12 room one star in a small country town), they have more in common with each other, than either of them does with a bank, a motor dealer, an airline or a primary school. There have been a number of schemas, or typologies, developed for the classification of service organizations, which will be discussed in Chapter 3. The question to be asked with regard to service quality, then, is, "Does its measurement depend on the type of organization?" In their development of the SERVQUAL instrument, Parasuraman, Zeithaml and Berry [1988] make mention of the fact that *it is a generic instrument*, as appropriate to the measurement of the service quality of a hotel (be it a 5 star or a 1 star), as to a bank, as to a motor dealer, airline, or primary school. While their original development testing of the instrument indicated it to be reliable and valid across five different kinds (narrow typologies) of organizations, it would seem appropriate to further test it, using another typology, and of course, across a new set of organizations. As will be seen in Chapter 3, the Larsson-Bowen Service Organization Typology [Larsson and Bowen 1989] is suggested as a most suitable one, which categorizes four basic types of service organizations. If SERVQUAL is truly reliable and valid, it should be reliable and valid for each of the organization types in this model.

Research Proposition 7: That, despite features and characteristics that make the organization types within the Larsson-Bowen Service Organization Typology and their particular business situations unique, service quality is of no lesser importance in any of them. Therefore, instruments used to assess and manage service quality should be applicable in all organizations.

Research Proposition 8: That, despite features and characteristics that make the organization types within the Larsson-Bowen Service Organization Typology and their particular business situations unique, instruments used to assess and manage service quality, and with demonstrated reliability, should maintain their reliability regardless of organization type.

Research Proposition 9: That, despite features and characteristics that make the organization types within the Larsson-Bowen Service Organization Typology and their particular business situations unique, instruments used to assess and manage service quality, and with convergent validity, should maintain their convergent validity regardless of organization type.

Research Proposition 10: That, despite features and characteristics that make the organization types within the Larsson-Bowen Service Organization Typology and their particular business situations unique, instruments used to assess and manage service quality, and with nomological validity, should maintain their nomological validity regardless of organization type.

Research Proposition 11: That, despite features and characteristics that make the organization types within the Larsson-Bowen Service Organization Typology and their particular business situations unique, instruments used to assess and manage service quality, and with construct validity, should maintain their construct validity regardless of organization type.

Research Proposition 12: That, despite features and characteristics that make the organization types within the Larsson-Bowen Service Organization Typology and their particular business situations unique, instruments used to assess and manage service quality, and with discriminant validity, should maintain their discriminant validity regardless of organization type.

2.6 Summary

This study has considered theory concerning three areas, namely services marketing, with particular reference to service quality as a major strategy for differentiation; service quality and its measurement, with particular reference to the development and use of valid, reliable instruments for measurement; and, typologies of service organization, where the different approaches to classifying, categorising, and understanding organizations from various perspectives are of concern. The chapter has provided the theoretical foundations for the development of the hypotheses to be tested in the study. Research propositions have been developed based on the relevant literature, and these will be used to model and form more specific hypotheses in Chapter 4.

Chapter 3

Services Marketing, Service Quality and Service Organization Typologies

3.0 Introduction

In this chapter the applicable literature will be reviewed, with a focus on three areas: services marketing and service quality; the measurement of behavioural constructs in marketing with particular reference to the measurement of service quality; and, the various ways of classifying service organizations and the perspectives these propositions give the serious student of organization typology.

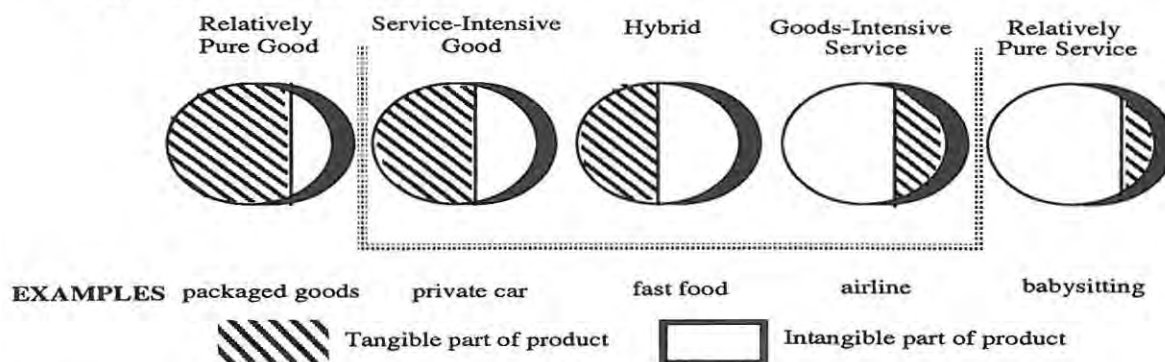
3.1 The Distinctive Nature of Services and Services Marketing

Whereas it would have been justifiable ten years ago to talk of a dearth of literature on services and services marketing, this would be deniable today. Recent years have seen considerable theoretical and empirical developments in the services marketing literature. This body of knowledge is characterized by certain basic assumptions [see for example the early work of Rathmell 1966; Berry 1980; Kotler 1980] concerning first, certain unique characteristics of services; and, second, that these characteristics present bothersome difficulties, if not problems, to services marketers.

The importance of service is constantly increasing in most economies [Gronroos 1988], and service is becoming exceedingly vital to success for manufacturers of goods as well [see for example Cravens, Holland, Lamb, and Moncrief 1988; Light 1986]. Service is very frequently referred to as the definitive competitive tool [Kyj 1987; Coppett 1988] and some writers [Quinn and Gagnon 1986] have warned that services, if not managed suitably could follow manufacturing into decline, as inattention to quality, emphasis on scale economies, and short-term orientation predominates. Indeed, Levitt [1981] has questioned the services-goods dichotomy, and states that all products, whether they are services or goods, possess a certain amount of intangibility, perhaps the fundamental difference between the two referred to by most other writers. It is this intangibility which is seen as being the fundamental distinguishing characteristic of services. As Kotler [1988] defines a service it is: "*...any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product.*"

Is there such a thing as a pure service? Or for that matter a pure product? Taking Levitt's [1981] argument a little further, Shostack [1977] argues for a goods-services continuum. This is illustrated in Figure 3.1. As is postulated in Figure 3.1, a pure "good" or a pure "service" does not really exist. Rather, all products have certain service characteristics, and there are tangible product attributes associated with all services. It thus makes more sense to talk of a "relatively pure good" at the product extreme of the spectrum, and of a "relatively pure service" at the service end. Packaged goods, such as frozen foods, typically involve little, if any service to the final consumer. Baby-sitting involves an almost pure "performance", of which little or nothing is tangible. While a private car is a good, there is quite a substantial component of pre- and post-sale servicing inherent in the sale thereof. Similarly, while air travel is a service, the consumer of an air ticket from a point of departure to a destination is exposed to a number of product tangibles, such as aircraft, equipment, drinks and meals. A good example of a service-good hybrid is fast food, where the mix between physical product [a hamburger or fried chicken take-away, for instance] and the service [waiting, ordering, being served by a member of the personnel, and having the food prepared and packaged] is in almost equal proportions. Shostack [1977] suggests that strategies should be formulated to continually attempt to move from beyond the "boundaries of pureness" in Figure 3.1 to within, in order to make marketing more effective. Thus packaged goods manufacturers can add more service to [or "servitise"] such products as frozen foods, by offering a toll-free information service, and recipe booklets. Baby-sitting services can "tangibilise" the service by providing new toys for children on loan every time the baby-sitter visits them.

Figure 3.1
The Goods-Service Spectrum



Source: Adapted from G. Lynn Shostack, "Breaking Free From Product Marketing", in *Journal of Marketing*, April 1977, pp 73 - 80

As Zeithaml, Parasuraman and Berry [1985] have it, the rationale for treating services marketing differently centres on the existence of a number of characteristics of services which are consistently cited. These not only make the marketing of services seemingly more difficult for the practitioner, but more pertinently to this study, the measurement of service quality, a more formidable task.

3.1.1 The Distinctive Characteristics of Services

The existence of a number of characteristics of services, consistently cited in the literature [Bateson 1977; Berry 1980; Lovelock 1981; Rathmell 1966, 1974; Shostack 1977] provide the rationale for a separate treatment of services marketing. These characteristics are: intangibility, inseparability of production and consumption, heterogeneity, and perishability. It should be noted that a number of authors have disputed the need for a separate treatment of services in marketing. These authors include Bonoma and Mills [1979], Enis and Roering [1981], and Wyckham, Fitzroy and Mandry [1975]. However, most of the proposed difficulties in studying the quality of service result from the unique characteristics thereof. Therefore, these characteristics bear discussion.

3.1.1.1 Intangibility

Intangibility stems from the fact that services are performances which cannot be seen, touched, tasted or smelled. Neither can they be possessed. Intangibility relates to the difficulty that consumers may have in understanding the service offering. While services may have a few tangible attributes, typically called search qualities that can be viewed prior to purchases or up to purchase, the resulting marketing problems of intangibility are significant. Services cannot be stored, protected through patents, readily displayed or communicated, or the quality thereof assessed effectively. When consumers cannot view a product in advance and examine its properties, they may not understand exactly what it is that they are being offered. Even when consumers gain sufficient knowledge about service offerings, they may not be able to evaluate the possible alternatives. On the other hand, services are rich in experience and credence qualities [Zeithaml 1981].

Experience qualities are those qualities of service that can be assessed only after purchase and consumption thereof. Credence qualities are those qualities of service that cannot even be assessed after purchase and consumption - for example, a heart operation is a service high in credence quality, for, even after the operation, most consumers are not knowledgeable enough to assess the quality thereof.

3.1.1.2 Inseparability

Inseparability of production and consumption involves the simultaneous production and consumption which characterises most services. This is related to intangibility. Whereas goods are first produced, then sold, then consumed, services are first sold and then produced and consumed simultaneously [Regan 1963]. A medical examination is an example of simultaneous production and consumption. The practitioner cannot perform this service without the patient's presence, and the consumer is actually involved in the production process [Carman and Langeard 1980]. This inseparability means that the

producer and the seller are the same entity, which makes direct distribution the only possibility in most cases [Upah 1980]. Marketing and production, typically separated in most manufacturing organizations, need therefore to be highly interactive in service organizations [Gronroos 1978]. Because of high consumer involvement in the production and consumption of most services, the standardization and control thereof are difficult to maintain. The implications for service quality and the measurement and management thereof are thus obvious.

3.1.1.3 Heterogeneity

Because most services are labour intensive, they are susceptible to heterogeneity. Most services are performed by people, and people do not always perform consistently. There may be variation from one service to another within the same organization, variation in the service a single individual provides from day to day, and from customer to customer. Thus standardization and quality of service are extremely difficult to control. However, this also leads to large opportunities for the customisation of services in order to meet customers' specific needs. Because of these factors, service marketers often face the dilemma of providing efficient standardized service at some acceptable level of quality, while simultaneously attempting to treat each customer as a unique individual. Giving good service is a major concern of all service organizations and this is often translated into a more personalized service [Surprenant and Solomon 1987].

3.1.1.4 Perishability

Because production and consumption of services are simultaneous, services are also characterized by perishability. Perishability means that services cannot be saved [Bessom and Jackson 1975]. Capacity, unused in one time period, cannot be stock-piled or inventoried for future time-periods. Air-lines flying with empty seats cannot store them for busy periods. Hotels with empty rooms during the week cannot keep them for busy week-end or holiday periods. Service perishability, therefore, presents problems very different from the supply and demand problems typically encountered in the manufacturing and marketing of goods [Berry, Zeithaml and Parasuraman 1984].

3.1.2 Some Aspects of Services Marketing

One important point which should not be overlooked by services marketers is that the marketing concept is equally applicable to goods and services. Services marketers, therefore, must strive to provide bundles of benefits that satisfy the needs of consumers [Enis and Roering 1981]. Services marketers need to define target markets and develop marketing mixes, the basic requirements of any marketing strategy. Berry [1987] has proposed seven ideas to consider when developing a service marketing strategy. These ideas include the option that marketing should occur at all levels in the organization; that there should

be flexibility in providing the service; that high quality personnel should be recruited and maintained within the organization; that existing customers should form a focal group for all organizations; that organizations resolve quickly any problems in the provision of service; that high technology should be employed to provide improved services at a lower cost; and, that where possible, the service should be branded.

3.1.3 Strategic Implications of Service Quality

In the words of Tom Peters [1988], the long ignored evidence in management is that quality equals profit. Until 1985 the PIMS [See Buzzell and Gale 1987; PIMSLETTER no. 4; PIMSLETTER no. 31], or Profit Impact of Market Strategy research programme had proposed that share of the served market was the most significant factor impacting on return on investment and other measures of profit. Re-analysis of the data has led to a more compelling reasoning: While high market share may result in higher returns, sustainable market share comes through enhanced quality of product and service compared to competitors, as perceived by the customer. The PIMS researchers now aver to [relative] quality of product and service as “the most important single factor affecting a business unit’s long-term performance.” The relationship between quality and returns on investment and sales is also illustrated graphically in Figure 3.2a, and with specific reference to service quality in Figure 3.2b.

Buzzell and Gale [1987] make the point that quality boosts performance in two ways:

- *In the short run superior quality yields increased profits through premium prices. Their research shows companies ranked in the top third on relative quality to be able to command a price edge of 6% above those in the low third.*
- *In the long run, the quality route is the more effective way for organizations to grow. Quality leads to gains in both market expansion and market share.*

Figure 3.2a
The relationship between overall quality and returns on investment and sales

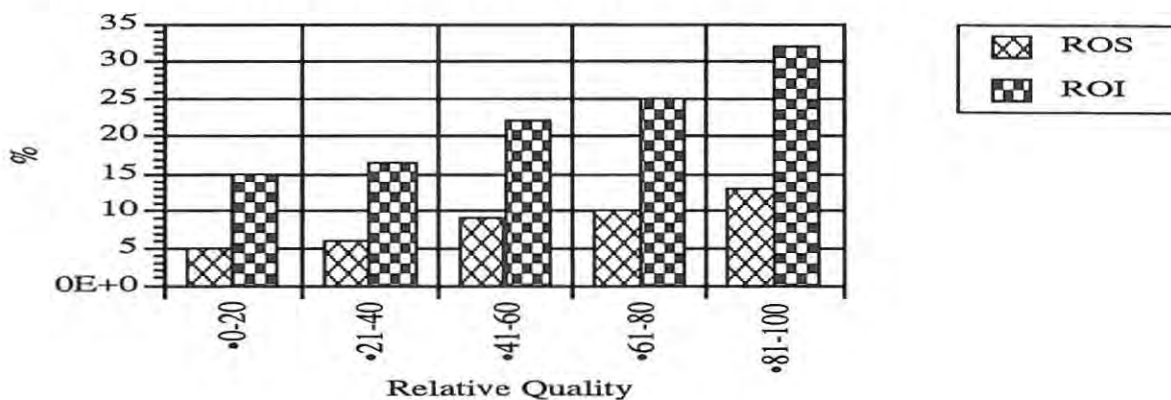
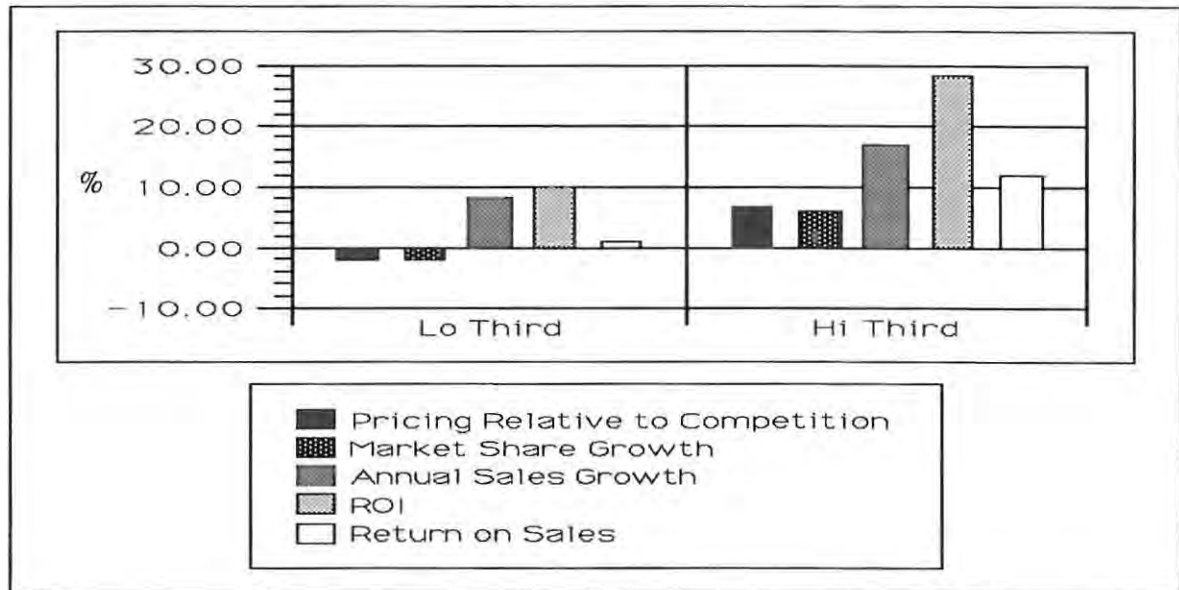


Figure 3.2b
The effects of service quality on key performance areas in organizations



Luchs [1986] expounds on this theme by identifying quality as the sharpest competitive weapon available to most businesses, also citing data from PIMS studies. He emphasises the fact that there is a competitive dimension to quality: the customer constantly compares a product with that of competitor companies. Luchs summarizes several analyses with the statement “quality is clearly one of the most vital strategic variables for businesses to consider.” De Souza [1989] refers to the results of the Technical Assistance Research Program [TARP] study on quality and complaint management commissioned by the U.S. federal government in 1984: “Less than one out of six of all major quality problems are reported and nine out of ten buyers never repurchase from offending companies. . . customers don’t complain - they just don’t come back.” These themes have been expanded upon by various authors in recent times [See Baum 1990; Blackiston 1988].

A perhaps unexpected concept in current quality-related literature is that high quality does not necessarily mean more cost to a company [Luchs 1986; Martin 1987]. Proponents of this idea argue that a company incurs many hidden costs as a result of not doing things right the first time. Further support for the desirability of quality goods and services comes from a study of employee perceptions on the performance of retail stores. Weitzel, Scharzkopf, and Peach [1989] found in their study that, after store size, employees perceptions of quality of service to customers was the major predictor of sales. This finding emphasises the all-encompassing nature of quality.

Porter [1985] asserts that an organization can attain a position of advantage in two ways: through lowest

delivered cost; or, through differentiation. Only one organization in any industry or market can attain the lowest delivered cost position, so for all the others effective differentiation will be the only means of ensuring survival. This differentiation occurs when some value-adding activities are performed in a way that leads to perceived superiority along dimensions that are coveted by customers. For many - perhaps too many - organizations, the chosen differentiation route is that of superior service [see for example, Kyj 1987; Heil and Tate 1990; Holpp 1990; Kasper and Lemmink 1989; O'Connor, Powers, and Bowers 1988; Quinn and Gagnon 1986; Ribourdale, Matteis and Helgesen, 1989; Sherden 1988; Shetty and Ross 1985; Sonnenberg 1989; Wellins 1989]. For this strategy to be profitable, customers must be willing to pay a price premium for the benefits [superior service], and this must exceed the added costs of providing the superior service.

A recent study [KSAMI] has indicated customer service and product quality to be the first and second most important marketing issues facing South African marketing managers in the next ten years [Nel, Pitt, Marks and Nel, 1989]. Davidow and Uttal [1989] have also identified customer service as the critical issue of the Nineties in their comprehensive work on service in the United States. Customer service therefore represents a significant part of industry's offerings in the market place, and, due to the nature of these offerings, the concept of quality has complexities that are not frequently encountered in the traditional goods market.

Service quality has thus been shown to have a profound and substantial impact on the financial and strategic performance of organizations. It is essential for organizations to develop and build adequate measures of service quality, and to implement these. For by doing this they will be ensuring that they come to grips with one of the fundamental predictors of performance.

3.2. The Construct of Service Quality

As Crosby [1979] has stated: "Quality is an elusive and indistinct construct. Often mistaken for imprecise adjectives like *'goodness, or luxury, or shininess, or weight'*". Quality and its requirements are therefore not easily articulated by customers. Until recently most successful efforts in defining quality have come from the manufacturing sector, ranging from Japanese views such as "zero defects" and doing things right first time, through Crosby's [1979] "conformance to requirements", to David Garvin's [1983] views of quality as being both internal [eliminating faults before the product leaves the factory] and external [eliminating failures after the product leaves the factory]. In the late 1970s, and in the early 1980s, however, service quality also began to receive attention in the marketing literature [see Gronroös 1982; Lewis and Booms 1983; Sasser, Olson and Wyckoff 1978; Martin 1986a; 1986b]. Cravens, Holland, Lamb and Moncrief [1988] provide an excellent overview of some attempts to come to grips with the definitions of both product and service quality.

Parasuraman, Zeithaml, and Berry [1985] identify three themes relevant to service quality:

Service quality is more difficult for the consumer to evaluate than goods quality.

Service quality perceptions result from a comparison of consumer expectations with actual service performance.

Quality evaluations are not made solely on the outcome of a service; they also involve evaluations of the process of service delivery.

As early as the 1970s, authors such as Nelson [1974], and Darby and Karni [1973] proposed frameworks for isolating differences in the evaluation of quality for goods and services. These authors distinguished between three categories of properties of goods that would influence the consumers' evaluation process:

Search properties: attributes that a consumer can determine prior to purchasing a product.

Experience properties: these attributes can only be discerned after purchase or during consumption.

Credence properties: characteristics which the consumer may find impossible to evaluate even after purchase and consumption.

In general, offerings high in search properties are easiest to evaluate, those high in experience properties more difficult to evaluate, and those high in credence properties hardest to evaluate [Parasuraman, Zeithaml, and Berry 1985]. Most services contain few search properties and are high in experience and credence properties, making their quality more difficult to evaluate [Zeithaml 1981]. And of course, this is exacerbated by the service characteristics already referred to - intangibility, heterogeneity and inseparability

Most researchers and practitioners would now concur that service quality involves a comparison by the customer of expectations with performance, and that obviously no one but the customer/consumer/client/user is able to make this definition [Boothe 1990]. According to Lewis and Booms [1983], service quality is a measure of how well the service level delivered matches customers' expectations. Therefore delivering service quality means conforming to customers' expectations on a consistent basis. Gronroos [1982] contends that consumers compare the service they expect with their perceptions of the service they receive in their evaluation of service quality. Satisfaction with service can thus be related to the disconfirmation paradigm proposed by Churchill and Surprenant [1982]. This posits that satisfaction is related to the magnitude and path of the disconfirmation experience, where disconfirmation is related to the individual's initial expectations.

Since that time, disconfirmation theory has received much attention in the service quality [specifically], and customer satisfaction [generally] literature [see Assael and Kamins 1989; Bitner 1990; Cronin and Morris 1989; Kamins and Assael 1987; Oliver and Bearden 1985; Oliver and DeSarbo 1988; Oliver and Swan 1989; Swartz and Brown 1989; Tse and Wilton 1988; Wilton and Myers 1986]. Before discussing the “quality as perception” approach which forms the base of the propositions to be researched in this study [Parasuraman, Zeithaml and Berry 1988] it is therefore useful to consider the relationships between service quality, attitudes and satisfaction. Researchers have generally distinguished between two constructs, *customer satisfaction* and *attitude*. Customer satisfaction is the customer’s post-purchase evaluation of a product/service offering [Hunt 1977]. The customer is satisfied when the offering exceeds expectations, and is dissatisfied when the product/service does not perform as expected. Customer satisfaction or dissatisfaction is typically modeled as a function of disconfirmation, arising from discrepancies between prior expectations and actual performance [Cardozo 1965; Olshavsky and Miller 1972; Olson and Dover 1979]. Customer attitude, in contrast, alludes to an overall evaluation of the product/service, rather than to a global evaluation of a specific transaction [Holbrook and Corfman 1985; Olshavsky 1985]. It can thus be argued that satisfaction eventually becomes an input to a less dynamic attitude, although the distinction between the two can become somewhat confused for frequently provided services [Bolton and Drew 1991b]. Attitude is the customer’s global evaluation of the product/service offering, and recent research in services marketing has centred on the customer’s evaluation of the overall excellence or superiority of the service. This has culminated in the work of Parasuraman, Zeithaml and Berry [1985; 1988]. There are thus two sides to the service quality equation - namely expectations [Cadotte, Woodruff, and Jenkins 1987; Cronin and Morris 1989; Swartz and Brown 1989], and perceptions [Becker and Wellins 1990; Bertrand 1989; Hensel and Baumgarten 1988; LeBlanc and Nguyen 1988; Tabacchi and Marshall 1988].

3.2.1 Models of Service Quality

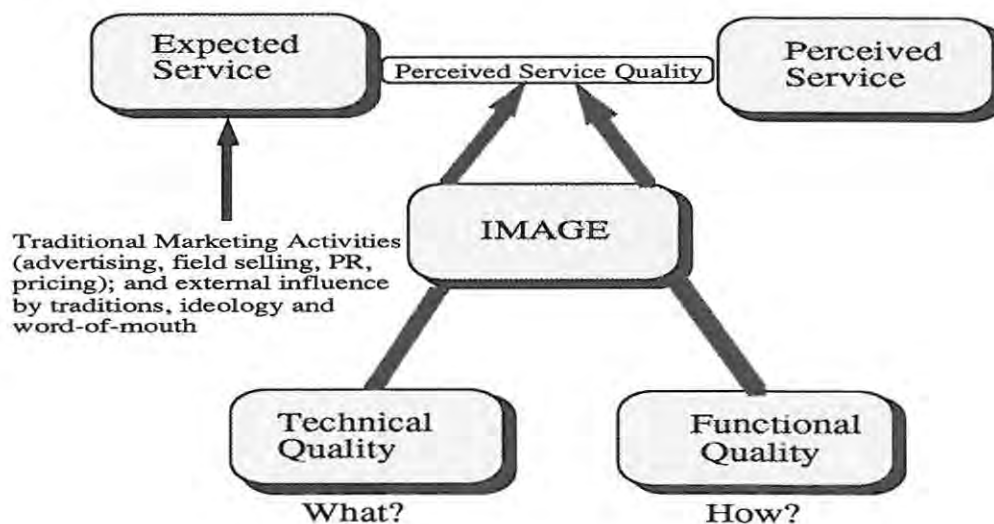
Models of complicated phenomena make latter explication thereof simpler for both researchers and practitioners. While there have been a number of conceptualizations of the construct [see for example Haywood-Farmer 1988], two of the best-known “models” of service quality are considered briefly here. They are Gronroös’s [1984] model of service quality, and the so-called “gaps” model of service quality of Parasuraman, Zeithaml and Berry [1985].

3.2.1.1 Gronroös’s [1984] Service Quality Model

Gronroös’s model of service quality theorises that the perceived service is the result of a consumer’s view of a bundle of service dimensions, some of which are technical and some of which are functional in nature. When this perceived service is compared with the expected service, the customer’s perceptions

of service quality result, as illustrated in Gronroös's model in Figure 3.3. In this sense Gronroös's propositions do not differ significantly from other service quality literature, nor from the disconfirmation theory referred to, nor from the "gaps" model of Parasuraman, Zeithaml and Berry [1985]. An interesting aspect to Gronroös's model, however, which is not generally alluded to in the North American literature, is what he refers to as the "third quality dimension", namely image. He asserts that service firms cannot hide behind brand names or distributors - that the customer will always perceive and internalise the image in service encounters, and that *corporate image* is of utmost importance to service firms [see also Bessom and Jackson 1975 in this regard]. The expectations of customers are influenced, according to Gronroös, by their view of the company - in other words, its image. And, in turn, image, is the result of how customers perceive the firm.

Figure 3.3
Gronroös's Service Quality Model



3.2.1.2 The Parasuraman, Zeithaml and Berry [1985] "Gaps" Model of Service Quality

Parasuraman, Zeithaml, and Berry [1985] proposed a model of service quality that can be summarized as follows:

Service Quality as perceived by a consumer depends on the size and direction of the gap between expected service and perceived service, which, in turn, depends on the nature of the gaps on the service provider's side, associated with the design, marketing, and delivery of services.

Parasuraman, Zeithaml, and Berry [1988] clarify the term 'expectations' by noting that it differs from the consumer satisfaction literature definition of expectations. The latter views expectations as predictions made by consumers about what is likely to happen during an impending transaction or

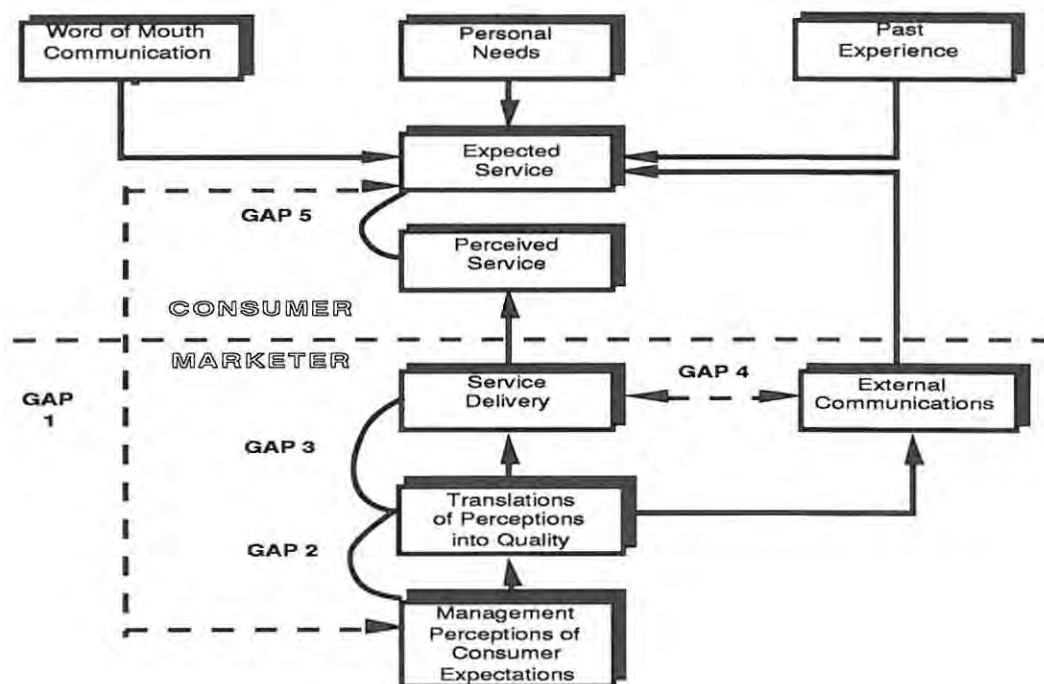
exchange, while the former views expectations as desires or wants of the customer, i.e., what they feel a service provider **should** offer rather than **would** offer.

Finally, their work revealed that, regardless of the type of service, consumers used basically similar criteria in evaluating service quality. These criteria fell into 10 key categories, labelled 'service quality determinants' -

reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer, and tangibles.

The "Gaps" model has received much attention of late. It has been expanded upon since then, and is the focus of a book by the same authors [Zeithaml, Parasuraman, and Berry 1990]. The model is illustrated in Figure 3.4, and views service quality and service quality problems as existing between consumer [or customer] and marketer. From the consumer's point of view, service quality is the difference between what he or she expects, and what he or she perceives themselves to be receiving from the service provider. If the expectation equals the perceptions, the consumer is technically satisfied. When the perception exceeds the expectations, the consumer is more than satisfied and can even be excited. When expectations exceed perceptions however, the consumer is dissatisfied, and there is a service quality problem.

Figure 3.4
The Gaps Model of Service Quality [Parasuraman, Zeithaml and Berry 1985]



The consumer's gap between expectations and perceptions - Gap 5 in the model - is caused by four other gaps, which are internal to the marketer's organization. Gap 1 is a gap between managers perceptions of expectations and the consumer's actual expectations - quite simply managers dont always understand what consumers want. Gap 2 is a gap between managers' perceptions of consumer expectations and their ability to translate these into service quality standards. In other words managers might know what consumers expect, but are unable to set quality standards. Gap 3 is a gap between the service quality standards that are set, and the service quality that is actually delivered. The organization does not deliver according to the standards it has set for itself. Finally, Gap 4 is a gap between service delivery and external communications - the service that is actually delivered might not live up to promises made by the provider's advertising and selling strategies. These gaps are now expanded upon in more detail, based on Pitt [1991].

- *Gap 1 - Not Understanding What Customers Expect*

Understanding what customers expect is a critical pre-requisite for delivering quality service. Being able to deliver what customers will perceive as excellent service requires that management know what customers expect. Being wrong about this means that companies lose out to those service providers who do understand what customers expect. It also often means expending substantial sums of money, time and effort on things that probably dont make that much impression on customers. Sometimes it even means not surviving. The usual causes of gap 1 are a *lack of a marketing research orientation; a lack of upward communication; and, too many levels of management.*

- *Gap 2 - Setting the Wrong Standards*

Understanding what customers expect from service quality is not enough to ensure it. This intelligence must be converted into meaningful service quality standards for the organization. There are four chief causes of gap 2 - or, why, despite the fact that they may know what customers expect, managers dont set acceptable appropriate service quality standards. Regardless of the lip service paid to it, in many organizations there is *no commitment by management to service quality.* Short-term objectives such as cost reduction, market share and profitability are far easier to assess, and therefore seem to merit focus. Frequently, service quality is defined from the company's point of view, and not the customer's. Middle management and contact employees cannot be expected to commit to quality if senior levels in the organization are not.

In many organizations, and one is tempted to say that this is presently particularly true in South Africa, there is a *perception of infeasibility* - "It cant be done". "We dont have the people/the skilled people/ the committed skilled people". [Or the money, or the time, or the equipment.... the list of excuses is

almost endless for the creative.]

Inadequate task standardization as a cause of gap 2 has to do with the extent to which hard and soft technology are used to standardize service tasks. Here managers must ask the questions: Is automation used to achieve consistency in serving customers? Are programmes in place to improve operating procedures so that consistent service is provided?

If service quality goals are based on company standards rather than on customer standards and expectations, then there really is *an absence of goal setting*.

• *Gap 3 - The Service Performance Gap*

Gap 3 in the model - the gap between service standards and service delivery - is probably the most serious from the manager's point of view. Yet it is also the gap which is easiest to identify, rectify, and manage. The causes of Gap 3 include *role ambiguity*, which exists whenever employees do not possess the information or training necessary to perform their jobs adequately. *Role conflict*, which occurs when employees perceive that they cannot satisfy all the demands of the individuals they must serve. Very often in organizations there is a *poor fit between employee and job*, and between *technology and job*. These two causes can be cured by giving adequate attention to the type of people put into jobs, and making sure that the appropriate technology needed is available to ensure the customer's expectations are met.

Another common cause of gap 3 is *inadequate supervisory control systems*, for example, supervisors who act either as policemen, believing it is their job to "catch out" subordinates, or as army sergeants, maintaining that they should "tell" subordinates what to do. *Lack of perceived control* has to do with two things. Firstly, it has to do with the extent to which employees believe the organization can actually control the standards that have been set. The finest standards will not be met if employees believe that the company cannot actually measure performance against them. Secondly, perceived control involves the ability to make responses that influence threatening situations and the ability to choose outcomes or goals. The employee who has no choice but to refuse a customer a justified refund when the supervisor is on lunch perceives him- or herself to have little control over the situation. What management needs to do is empower employees - give them far more capacity to make more meaningful decisions if they affect customers. *Teamwork - or lack thereof* - is probably one of the commonest problems facing all organization. One of the most important aspects of teamwork is the extent to which employees view other employees as customers. Another is the extent to which employees feel personally involved and committed to the firm. Teams need to be built, they generally don't just happen. Teamwork is the heart of service quality initiatives - if employees can't work together, then service can't come together for customers.

• *Gap 4 - Service Delivery and Broken Promises*

The fourth gap in the service quality model is that between what a firm promises about a service and what it actually delivers. An enormous amount of advertising money is spent on creating expectations in the minds of customers. When what is delivered does not match these expectations the customer is often dissatisfied to an extent that the organization would have been far better off had it said nothing. The same can be said for promises made by people in sales, people in operations, and other functional areas of the organization. The major causes of gap 4 are *inadequate horizontal communication*, and a *propensity to overpromise*. Communications between various functional areas in the organization, such as marketing and operations, and also between different branches or regions, are necessary to achieve the common goals of the organization. If advertising is developed independently from the people who are expected to deliver on the promises made by it, customers will be unhappy, and the deliverers left disheartened, as they rightfully claim, “You surely didnt expect us to be able to do that”, or, “You must have been talking about someone else”. It is also all too easy for one branch or department to make promises on behalf of another, and everyone, especially the customer suffers in the end. A propensity to overpromise might simply be a nice way of saying lying. Promising is one of the easiest things to do in business, delivering one of the hardest. Advertising and other forms of marketing communication are remarkably credible to customers - in most instances they start off by believing what they are told to. Appropriate and effective communications about service quality must be developed, and attention given to dealing with the quality dimensions and features that are most important to customers, accurately reflecting what customers actually receive in the service encounter, and helping customers understand their roles in performing the service.

3.2.2 Measuring Service Quality

Literature on quality in general, as well as service specific, stresses the importance of measurement and monitoring of quality [Takeuchi and Quelch 1983; Martin 1987; De Souza 1989; Hensel and Baumgarten 1988; Davidow and Uttal 1989; Kierl and Mitchell 1990; Mangold and Babakus 1990]. An early example of measurement of service quality was the experience of a British bank discussed by Buswell [1983], which considered such aspects as knowledge of staff, communications, expertise of staff, willingness to lend, and branch design. Richardson and Robinson [1986] assessed the functional quality of service [Gronroös 1978] provided by bank staff, in South Africa. Tansuhaj, Wong and McCullough [1987] measured technical and functional items of quality of banks in Thailand.

Parasuraman, Zeithaml, and Berry [1988] operationalized their conceptual model of service quality by following the framework of Churchill [1979] for developing measures of marketing constructs. This

resulted in a 22-item instrument [SERVQUAL] for assessing customer perceptions of service quality in service and retailing organizations. Underlying the 22 items are five dimensions that the authors claim are used by customers when evaluating service quality, regardless of the type of service. These dimensions are:

TANGIBLES - Physical facilities, equipment, and appearance of personnel.

RELIABILITY - Ability to perform the promised service dependably and accurately.

RESPONSIVENESS - Willingness to help customers and provide prompt service.

ASSURANCE - Knowledge and courtesy of employees and their ability to inspire trust and confidence.

EMPATHY - Caring, individualized attention the firm provides its customers.

The authors concede that items that may be relevant to the discussion of service quality for one particular industry/firm may not be reflected in their generalized instrument. The instrument may, therefore, need to be reworded or augmented when applied in specific applications.

3.2.3 The SERVQUAL Instrument

The development of the SERVQUAL instrument, a multi-dimensional questionnaire for the assessment of service quality is described by Parasuraman, Zeithaml and Berry [1988]. The development process closely followed that suggested by Churchill [1979]. Their exploratory research [Parasuraman, Zeithaml and Berry 1985] had revealed that the criteria used by customers to evaluate service quality fit 10 possibly overlapping dimensions, namely tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, knowing/understanding the customer, and access. These 10 dimensions and their descriptions served as the basic structure of the service quality domain, from which the developers then derived items for the SERVQUAL scale. The questionnaire used a 7-point Likert-type scale anchored on “Strongly disagree” (1) through to “Strongly agree” (7), with half the statements positively, and half negatively worded. Service quality was defined as the discrepancy between the customer’s perceptions of the actual quality of service received, and his or her expectations of that service.

The questionnaire was used to assess the service quality perceptions of customers who had recently used the services of 5 different types of service organizations (essentially following Lovelock’s [1980] classification). The 97-item instrument was then purified and condensed by focusing firstly on the questions discriminating well between respondents having different perceptions, and secondly, by focusing on the dimensionality of the scale and establishing the reliability of its components.

Ninety-seven items representing various facets of the 10 dimensions were generated to form the initial

pool (approximately 10 items per dimension). Each item was recast into two statements: one to measure **expectations** about firms in general within the type of service under investigation, and the other to measure **perceptions** of the service quality of the particular organization within the category being measured. Service quality per item was captured by a difference score Q (representing perceived quality for that item), where

$$Q = P - E$$

and P and E are the ratings on the corresponding perception and expectation statements respectively.

The purification process, and subsequent analysis effectively resulted in four outcomes:

- elimination of 75 of the original 97 statements, leaving 22 items on the questionnaire.
- condensation of the number of dimensions, by a process of factor analysis, from the original 10, to 5. While the original dimensions tangibles, reliability and responsiveness remained intact, the process suggested consolidation of the last seven dimensions into two broader dimensions which were then labelled **assurance** and **empathy**. Figure 3.5 illustrates the correspondence between the original 10 dimensions and the 5 dimensions now contained in the SERVQUAL scale.

Figure 3.5
Distillation of Dimensions During the Development of the SERVQUAL Instrument

	Tangibles	Reliability	Responsive-ness	Assurance	Empathy
Tangibles					
Reliability					
Responsive-ness					
Competence Courtesy Credibility Security					
Access Communication Understanding the Customer					

- Confirmation of the reliability of the SERVQUAL instrument, and the items within (total scale reliability in excess of 0.85, and coefficient alphas [Cronbach 1951] equal to or exceeding 0.70 for all dimensions except tangibles). Confirmation of the various facets of validity of the SERVQUAL instrument.
- Establishment of the relative importance of the 5 dimensions. While all dimensions of service quality are obviously important to customers, Parasuraman, Zeithaml and Berry [1988] established that some dimensions are relatively more important to customers than others. By regressing the overall quality

perceptions on the SERVQUAL scores for the individual dimensions, it is possible to estimate (by using the standardised slope coefficient) the relative importance of the dimension. Generally Parasuraman, Zeithaml and Berry, (and subsequent other research has) have found the order of importance by dimension to be as follows:

1. Reliability
2. Responsiveness
3. Assurance
4. Empathy
5. Tangibles.

Since 1990 [see Zeithaml, Parasuraman and Berry 1990], the SERVQUAL instrument has been changed in one important way: All items are positively stated and scored. In the original SERVQUAL, some items were negatively phrased, as a check on respondent thoroughness. However, this was felt by the developers to be cumbersome and confusing. There has been some informal criticism that the current phrasing of statements on expectations especially, leads to a “halo-effect”, of respondents rating every expectation “7”. In practice results do not generally support this. Indeed, it may be the case with some respondents. As damaging to data integrity however, could be the careless/disinterested respondent who indicates a “7” on a negatively phrased expectation statement. A generic version of the SERVQUAL [Zeithaml, Parasuraman and Berry 1990] instrument is appended to this chapter in Appendix 3.1. It should also be noted that since the development of SERVQUAL to measure Gap 5 in the “Gaps” model [Parasuraman, Zeithaml and Berry 1985], the authors have designed instruments to measure gaps 1 through 4 [see Zeithaml, Parasuraman and Berry 1990].

SERVQUAL has been designed to be applicable across a broad spectrum of services. If necessary it can be adjusted or adapted to fit the characteristics or specific research needs of a wide range of organizations. It can be used to track service trends, and it can be used to assess the organization’s service quality along the five dimensions, for the relative importance of the dimensions to the customer can be determined. SERVQUAL also has significant potential as a market segmentation tool - different customer groups may seek or regard different dimensions of service quality as more desirable or more important. The dimensions can indeed be regarded as benefits from a benefit segmentation [See Haley 1963] perspective. Benefits (dimensions) sought can also be identified by other categorization included in the SERVQUAL questionnaire use, such as demographics, and psychographics. Frequently, organizations need to consider the service quality provided by branches, departments, regions or depots, in order to evaluate, motivate and control them. SERVQUAL offers a reliable, valid and fair way of doing this, and scores can also be broken down by dimension. Finally, organizations can use SERVQUAL studies to compare themselves to close competitors. In this case the expectations statements do not need to be

repeated for each firm - they should be standard across a range of competing firms. All that is required is that perceptions data be gathered for each specific firm in the study.

3.3 Classification of Service Organizations and Service Organization Typologies

Given the shift, in most countries, and even in some third world nations, from a manufacturing- oriented economy to one that is more service dominated, Davis [1983] asserts that the organisation-customer interface must be an important focus of analysis within organizational theory. Typically the production and delivery of services involves considerable contact between the organization and customers. Frequently customers participate in service production tasks performed at the organisation-customer interface [Bowen and Schneider 1988; Lovelock 1984; Mills 1986; Kelley, Donnelly and Skinner 1990]. Obviously the view taken by practitioners and academics on the real nature of the service organization will have implications for management and research. Service quality has also received much attention of late (as evidenced by the work of Parasuraman, Zeithaml and Berry [1985; 1988]). This chapter attempts to provide an overview, and discussion of the relative merits and demerits of some service organization typologies.

3.3.1 The Service Organization-Customer Interface: An Overview of Different Perspectives

Various subject-discipline perspectives have been used to structure organization-customer relationships, including operations management, sociology, economics, organization theory, and marketing. Many works in the literature on services claim that these established perspectives include a bias towards manufacturing that limits the applicability to service organizations, given the differences between goods and services [Berry 1980; Mills and Margulies 1980; Sasser 1976; Shostack 1977; Thomas 1978; Zeithaml, Parasuraman and Berry 1985], and so the phenomenon of customer participation in the service production (more so than goods) is difficult to consider through conventional thinking. Traditionally, marketing has viewed its functions as separate from production. However, service production tends to merge the two [Gronroös 1982; Gummesson 1979; Northcraft and Chase 1985].

Acknowledging these shortcomings, some researchers in the services literature have specifically looked at the service organization-customer interface. However their work is also not unflawed, although this is acceptable because these were rudimentary endeavours to clarify a comparatively neglected field. Some of the major efforts in this regard are summarised in tabular form in Table 3.1.

Table 3.1 [After Lovelock 1983]
Researchers in the services literature: Views on the service organization-customer interface

Author	Major Dimensions of Classification Scheme	Limitations/Advantages
Judd [1964]	Rented goods services vs Owned goods vs nongoods services	While first two are specific, third category is too broad to be useful
Rathmell [1974]	Type of buyer vs Type of Seller vs Buying practice vs Buying motives vs Degree of regulation	No specific application to services - very general
Shostack [1977]	Physical goods vs intangible services in the product package	Good opportunities for multi-attribute modelling.
Hill [1977]	* Services affecting persons vs. those affecting goods *Reversability vs non-reversability of these effects *Physical vs mental effects *Individual vs collective effects * Permanent vs temporary effects of the service	Does recognize the nature of services, and, in, the nature of these effects
Kotler [1980]	People vs equipment based Extent to which client's presence is necessary Personal vs business needs Public vs private Profit vs Nonprofit	A good synthesis of previous work, recognizing differences in organizational purposes, but nothing new

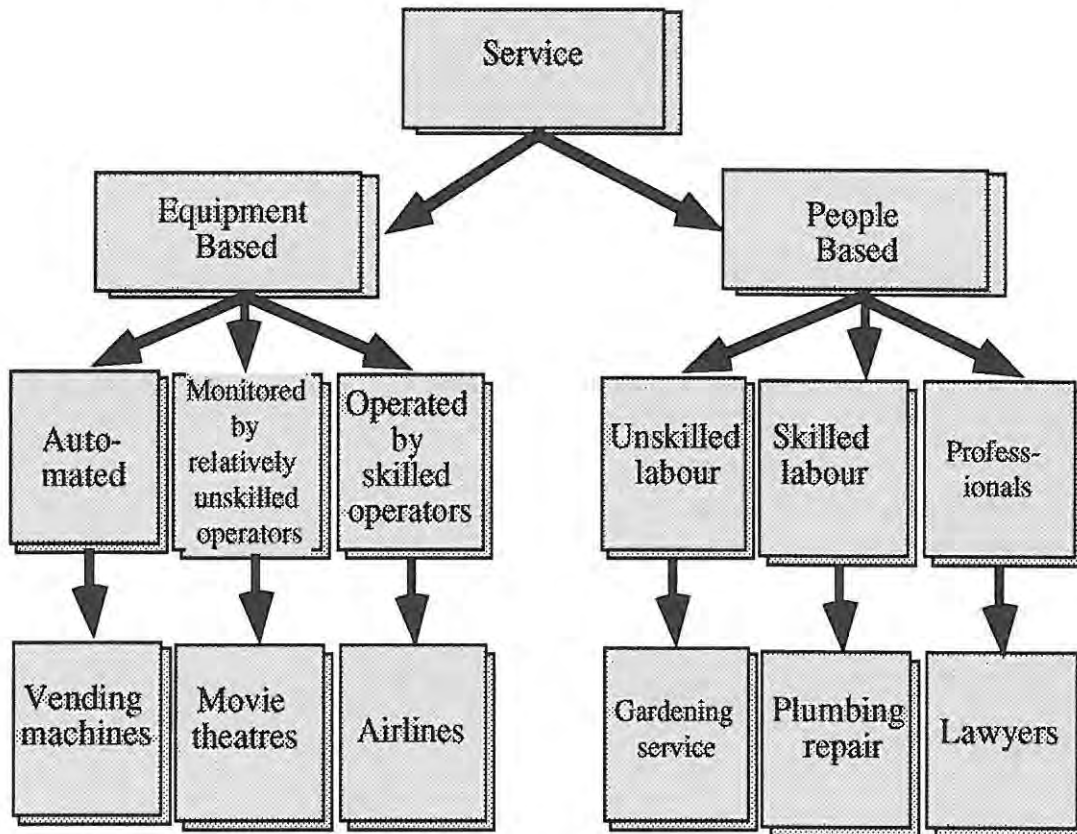
Some of the better known attempts [particularly those not summarised in Table 1 above] at elucidating this area of study are now discussed briefly:

• *Thomas [1978] Equipment vs. People-based Service Firms*

Thomas asserts that while most managers of service firms continue to consider their outputs, this is actually irrelevant, and that the most useful insights can be obtained from a consideration of whether the service is equipment-based (that is, it relies on machines for its production) or people-based (that is, it relies on people for its production). Thomas's schema is summarised in the diagram in Figure 3.6. He

further distinguishes between automated, relatively unskilled monitoring by unskilled workers, and skilled worker operation in the case of equipment based services; and, unskilled labour, skilled labour, and professional services in the case of people based services. While Thomas's schema is a useful classification approach, its use in addressing such key factors as coordination in management of services enterprises, and its applicability in quality measurement and management are less apparent.

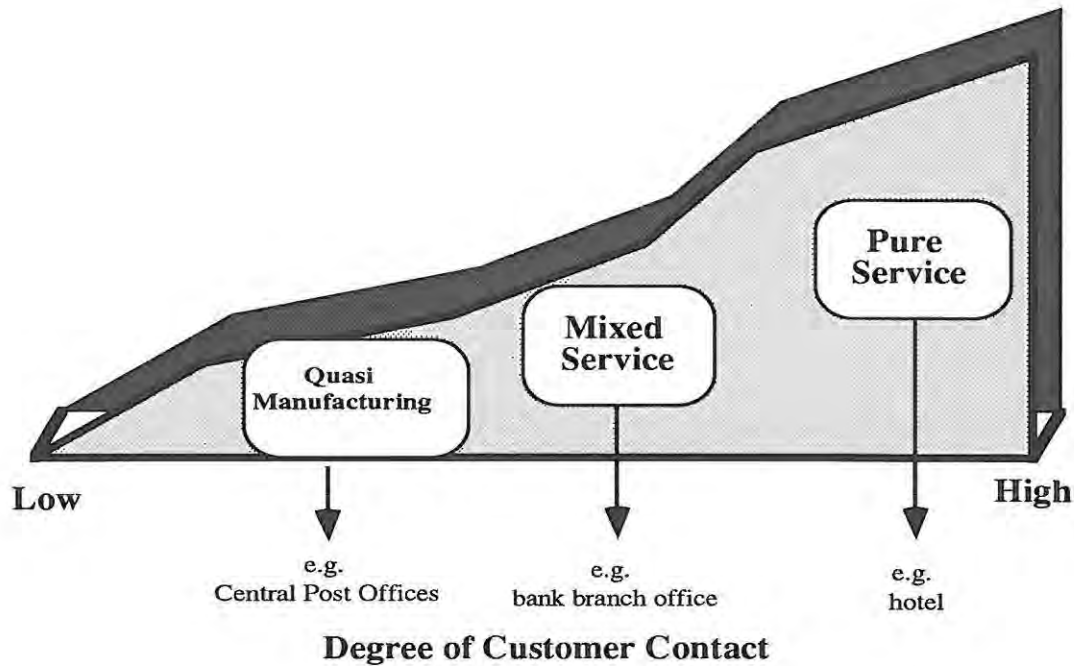
Figure 3.6
Equipment based vs. People Based Service Organizations [Thomas 1978]



• *The customer contact model [Chase 1978, 1981; Chase and Tansik 1983]*

This model differentiates between high-customer- and low-customer contact services and suggests some of the possible organizational design implications of each. It is illustrated in Figure 3.7. Chase's theory is that the potential efficiency of a service system is a function of the degree of customer contact entailed in the production of the service product. It should be remembered that Chase, was writing from an operations management perspective - from a marketing point of view, the model has limitations because it is based on only one dimension, customer contact, and this dimension also fails to differentiate between active versus passive customer presence.

Figure 3.7
Chase's Customer Contact Model [Adapted]



Several two-dimensional typologies have been developed that, at least implicitly, extend Chase's customer-contact model.

• *Lovelock [1983] and Maister and Lovelock [1982]*

Lovelock [1983] emphasises that the development of service organization classification schemes is useful, but not enough. He argues that the service organization classification scheme must offer strategic insight if it is to have managerial value. Completing the diagnostic checklist in Table 3.2 may provide further insights to researchers and practitioners, if one follows Lovelock's logic.

Lovelock [1980; 1983] concludes that a combination of classification schemes in a matrix will produce more superior marketing insights than uni-dimensional classification schemes. Lovelock [1983] indeed suggests five 2 X 2 matrices which he claims, offer strategic insights. However, it is obvious that there are in fact 20 options (5 X 4) if the logic of the questions suggested in Table 2 is followed as well as the "within option" possibilities as suggested by Lovelock [1983]. Lovelock considers understanding the nature of the service act [vs who or what is the recipient of the service]; nature of service delivery [vs

type of relationship between the service organization and its customers]; judgement [vs customization]; nature of the demand for the service relative to the supply; method of service delivery [outlet availability vs nature of interaction between customer and service organization]. Conceivably other classifications based on the service dimensions suggested may offer additional insights - it may be remarked on that no one has seriously pursued these possibilities in the literature.

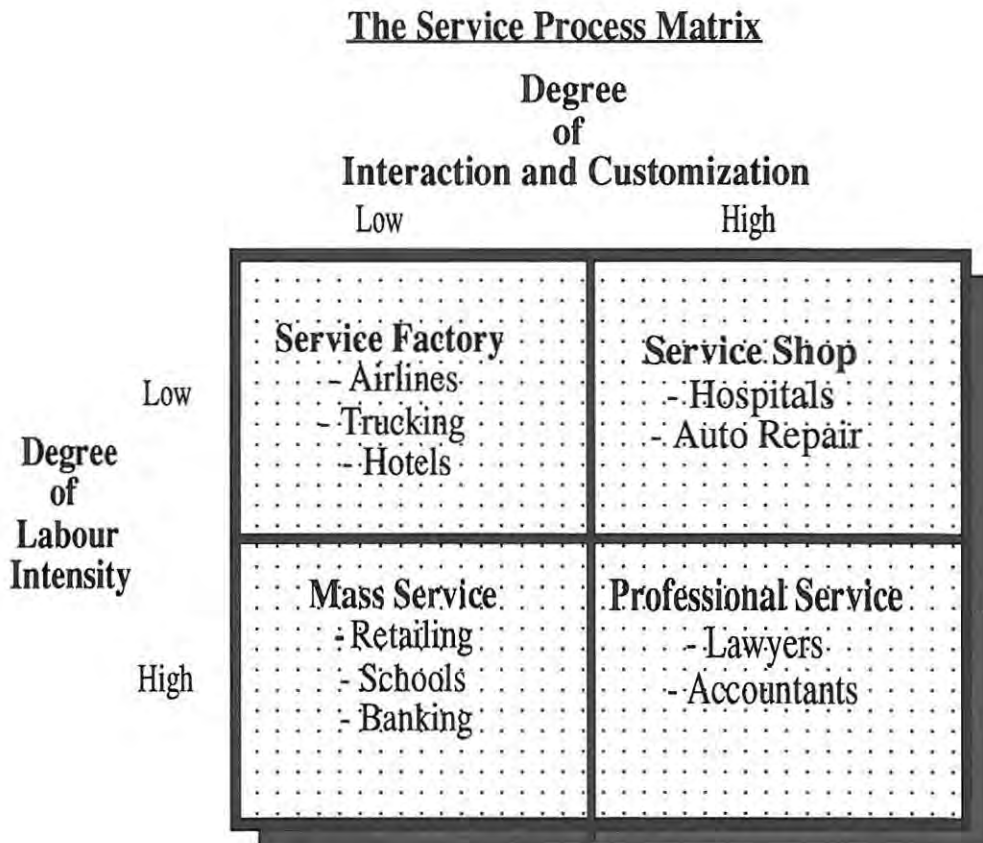
Table 3.2
Service Organization Classification: A Diagnostic Checklist (Developed from Lovelock 1983)

Questions:	Description
1. What is the nature of the service?	
2. What type of relationship does the service organization have with its customers?	
3. How much room is there for customization and judgement on the part of the service provider?	
4. What is the nature of demand and supply for the service?	
5. How is the service delivered?	

• *The two dimensions, degree of interaction and degree of customisation, were used by Schmenner [1986].*

Schmenner suggests the use of a service matrix as a way for service businesses to broaden their relationships with other services that have similar operations and managerial challenges - in this way, he asserts, will they gain the economic foothold needed to survive. Schmenner's service process matrix is illustrated in Figure 3.8 and it will be obvious that the main dimensions are the degree of interaction and customization, and the degree of labour intensity.

Figure 3.8
Schmenner's service process matrix



- *The work of Mills [Mills 1986; Mills and Margulies 1980; Mills and Morris 1986; Mills 1990]*, is one of the most visible service organization typology[ies], which represents three types of service organizations that are classified, based on various low- medium-, or high-level combinations of seven service organization-customer interface variables (e.g. information exchange at the interface, time-spent interfacing).

- *The Customer Participation Model of Kelley, Donnelly and Skinner [1990]*

Kelley, Donnelly and Skinner [1990] give attention to the role of service customers in service encounters where he or she partakes. They provide a participatory framework which specifically considers the role of the user, and suggest the process of organizational socialization as a way for service customers to play the role of pseudo-employees, and for learning the role[s] accompanying the encounter. Their model is illustrated in Figure 3.9.

Figure 3.9
Customization and the Nature of the Service Act

	Service Directed toward People	Service Directed toward Intangible Things	Service Directed toward Tangible Things
High Level of Customization	Service Quality Components that apply: ETQ, EFQ, CTQ, CFQ	Service Quality Components that apply: ETQ, EFQ, CTQ, CFQ	Service Quality Components that apply: ETQ, CTQ
Low Level of Customization	Service Quality Components that apply: ETQ, EFQ, CFQ	Service Quality Components that apply: ETQ, EFQ, CFQ	Service Quality Components that apply: ETQ

[Key to abbreviations: ETQ = Employee technical quality; EFQ = Employee functional quality; CTQ = Customer technical quality; CFQ = Customer functional quality.]

The model is unique in that it offers a direct perspective on the measurement of service quality - the focus of the paper by the developers [Kelley, Donnelly and Skinner 1990]. They add to Gronroös's [1983] framework by suggesting that the customer is also active in determining both the technical and functional qualities of the service he or she receives.

• *The Larsson and Bowen Contingency Framework [1989]*

The focus of Larsson and Bowen's [1989] work is on how varying forms of co-production by employees and customers affect the design and co-ordination of service systems. They review alternative perspectives on the service organization-customer interface; develop a framework for co-ordinating service interdependencies that integrates organizational contingency theory [Lawrence and Lorsch 1967; Thompson 1967] and the emergent services literature [Czepiel, Solomon and Surprenant 1985]; treat customer participation in service reduction and delivery as a source of input uncertainty [Argote 1982], a concept that is elaborated on relative to prior treatments of the uncertainty concept [Brass 1985; Galbraith 1973; Slocum and Sims 1980]; present a typology of four service interdependent patterns that match alternative designs of the service system to alternative conditions of input uncertainty; and,

ultimately match these alternative interdependence patterns of the typology to appropriate portfolios of co-ordination mechanisms.

Whilst there are individual exceptions to the various cited shortfalls of the different service typologies, scant effort has been made to deal with the majority. In fact, no single typology has evolved to overcome them all. Larsson and Bowen [1989] have done most to address these limitations by offering a contingency framework for examining the total system design and co-ordination implications of the service organization-customer interface. Their emphasis is on how the relationship between the service organization and customers influences the management of differentiation and integration across the entire system [Lawrence and Lorsch 1967].

Figure 3.10
A Framework for the Design and Coordination of Service Interdependencies

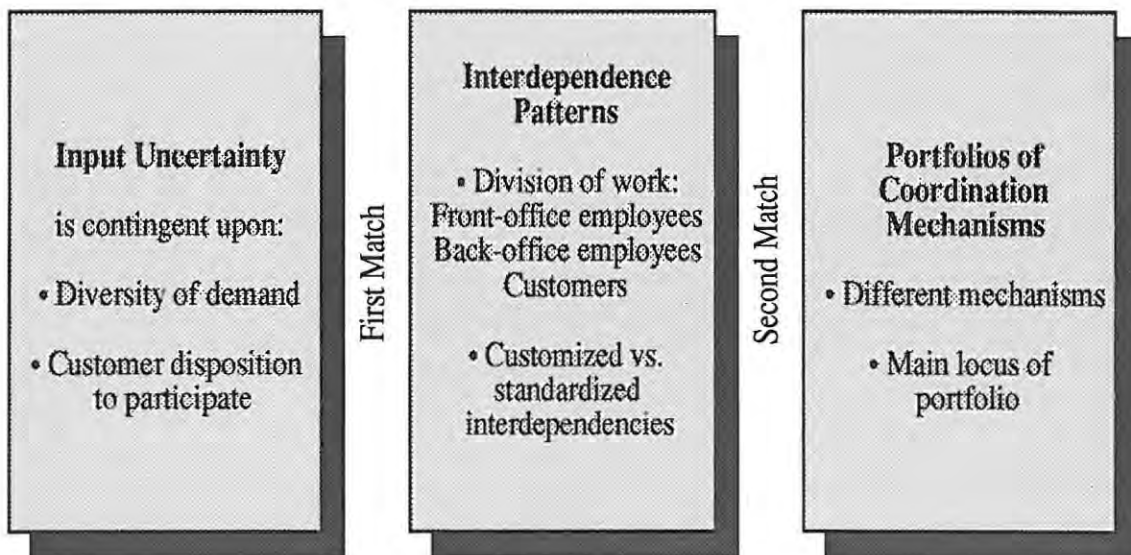


Figure 3.10 provides a model which directs the design and co-ordination of service operations where differing conditions of input uncertainty are matched with alternative interdependence patterns. These are then matched to different co-ordination mechanisms, consistent with the contingency framework of the organizational literature on co-ordination. Customer input can be (a) his/her specified or desired outcomes; (b) his/her body, mind, and/or goods to be serviced; and (c) his/her actions in participating in the service production. These inputs, controlled by the customers, are relatively unknown to the service organization before the specific service performance [Thompson 1962]. Therefore customer inputs are environmental sources of incomplete information for the service organization's performance of specific service tasks, at least until the actual service encounter.

Building on these prior treatments Larsson and Bowen then offer the following definition: *Customer-induced input uncertainty is the organization's incomplete information about what, where, when, and how customer input is going to be processed to produce desired outcome.*

• **Conditions of Input Uncertainty**

The input uncertainty that the customer poses for service operations varies with two environmental variables: the diversity of customer demand and of the tendency of customers to participate in the performance of the service [Bowen and Jones 1986]. The service organization therefore has incomplete information regarding either **what** (customer mind, body and/or goods) is to be serviced toward which desired outcomes, or **what actions** they will contribute in service co-production. These two sources can therefore be used for a two-dimensional framework of different conditions of input uncertainty in service production.

Diversity of demand refers to the uniqueness of customers' demands. It corresponds to how, why a range of patient conditions/inputs the emergency units faced in Argote's [1982] study. The wider the range of unique customer demands, the greater the specific information not possessed by the organization before the actual service encounter and, thereby, the higher the input uncertainty faced by the organization [Larsson and Bowen 1989]. **High diversity** also refers to qualitative differences in demand, for example, different car problems. Demand for the same service in different quantities is viewed as **low diversity**, for example different amounts of fuel being ordered from a service station, or different cold remedies being ordered from a retail pharmacist.

Customer disposition to participate refers to the extent the customer tends to play an active role in supplying labour or information inputs to the service production process [Larsson and Bowen 1989]. The more the customer contributes, the higher the input uncertainty, because the organization has incomplete information about what the customer actually will do before the service encounter [Thompson 1962]. This dimension stresses the degree of active participation as opposed to Chase's [1978/1981] high versus low contact dimension, which depends only on the customer's presence, and in a way extends Chase's approach.

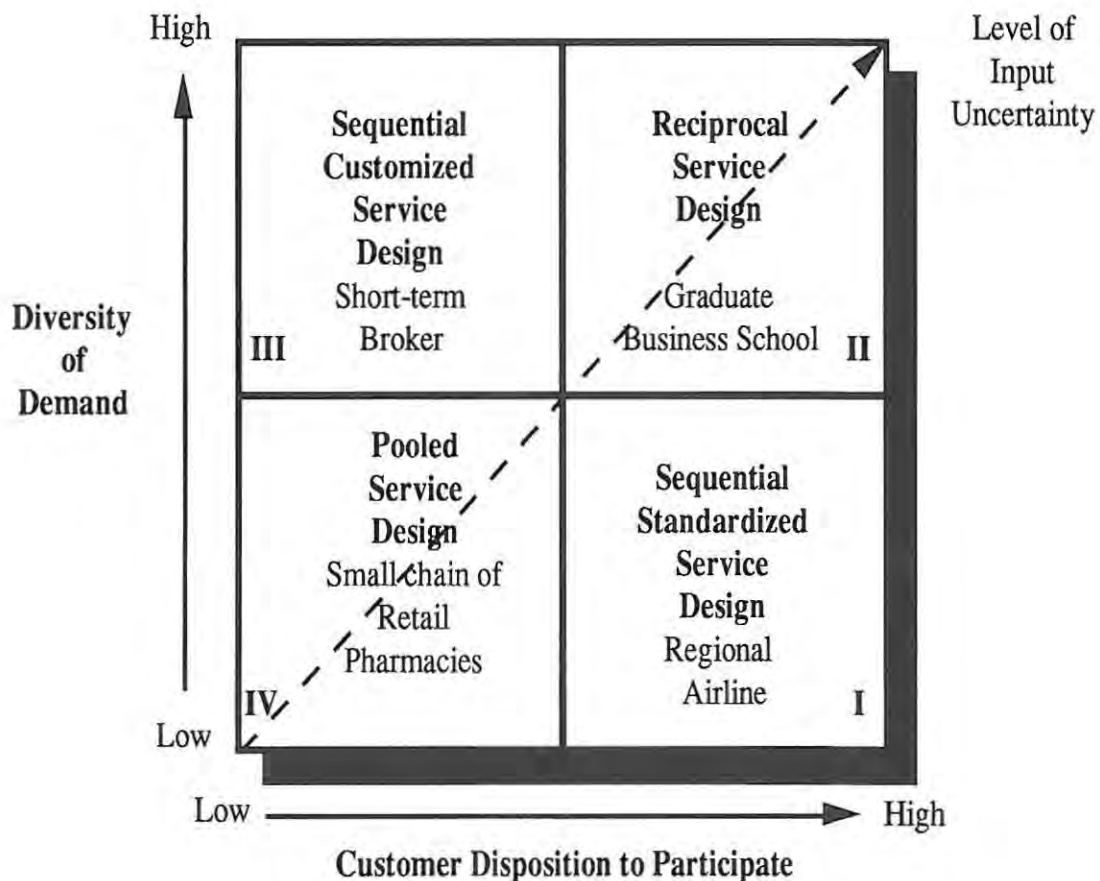
Customer motivation is the prime factor driving the disposition to participate. Customer motivation sources mainly from: (a) Customers find doing it for themselves intrinsically attractive [Bateson 1983], which means customers prefer to be involved in serving themselves even without a price reduction; (b) Customers may feel that their active involvement is necessary to guarantee quality. Therefore, customers are a source of input uncertainty, which stems from the diversity of their demands, and their disposition to participate. These variables are customer characteristics external to the organization constituting

constraints and contingencies to which the design of the organization must adapt [Larsson and Bowen 1989].

• Matching Input Uncertainty and Interdependence Patterns

The two customer input dimensions can be dichotomized to yield four basic conditions of input uncertainty which face the service organization. The contingency logic of the first match in Figure 3.10 is that organizations attempt to adapt the design of service interdependence patterns to the conditions they face. While this is not considered by Larsson and Bowen this configuration may also have significant implications for the measurement and management of service quality within these various organization types. This is illustrated in Figure 3.11, and it can be seen from Figure 3.11 that there are four alternative service interdependence patterns. Examples of typical organizations for each cell in the matrix are provided and these will be expanded upon in Chapter 5.

Figure 3.11
A Typology of Service Interdependence Patterns Matching Input Uncertainty [Larsson and Bowen 1989]



1. In situations of high customer disposition to participate and low diversity of demand, the bulk of the workload can be placed on customers if they have adequate ability and are clear about their roles. Here, customers are expected to be more sensitive to prices since they forego customization and provide most of the labour themselves. It is unlikely that their participation will be motivated by a need to monitor service quality, given the clarity of standardized options.
2. If customers have complex and unique problems (high demand diversity) then it can be expected that they will be less price sensitive and will want expertise for customized solutions to their problems. The customer's self, rather than his or her goods, is often the focus of these complex services. This can be a strong source of motivation for them to actively participate in order either to obtain intrinsic rewards or to monitor the quality of the service. The high disposition to participate also can stem from the need for the customer to provide information for adequate problem solving throughout service production. This leads to interactive service production between mainly customer and front office employees that is typically found in professional services such as psychotherapy, medical care, legal advice and higher education.
3. High diversity of demand also can be accompanied by low customer disposition to participate. Many unique services are purchased for mere convenience when customers prefer to have others perform the services for them (without necessarily lacking the expertise as in the case of professional services). This could be because of lack of time, or the customer's low intrinsic motivation to participate in menial services. Here, the bulk of the workload is placed on service employees. Frontline employees take in the customer specifications of the service, and it is performed by back office employees. Examples include tailoring of clothes and repair services.
4. This last quadrant represents low demand diversity and low customer disposition to participate in the service production. Low disposition of customers to participate can stem, for example, from their low need to monitor standardized services or their inability to perform large scale services (e.g., handling insurance needs). This allows for allocating most of the work to efficient back office operations composed of standardized interdependencies and decoupling them from most front office disturbances (Chase 1981). Here, division of work between back office employees can result in advantages of specialization because the repetitiveness of standardized operations creates a higher tolerance for interdependencies.

These four interdependent patterns represent different combinations of the customization and customer participation allowed in different service designs. Thus these two design parameters constitute the defining dimensions of the typology of service interdependence patterns. Dichotomizing of the design dimensions into high or low allowed customization - and participation - creates a two-by-two service

design framework. Obviously there will be implications arising from this for the measurement of service quality in organizations.

3.4 Summary

This chapter has reviewed the relevant literature concerning the main issues of this study. "Service" was defined and it was also suggested that researchers and practitioners in the future may wish to consider goods and services as existing along a spectrum, rather than in a dichotomy. The distinctive nature of services was considered, and the implications these have for the measurement of service quality in organizations. These unique characteristics are intangibility, inseparability, heterogeneity and perishability. The strategic implications of service quality were discussed, and service quality shown to be a strong driving force of differentiation, and measures of financial performance in most organizations.

The construct of service quality was further refined, and two well-known models of service quality presented, namely the Gronroös [1978] model, and the Parasuraman, Zeithaml and Berry "Gaps" model [1985]. The measurement of service quality also received attention, and in this instance, SERVQUAL, an instrument which measures Gap 5 in the Parasuraman, Zeithaml and Berry [1985] model was expounded upon. The instrument measures five dimensions of service quality, from the vantage of the consumer's perceptions, namely, tangibles, reliability, responsiveness, assurance and empathy.

Finally, different service organization typologies were reviewed, from the points of view of both their strengths and limitations. These included the typologies of Chase, Thomas, Lovelock, Schmenner, Mills, Kelley et al., and the contingency framework of Larsson and Bowen. The latter is suggested as possessing major potential for research in the areas of service quality measurement and management.

In the following chapter the problem of this research will be stated, and hypotheses formulated, based on the theoretical foundations built in the previous chapter and the literature reviewed in this.

Appendix 3.1

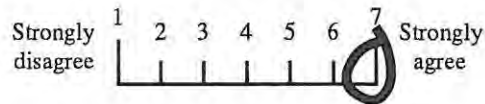
The SERVQUAL Instrument - Generic Version [Zeithaml, Parasuraman and Berry 1990]

SERVICE QUALITY EXPECTATIONS

DIRECTIONS: Based on your experiences as a customer ofs, please think about the kind ofs that would deliver excellent quality of service. Think about the kind of with which you would be pleased to do business.

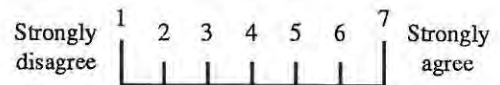
Please show the extent to which you think such a would possess the feature described by each statement. If you feel a feature is **not at all essential** for excellents such as the one you have in mind, **circle the number 1**. If you feel a feature is **absolutely essential** for excellents, **circle the number 7**. If your feeling is less strong, **circle one of the numbers in the middle**. There are no right or wrong answers - all we are interested in is a number that truly reflects your feeling regarding companies that would deliver excellent quality of service.

For example, if you **strongly agree** that the employees of an excellent will be efficient, you would circle as follows:



Please Respond to ALL the statements

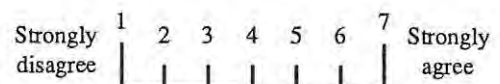
1. Excellents will have up-to-date equipment



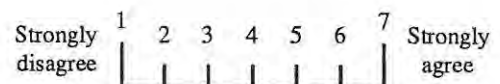
2. The physical facilities at excellents will be visually appealing



3. Employees at excellents will be well dressed and appear neat



4. Materials associated with the service (such as brochures or statements) will be visually appealing in an excellent



Services Marketing, Service Quality and Service Organization Typologies

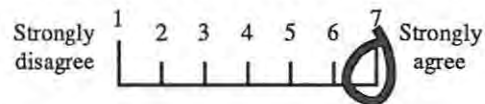
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|-----|--|-------------------|--|---|---|---|---|---|---|---|--|--|--|--|--|--|--|----------------|
| 5. | When excellents promise to do some thing by a certain time, they will do so | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| 6. | When a customer has a problem, excellents will show a sincere interest in solving it | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| 7. | Excellents will perform the service right the first time | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| 8. | Excellents will provide their services at the times they promise to do so | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| 9. | Excellents will insist on error-free records | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| 10. | Excellents will tell customers exactly when services will be performed | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| 11. | Employees in excellents will give prompt service to customers | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| 12. | Employees in excellents will always be willing to help customers | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| 13. | Employees in excellents will never be too busy to respond to customers' requests | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| | | | | | | | | | | | | | | | | | | |
| 14. | The behaviour of employees in excellents will instil confidence in customer | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| 15. | Customers of excellents will feel safe in their transactions | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| 16. | Employees in excellents will be consistently courteous with customers | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="border-right: 1px solid black; padding: 0 5px;">7</td> </tr> <tr> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; width: 10px;"></td> <td style="border-top: 1px solid black; border-right: 1px solid black; width: 10px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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17. Employees in excellents will have the knowledge to answer customers' questions
- Strongly disagree 1 2 3 4 5 6 7 Strongly agree
18. Excellents will give customers individual attention
- Strongly disagree 1 2 3 4 5 6 7 Strongly agree
19. Excellents will have operating hours convenient to all their customers
- Strongly disagree 1 2 3 4 5 6 7 Strongly agree
20. Excellents will have employees who give customers personal attention
- Strongly disagree 1 2 3 4 5 6 7 Strongly agree
21. Excellents will have the customer's best interests at heart
- Strongly disagree 1 2 3 4 5 6 7 Strongly agree
22. The employees of excellents will understand the specific needs of their customers
- Strongly disagree 1 2 3 4 5 6 7 Strongly agree

SERVICE QUALITY PERCEPTIONS

DIRECTIONS : The following set of statements relate to your feelings about ABC Co.. For each statement, please show the extent to which you believe ABC Co. has the feature described by the statement. Once again, **circling a 1 means that you strongly disagree that ABC Co. has that feature**, and **circling 7 means that you strongly agree that ABC Co. has that feature**. You may circle any of the numbers in the middle that show how strong your feelings are. There are no right or wrong answers - all we are interested in is a number that best shows your perceptions about ABC Co..

For example, if you **strongly agree** that the employees in ABC Co. are efficient, you would circle as follows:



Please Respond to ALL the statements

- | | | | | | | | | | | | | | | | | | | |
|----|---|-------------------|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|----------------|
| 1. | ABC Co. has up-to-date equipment | Strongly disagree | <table border="0"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 2. | The physical facilities at ABC Co. are visually appealing | Strongly disagree | <table border="0"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 3. | Employees at ABC Co. are well dressed and appear neat | Strongly disagree | <table border="0"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 4. | Materials associated with the service (such as brochures or statements) are visually appealing at ABC Co. | Strongly disagree | <table border="0"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 5. | When ABC Co. promises to do something by a certain time, it does so | Strongly disagree | <table border="0"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 6. | When you have a problem, ABC Co. shows a sincere interest in solving it | Strongly disagree | <table border="0"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 7. | ABC Co. performs the service right the first time | Strongly disagree | <table border="0"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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Services Marketing, Service Quality and Service Organization Typologies

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|-----|---|-------------------|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|----------------|
| 8. | ABC Co. provides its services at the time it promises to do so | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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| | | | | | | | | | | | | | | | | | | |
| 9. | ABC Co. insists on error-free records | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 10. | Employees in ABC Co. tell you exactly when services will be performed | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 11. | Employees in ABC Co. give you prompt service | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 12. | Employees in ABC Co. are always willing to help you | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 13. | Employees in ABC Co. are never too busy to respond to your requests | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 14. | The behaviour of employees in ABC Co. instills confidence in you | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 15. | You feel safe in your transactions with ABC Co. | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 16. | Employees in ABC Co. are consistently courteous with you | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 17. | Employees in ABC Co. have the knowledge to answer your questions | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 18. | ABC Co. gives you individual attention | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 19. | ABC Co. has operating hours convenient to all its customers | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 20. | ABC Co. has employees who give you personal attention | Strongly disagree | <table border="0" style="margin: auto;"> <tr> <td style="padding: 0 5px;">1</td> <td style="padding: 0 5px;">2</td> <td style="padding: 0 5px;">3</td> <td style="padding: 0 5px;">4</td> <td style="padding: 0 5px;">5</td> <td style="padding: 0 5px;">6</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> <td style="border-left: 1px solid black; border-right: 1px solid black; height: 15px;"></td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | | | | | Strongly agree |
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Services Marketing, Service Quality and Service Organization Typologies

21. ABC Co. has your best interests at heart

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

22. The employees of ABC Co. understand your specific needs

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

Chapter 4

Applicability of the SERVQUAL Instrument Under South African Conditions and Service Organization Typologies

4.0 Introduction

This chapter focuses on a statement of the problem, and the subsequent formulation of the hypotheses to be tested in this study. The problem and hypotheses are [and will be] based in the literature, and a rationale for each will be given. Chapter 1, introduced the study and clarified its broad objectives. Key concepts, such as the characteristics of service, service quality, service quality measurement, and service organization typology have been clarified. Chapter 2 provided the theoretical foundations for the development of the hypotheses to be tested in the study, which is grounded in theory concerning three areas, namely services marketing, with particular reference to service quality as a major strategy for differentiation; service quality and its measurement, with particular reference to the development of valid, reliable instruments for measurement; and, typologies of service organization, where the different approaches to classifying, categorizing, and understanding organizations from various perspectives are of concern. Broad research propositions were also formulated, which will enable the formulation of specific research hypotheses in this chapter. In Chapter 3 the applicable literature was reviewed, with a focus on three areas: services marketing and service quality; the measurement of behavioural constructs in marketing and in particular, the measurement of service quality; and, the various ways of classifying service organizations and the perspectives these propositions give the serious student of organization typology. The preceding three chapters form the basis for problem formulation and the subsequent generation of hypotheses, which is the objective of this chapter.

The development of the study up to this point, should, to a major extent, have answered the following questions, suggested as some to be addressed by Dillon, Madden and Firtle [1987]. *What has been learned of the situation?* The situation has been introduced, and grounded in appropriate theory. Furthermore, relevant literature regarding the situation has been reviewed and evaluated. *What assumptions are being used?* The major assumptions of the study are, first, that the SERVQUAL instrument [Parasuraman, Zeithaml and Berry 1988] is an appropriate instrument for the measurement of service quality, and moreover that it is a major development in the field. Second, that the Larsson-Bowen [1989] typology of service organizations is an appropriate one, and deserving of further

consideration. Thirdly, that it is possible to conduct service quality research under various conditions and circumstances in South Africa. *Are the assumptions reasonable?* The first assumption is reasonable in that the instrument under examination has followed a rigorous process of development, as reported in reputable journals; has been widely cited; and, that it has formed the focus of other major research projects, as reported in the scholarly literature. Similarly the second assumption is deemed reasonable in that the developers of the typology have examined preceding approaches, critically and in great detail, and have commented appropriately on their limitations and advantages. Furthermore, the model itself has appeared in the major journal in its field, and is generally regarded as a principal contribution. The third assumption has not received the same degree of scrutiny as the first two - unless this study shows otherwise it is therefore reasonable to assume that it is possible to conduct service quality research under various conditions and circumstances in South Africa. *If the assumptions turn out to be unrealistic how does this affect what is to be expected?* If the first two assumptions turn out to be unrealistic (which, at the risk of pre-empting research, is unlikely) additional light may be thrown on current major theory. If the third assumption turns out to be unrealistic, major alterations will be needed to existing, internationally accepted approaches to the measurement of service quality if they are to be set appropriately under South African circumstances. *How precise does the information need to be?* Obviously, a study of this nature requires a high degree of rigour in approach, data-gathering, data analysis, and presentation. However, it should be borne in mind that the nature of the research does not really permit, or warrant, perfectly precise measurement. The focus of analysis is the *expectations* and *perceptions* of many human beings, and the ultimate purpose is managerial insight. While analysis to six decimal places is perhaps appropriate in the physical sciences, it is possible, but not necessarily relevant, here.

4.1 Formulation of Hypotheses

Based on the theoretical foundations presented in Chapter 2, and substantiated by the literature review in Chapter 3, it is now possible to formulate specific null hypotheses to be tested in this study. These hypotheses are grounded in the research propositions developed in Chapter 2. The hypotheses to be addressed in this study can be broadly categorized into two groups: First, those with specific reference to the application of the SERVQUAL instrument in South Africa; and, second, those appertaining to the application of the SERVQUAL instrument across the service organizations within the Larsson-Bowen typology.

4.1.1 Hypotheses regarding the applicability of the SERVQUAL instrument in South Africa

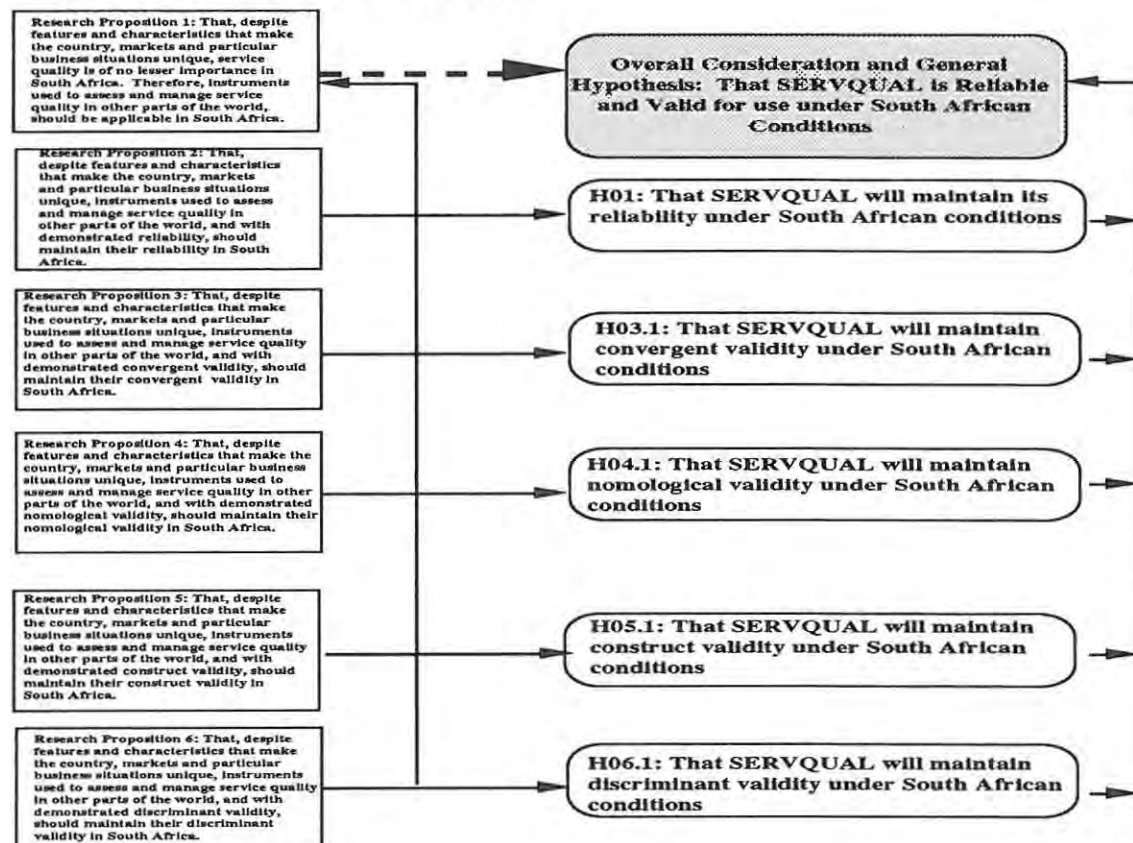
Five specific, and one general hypothesis regarding the applicability of the SERVQUAL instrument in South Africa are developed, following the research propositions generated in Chapter 2. These are

summarised and schematised in the model presented in Figure 4.1. As will be seen in Figure 4.1, the specific hypotheses to be tested in this study are:

- H_{01} : That SERVQUAL will maintain its reliability under South African conditions
- $H_{03.1}$: That SERVQUAL will maintain convergent validity under South African conditions
- $H_{04.1}$: That SERVQUAL will maintain nomological validity under South African conditions
- $H_{05.1}$: That SERVQUAL will maintain construct validity under South African conditions
- $H_{06.1}$: That SERVQUAL will maintain discriminant validity under South African conditions

Leading from hypotheses 01, 03.1, 04.1, 05.1, and 06.1 is the overall consideration and general hypothesis that the SERVQUAL instrument is reliable and valid for use under South African conditions. Obviously this hypothesis is not as technically testable as are the other five, but is, rather, dependent on acceptance or rejection of the other hypotheses for its own acceptance or rejection. More subjective, rules-of-thumb might apply: if the SERVQUAL instrument is shown to be reliable (as evidenced by high coefficient alphas [Cronbach 1951], and valid in at least 3 of 4 dimensions of validity, then it (the general hypothesis) can be accepted.

Figure 4.1
Research Propositions Leading to Hypotheses regarding the applicability of the SERVQUAL instrument in South Africa



4.1.2. Hypotheses regarding the applicability of the SERVQUAL instrument across the service organizations within the Larsson-Bowen typology.

Five specific, and one general hypothesis regarding the applicability of the SERVQUAL instrument within the Larsson-Bowen typology are developed, following the research propositions generated in Chapter 2. These are summarised and schematised in the model presented in Figure 4.2. As will be seen in Figure 4.2, the specific hypotheses to be tested in this study are:

H₀₂: That SERVQUAL will maintain its reliability across the service organizations within the Larsson-Bowen typology

H_{03.2}: That SERVQUAL will maintain convergent validity across the service organizations within the Larsson-Bowen typology

H_{04.2}: That SERVQUAL will maintain nomological validity across the service organizations within the Larsson-Bowen typology

H_{05.2}: That SERVQUAL will maintain construct validity across the service organizations within the Larsson-Bowen typology

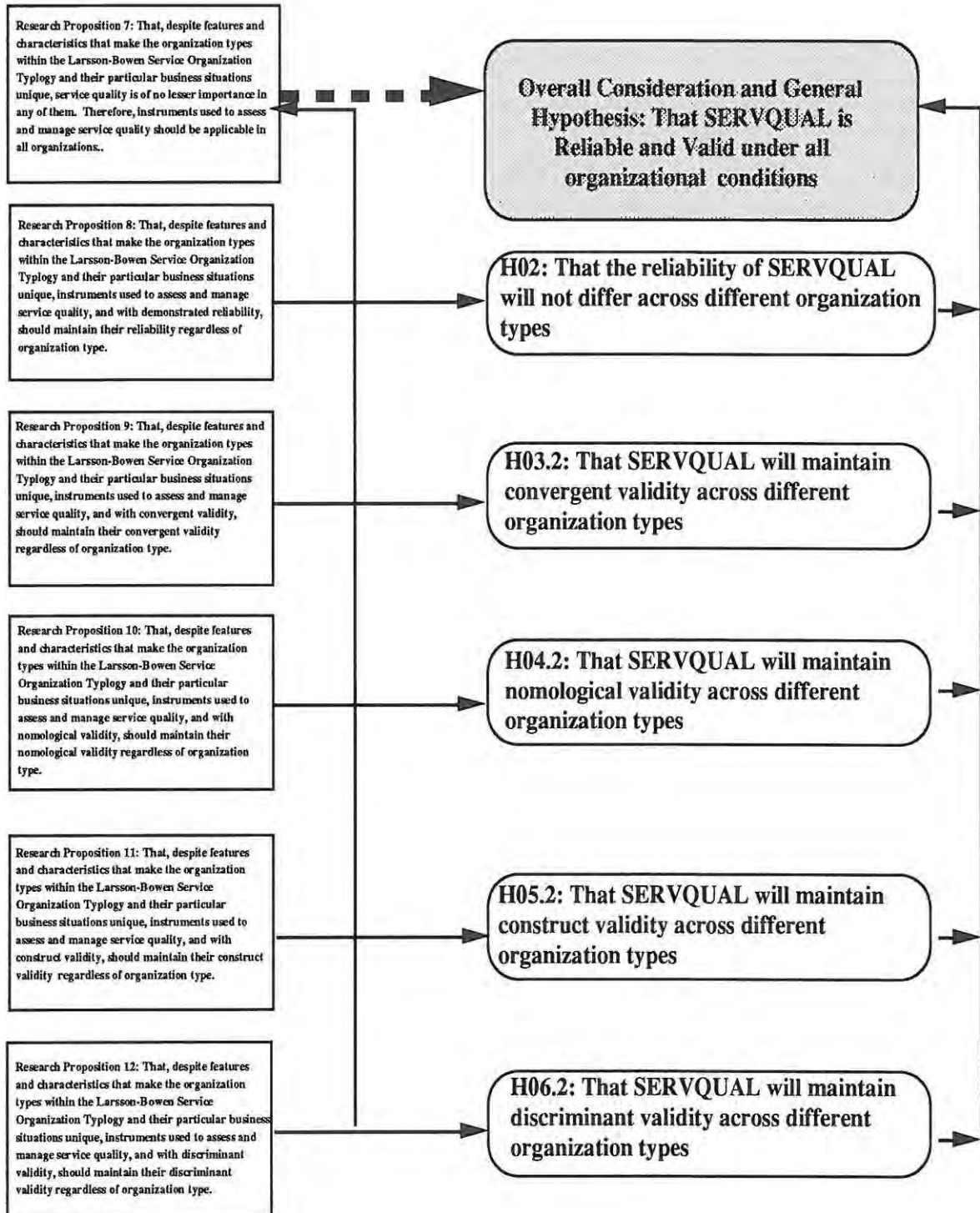
H_{06.2}: That SERVQUAL will maintain discriminant validity across the service organizations within the Larsson-Bowen typology

Leading from hypotheses 02, 03.2, 04.2, 05.2, and 06.2 is the overall consideration and general hypothesis that the SERVQUAL instrument is reliable and valid for use across the service organizations within the Larsson-Bowen typology. Obviously this hypothesis is not as technically testable as are the other five, but is, rather, dependent on acceptance or rejection of the other hypotheses for its own acceptance or rejection. More subjective, rules-of-thumb might apply: if the SERVQUAL instrument is shown to be reliable (as evidenced by high coefficient alphas [Cronbach 1951], and valid in at least 3 of 4 dimensions of validity, then it (the general hypothesis) can be accepted.

4.2 Summary

In this chapter problem formulation in general, and more specifically, the generation of hypotheses, have been addressed. These hypotheses have been developed from the research propositions formulated in Chapter 2. They cover specifically, aspects of the reliability; and, construct, nomological, discriminant and convergent validity of the SERVQUAL instrument. The hypotheses address the two broad areas of the study, namely the SERVQUAL instrument in South Africa, and its applicability across a spectrum of organizations within a typology.

Figure 4.2
Research Propositions Leading to Hypotheses regarding the applicability of the SERVQUAL instrument across the service organizations within the Larsson-Bowen typology.



Chapter 5

The Empirical Study - Methodology and Approach

5.0 Introduction

This chapter will describe the methodology to be used in the study and the rationale behind it. It will describe the sampling approach[es] used and the justification for these. It will also describe the use of the SERVQUAL instrument in the study, and the changes made to the original instrument for application under particular conditions. A brief description of the relevant statistical techniques used in the study, such as reliability computation using coefficient alpha [Cronbach 1951], factor analysis, multiple regression, and factor analysis is given, and the rudiments behind their application in the study provided.

5.1 Objectives of the Study

The objectives of this study, derived from the hypotheses formulated in Chapter 4, are broadly two-fold. First, this study has the objective of determining the applicability, reliability and validity of the SERVQUAL [Parasuraman, Zeithaml and Berry 1988] instrument for the measurement of service quality in South Africa. Secondly, this study has the objective of determining the applicability, reliability and validity of the SERVQUAL [Parasuraman, Zeithaml and Berry 1988] instrument for the measurement of service quality across a range of organization typologies, as suggested by the Larsson- Bowen [Larsson and Bowen 1989] framework. Within the context of validity of the instrument, the study also has the objectives of assessing the construct, nomological, convergent and discriminant validities of the SERVQUAL instrument.

Because the study intends to examine the applicability of the SERVQUAL instrument across a broad range of organizations, it is necessary to allocate specific types of organizations to the various dimensions of the typology used. In this case, the Larsson-Bowen framework is used, which distinguishes between four basic service organization types according to the degree of customer disposition to participate, and the diversity of demand. In the original development of the SERVQUAL instrument, the developers [Parasuraman, Zeithaml and Berry 1988] also used a typology, that of Lovelock [1980].

5.1.1 Allocation of Organization Types to the Larsson-Bowen Framework

It is necessary to identify an organization type typical of each cell in the Larsson-Bowen framework which can be researched if the objectives of the study are to be accomplished. This step is fraught with two limitations. *First*, it would obviously be more desirable to identify more than one organization within each cell, and study as many organizations as possible. The benefit of larger numbers and larger samples would be obvious. However, the main constraints here, as in most studies of a similar nature, are those of time and money. In any case the developers of the original instrument constrained themselves to only five different organizations in the development phase, for the same reasons. *Secondly*, allocation of organization types and specific organizations to the framework is obviously biased. It could in some instances be argued that a particular organization is more suited to, or fits better in, another cell.

The allocation of the various organization types to be studied is illustrated in Figure 5.1. From Figure 5.1 it will be seen that the organizations chosen are:

- Type I [Low diversity of demand, high customer disposition to participate]: A regional airline.
- Type II [High diversity of demand, high customer disposition to participate]: A graduate business school.
- Type III [High diversity of demand, low customer disposition to participate]: A short term insurance broking firm.
- Type IV [Low diversity of demand, low customer disposition to participate]: A small chain of (four) retail pharmacies.

It is obvious that any allocation of types of organization to the framework in Figure 5.1 may be open to debate. Certainly, there could be considerable argument concerning whether a particular organization fits in to one cell or another. The Larsson-Bowen framework, as all other frameworks proposed, does not permit or suggest the perfect assignment of organizations to a cell. Rather, the researcher or the user must base the allocation of organizations on circumspection and good sense. However, it is necessary that the allocation of the organizations researched in this study be justified to the extent that this is possible.

A typical Type I organization was judged to be an airline. Typically a small regional airline is characterized by low diversity of demand - customers/passengers want to get from one place to another. Relatively short trips, flown by smaller aircraft, also mean that the customer does not demand additional

benefits such as business class seating, priority check-ins, or special meals and drinks. The customer has high disposition to participate. He or she is interested enough in the service being purchased to go to the provider or his agent to purchase the ticket, to travel to the airport to catch the flight in time, carrying baggage and ensuring this gets on to the aircraft. The passenger/customer then waits until take-off, walks through security checkpoints to and on to the aircraft, and complies with safety instructions and requirements during the flight. At the destination the passenger then repeats most of the actions involved previously in the departure.

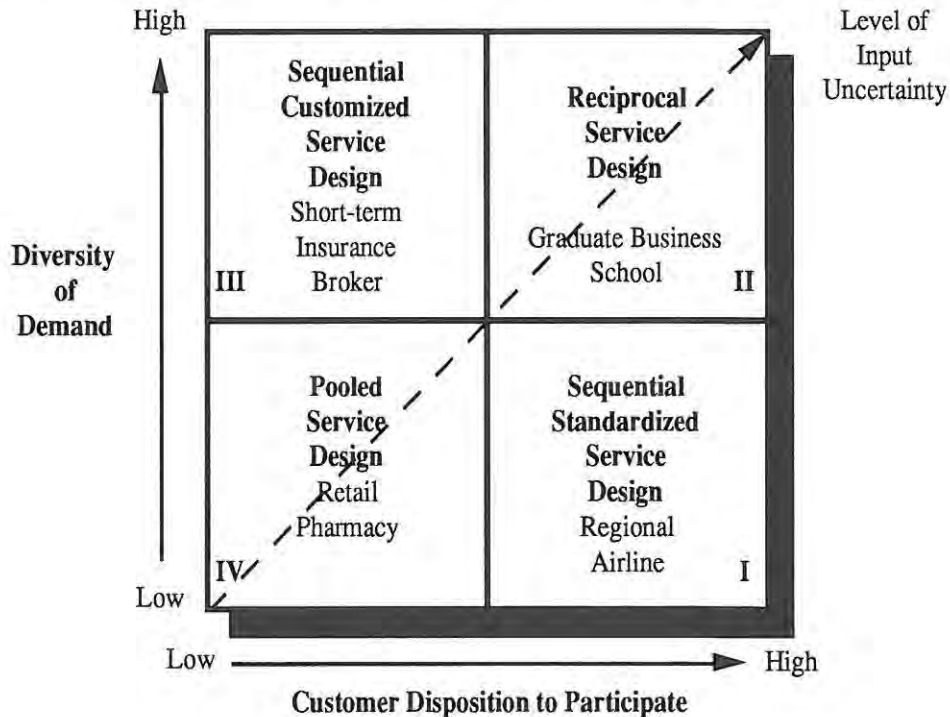
A graduate business school was selected as representative of Type II organizations. The typical graduate business school faces high diversity of demand. Its clients generally consist of graduate students on degree programmes who wish to pursue MBA degrees, or perhaps doctoral study, and executives who attend shorter management development programmes. Students generally pursue graduate business study for different reasons. Some enroll for an MBA purely for the learning experience, others to enhance careers, others to boost earnings, others to get out of what are perceived as dead-end jobs, and still others perhaps because they are undecided about a career or because they merely wish to undertake a challenge. Within this client body there may be students who desire a school because of the reputation of its faculty, others because of the nature of its programmes with regard to flexibility and time taken, others because of the content of the programmes and opportunities for specialization, and still others because of the convenience of location. In the case of practicing managers and executives who attend courses, there is also very high diversity of demand. Some executives (and also their sponsoring employers) desire short courses (five days or less) while others look for something a little more substantial (three weeks or longer). Some look for specialised programmes, for example in marketing or finance, while others require general management programmes. Many expect the things already discussed with reference to graduate students, such as faculty, location and duration. Various companies who sponsor executives may do so because they generally believe that genuine development will occur, while others may do so as a reward to the recipient. The customers of a graduate business school generally exhibit high disposition to participate. They realise that what they receive depends to a large extent on their own participation. The results they achieve, and the success of their programme, depends as much on their own efforts with regard to time and work input as it does on the quality of the faculty, structure of the programme, and the physical facilities and location.

A short-term insurance broker was chosen for this study as an organization embodying the characteristics of a Type III organization. Customers of a short term insurance broker generally exhibit low disposition to participate in the service transaction. They call the broker, place their business and make claims when they need to. Many customers probably regard the procurement of short-term insurance as a grudge purchase. However, customers of a short term insurance broker would generally display a high diversity of demand. Some would want to insure assets of relatively small value, and others large. Some would

wish to pay premiums very frequently, for example monthly, and others only infrequently, perhaps annually. There are customers who would wish to specialise their insurance, such as car and home only, in the case of the private individual, while others would prefer to spread their risks or perhaps carry some risks themselves. And, of course, the individual insurance needs of each individual client will vary broadly, because all individuals differ with regard to their possessions, knowledge and willingness to assume risk.

Finally, a chain of retail pharmacists was chosen as a typical Type IV organization. Here, the diversity of demand and customer disposition to participate are both low. While the customers of such an organization may indeed purchase a vast range of physical products, when it comes to service they typically all require availability of products and some certain level of minimum advice from a pharmacist, which does not vary greatly. Usually, they enter the store, purchase a number of products by self-service, perhaps a number of drugs on standard prescription, and then leave the store. Disposition to participate is also low. Customers do not get deeply involved in the purchase, and the results of what they receive are not greatly dependent on this involvement. While they generally visit the retail pharmacist to do their purchasing, frequently the retail pharmacist recognizes the customers' desire for minimum involvement by providing a delivery service.

Figure 5.1
A Typology of Service Interdependence Patterns Matching Input Uncertainty [Larsson and Bowen 1989] and Allocation of Specific Organizations for this Study

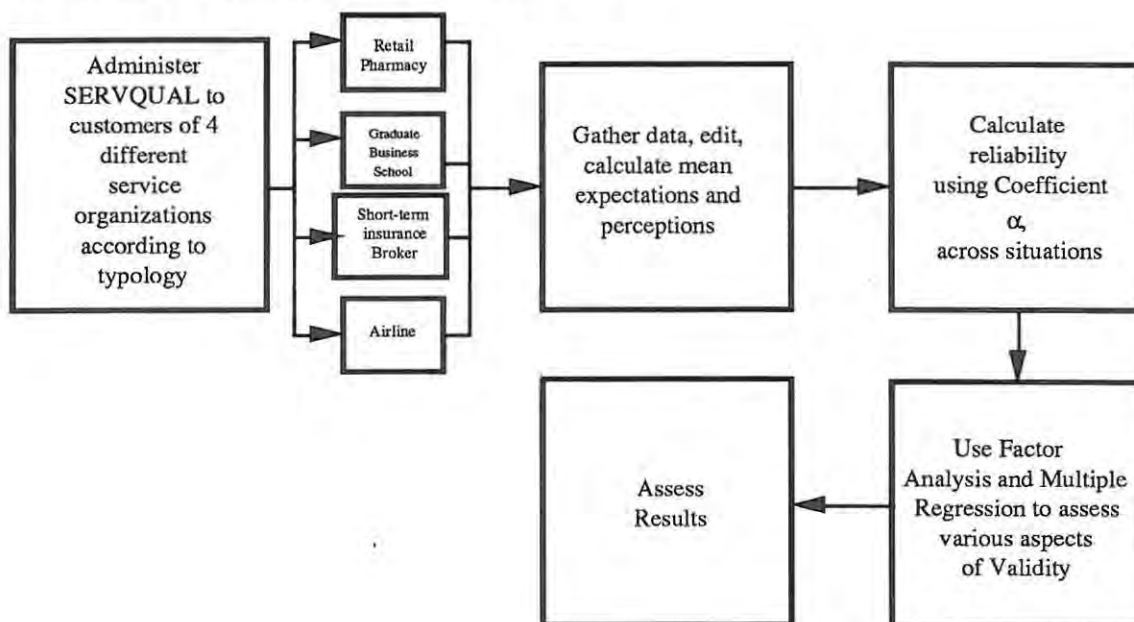


5.2 General and Specific Methodology

Replications of original studies are acceptable vehicles for the establishment of reliability and validity of instruments - that is essentially what this study is about. In generally similar ways, it replicates the original development process of the SERVQUAL questionnaire [Parasuraman, Zeithaml and Berry 1988], by testing the SERVQUAL instrument under four different situations. It will be noted that these studies were not conducted in identical ways, nor is the data analysed, or presented, in exactly the same way each time. As Brown and Gaulden [1984] point out, this is indeed acceptable practice in research, and frequently adds valuable insights if replication is to add to the development of theory. It is not absolutely essential that replications of studies be clones of those studies. Furthermore, presenting intrinsically equivalent results in different ways hopefully adds richness both to discussion and future developments.

The general methodology employed in this study is presented in Figure 5.2. Essentially the study required the administration of the SERVQUAL instrument, suitably amended, to customers of the four different service organization types as identified in Figure 5.1. Data was gathered, edited, and the appropriate descriptive statistics calculated. Reliability was ascertained using the coefficient alpha [Cronbach 1951] for each type of service organization. Then factor analysis, and multiple regression were used to assess various aspects of validity. Of course, specific details of the methodology differed in the case of each service organization type. These details are discussed below.

Figure 5.2
Schematic Representation of Methodology



5.2.1 Methodology - Regional Airline

SERVQUAL questionnaires were distributed to passengers boarding the airline's flights from various airports in South Africa. Apart from obvious changes, such as the substitution of "aircraft" for "equipment", the SERVQUAL questionnaire used had also been amended by the addition of five statements to the original SERVQUAL questionnaire. In some cases these were true additions, while in others one statement on the original SERVQUAL questionnaire was split into two, as appropriate to the particular kind of service business. The additional and amended questions are summarised in Table 5.1. Respondents were also required to rate the overall quality of service on a four-point scale [poor, fair, good, excellent].

Table 5.1
Amendments to the original SERVQUAL questionnaire as used in the airline study

3. Interiors of aircraft visually appealing (Additional question)
4. Engine noise should be acceptable in cabin (Additional question)
7. Clear signage, direction boards and airport announcements (Additional question)
11. Flights will depart at the time they promise to do so. (Amendment to question 8)
12. Flights will arrive the time they promise to do so. (Amendment to question 8)
22. Airlines will have departure times convenient to all of their customers (Amendment to question 19)
23. Airlines will have reservation times convenient to all of their customers (Amendment to question 8)
27. Airlines will be easily accessible by telephone (Additional question)

Questionnaires with instructions on their completion were distributed to 400 passengers, on aircraft selected at random by a simple stratified procedure, departing from various airports in South Africa, prior to take-off. Passengers were requested to complete the questionnaires, and to return them at the end of the flight. A total of 160 questionnaires were returned, for an overall response rate of 40%. Editing resulted in the elimination of 5 questionnaires, leaving 135 usable, an effective response rate of 34%.

5.2.2 Methodology - Graduate Business School

A suitably modified version of the SERVQUAL instrument was issued by means of a "pigeon-hole"

mailbox system to all full-time and part-time MBA students, and to all participants (middle and senior managers) on a three-week executive development programme at a graduate business school. The perceptions section of the instrument was appropriately worded to suit the particular characteristics of the graduate business school, and instructions given for its completion. In this instance the questionnaire contained 22 statements as in the case of the original SERVQUAL questionnaire. Delegates from these specific programmes were selected for the following three reasons: convenience in administering the SERVQUAL questionnaire; recent and current experiences of business school services; and to provide insights into the effect of nature of programme, and length of exposure on the service quality gap. Respondents were also required to rate the overall quality of service on a four-point scale [poor, adequate, good, excellent]. Part-time MBA students received the questionnaire three-quarters of the way through their programme; full-time MBA students received the questionnaire half-way through their programme; and executive course delegates were targeted during the second week of their programme. Details of the response are presented in Table 5.2.

Table 5.2 SERVQUAL Administration and Return Details - Graduate Business School

Programme	SERVQUAL issued	SERVQUAL returned	Response Rate %
MBA	96	67	69.79
Executive	150	95	63.33
Total	246	162	65.85

For purposes of analysis here, full- and part-time MBA students were combined. It can be seen from Table 5.2 that MBA students yielded a response rate of 69.79%, and executives 63.33%, for an overall response of 65.85%.

5.2.3 Methodology - Short term insurance Broker

SERVQUAL questionnaires with instructions on their completion were mailed to 500 customers on the existing customer base of a short term insurance broking firm. These were chosen at random through a computerised random number generation system. In this instance the questionnaire contained 22 statements as in the case of the original SERVQUAL questionnaire. Respondents were also required to rate the overall quality of service on a five-point scale [very poor, poor, adequate, good, excellent]. A total of 86 questionnaires was returned by respondents, resulting in an overall response rate of 17%. After elimination of incomplete questionnaires, a total of 74 questionnaires was used in the analysis, for an effective response rate of 15%.

5.2.3 Methodology - Retail Pharmacy

SERVQUAL questionnaires, with instructions on their completion were mailed to 2000 customers on the existing customer base, of a chain of four rural area, retail pharmacies. Respondents were also required to rate the overall quality of service on a five-point scale [very poor, poor, adequate, good, excellent]. A total of 253 questionnaires was returned by the cutoff date, resulting in a response rate of 13 per cent. After eliminating incomplete questionnaires, 222 were used in the analysis, an effective response rate of 11 per cent.

5.3 Statistical Methods Used

The assessment of reliability and validity of an instrument such as the SERVQUAL questionnaire requires the use of a number of statistical techniques apart from the simple calculation of means, and gap scores. Typically, in any study which is replicative in nature, such as this one, extensive use is made of the same techniques employed by the developers of the instrument in their original work. Thus, it is necessary to utilise calculations of coefficient Alpha [Cronbach 1951]; multiple regression and factor analysis, all of which are standard procedures under the SAS (Statistical Applications Software) [SAS 1987] computer package used to process the data gathered in this study. These techniques are explained briefly.

5.3.1 Coefficient Alpha [Cronbach 1951]

Most approaches towards the assessment of reliability of instruments involve the determination of systematic variation in measurement scales. These methods involve a determination of the association between scores obtained from two scales, where one is a similar replicated version of the other. If the association between the scores derived from the two scales is high, the scales are consistent in yielding the same results, and are therefore reliable. In modern social sciences research, most emphasis has been placed on the assessment of internal consistency reliability, where item scores obtained from administering the scale are in some way split in half and the resulting half scores are correlated. Large correlations between split-halves indicate high internal consistency. Coefficient Alpha (α) was originally proposed by the psychometrician Cronbach [1951], and is today the most commonly used approach for assessing the internal consistency of multi-item measurement scales. Cronbach's alpha is a mean reliability coefficient calculated from all possible split-half partitions of a measurement scale [Dillon, Maddon and Firtle 1987]. Some of the relevant theory behind coefficient alpha has already been referred to in Chapter 2. Again, the formula is:

$$\alpha = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum_{i=1}^k \sigma_i^2}{\sigma_T^2} \right)$$

where

k = the number of items in the measurement scale

σ_i^2 = variance of the *i* th item

σ_T^2 = variance of the entire measurement scale

Coefficient alpha is calculated as part of the correlation routines under SAS. In this study the primary purpose of the calculation of the coefficient Alpha is to determine the internal consistency of the SERVQUAL questionnaire overall, by dimension, and by individual item, across the four different service organizations.

5.3.2 Multiple Regression

Although some methods in statistics concern a single variable, problems involving several variables often occur. The terms correlation and regression refer to relationships among several variables. Both terms, but especially regression, also describe the statistical methods used to study such relationships. Correlation may mean general interdependence or association; more commonly, however, it refers to a linear association that can be measured by a particular quantity called the product-moment correlation coefficient, or simply the correlation. Statisticians have defined other types of correlations in addition to the simple correlation between pairs of variables. Partial correlations are correlations between pairs of variables when the other variables are held constant. A multiple correlation is a correlation between one variable and a set of other variables. The technique for investigating such a relationship is called multiple regression analysis.

Regression analysis is a statistical technique for investigating the relationship between a response variable (the dependent variable) and one or more explanatory, or independent, variables. Used to predict the behaviour of the dependent variable from given values of the independent variables, it proceeds by (1) stating the form of a model linking the variables, (2) fitting this model to the data, (3) assessing whether the model fits well enough to be useful, and, if it does, (4) using the fitted model for prediction and other purposes [see Draper and Smith, 1977; Ezekiel 1988; Neter and Wasserman 1983].

Frequently the researcher needs to establish the extent of association between two variables. In many marketing studies today, the emphasis is on the extent to which variation in one variable (the dependent, or criterion variable) is caused by the variation in one or more independent, or predictor variables. In

cases where the criterion variable is at least ordinally scaled, one or other multiple regression technique is used to establish the association. Typically multiple regression formulae are written in the following form:

$$y_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \dots + \beta_p x_{pi} + \varepsilon_i$$

Where

y_i = i th response for the criterion variable

x_{1i} = i th response for the first independent variable

x_{2i} = i th response for the second independent variable

x_{pi} = i th response for the p th independent variable

β_0 = model intercept

β_1 = regression intercept coefficient for variable 1

β_2 = regression intercept coefficient for variable 2

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β_p = regression coefficient for variable p

ε_i = i th residual

The coefficient of multiple determination, R^2 reported by most computerised statistical packages represents the proportion of variation in the dependent variable explained by the set of independent variables.

Stepwise regression is a multiple regression approach frequently used in which the user can eliminate from, or force into the regression equation, predictor variables in the order in which, and at the point at which they contribute to the significance of the equation. Where appropriate it was used in this study to determine the relative importance of the dimensions of service quality for each study.

In the study presented here, multiple regression analysis was undertaken, where necessary, by using the SAS package. The primary purpose of multiple regression analysis is to assess aspects of validity of the SERVQUAL questionnaire overall, by dimension, and by individual item, across the four different service organizations, using the overall assessment of service quality required of respondents in each

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x_{2i} = i th response for the second independent variable

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β_0 = model intercept

β_1 = regression intercept coefficient for variable 1

β_2 = regression intercept coefficient for variable 2

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β_p = regression coefficient for variable r

ϵ_i = i th residual

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case as the criterion variable.

5.3.3 Factor Analysis

Factor analysis is a statistical method that attempts to explain the interdependence among a set of response variables in terms of the common dependence of these variables on a smaller number of unobservable common factors. The development of factor analysis was closely associated with, and is still commonly used in, psychological testing. It was initially hoped, for example, that the scores of a subject on several different “intelligence” tests could be accounted for by a single common factor of general ability plus other factors unique to each test.

Since the number of common factors needed to account for the dependence observed in the response variables is rarely known in advance, it is usual first to assume the existence of a small number of factors, gradually increasing the number of factors assumed until the data are adequately explained. Unfortunately, it is then difficult to give clear interpretations to the resulting common factors. For these and other reasons, the results of factor analysis are rarely more than suggestive.

Factor Analysis is a linear reduction technique which assumes a specified model that implies a reduced form of the input matrix. In other words, the factor analytic model presumes the existence of a smaller set of factors that can produce exactly the correlation in the larger set of variables. The basic model in factor analysis is expressed by

$$\mathbf{X} = \Lambda\mathbf{f} + \mathbf{E}$$

where

\mathbf{X} = p -dimensional vector of observed responses

Λ = $p \times q$ matrix of unknown constants called factor loadings

\mathbf{f} = q -dimensional vector of unobservable variables called common factors

\mathbf{E} = p -dimensional vector of unobservable variables called unique factors

The assumption is that the variance-covariance matrix of \mathbf{E} is a diagonal matrix Φ with entries Φ^2 , and that all the covariances between \mathbf{E} and \mathbf{f} are zero. Another assumption of factor analysis is that alternative solutions are possible and may be just as valid. The rotational analysis of factors allows the researcher a degree of flexibility by presenting a multiplicity of views of the same data set in order to aid interpretation. Various computer packages for factor analysis provide a range of rotational procedures. Factor analysis is used frequently to assess the various aspects of validity of measurement instruments in the social sciences. The primary purpose of factor analysis in this study is to assess aspects of validity

of the SERVQUAL questionnaire overall, by dimension, and by individual item, across the four different service organizations.

One of the issues facing the researcher using factor analysis, is that of how many factors to extract. There are a number of rules of thumb for this. A commonly used rule of thumb is to extract all factors with an Eigenvalue of at least 1 - this is also known as the "MINEIGEN" criterion under SAS. This was the rule used for factor extraction in the original SERVQUAL development study [Parasuraman, Zeithaml and Berry 1988], and obviously it was the rule used in the study under discussion.

5.4 Summary

This chapter has presented the objectives, methodology and approach followed in the empirical study. The objectives of the study were essentially to assess the reliability of the SERVQUAL questionnaire under South African conditions, and across a range of service organizations, using the Larsson-Bowen framework. Allocation has been made of four organizations to the Larsson-Bowen framework, namely a regional airline, a graduate business school, a short term insurance broker, and a small chain of regional pharmacies. The general methodology was presented, and then the specific methodologies utilised in the case of each organization. Finally, brief descriptions of the three main statistical techniques used in this study, namely coefficient Alpha [Cronbach 1951], multiple regression, and factor analysis, have also been given.

Chapter 6

Results and Discussion

6.0 Introduction

In this chapter the results of the study are presented and discussed by service organization type - namely airline, short-term insurance broker, graduate business school, and retail pharmaceutical chain. The results and accompanying discussion are not always presented in the same, or identical format. Also, graphical presentations of the results differ. The reason for this is that in all four instances the results are unique in some aspects, and deemed interesting enough to merit separate and individual presentation. The presentation is in numerical order according to the Larsson-Bowen framework, starting with the Type I organization [the regional airline], proceeding to Type II [the graduate business school], Type III [the short-term Insurance broker] and concluding with Type IV [the retail pharmacies]. For each service organization, results are discussed in the order of overall SERVQUAL scores, then with regard to reliability, followed by convergent validity, nomological validity, construct and convergent validity. Finally the formulated hypotheses are evaluated against the results obtained.

6.1 Results: Regional Airline Service Quality Measurement

Overall measurements of the service quality of a regional airline are presented in Table 6.1.1. Items in the table are abbreviated for the sake of convenience. As already mentioned, the SERVQUAL instrument was quite extensively modified in this case, leading to a final administered instrument of 27 items. As can be seen from Table 6.1.1, the airline concerned only exceeded the expectations of the respondents to the survey on one item, namely item 6 in the questionnaire, relating to the visual attractiveness of the materials associated with the service. All the other gaps on the individual items are negative, indicating that the airline concerned did not live up to the expectations of its clients. This ranges from a high gap of -2.296 on item 4, engine noise acceptable in the cabin, a tangibles item (an additional item to the battery) to a low of -0.370, employees should give customers personal attention, an empathy item. Other items where there are gaps which exceed - 1 are items 3 (visually appealing aircraft interiors, gap score -1.703), and 7 (clear signage, direction boards and airport announcements, gap score -1.444) which are both "tangibles" items; 8 (keeping promises, gap score -1.171), 9 (showing a sincere interest in solving customer problems, gap score -1.088), 10 (performing the service right the first time, gap score -1.029), 11 (flights departing on time, gap score -1.281), 12 (flights arriving on time, gap score -1.103). Statements 8, 9, 10, 11 and 12 are all "reliability" statements. Furthermore, statements 11 and 12 are

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Table 6.1.1.
Overall Expectations, Perceptions and Gaps, by Item, Airline Service Quality Measurements

Item	Expectations	Perceptions	Difference
1. Modern-looking aircraft	5.362	4.414	-0.948
2. Physical facilities should be visually appealing	5.548	4.674	-0.874
3. Interiors of aircraft visually appealing	5.955	4.251	-1.703
4. Engine noise should be acceptable in cabin	6.170	3.874	-2.296
5. Employees should be well-dressed and appear neat	6.318	5.962	-0.355
6. Materials associated with the service should be visually appealing	5.229	5.296	0.067
7. Clear signage, direction boards and airport announcements	6.488	5.044	-1.444
8. If airlines promise to do something by a certain time, they should do so	6.459	5.288	-1.171
9. Show a sincere interest in solving customer problems	6.667	5.577	-1.088
10. Perform the service right the first time	6.177	5.148	-1.029
11. Flights will depart at the time they promise to do so.	6.348	5.066	-1.281
12. Flights will arrive the time they promise to do so.	6.200	5.096	-1.103
13. Tell customers when the service will be performed.	6.029	5.355	-0.674
14. Customers expect prompt service from employees	6.429	5.762	-0.667
15. Willing to help customers	6.244	5.607	-0.637
16. Never too busy to respond to customers' requests	6.244	5.607	-0.637
17. Instill confidence in customers	6.407	5.725	-0.681
18. Customers should feel safe in their transactions	6.385	5.518	-0.866
19. Employees should be consistently courteous with customers	6.400	5.755	-0.644
20. Employees will have the knowledge to answer customers' questions	6.222	5.577	-0.644
21. Customers should get individual attention	5.955	5.570	-0.385
22. Airlines will have departure times convenient to all of their customers	5.496	4.948	-0.548
23. Airlines will have reservation times convenient to all of their customers	5.822	5.177	-0.644
24. Employees should give customers personal attention	5.977	5.607	-0.370
25. Should have customers' best interests at heart	6.318	5.400	-0.918
26. Will understand the specific needs of customers	6.103	5.259	-0.844
27. Airlines will be easily accessible by telephone	6.392	5.459	-0.933

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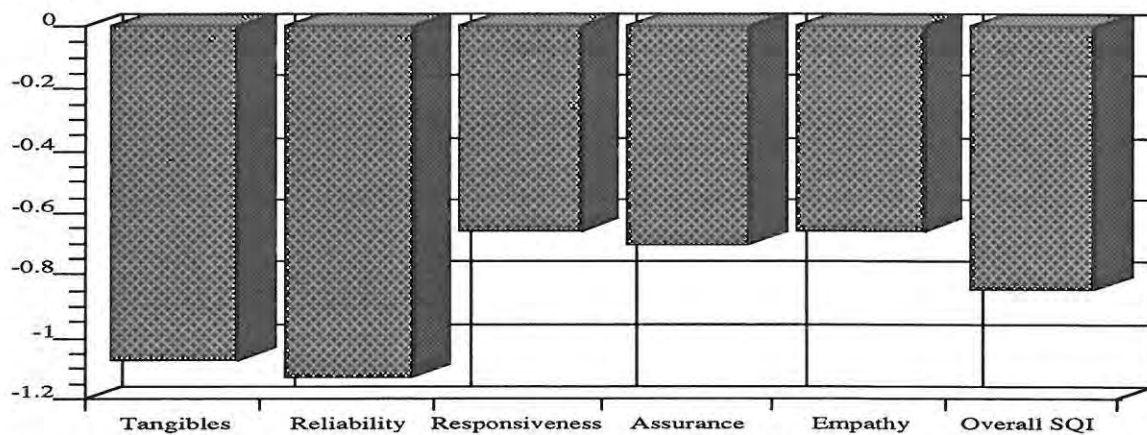
additional items to the SERVQUAL questionnaire, which demonstrates that it may frequently be necessary to add items if aspects of service quality truly unique to the situation are to be captured effectively. Finally, it would seem that the respondents to the airline study experience the greatest problems with the service quality dimensions of tangibles and reliability. This is contrary to the usual patterns which develop in studies such as this - in many studies, the tangibles gap is the least serious, and in many cases is positive [Parasuraman, Zeithaml and Berry 1988; 1990].

Overall gap scores by dimensions, by dimension for the airline service quality study are summarised in Table 6.1.2, and illustrated graphically in Figure 6.1.

Table 6.1.2
Overall Gap Scores By Dimension, and Service Quality Index, Airline Service Quality Study

Dimensions	Scores
Tangibles	-1.079
Reliability	-1.134
Responsiveness	-0.668
Assurance	-0.709
Empathy	-0.663
Overall Service Quality Index	-0.851

Figure 6.1
Overall Gap Scores by Dimension, and Service Quality Index, Airline Service Quality Study



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From this table and figure it can be seen that the overall service quality index for the airline is -0.851, and that the dimensional gaps on which there are the most serious shortfalls are tangibles (-1.079) and reliability (-1.134). The least severe of the gaps is empathy (-0.663). Generally the regional airline concerned is not performing up to its customers expectations on any of the service quality dimensions.

6.1.1. Reliability Data - Airline Service Quality Study

The item to total correlations of each item in the SERVQUAL instrument used in the airline service quality study and the coefficient alphas [Cronbach 1951] for each, including the additional 5 statements, are reported in Table 6.1.3.

Table 6.1.3
Reliability Data - Airline Service Quality Study

Deleted Variable	Correlation with Total	Coefficient Alpha
1	0.579006	0.967574
2	0.659692	0.966985
3	0.647799	0.967072
4	0.510918	0.968068
5	0.721913	0.966527
6	0.616586	0.967300
7	0.584778	0.967532
8	0.722759	0.966521
9	0.712728	0.966595
10	0.748530	0.966330
11	0.565379	0.967674
12	0.603366	0.967397
13	0.761185	0.966236
14	0.807951	0.965889
15	0.765417	0.966205
16	0.812362	0.965856
17	0.787087	0.966044
18	0.819762	0.965801
19	0.790554	0.966019
20	0.779226	0.966103
21	0.782623	0.966077
22	0.663916	0.966954
23	0.713286	0.966591
24	0.797335	0.965968
25	0.817506	0.965818
26	0.831335	0.965715
27	0.672604	0.966890

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It is immediately apparent from the alpha coefficients in Table 6.1.3 that the SERVQUAL instrument as utilised in the airline service quality study exhibits high internal consistency. All the alphas exceed 0.9, where a cutoff of 0.7 for a coefficient alpha is regarded as acceptable for commercial research purposes. This includes the additional items, and it can thus be accepted that SERVQUAL is a reliable instrument for the measurement of service quality for a Larsson-Bowen Type I organization, namely a regional airline, under South African conditions.

At this point it is appropriate, however to comment on the effects of adding items of a similar nature, to an instrument for which reliability has already been established. If coefficient alpha [Cronbach 1951] is given by

$$\alpha = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum_{i=1}^k \sigma_i^2}{\sigma_T^2} \right)$$

where

- k = the number of items in the measurement scale
- σ_i^2 = variance of the i th item
- σ_T^2 = variance of the entire measurement scale

Then if the total variance equals the sum of the individual scale item variances plus two times the sum of the scale item covariances, coefficient alpha can be expressed as

$$\alpha = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum_{i=1}^k \sigma_i^2}{\sum_{i=1}^k \sigma_i^2 + 2 \sum_{i < j}^k \sigma_{ij}} \right)$$

where

σ_{ij} , $i > j$ denote the $k(k-1)/2$ variances

In this form, an interesting property of coefficient alpha becomes apparent [Dillon, Maddon and Firtle 1987], relating to the internal consistency of a measurement scale as indicated by α as the number of scale items increases. If the number of items in a scale is increased by m items, then $(k+m)/(k+m-1) < (k/k-1)$ and this component of the formula decreases. However, there are m additional variances and $m(m-1)$ additional covariance terms; thus, the number of additional variance terms increases arithmetically, while the number of additional covariance terms increases geometrically. Since the former component appears in the numerator and the latter in the denominator, the quotient in the above expression increases. Although $(k/k-1)$ in the formula decreases with an increase in the number of scale items and the additional variance terms have a negative effect on coefficient α , the geometric increase in the denominator more than offsets these effects. An important property of α is thus that the covariance of each of the additional

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scale items with original item is almost zero, and the variance of each of the additional items is not, an increase in the number of scale items, as in the above case from 22 to 27, will increase the reliability of the scale as measured by coefficient α . Thus, α can be increased almost to a maximum by asking what are essentially the same questions a number of times, or in slightly different ways. This is obviously not the object in scientific research, nor is it good measurement practice. An important lesson to be learned from the airline service quality study here is that it may have in some cases have been unnecessary to ask some of the questions - for example, the questions of arrival and departure times could still in all likelihood have been captured by the essence of keeping promises (item 5 in the original SERVQUAL questionnaire). One of the intentions of the scale purification process in the case of the original SERVQUAL questionnaire was to capture all the dimensions of service quality in as few items as possible. Users of the instrument should therefore attempt to do this in their own research, as tempting as it may sometimes be to add "very industry specific" items. Increases in reliability may not only be misleading, but the additional items also increase respondent tedium.

6.1.2 Convergent Validity - Airline Service Quality Study

In order to establish convergent validity, SERVQUAL scores, by dimension, and in total, were categorized by respondents overall evaluation on a 4-point scale ranging from Poor to Excellent. For the Airline Service Quality Study this is reported in Table 6.1.4.

Table 6.1.4
Overall Evaluation of Airline Service Quality, by dimension and by service quality index.

	Poor	Fair	Good	Excellent
Total	1	16	89	19
Tangibles	-4.86	-2.14	-1.02	-0.44
Reliability	-4.20	-2.70	-1.01	0.50
Responsiveness	-2.50	-1.98	-0.53	-0.26
Assurance	-3.00	-2.05	-0.58	-0.13
Empathy	-2.57	-2.07	-0.59	0.20
Overall SQI	-3.43	-2.19	-0.74	-0.24

Content validity is an indication of the representativeness of the content of a measurement scale, and focuses on whether the scale items adequately cover the entire domain of the construct under study. Convergent validity, is for purposes of this study a similar component, and is based on the correlation between responses to maximally different measuring methods of measuring the same construct. Content validity should be satisfied by this question: Does the SERVQUAL scale appear to measure what it is supposed to? Convergent validity should be answered by this question: Does a measure of service quality determined by SERVQUAL correspond with other measures of service quality? Both these questions for the airline service quality study are answered in Table 6.1.4. In this table, service quality measures by dimensions, and by the overall service quality index (SQI) are compared against overall ratings by

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the respondent, on a four-point scale, to a single question regarding the service quality of the airline concerned. Table 6.1.4 indicates high content and convergent validities for the SERVQUAL instrument in the case of the measurement of airline service quality. The overall SQI, and the service quality scores by dimension improve as the overall ratings increase from poor to excellent. In the case of those respondents rating the overall service quality of the airline as excellent, the gaps on reliability and empathy were positive - the airline had in fact exceeded their expectations.

A multiple regression analysis was also undertaken in this regard, using the overall service quality evaluation as the dependent variable, and the indices on the five dimensions as the predictor variables. The results are reported in Table 6.1.5.

Table 6.1.5.
Regression of SERVQUAL dimensions on overall service quality ratings

Variable	DF	Estimate	Standard Error	T for H0	Prob > t
Tangibles	1	0.0483	0.0595	1.107	0.2706
Reliability	1	0.0314	0.0437	0.696	0.4878
Responsiveness	1	-0.0006	0.0451	-0.009	0.9924
Assurance	1	0.1659	0.0683	2.214	0.0287
Empathy	1	0.1127	0.0749	2.137	0.0347

An important reason for using multiple regression is to determine the relative importance of the five service quality dimensions. The analysis returned a significant regression ($f = 13.364$, $p > 0.0001$). This indicates that all five dimensions are associated with the overall perception of service quality. However, as will be seen from the table, assurance contributed most to the regression model, as indicated by the t statistic ($t = 2.214$; $p > 0.0287$), and empathy the second most to the model ($t = 2.137$; $p > 0.0347$). This means that assurance is relatively the most important dimension, and empathy the second most important dimension. The other dimensions did not return significant t statistics, which indicates that each of the remaining dimensions cannot be evaluated on importance relative to assurance and empathy for this particular sample of respondents. However this major finding does not imply that the other three dimensions are not important. It simply stresses that the passengers of a regional airline value service delivery which satisfies their assurance and empathy needs. Although not significant there is value in ranking the other three dimensions according to the absolute values of the t statistics and significance levels. The criteria for ranking would be: the greater the t statistic, and the smaller the significance level, the more important (relatively) the particular dimension would be. From Table 6.1.5, it is evident that the ranking would be as follows: assurance, empathy, tangibles, reliability, and finally, responsiveness. A step-wise multiple regression procedure confirmed this result, by eliminating three dimensions, namely, tangibles, reliability, and responsiveness from the regression model, meaning that assurance ($f=54.13$, $p > 0.0001$) and empathy ($f=8.05$; $p > 0.0053$) are crucial to the airline as perceived by the

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respondents. A general conclusion at this stage is that the SERVQUAL questionnaire has good content and convergent validity for purposes of measurement of service quality in a Larsson-Bowen Type I organization, a regional airline, under South African conditions.

6.1.3. Nomological Validity - Airline Service Quality Study

Nomological validity is indicated if items expected to load together in a factor analysis, actually do so. The SERVQUAL questionnaire items do a reasonably good job here, according to Carman [1990]. Nomological validity refers to an observed relationship between measures purported to assess different (but conceptually related constructs). If two constructs (C_1 and C_2) are conceptually related evidence that purported measures of each (M_1 and M_2) are related is usually accepted as empirical support for the conceptual relationship.

In order to establish nomological validity of the SERVQUAL instrument in the airline service quality study, a factor analysis, with number of factors established by the SAS MINEIGEN criterion, and using PROMAX rotation was used. The results of the procedure are reported in Table 6.1.6.

Table 6.1.6.
Results of Airline Service Quality Study - Factor Analysis following PROMAX rotation

Item	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	Communality								
1	0.36704	0.51014	0.44363	0.86796	0.79								
2	0.56008	0.50774	0.38458	0.79297	0.70								
3	0.42164	0.60796	0.49116	0.84028	0.79								
4	0.51721	0.33220	0.17364	0.64803	0.54								
5	0.60657	0.81664	0.37448	0.40993	0.68								
6	0.44799	0.77700	0.31587	0.46290	0.63								
7	0.38959	0.68897	0.46016	0.47678	0.54								
8	0.73291	0.53541	0.61143	0.32334	0.64								
9	0.62534	0.68356	0.63855	0.29560	0.64								
10	0.75468	0.52584	0.67519	0.36238	0.71								
11	0.41169	0.41898	0.93363	0.35363	0.87								
12	0.43290	0.47759	0.91809	0.38958	0.85								
13	0.82690	0.55936	0.44925	0.37387	0.69								
14	0.74282	0.81110	0.51963	0.32761	0.77								
15	0.84812	0.64634	0.38443	0.24125	0.77								
16	0.89027	0.61278	0.47407	0.32680	0.81								
17	0.70148	0.78209	0.46636	0.45193	0.69								
18	0.87123	0.63749	0.42171	0.43437	0.78								
19	0.68557	0.82467	0.42763	0.48057	0.73								
20	0.82835	0.65130	0.35244	0.39426	0.72								
21	0.71434	0.79237	0.41843	0.42089	0.71								
22	0.59894	0.47920	0.62230	0.51261	0.56								
23	0.81056	0.43392	0.45216	0.40077	0.69								
24	0.74035	0.81392	0.41611	0.38724	0.75								
25	0.83215	0.70093	0.36452	0.47212	0.76								
26	0.86056	0.65187	0.39617	0.51734	0.79								
27	0.74445	0.48524	0.28894	0.44273	0.59								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>FACTOR1</th> <th>FACTOR2</th> <th>FACTOR3</th> <th>FACTOR4</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">12.684819</td> <td style="text-align: center;">10.922701</td> <td style="text-align: center;">6.879964</td> <td style="text-align: center;">6.346333</td> </tr> </tbody> </table>						FACTOR1	FACTOR2	FACTOR3	FACTOR4	12.684819	10.922701	6.879964	6.346333
FACTOR1	FACTOR2	FACTOR3	FACTOR4										
12.684819	10.922701	6.879964	6.346333										

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The loadings of each of the SERVQUAL items used in the airline service quality study, on each of the factors extracted; the commonality scores for each item; and the variance accounted for by each factor, are reported in Table 6.1.6. It is apparent from the factor analysis that the service quality study in the case of the regional airline did not result in the same factors, or in the same item to-factor loadings as in the original SERVQUAL questionnaire development. More importantly, the items that were expected to load together, did not. It would thus seem that the SERVQUAL questionnaire is not nomologically valid for a Larsson-Bowen framework Type I organization, namely a regional airline, under South African conditions.

Upon examination of the factor analysis in greater detail, it can be seen from Table 6.1.6 that only four factors emerge following the MINEIGEN criterion, rather than the five service quality dimensions as would be expected. Furthermore, the factors are not as clearly identifiable as are the five dimensions under the original SERVQUAL questionnaire. Factor 4 is clearly a tangibles factor, capturing part of the tangibles dimension, all of which seem to have to do with physical things such as modern looking aircraft, visually appealing physical facilities, visually appealing aircraft interiors, and acceptable engine noise. However, the other tangibles items (5 [appearance of employees], 6 [materials] and 7 [signage and announcements]) all load onto Factor 2, along with items 9 (sincere interest in solving problems, a reliability item); 14 (prompt service, a responsiveness item); 17 (instilling confidence, an assurance item); 19 (consistent courtesy, an assurance item); 21 (individual attention, an empathy item); and, 24 (personal attention, an empathy item). While sufficient creative input may indeed be able to name this factor, whether this would in fact be meaningful may be an issue. The same can be said for Factor 1, which seems to capture a number of service quality items from all dimensions except tangibles. The interesting factor is Factor 3, onto which only three items load. These are items 11 and 12 (flights departing, and arriving on time, both reliability items) and 22 (convenient departure times, an empathy item). Factor 3 would thus be very much easier to name - something like "arrivals and departures" - but whether this has a point is debatable. The points made under the discussion on the reliability of the SERVQUAL questionnaire bear reiteration - while it may seem attractive to add unique items to the instrument, they appear to detract from its elegance, and do not make meaningful contributions to either reliability or nomological validity.

6.1.4 Construct Validity - Airline Service Quality Study

Construct validity is indicated if the same items that reflect a factor in the original Parasuraman, Zeithaml and Berry [1988] factor analysis load on that same factor in a replication. Carman [1990] found the PZB items do a fair job in this regard. However, it would appear from the factor analysis in Table 6.1.6 that the SERVQUAL questionnaire used in the study of a Larsson-Bowen framework Type I organization, a regional airline, did not perform very well with regard to construct validity under South African conditions. Five factors did not emerge as expected. Apart from Factor 4, which consisted only of

tangibles items, and Factor 3, which seems to have to do with arrivals and departures, little sense can be made out of Factors 1 and two, which are both a mixture of reliability, responsiveness, assurance and empathy items.

6.1.5 Discriminant Validity - Airline Service Quality Study

An approach to evaluating the instrument in this regard is to use the reference axis correlations, which are produced as part of the SAS factor analysis output. As will be seen from Table 6.1.7, a high (-0.47775) partial correlation between factor one and two is indicated. It would thus seem that the SERVQUAL questionnaire as used in the study of service quality in a Larsson-Bowen framework Type I organization, namely a regional airline, is questionable with regard to discriminant validity under South African conditions.

Table 6.1.7
Airline Service Quality Study - Reference Axis Correlations from Factor Analysis

	FACTOR1	FACTOR2	FACTOR3	FACTOR4
FACTOR1	1.00000	-0.47775	-0.20050	-0.13131
FACTOR2	-0.47775	1.00000	-0.21781	-0.24360
FACTOR3	-0.20050	-0.21781	1.00000	-0.15073
FACTOR4	-0.13131	-0.24360	-0.15073	1.00000

6.1.6 Airline Service Quality Study - Conclusions

The essential conclusions concerning the applicability of the SERVQUAL questionnaire in a Larsson-Bowen framework Type I organization, namely a regional airline, are summarised in Table 6.1.8. As the table indicates, the SERVQUAL questionnaire has been shown to be very reliable in the study, and to demonstrate good convergent validity. However, the instrument has not shown nomological, or construct, or discriminant validity.

Table 6.1.8
Airline Service Quality Study - Conclusions

Research Characteristics	Airline Service Quality Study
Reliability	✓
Convergent validity	✓
Nomological validity	✗
Construct validity	✗
Discriminant validity	✗

6.2 Results: Graduate Business School Service Quality Measurement

Overall measurements of the service quality of a graduate business school are presented in Table 6.2.1. Items in the table are abbreviated for the sake of convenience. In this study, the original SERVQUAL items were used, with only minimal appropriate changes. In this table, SERVQUAL scores are averaged by dimension, and are presented for the two important groups of customers for the school, namely MBA students and executives, and are also averaged across the two customer groups and summarised as "All". As can be seen from Table 6.2.1, the graduate business school concerned did not exceed the expectations of "ALL" the respondents to the survey, or the MBA students on any of the dimensions. However, in the case of executives, the graduate business school did exceed their expectation on the assurance and empathy dimensions.

Overall gap scores for the graduate business school service quality study are also summarised in Table 6.2.1, and illustrated graphically in Figure 6.2.

Figure 6.2
Overall gap scores for the graduate business school service quality study

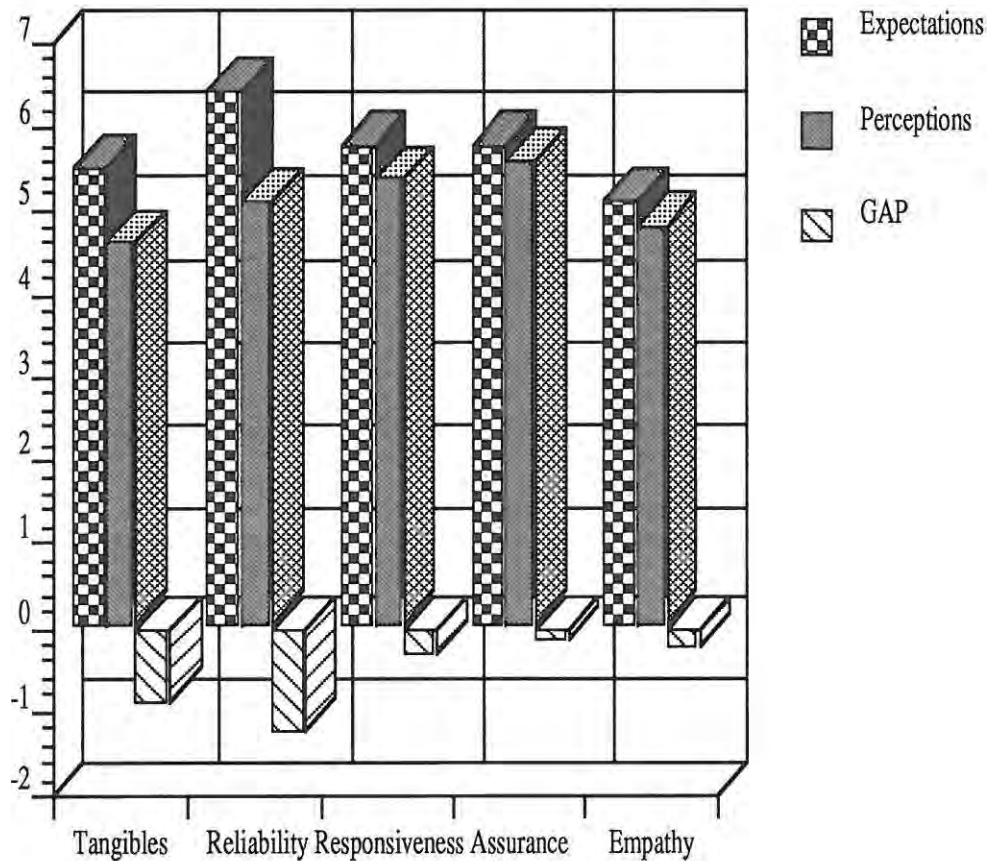


Table 6.2.1
Overall Expectations, Perceptions and Gaps, Graduate Business School Service Quality Measurements

Expectation	All	MBA	Executive
Tangibles	5.2	5.6	5.4
Reliability	6.4	6.4	6.3
Responsiveness	5.8	5.6	5.9
Assurance	5.8	5.7	5.9
Empathy	5.1	5.3	5.0
Perceptions	All	MBA	Executive
Tangibles	4.6	3.8	5.2
Reliability	5.1	4.1	5.8
Responsiveness	5.4	4.5	6.0
Assurance	5.6	5.7	6.1
Empathy	4.8	4.2	5.2
Gap	All	MBA	Executive
Tangibles	-0.9	-1.8	-0.5
Reliability	-1.2	-2.3	-0.5
Responsiveness	-0.4	-1.2	-0.1
Assurance	-0.2	-0.8	0.2
Empathy	-0.4	-1.1	0.2

Overall Gap	-0.75
Standard Deviation	1.7
Variance	2.9

6.2.1. Reliability Data - Graduate Business School Service Quality Study

The reliability alpha coefficients [Cronbach 1951] calculated for SERVQUAL are shown in Table 6.2.2, for expectations, perceptions and the gap between them.

**Table 6.2.2
Reliability Data [Cronbach Alpha by dimension] - Graduate Business School Service Quality Study**

	All	MBA	Executive
Tangibles	0.69	0.45	0.56
Reliability	0.89	0.80	0.82
Responsiveness	0.85	0.80	0.81
Assurance	0.66	0.40	0.68
Empathy	0.79	0.66	0.75

Computed total scale coefficients are quite high, ranging from 0.88 to 0.95, suggesting good overall reliability of SERVQUAL. Within the individual dimensions, high alphas are obtained for reliability, responsiveness and empathy, for expectations, perceptions and the gap. The tangibles dimension is slightly weaker, while assurance alphas are both weak and sporadic. The most important figures, for comparison with PZB, are the gap dimension coefficients for the complete data set, which range from 0.66 to 0.89. These are generally greater than 0.70 and are well in line with those of the original SERVQUAL development. A general conclusion is that the SERVQUAL questionnaire is a generally reliable instrument for the measurement of service quality in a Larsson-Bowen framework Type II organization, namely a graduate business school, under South African conditions.

6.2.2 Convergent Validity - Graduate Business School Service Quality Study

In order to establish convergent validity, SERVQUAL scores, by dimension, and in total, were categorized by respondents' overall evaluation on a 4-point scale ranging from Poor to Excellent. For the graduate business school service quality study this is reported in Table 6.2.3. In this particular instance the "Fair" and "Poor" overall evaluations were grouped together, and the table also reports the results of a multiple regression procedure, in the form of R-squared values for each dimension. The resulting trends show increasing average gap scores on all dimensions by decrease in service quality measured by the overall ratings. The linear R² scores are all significant at $p < 0.05$, and the multiple

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regression of the dimension scores on the overall service quality rating returned an adjusted R² of 0.50. These results can be concluded to confirm SERVQUAL's convergent validity.

Table 6.2.3.

Overall Evaluation of Graduate Business School Service Quality, by dimension and by service quality index, and multiple regression R-squared.

	Excellent	Good	Adequate/ Poor	R2
Sample Number	48	73	41	
Tangibles	-0.1	-0.7	-1.9	0.32
Reliability	-0.3	-1.0	-2.6	0.41
Responsiveness	-0.0	-0.3	-1.4	0.31
Assurance	0.0	-0.2	-0.9	0.27
Empathy	0.0	-0.3	-1.4	0.34
Overall SQI	-0.08	-0.3	-1.64	

6.2.3. Nomological Validity - Graduate Business School Service Quality Study

In order to establish nomological validity of the SERVQUAL instrument in the management education service quality study, a factor analysis was undertaken, with number of factors established by the SAS MINEIGEN criterion, and using PROMAX rotation. The results of the procedure are reported in Table 6.2.4. In the table factor loadings below 0.25 were filtered out following the procedure suggested by Parasuraman, Zeithaml and Berry [1988] - it has been suggested that this simplifies visual analysis [Rigotti 1990]. For SERVQUAL to be nomologically valid, items that are expected to load together under the five SERVQUAL dimensions should do so. The factor analysis in Table 6.2.4 shows this to apply quite strongly to four of the five dimensions - assurance being the exception. In overall terms, therefore, SERVQUAL can be regarded as having nomological validity for measuring service quality of a graduate business school.

6.2.4 Construct Validity - Graduate Business School Service Quality Study

Construct validity is indicated if the same items that reflect a factor in the original Parasuraman, Zeithaml and Berry (PZB)[1988] factor analysis load on that same factor in a replication. Carman [1990] found the PZB items do a fair job in this regard, and it would appear from the factor analysis in Table 6.2.4 that the SERVQUAL questionnaire used in the study of a Larsson-Bowen framework Type II organization, a graduate business school, performed fairly well with regard to construct validity under South African conditions. Five factors did emerge, as expected. Examination of these shows that four of the five factors load highly along the five SERVQUAL dimensions [underlined values]. Factor 1 can be identified as Reliability except for the item relating to accurate keeping of records. Factor 5 is the tangibles dimension, with the exception of "appearance of personnel", and Factor 3 appears to be the empathy dimension.

Results and Discussion

Factor 4 captures most of the assurance dimension, and Factor 2 most of responsiveness.

6.2.5 Discriminant Validity - Graduate School of Business Service Quality Study

Discriminant validity in the case of the SERVQUAL scale is indicated in a factor analysis, if the factors, and their items, are truly different from one another. The robustness of the PZB factors are somewhat in doubt on this criterion, according to Carman [1990]. Discriminant validity is an indication of the extent to which the measurement scale is novel, and not simply a reflection of some other variable.

For an instrument to possess discriminant validity, the factors need to be truly different from each other. In this instance, rather than use reference axis correlations, item scores on factors and commonalities were used as a means of visual assessment of discriminant validity. Here, some anomalous results are apparent in the factor analysis, which would tend to reduce discriminant validity - items 3 [the physical appearance of staff], and 4 [appearance of materials] are cases in point. The items load onto more than one factor, and the commonality scores of 0.63 and 0.54 respectively are quite low. Other items where there appear to be non-discrimination are statements 10, 11, 13, 15, 18, 21 and 22. Generally, therefore, it would not be unfair to say that the SERVQUAL questionnaire is lacking in discriminant validity for the measurement of service quality in a Larsson-Bowen framework Type II organization, namely a graduate business school, under South African conditions.

Table 6.2.4.

Results of Graduate Business School Service Quality Study - Factor Analysis following PROMAX rotation

		Factor1	Factor2	Factor3	Factor4	Factor5	Commonality
Tangibles	1	0.38	-	-	-	0.62	0.59
	2					0.81	0.75
	3		0.65			0.37	0.63
	4	0.48				0.49	0.54
Reliability	5	0.83		0.27			0.81
	6	0.70			0.28		0.63
	7	0.83					0.80
	8	0.85					0.81
	9	0.47			0.27		0.41
Responsiveness	10	0.62	0.38	0.37			0.67
	11	0.48	0.58				0.68
	12	0.27	0.74		0.26		0.74
	13		0.65		0.45		0.71
Assurance	14				0.73		0.61
	15	0.52	0.29		0.48		0.60
	16		0.61	0.26			0.52
	17				0.50		0.40
	18	0.29	0.41	0.63			0.69
Empathy	19			0.69			0.54
	20		0.27	0.78			0.77
	21	0.30		0.56	0.37	0.35	0.66
	22	0.54			0.47		0.58
Variance Explained		22%	13%	11%	10%	9%	Total: 65%

6.2.6 Graduate Business School Service Quality Study - Conclusions

The essential conclusions concerning the applicability of the SERVQUAL questionnaire in a Larsson-Bowen framework Type II organization, namely a graduate business school, are summarised in Table 6.2.5. As the table indicates, the SERVQUAL questionnaire has been shown to be very reliable in the study, and to demonstrate good convergent validity. It has also shown adequate nomological validity, and construct validity. Only in the case of discriminant validity has the instrument failed to meet the set criteria.

**Table 6.2.5
Graduate Business School Service Quality Study - Conclusions**

Research Characteristics	Graduate Business School Service Quality Study
Reliability	✓
Convergent validity	✓
Nomological validity	✓
Construct validity	✓
Discriminant validity	✗

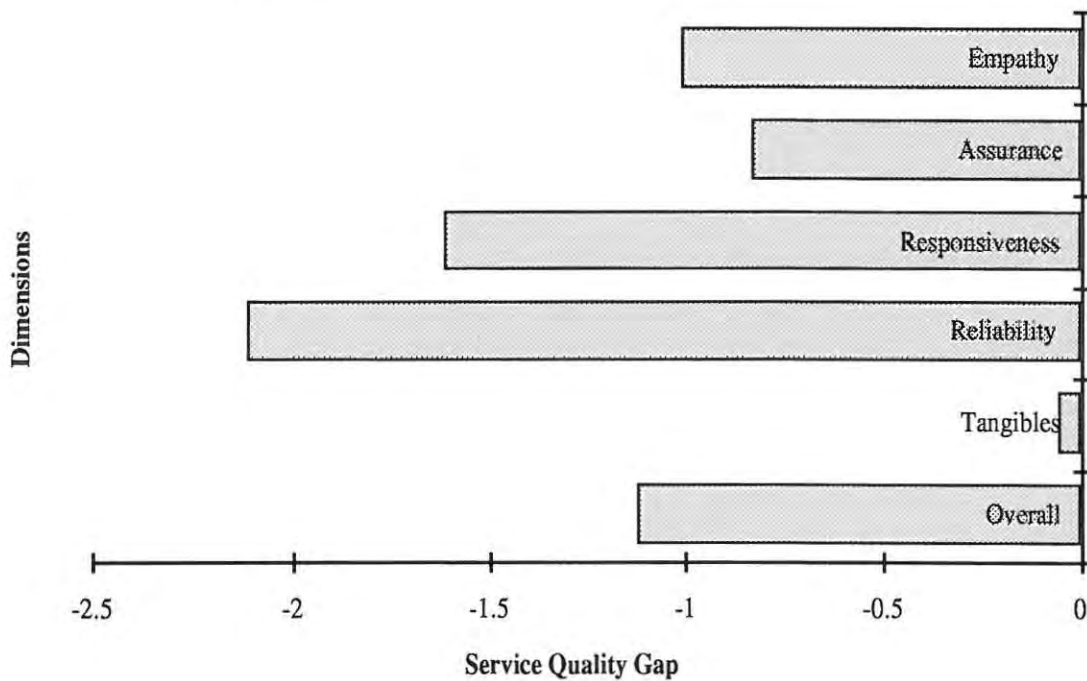
6.3 Results: Short-term Insurance Broker Service Quality Study

Overall measurements of the service quality for a short-term insurance broker are presented in Table 6.3.1. In the table, the measurements are abbreviated by dimension for the sake of convenience. In this study, the original SERVQUAL items were used, with only minimal appropriate changes. As can be seen from Table 6.3.1, and as illustrated graphically in Figure 6.3, the short-term Insurance broker concerned did not exceed the expectations of the respondents to the survey on any dimensions, although this was reasonably close on tangibles. All the other gaps on the dimensions are negative, indicating that the short-term insurance broker concerned did not live up to the expectations of its clients with regard to service quality. This ranges from a high gap of -2.1162 on reliability, to a low of -0.8258, on assurance. The overall SQI is -1.1199, which means that the organization concerned is not meeting the expectations of its customers (more especially the respondents to this study) with regard to service quality.

Table 6.3.1
Overall Service Quality by dimension, Short-term Insurance Broker Service Quality Study

OVERALL	-1.1199
TANGIBLES	-0.0526
RELIABILITY	-2.1162
RESPONSIVENESS	-1.6171
ASSURANCE	-0.8258
EMPATHY	-1.0049

Figure 6.3
Overall Gap Scores by Dimension, and Service Quality Index, Short-term Insurance Broker Service Quality Study



6.3.1. Reliability Data - Short-term Insurance Broker Service Quality Study

The alpha coefficients by dimension, for the gap, for the SERVQUAL instrument used in the short-term Insurance broker service quality study, are reported in Table 6.3.2. It can be seen from the table that the alpha for the instrument overall, namely the SQI, just achieves the commercially acceptable cutoff point of 0.7. Two dimensions, namely tangibles and assurance, fall below this point, at 0.53, and 0.61 respectively. The reliability of the other three dimensions is acceptable, and thus, with some reservation, it can be accepted that the SERVQUAL questionnaire is reliable for the measurement of service quality in a Larsson-Bowen framework Type III organization, namely a short-term Insurance broker, under South African conditions.

Table 6.3.2
Reliability Data - Short-term Insurance Broker Service Quality Study

Dimension	Cronbach Alpha
TANGIBLES	0.53
RELIABILITY	0.81
RESPONSIVENESS	0.79
ASSURANCE	0.61
EMPATHY	0.78
Overall SQI	0.70

6.3.2 Convergent Validity - Short-term Insurance Broker Service Quality Study

In order to establish convergent validity, the SERVQUAL scores, by dimension, and in total, were categorized by respondents overall evaluation on a 4-point scale ranging from Poor to Excellent. For the Short-term Insurance Broker service quality study this is reported in Table 6.3.3. From Table 6.3.3 it is clear that the service quality gaps by dimension, and for the overall SQI improve as the overall evaluations of service quality improve. For those respondents rating the service quality of the Short-term Insurance Broker as excellent or good, the gaps on two dimensions, namely tangibles and to a limited extent empathy, are positive.

Table 6.3.3
Overall Evaluation of Short-term Insurance Broker Service Quality, by dimension and by service quality index.

	EXCELLENT	GOOD	ADEQUATE	POOR
OVERALL	-0.122574	-0.670809	-1.375005	-2.341275
TABGIBLES	0.343728	0.005766	-0.177816	-0.262818
RELIABILITY	-0.574926	-1.502322	-2.420883	-3.745389
RESPONSIVENESS	-0.31341	-1.015839	-1.887342	-3.366228
ASSURANCE	-0.030318	-0.459234	-0.975105	-2.039676
EMPATHY	0.048546	-0.450399	-1.380213	-2.373732
Number of Respondents	14	26	24	10

In order to further investigate convergent validity, a multiple regression analysis was undertaken, using the overall service quality evaluation as the dependent variable, and the indices on the five dimensions as the predictor variables. Evidence of the convergent validity of a measure is provided by the extent to which it correlates highly with other methods designed to measure the same construct (Churchill 1979). While the previous table provides superficial support for SERVQUAL in this respect, regression of overall service impressions with an overall SERVQUAL score yielded the results in Table 6.3.4.

Table 6.3.4 Regression of overall service impression and overall SERVQUAL score.

Regression model R-squared	0.5435
Regression model significance	(F-test) 0.0001
Parameter estimate for SERVQUAL score	-0.673563
Significance of parameter estimate	(T-test) 0.0001

Results and Discussion

The result of a correlation analysis of overall service impression with overall SERVQUAL score indicated a high correlation (-0.7565) between the two measures, that is statistically significant ($p > 0.0001$). Both these results provide support for convergent validity of the SERVQUAL instrument. A conclusion specific to the respondents of this study then, is that the SERVQUAL questionnaire possesses convergent validity for the measurement of service quality in a Larsson-Bowen framework Type III organization, namely a short-term Insurance broker, under South African conditions.

6.3.3. Nomological Validity - Short-term Insurance Broker Service Quality Study

In order to establish nomological validity of the SERVQUAL instrument in the short-term Insurance broker service quality study, a factor analysis was undertaken, with number of factors established by the SAS MINEIGEN criterion, and using PROMAX rotation. The results of the procedure are reported in Table 6.3.5. For nomological validity to exist, the items expected to load together in a factor analysis should do so.

Table 6.3.5.

Results of Short-term Insurance Broker Service Quality Study - Factor Analysis following PROMAX rotation

ITEM	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
1					0.7824
2				0.43032	0.62592
3				0.76284	
4	0.35208		0.33252	0.46944	0.37164
5	0.84108	0.33252			
6	0.79218	0.5868			
7	0.7824	0.45966	0.38142		
8	0.88998	0.42054	0.3423		
9	0.61614	0.49878	0.44988		
10	0.67482	0.489	0.38142		
11	0.7824	0.60636	0.489		
12	0.66504	0.70416	0.51834		
13	0.6357	0.62592	0.57702		
14	0.3912	0.42054	0.75306		
15			0.79218		
16	0.32274	0.5379	0.489	0.59658	
17	0.6357	0.55746	0.45966		
18	0.50856	0.82152	0.36186		
19	0.33252	0.65526			0.30318
20	0.4401	0.79218	0.37164	0.2934	
21	0.62592	0.67482	0.65526		
22	0.64548	0.74328	0.489		

Results and Discussion

The results of the initial principle components factor analysis were subjected to a PROMAX rotation, as suggested by Carman [1990], yielding the rotated factor structure in Table 6.3.5. As can be seen, items that were expected to load together did so to a large extent. Five factors emerged, but were not exactly as predicted by the Parasuraman, Zeithaml, and Berry (1988) study, nor as clearly differentiable as might be expected.

Factor 4 and factor 5 were notable by the small number of items loading on to them. These factors relate to the tangibles dimension of the SERVQUAL questionnaire. The original tangibles factor appears to be split into two separately identifiable factors, one of which relates to physical characteristics of the Short-term Insurance Broker (Factor 5); and the other which relates to contact personnel or instances of customer - Short-term Insurance Broker interaction (Factor 4). This may be relevant to the circumstances of the study as it is likely that a number of clients dealing with a Short-term Insurance Broker might very seldom, if ever, actually visit the premises. Some clients may only deal with contact personnel in their offices, at home, or telephonically. This would explain the relatively high loading of item 16 (relating to employee courtesy) on Factor 4.

The remaining factors can be related directly to the SERVQUAL questionnaire. Factor 1 is the reliability dimension of the model; Factor 2 is the empathy dimension; and, Factor 3 closely approximates the assurance dimension. The responsiveness dimension loads along with the reliability items as factor 1. Generally, however, it can be accepted that the SERVQUAL questionnaire possesses nomological validity in the measurement of service quality in a Larsson-Bowen framework Type III organization, namely a short-term insurance broker, under South African conditions.

6.3.4 Construct Validity - Short-term Insurance Broker Service Quality Study

Construct validity is indicated if the same items that reflect a factor in the original Parasuraman, Zeithaml and Berry (PZB)[1988] factor analysis load on that same factor in a replication. Carman [1990] found the PZB items do a fair job in this regard, and it would appear from the factor analysis in Table 6.3.5 that the SERVQUAL questionnaire used in the study of a Larsson-Bowen framework Type III organization, a Short-term Insurance Broker, performed fairly well with regard to construct validity under South African conditions. Five factors did emerge, as expected. Examination of these shows that four of the five factors load highly along the five SERVQUAL dimensions and that while there is a little confusion over the tangibles dimension, and a joint loading of the reliability and responsiveness, generally, construct validity can be accepted.

6.3.5 Discriminant Validity - Short-term Insurance Broker Service Quality Study

For an instrument to possess discriminant validity, the factors need to be truly different from each other. In the factor analysis in Table 6.3.5, some doubt is cast on the SERVQUAL questionnaire's discriminant

validity. An indication of the weakness of the instrument in this area is provided by reference axis correlations, which indicate a high (-0.437) partial correlation between factor 1 and 2. A further pointer in this regard is the high coefficient alpha (0.9188) obtained by a correlation analysis of reliability and responsiveness items. A further correlation analysis on all 22 items in the instrument yielded a final indication of its questionable discriminant capability in terms of the five dimensions proposed by Parasuraman, Zeithaml, and Berry (1988). This analysis yielded a coefficient alpha of 0.919. Parasuraman, Zeithaml, and Berry (1988), used similar analyses to purify the instrument, where items with low corrected item-to-total correlations were deleted. This approach here would result in the removal of the all the tangibles items, and also item 15 (customers will feel safe in their transactions) in this study. A conclusion is thus that the SERVQUAL questionnaire does not possess discriminant validity for the measurement of service quality in a Larsson-Bowen framework Type III organization, namely a Short-term Insurance Broker, under South African conditions. Of course, the conclusion is only really specific to this study.

6.3.6 Conclusions - Short-term Insurance Broker Service Quality Study

Overall, it can be said that in the case of a Larsson-Bowen framework Type III organization, namely a Short-term Insurance Broker, the SERVQUAL questionnaire performed well with regard to reliability and validity. This is summarised in Table 6.3.6. The instrument showed fair reliability, and also convergent, nomological, and construct validity. Only in the case of discriminant validity can it be said that the instrument did not perform as expected.

Table 6.3.6
Short-term Insurance Broker Service Quality Study - Conclusions

Research Characteristics	Short-term Insurance Broker Service Quality Study
Reliability	✓
Convergent validity	✓
Nomological validity	✓
Construct validity	✓
Discriminant validity	✗

6.4 Results: Retail Pharmacy Service Quality Measurement

Overall measurements of the service quality of a chain of retail pharmacies are presented in Table 6.4.1. In this study, the original SERVQUAL items were used, with only minimal appropriate changes. As can be seen from Table 6.4.1, the retail pharmacies concerned exceeded the expectations of the respondents to the survey on two items, namely items 1 and 2, both "tangibles" items. All the other gaps on the individual items are negative, indicating that the retail pharmacies concerned did not live up to the expectations of their clients. This ranges from a high gap of -0.427 on item 8, delivering services at the promise time, a reliability item, to a general range of low gap scores on the other items. Generally it will be observed that the service quality gap scores are lower than for the three other sets of results

Table 6.4.1.
Overall Expectations, Perceptions and Gaps, by Item, Retail Pharmacy Quality Measurements

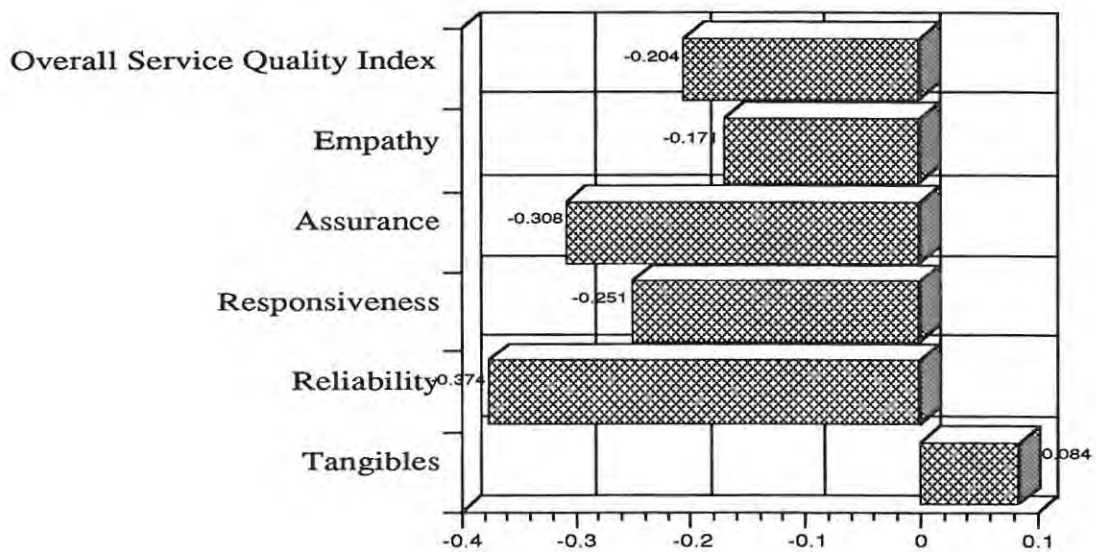
Item	Expectations	Perceptions	Difference
1	6.054	6.274	0.220
2	6.189	6.256	0.067
3	6.788	6.522	-0.265
4	6.072	6.387	-0.315
5	6.833	6.216	-0.315
6	6.846	6.585	-0.261
7	6.644	6.337	-0.306
8	6.693	6.265	-0.427
9	6.738	6.477	-0.261
10	6.594	6.243	-0.351
11	6.774	6.504	-0.270
12	6.801	6.585	-0.216
13	6.531	6.364	-0.166
14	6.693	6.324	-0.369
15	6.815	6.536	-0.279
16	6.716	6.536	-0.180
17	6.572	6.616	-0.405
18	6.581	6.450	-0.130
19	6.463	6.445	-0.018
20	6.590	6.382	-0.207
21	6.716	6.468	-0.247
22	6.666	6.414	-0.252

presented and discussed in this study. Compared to the regional airline, the graduate school of business, and the short-term insurance broker, the retail pharmacies concerned are doing a good job of meeting the service quality expectations of their customers. Overall gap scores for the retail pharmacy service quality study are summarised in Table 6.4.2, and illustrated graphically in Figure 6.4.

Table 6.4.2
Overall Gap Scores By Dimension, and Service Quality Index, Short-term Insurance Broker Service Quality Study

Dimensions	Gap
Tangibles	0.084
Reliability	-0.374
Responsiveness	-0.251
Assurance	-0.308
Empathy	-0.171
Overall Service Quality Index	-0.204

Figure 6.4
Overall Gap Scores by Dimension, and Service Quality Index, Retail Pharmacy Service Quality Study



From Table 6.4.2, and Figure 6.4, it can be seen that the retail pharmacies slightly exceeded the expectations of the respondents on the tangibles dimension, but did not live up to the expectations on the other dimensions, with reliability showing the largest negative gap at -0.374.

6.4.1. Reliability Data - Retail Pharmacy Service Quality Study

The item to total correlations of each item in the SERVQUAL instrument used in the retail pharmacy service quality study and the coefficient alphas for each, are reported in Table 6.4.3. From Table 6.4.3 it can be seen that the SERVQUAL questionnaire performed exceptionally well with regard to reliability in the measurement of perceptions of service quality in the case of respondents to the retail pharmacies service quality study. All the alphas exceed the commercially acceptable cutoff point of 0.7 - in fact, all the alphas exceed 0.96. It can thus be accepted that the SERVQUAL questionnaire is a reliable instrument for the measurement of service quality in a Larsson-Bowen framework Type IV organization, namely a chain of retail pharmacies, under South African conditions.

**Table 6.4.3
Reliability Data - Short-term Insurance Broker Service Quality Study**

Deleted Variable	Correlation with Total	Correlation Alpha
1	0.520071	0.968942
2	0.656918	0.967239
3	0.715430	0.966725
4	0.716554	0.966662
5	0.694236	0.967186
6	0.759223	0.966261
7	0.755426	0.966285
8	0.719350	0.966721
9	0.608729	0.967640
10	0.745874	0.966401
11	0.843582	0.965468
12	0.838876	0.965756
13	0.749608	0.966345
14	0.842820	0.965370
15	0.814663	0.965824
16	0.821954	0.965731
17	0.770331	0.966142
18	0.836558	0.965506
19	0.657279	0.967255
20	0.835111	0.965460
21	0.838330	0.965493
22	0.841416	0.965502

6.4.2 Convergent Validity - Retail Pharmacy Service Quality Study

In order to establish convergent validity, SERVQUAL scores, by dimension, and in total, were categorized by respondents' overall evaluations on a 4-point scale ranging from Poor to Excellent. For the retail pharmacies service quality study this is reported in Table 6.4.4. From this table it can be seen that the ratings by dimension, and for the SQI, improve as the overall evaluations of service quality improve. A slight inconsistency occurs in the case of the "Poor" rating, where the gap scores are actually very low. However it will be noted that only one respondent gave "Poor" as an overall service quality rating.

Table 6.4.4
Overall Evaluation of Retail Pharmacy Service Quality, by dimension and by service quality index.

	Poor	Fair	Good	Excellent
Total	1	11	74	102
Tangibles	-0.50	-0.50	-0.01	0.21
Reliability	-0.40	-0.89	-0.56	-0.21
Responsiveness	0.00	-0.59	-0.42	-0.13
Assurance	0.00	-0.68	-0.60	-0.09
Empathy	0.00	-0.58	-0.34	0.00
Overall SQI	-0.02	-0.65	-0.39	-0.05

A multiple regression analysis was also undertaken in this regard, using the overall service quality evaluation as the dependent variable, and the indices on the five dimensions as the predictor variables. The results are reported in Table 6.4.5.

Table 6.4.5
Results of multiple regression analysis on overall service quality rating

Variable	DF	Estimate	Standard Error	T for H0	Prob > t
Tangibles	1	0.0161	0.0484	0.322	0.7402
Reliability	1	0.1886	0.0725	2.599	0.0103
Responsiveness	1	-0.1742	0.1109	-1.570	0.1187
Assurance	1	0.1893	0.0919	2.058	0.0414
Empathy	1	0.0302	0.0893	0.338	0.7355

The analysis returned a significant regression ($f = 5.044$; $p > 0.0003$) which indicates that all five dimensions are associated with an overall perception of service quality. However it can be seen that the reliability dimension contributed most to the regression model with a significant t statistic of 2.599 ($p > 0.0103$), and assurance second most ($t = 2.058$; $p > 0.0414$). This indicates that reliability is relatively the most, and assurance the second most, important dimension to service quality in the case of retail pharmacies - or at least for the respondents to the retail pharmacy service quality study reported here. The remaining dimensions did not return significant t statistics, which means that their relative importance cannot be evaluated in terms of reliability and assurance. This obviously does not mean that they are not important. It simply stresses what already has intuitive appeal in the understanding of customers' judgments about pharmacies that in this particular service provider-client interaction, being able to trust in a reliable service provider, is most important.

Although not statistically significant, there is merit in ranking the other three dimensions according to the absolute values of the t statistics and significance levels. The ranking would then be (from Table 6.4.5): reliability, assurance, responsiveness, empathy, and tangibles. A stepwise regression procedure confirmed this result by eliminating three dimensions, namely tangibles, empathy and responsiveness from the model, and leaving reliability ($f = 19.62$; $p > 0.0001$) and assurance ($f = 2.66$; $p > 0.1047$).

6.4.3. Nomological Validity - Retail Pharmacy Service Quality Study

In order to establish nomological validity of the SERVQUAL instrument in the retail pharmacy service quality study, a factor analysis was undertaken, with number of factors established by the SAS MINEIGEN criterion, and using PROMAX rotation. The results of the procedure, and the variance accounted for by each of the factors are reported in Table 6.4.6. For nomological validity to exist, the items expected to load together in a factor analysis should do so. The factor analysis procedure only resulted in the extraction of three factors, but generally the items that are expected to do so, load on to the same factors. There are some exceptions. Item 3, a tangibles item (appearance of employees) does not load with the other tangibles items; item 9, a reliability item (error-free records) does not load with the other reliability items; item 10, a responsiveness item (employees telling exactly when the service will be performed) does not load with the other responsiveness items; and, item 19, an empathy item (convenient operating hours) does not load with other empathy items. If the nature of the organization is considered: These observed differences as to what could have been expected, may not be simply random, and the three factors may make sense. This aspect will be discussed under the following section, construct validity. In general, it can be said that the SERVQUAL questionnaire possesses nomological validity for the measurement of service quality in a Larsson-Bowen framework Type IV organization, namely a group of retail pharmacies, under South African conditions.

Table 6.4.6.

Results of Retail Pharmacy Service Quality Study - Factor Analysis following PROMAX rotation

Item	FACTOR 1	FACTOR 2	FACTOR 3	Communality
1	0.40021	0.41809	0.82876	0.69
2	0.53737	0.51196	0.90137	0.81
3	0.72351	0.49843	0.63762	0.60
4	0.60107	0.63004	0.79167	0.69
5	0.53070	0.92412	0.48777	0.86
6	0.66726	0.77489	0.58603	0.67
7	0.68922	0.76598	0.51957	0.66
8	0.57341	0.92761	0.45453	0.87
9	0.60780	0.49739	0.49772	0.41
10	0.65243	0.76192	0.58883	0.65
11	0.89150	0.59786	0.56101	0.80
12	0.90782	0.60533	0.48222	0.83
13	0.83973	0.54560	0.39039	0.72
14	0.92625	0.56338	0.51510	0.86
15	0.85254	0.59181	0.56337	0.74
16	0.92445	0.54143	0.46100	0.86
17	0.83940	0.53576	0.49008	0.71
18	0.87519	0.61682	0.55048	0.78
19	0.52988	0.69502	0.66520	0.59
20	0.85593	0.66746	0.53382	0.76
21	0.78902	0.76449	0.59808	0.75
22	0.89017	0.60697	0.54596	0.80
FACTOR1	FACTOR2	FACTOR3		
12.32179	9.343072	7.606308		

6.4.4 Construct Validity - Service Quality Study for a Group of Retail Pharmacies

Construct validity is present when the same items that reflect a factor in the original Parasuraman, Zeithaml and Berry [1988] factor analysis load on that same factor in a replication. Carman [1990] found the PZB items do a fair job in this regard. However it would appear from the factor analysis in Table 6.3.6 that the SERVQUAL questionnaire used in the study of a Larsson-Bowen framework Type IV organization, a group of retail pharmacies, did not perform as well with regard to construct validity under South African conditions. Only three factors emerged. Examination of these shows that while two of the three factors (Factors 2 and 3) have much in common with the SERVQUAL dimensions, there is some confusion on Factor 1, which seems to assimilate the responsiveness, assurance and empathy dimensions. Strictly speaking, construct validity cannot therefore be accepted, and a conclusion is that the SERVQUAL questionnaire does not possess construct validity in the measurement of service quality in a Larsson-Bowen framework Type IV organization, namely a group of retail pharmacies, under South African conditions.

Nevertheless, it seems relatively easy to name the factors, and to explain them given the nature of the kind of organization concerned. Doing so certainly makes more sense in the airline study. Factor 3 is obviously a simple, non-personal, tangibles dimension, encompassing equipment, physical facilities and materials - it could be called "appearances". Factor 2 is clearly the reliability dimension - to most customers of retail pharmacies, it would not matter greatly if the records were up-to-date (but it would if promises were not kept - hence the inclusion of item 10 in this dimension, telling exactly when services will be performed). Similarly, the convenience of operating hours, item 19, also loads onto this factor - when medication is needed, it is important for the customer to know that the retail pharmacy can be *relied* upon to be open. Factor 1 incorporates the rest of the variables, and in the context of retail pharmacies can perhaps be regarded as the "human touch" dimension. It would seem that for the respondents to this study at least, it is important to know that the neat, well-dressed personnel of retail pharmacies, who keep accurate records, are willing to serve them promptly, be truly competent and trustworthy, and give them individual attention.

6.4.5 Discriminant Validity - Service Quality Study of Retail Pharmacies

For an instrument to possess discriminant validity, the factors need to be truly different from each other, but cast some doubt on its discriminant validity. A cursory examination of the factor analysis in Table 6.4.6 would seem to indicate that all the items load rather strongly on to all of the factors, suggesting that the factors may in fact be highly correlated - in fact, the lowest loading of an item onto a factor is that of item 1 onto Factor 1, 0.40021. This is also confirmed by examination of the reference axis correlations as presented in Table 6.4.7, in which it can be seen that the factors correlate quite highly with each other. In the case of Factors 1 and 2 the correlation is 0.4625, and other correlations exceed 0.3.

Table 6.4.7
Reference Axis Correlations, following PROMAX rotated Factor Analysis, Service Quality Study, Retail Pharmacies

	FACTOR1	FACTOR2	FACTOR3
FACTOR1	1.00000	-0.46250	-0.31899
FACTOR2	-0.46250	1.00000	-0.32238
FACTOR3	-0.31899	-0.32238	1.00000

It can thus be said that the SERVQUAL questionnaire does not possess high discriminant validity for the measurement of service quality in a Larsson-Bowen framework Type IV organization, namely a chain of retail pharmacies, under South African conditions, or more particularly, at least for the respondents to this particular study.

6.4.6 Conclusions - Service Quality Study of Retail Pharmacies

Overall, it can be said that in the case of a Larsson-Bowen framework Type IV organization, namely a small chain of retail pharmacies, the SERVQUAL questionnaire performed well with regard to reliability, and some aspects of validity. This is summarised in Table 6.4.8. The instrument showed fair reliability, and also convergent, and nomological validity. In the cases of construct and discriminant validity, however, it can be said that the instrument did not perform as expected.

Table 6.4.8
Conclusions - Service Quality Study of Retail Pharmacies

Research Characteristics	Retail Pharmacy Service Quality Study
Reliability	✓
Convergent validity	✓
Nomological validity	✓
Construct validity	✗
Discriminant validity	✗

6.5 The Hypotheses, and the Results of this Study

This study has considered the reliability, and various aspects of validity, of the SERVQUAL questionnaire [Parasuraman, Zeithaml and Berry 1988], for the measurement of service quality, under South African conditions. In order to do this, it has utilised the contingency framework suggested by Larsson and Bowen [1989]. Four organizations have been researched, each of which fits into one of the categories proposed by Larsson and Bowen. The results of this are summarised in Table 6.5.1.

Table 6.5.1
Reliability and Aspects of Validity of the SERVQUAL in Four Organizations

Research Characteristics	Regional Airline	Graduate Business School	Short-term Insurance Broker	Retail Pharmacy Service Quality Study
Reliability	✓	✓	✓	✓
Convergent validity	✓	✓	✓	✓
Nomological validity	✗	✓	✓	✓
Construct validity	✗	✓	✓	✗
Discriminant validity	✗	✗	✗	✗

Five specific, and one general hypothesis regarding the applicability of the SERVQUAL instrument in South Africa were developed in Chapter 4, following the research propositions generated in Chapter 2, and grounded in the literature discussed in Chapter 3. With reference to Table 6.5.1, and the foregoing discussion concerning the four organizations, it is now possible to comment specifically on the hypotheses with reference to the SERVQUAL questionnaire, and the South African situation.

H₀₁: *That SERVQUAL will maintain its reliability under South African conditions*

The SERVQUAL questionnaire has produced consistently high alpha coefficients in all four studies. The hypothesis is accepted.

H_{03.1}: *That SERVQUAL will maintain convergent validity under South African conditions*

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The SERVQUAL questionnaire exhibited high convergent validity in all four studies, by showing a strong relationship between service quality indices and dimensional gap scores, and separate evaluations by respondents of overall service quality. This was also confirmed in all four multiple regression analyses, where the overall regressions were significant. The hypothesis is accepted.

H_{04.1}: That SERVQUAL will maintain nomological validity under South African conditions

The SERVQUAL questionnaire's nomological validity held in all cases, except for the regional airline study. In the other cases, the items which were expected to load together in a factor analysis generally did so. Among the possible reasons for this in the case of the Type I organization, is the fact that reasonably major changes were made to the original instrument compared to that used in the other three instances. The hypothesis is accepted.

H_{05.1}: That SERVQUAL will maintain construct validity under South African conditions

Construct validity is present when the same items that reflect a factor in the original Parasuraman, Zeithaml and Berry [1988] factor analysis load on that same factor in a replication. This occurred in two of the four studies undertaken. In the case of organization types I and IV, namely those with low demand diversity, construct validity was not established. Identifying possible reasons for this would be mere conjecture at present - however, there seem to be rewarding research possibilities in this regard. Using the rule-of-thumb cutoff rule for rejection or acceptance, however, the hypothesis is rejected.

H_{06.1}: That SERVQUAL will maintain discriminant validity under South African conditions

It is obvious from Table 6.5.1 that the SERVQUAL questionnaire did not possess discriminant validity in any of the four studies. The hypothesis is thus rejected.

An overall consideration and general hypothesis that the SERVQUAL instrument is reliable and valid for use under South African conditions is obviously not as technically testable as are the other five, as indicated earlier. Rather, the acceptance or rejection of the other hypotheses determines the acceptance or rejection of the broad hypothesis. A more subjective, rule-of-thumb was suggested in Chapter 4: if the SERVQUAL instrument is shown to be reliable (as evidenced by high coefficient alphas [Cronbach 1951], and valid in at least 3 of 4 dimensions of validity, then it (the general hypothesis) can be accepted. According to this broad rule of thumb then, this hypothesis is rejected. At this stage however it is important to caution against overall rejection of the SERVQUAL questionnaire for use in South Africa. **First**, in these studies it has indeed demonstrated good reliability, as well as convergent and nomological validities. In two instances out of four instances construct validity was also found to be sound. Only in

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the case of discriminant validity was the instrument really found wanting. Second, it must be borne in mind that this study has all the limitations of sampling, choice of organizations and respondents, and of methodology, of any other type of survey study. Only by further replication can researchers draw ever closer to really conclusive answers.

Five specific, and one general hypotheses regarding the applicability of the SERVQUAL instrument within the Larsson-Bowen typology were also developed, following the research propositions generated in Chapter 2. Once more referring to Table 6.5.1, and following a similar reasoning to that in the evaluation in the section regarding South African conditions:

H₀₂: *That SERVQUAL will maintain its reliability across the service organizations within the Larsson-Bowen typology*

This hypothesis is accepted.

H_{03.2}: *That SERVQUAL will maintain convergent validity across the service organizations within the Larsson-Bowen typology*

This hypothesis is accepted.

H_{04.2}: *That SERVQUAL will maintain nomological validity across the service organizations within the Larsson-Bowen typology*

This hypothesis is accepted.

H_{05.2}: *That SERVQUAL will maintain construct validity across the service organizations within the Larsson-Bowen typology*

This hypothesis is rejected. As indicated, however, there is a possibility that there may be a possibility of a relationship between construct validity and demand diversity, with particular reference to the Larsson-Bowen framework.

H_{06.2}: *That SERVQUAL will maintain discriminant validity across the service organizations within the Larsson-Bowen typology*

This hypothesis is rejected.

The general hypothesis that the SERVQUAL questionnaire is reliable and valid across the range of organizations within the Larsson-Bowen framework must be rejected in overall terms. However, the *caveats* applying to its rejection in the case of South African conditions should be equally strong here.

6.6 Summary and Conclusions

This chapter has presented, and discussed the results of four service quality studies conducted in South African organizations, using the Larsson-Bowen framework as typology. These organizations were: a regional airline [Larsson-Bowen framework Type I]; a graduate business school Larsson-Bowen framework Type II; a short-term insurance broker [Larsson-Bowen framework Type III]; and, a chain of retail pharmacies [Larsson-Bowen framework Type IV]. The general hypotheses examined were that the SERVQUAL questionnaire is a reliable, and valid instrument for the measurement of service quality, across all organizations, under South African conditions. More specifically the hypotheses tested were, that the SERVQUAL questionnaire is a reliable instrument as ascertained by coefficient alpha [Cronbach 1951], and that it possesses convergent, nomological, construct, and discriminant validity, for organizations in all four quadrants of the Larsson-Bowen framework, under South African conditions.

In the case of the regional airline, the SERVQUAL questionnaire showed exceptionally high reliability throughout all items. It was suggested that this could have been partly due to the inclusion of additional, and perhaps repetitive items to the questionnaire. Convergent validity was also established. However, the SERVQUAL questionnaire was found not to possess nomological, construct or discriminant validities in the regional airline study.

The SERVQUAL questionnaire was found to be a reliable instrument for the measurement of service quality in the case of the graduate business school. It was also found to possess all aspects of validity except for discriminant validity.

In the Short-term Insurance Broker study, the SERVQUAL questionnaire was found to be a reliable instrument for the measurement of service quality. It was again found that the instrument possessed all traits of validity except for discriminant validity.

In the case of the chain of Retail pharmacies studied, the SERVQUAL questionnaire demonstrated reliability, and convergent, nomological and construct validity. It was not found to possess discriminant validity.

Overall then the hypothesis that the SERVQUAL questionnaire would be a reliable instrument for the measurement of service quality in all cells of the Larsson-Bowen framework, under South African conditions was accepted. So were the hypotheses concerning convergent validity, and nomological

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validity. The hypothesis concerning construct validity was rejected, albeit marginally, while the hypothesis that it possessed discriminant validity was rejected outright. The general hypotheses were therefore also rejected, however important *caveats* were placed on this rejection, namely that the four studies conducted had the obvious limitations of sampling, methodology, and selectiveness, which are common to studies of this nature. It was also remarked upon that the SERVQUAL questionnaire seemed to perform less favourably in the case of Larsson-Bowen framework Type I and Type IV organizations, namely those with low demand diversity. This suggests two things: *First*, perhaps the reliability and validity of the SERVQUAL questionnaire are less dependent on the country of application and more on the nature of the organization in which it is used. *Second*, that the reliability and validity of the SERVQUAL questionnaire may be more questionable in organizations which face demand diversity. The latter point makes for interesting research in the future, and will be discussed in Chapter 8, which summarises this study, discusses the implications, and attempts to identify directions for future research in this regard.

Chapter 7

Summary, Conclusions and Directions for Future Research

7.0 Introduction

This chapter presents a brief summary of the study by problem, methodology, results and major findings. This is done on a chapter-for-chapter basis. Limitations of the study are also pointed out. Then, certain recommendations are made, based on the findings, for the conducting of future research in the area of using the SERVQUAL questionnaire for the measurement of service quality. Finally, other related avenues and directions for future research are identified.

7.1 Summary of Chapters

A summary of the chapters so far, follows.

7.1.1 Chapter 1: Introduction - Broad Objectives, and Key Concepts

This chapter served as an introduction to this study of the applicability of SERVQUAL, an instrument for the measurement of service quality, across a range of service organization typologies, with particular reference to the South African situation. A number of key concepts, including service, attributes of service, service quality, service quality measurement, and organization typology were introduced and defined.

7.1.2 Chapter 2: Theoretical Foundations of the Study

This chapter considered theory concerning three areas, namely services marketing, with particular reference to service quality as a major strategy for differentiation; service quality and its measurement, with particular reference to the development and use of valid, reliable instruments for measurement; and, typologies of service organization, where the different approaches to classifying, categorising, and understanding organizations from various perspectives are of concern. The chapter provided the theoretical foundations for the development of the hypotheses to be tested in the study. Research

propositions were developed based on the relevant literature, and these were used to model and form more specific hypotheses in Chapter 4.

7.1.3 Chapter 3: Services Marketing, Service Quality and Service Organization Typologies

This chapter reviewed the relevant literature concerning the main issues of the study. “Service” was defined and it was also suggested that researchers and practitioners in the future may wish to consider goods and services as existing along a spectrum, rather than in a dichotomy. The distinctive nature of services was considered, and the implications this has for the measurement of service quality in organizations. These unique characteristics are intangibility, inseparability, heterogeneity and perishability. The strategic implications of service quality were discussed, and service quality shown to be a strong driving force of differentiation, and measures of financial performance in most organizations.

The construct of service quality was further refined, and two well-known models of service quality presented, namely the Gronroos [1978] model, and the Parasuraman, Zeithaml and Berry “Gaps” model [1985]. The measurement of service quality also received attention, and in this instance, SERVQUAL, an instrument which measures Gap 5 in the Parasuraman, Zeithaml and Berry [1985] model was expounded upon. The instrument measures five dimensions of service quality, from the vantage of the consumer’s perceptions, namely, tangibles, reliability, responsiveness, assurance and empathy.

Finally, different service organization typologies were reviewed, from the points of view of both their strengths and limitations. These included the typologies of Chase, Thomas, Lovelock, Schmenner, Mills, Kelley et al., and the contingency framework of Larsson and Bowen. The latter was suggested as possessing major potential for research in the areas of service quality measurement and management.

7.1.4 Chapter 4: Applicability of the SERVQUAL Instrument Under South African Conditions and Service Organization Typologies

In this chapter problem formulation in general, and more specifically, the generation of hypotheses, was addressed. These hypotheses were then developed from the research propositions formulated in Chapter 2. They cover specifically, aspects of the reliability; and, convergent, nomological, construct, and discriminant validity of the SERVQUAL instrument. The hypotheses addressed the two broad areas of the study, namely the SERVQUAL instrument in South Africa, and its applicability across a spectrum of organizations within a typology.

7.1.5 Chapter 5: The Empirical Study - Methodology and Approach

This chapter presented the objectives of, and methodology and approach followed in the empirical study. The objectives of the study were essentially to assess the reliability of the SERVQUAL questionnaire under South African conditions, and across a range of service organizations, using the Larsson-Bowen framework. Four organizations were allocated to the Larsson-Bowen framework, namely a regional airline, a graduate business school, a short term insurance broker, and a small chain of regional pharmacies. The general methodology was presented, as well as the specific methodologies utilised in the case of each organization. Finally, brief descriptions of the three main statistical techniques used in the study, namely coefficient Alpha [Cronbach 1951], multiple regression, and factor analysis, were given.

7.1.6 Chapter 6: Results and Discussion

This chapter presented, and discussed the results of four service quality studies conducted in South African organizations, using the Larsson-Bowen framework as typology. These organizations were: a regional airline [Larsson-Bowen framework Type I]; a graduate business school [Larsson-Bowen framework Type II]; a short-term insurance broker [Larsson-Bowen framework Type III]; and, a chain of retail pharmacies [Larsson-Bowen framework Type IV]. The general hypotheses examined were that the SERVQUAL questionnaire is a reliable, and valid instrument for the measurement of service quality, across all organizations, under South African conditions. More specifically the hypotheses tested were, that the SERVQUAL questionnaire is a reliable instrument as ascertained by coefficient alpha [Cronbach 1951], and that it possesses convergent, nomological, construct, and discriminant validity, for organizations in all four quadrants of the Larsson-Bowen framework, under South African conditions.

In the case of the regional airline, the SERVQUAL questionnaire showed exceptionally high reliability throughout all items. It was suggested that this could have been partly due to the inclusion of additional, and perhaps repetitive items to the questionnaire. Convergent validity was also established. However, the SERVQUAL questionnaire was found not to possess nomological, construct or discriminant validities in the regional airline study. The SERVQUAL questionnaire was found to be a reliable instrument for the measurement of service quality in the case of the graduate business school. It was also found to possess all aspects of validity except for discriminant validity. In the short-term insurance broker study, the SERVQUAL questionnaire was found to be a reliable instrument for the measurement of service quality. It was again found that the instrument possessed all traits of validity except for discriminant validity. Finally, in the case of the chain of retail pharmacies studied, the SERVQUAL

questionnaire demonstrated reliability, convergent and nomological validity. It was not found to possess construct or discriminant validity.

In this chapter, the hypothesis that the SERVQUAL questionnaire would be a reliable instrument for the measurement of service quality in all cells of the Larsson-Bowen framework, under South African conditions was accepted. So were the hypotheses concerning convergent validity, and nomological validity. The hypothesis concerning construct validity was rejected, albeit marginally, while the hypothesis that it possessed discriminant validity was rejected outright. The general hypotheses were therefore also rejected, however important *caveats* were placed on this rejection, namely that the four studies conducted had the obvious limitations of sampling, methodology, and selectiveness, which are common to studies of this nature. It was also remarked upon that the SERVQUAL questionnaire seemed to perform less favourably in the case of Larsson-Bowen framework Type I and Type IV organizations, namely those with low demand diversity. This suggests two things: *First*, perhaps the reliability and validity of the SERVQUAL questionnaire are less dependent on the country of application and more on the nature of the organization in which it is used. *Second*, that the reliability and validity of the SERVQUAL questionnaire may be more questionable in organizations which face demand diversity.

7.3 Limitations of the Study

Like all projects of a similar nature, this study has some obvious limitations which signal caution to the generalization of the findings. Firstly, the study was limited by the use of only four organizations within the Larsson-Bowen framework. Even if one accepts the allocation of particular organizations to the framework, the study is still in reality representative of those organizations only. Similarly, apart from the limitations of sampling, the studies conducted all utilised some form of mail survey. A notorious disadvantage of mail surveys is that they invariably induce a response bias - respondents at severe ends of the satisfaction spectrum tend to respond disproportionately (those who are delighted, and those who are angry). Finally, the studies were in a sense limited by the fact that the respondents were assumed by the questionnaire to be literate, firstly, and capable of understanding the English language, secondly. The SERVQUAL questionnaires used were all, only, in English. In South Africa today that will not always be a reasonable assumption.

7.4 Recommendations

A number of aspects learned from this study may be beneficial to researchers in this area in the future, and thus serve as recommendations. In no particular order the following recommendations can be made:

7.4.1 Addition of items to the SERVQUAL questionnaire

Frequently, managers within industries may believe that their organizations are so unique that basic principles don't apply. In conducting service quality research, it is frequently easy then, to gloss over the SERVQUAL questionnaire, and assert that it does not capture all the dimensions of service quality in that particular industry. The 22 items then become many more, and the original purpose of the developers in producing the instrument, namely elegance, genericism, and brevity is lost. This was illustrated well in the case of the airline service quality study. A number of essentially repetitive questions resulted in very high coefficient alphas, without necessarily increasing the quality of measurement. The effects of this on validity were also obvious in the subsequent factor analysis.

Obviously wording will have to be changed depending on the type of organization and industry, and certainly items may have to be deleted or added. The recommendation however is that this be done very carefully. Perhaps even more importantly, when the SERVQUAL questionnaire is used in commercial settings by marketing researchers, clients should be aware of the implications, and insist more rigidly on rigorous monitoring and assessment, and eventual alteration, of the instrument used.

7.4.2 Measuring service quality in South Africa

This series of studies was conducted among literate, mainly white South Africans with at least a command of the English language. In the future it may be important to develop ways of measuring service quality in other languages, while still maintaining reliability and validity. It will also be important in third-world countries to develop marketing measures, of which the SERVQUAL questionnaire is one, which can be communicated to illiterate consumers.

7.4.3 That the nature of the organization be considered carefully in conducting service quality research

Within the Larsson-Bowen framework used in this study, it was observed that the SERVQUAL questionnaire was not equally reliable and valid across all organizations. The instrument did not perform as well in the case of organizations on the bottom half of the matrix, namely those facing low diversity of demand. This may simply be because of the simple limitations of organization selection such as these already referred to. However, it may be due to the nature of the organizations concerned, and more particularly the nature of the demand patterns facing them.

Diversity of demand refers to the uniqueness of customers' demands. The wider the diversity, the greater

the specific information not possessed by the organization before the actual service encounter and, thereby, the higher the input uncertainty faced by the organization [Larsson and Bowen 1989]. It is possible that in the case of low demand diversity situations, consumers use fewer dimensions to evaluate the quality of the service they receive, or “bundle” these dimensions together. Similarly, these organizations may achieve much greater consumer satisfaction with service quality (or much less, obviously), by concentrating on fewer issues (or dimensions), and doing them right. A clue to this may be the fact that in the case of the organizations facing lower demand diversity in this study, namely the regional airline, and the retail pharmacies, the factor analyses resulted in the extraction of fewer factors, (or dimensions). Careful development of specific questionnaires in these instrument could then result in shorter, and perhaps more user-friendly measuring instruments, as these will need to capture fewer dimensions of service quality.

7.4.4 That the Reliability and Validity of the SERVQUAL questionnaire be established in using it in commercial marketing research applications

It is likely that the SERVQUAL questionnaire will be used increasingly to measure service quality in organizations both in South Africa and the rest of the world in the coming years. It’s reliability and validity have been reasonably well demonstrated both internationally, and in South Africa [viz. this study]. However it is recommended, for three reasons, that in commercial applications a check still be maintained on reliability and validity. First, this is simply good research practice, and it is fair that clients demand this of their marketing research suppliers. Second, questionable results in this regard may point to inadequate research methodology and practice. Or, thirdly, questionable results, may shed light on interesting situations within the company, or its markets. Low alpha coefficients, for example, may be a sign that the company faces two or more distinct market segments, who rate the SQI, or by dimension, very differently. These may be different types of customer, as for example the students versus the executives in the graduate business school study. Or, an organization surveying customers at different geographic locations, may find that alphas are low because of the very different nature of service quality at the various branches. Whatever the reasons for low reliability and validity in a particular study, in all likelihood interesting and useful insights may be given to managers.

7.5 Directions for Future Research

Some directions for possible future research in the area of service quality within organization typologies, under South African conditions have been identified. These are now proposed and discussed briefly. These are discussed firstly with reference to typologies of service organizations; secondly with specific reference to the SERVQUAL instrument and the “Gaps” model of service quality [Parasuraman,

Zeithaml and Berry 1985]; and thirdly with reference to service quality in South Africa.

7.5.1 Service Quality Research and Service Organization Typologies

A number of service organization typologies were identified and discussed in Chapter 3. One of these, namely, the Larsson-Bowen contingency framework, formed the conceptual basis for this study. However, it is proposed that the other frameworks also offer high potential for the researcher in the area of service quality measurement and management. A number of research propositions are offered in this regard.

Researchers and academics develop frameworks, typologies, and models, such as those discussed, for many purposes. In order, for example, to make the explication of concepts, which may normally be difficult to grasp in class situations, easier. Or, in order to propose, and develop new theories, or to fit old theories better. Or, and this is their suggested application here, to formulate hypotheses or propositions for future research - either by themselves, or for consideration by other researchers seeking topics of interest. Specific attention is now given to the implications of the typologies discussed for the measurement of service quality, and directions for future research proposed.

7.5.1.1 Thomas [1978] Equipment vs. People-based Service Firms

Thomas asserts that useful insights can be obtained from a consideration of whether the service is equipment-based (that is, it relies on machines for its production) or people-based (that is, it relies on people for its production). Supposedly, the more equipment-based a service is, the less heterogeneous it will be. That is one of the major reasons why banks have installed auto-teller machines (which will always deliver the service in the same way), and why telephone companies have developed automatic long-distance dialling. Therefore, service quality, and measures thereof should oscillate less over time in equipment based service organizations, which are supposedly less susceptible to the vagaries of employee behaviour. If this is so it would indicate the need for more frequent measurement, where the service is people-based.

Research Proposition 1: *Measures of service quality will fluctuate less over time in equipment-based service companies than in people-based service companies.*

7.5.1.2 The customer contact model [Chase 1978, 1981; Chase and Tansik 1983]

Chase proposes that the potential efficiency of a service system is a function of the degree of customer

contact entailed. This will obviously differ according to the type of organization, such as hotels versus life insurance companies, but less obviously by the nature of the customer, such as heavy users versus light users of the service. In cases of high levels of customer contact, either by the nature of the service, or by nature of the customer, one might suppose that the customer will “learn by experience” to become more discerning and critical. Measures of service quality might therefore need to be applied more, and more regularly applied, in higher contact situations (indeed one might suppose that this is being done), or to be focused more on more frequent users of the service, as they are the customers who will generally be generating more revenue.

Research Proposition 2.1: *Measurement of service quality will more likely be undertaken in high customer contact service organizations than in low customer contact ones.*

Research Proposition 2.2: *Measurement of service quality will be undertaken more frequently in high customer contact service organizations than in low customer contact ones.*

Research Proposition 2.3: *Customers of service organizations who have more contact with the organization will be more critical of the service quality.*

7.5.1.3 Lovelock [1983] and Maister and Lovelock [1982]

Lovelock [1983] emphasises that service organization classification schemes must offer strategic insights, yet following his paper, the impression is gained that researchers and students of services marketing have not extended his multi-dimensional service organization/use classification scheme further. They have also not considered within-dimension research options, which also appear to be very fruitful.

Research Proposition 3: *The 5 x 4 classification scheme of Lovelock [1983] can be fruitfully extended and examined by services marketing researchers.*

7.5.1.4 Degree of interaction and degree of customisation [Schmenner 1986].

Schmenner’s service process matrix proposes that the main dimensions of service organizations are the degree of interaction and customization, and the degree of labour intensity. It may be supposed that characteristics of service such as inseparability and heterogeneity will be relevant here, with regard to the measurement of service quality.

Research Proposition 4: *That the measurement of service quality will differ in frequency and nature, depending on the position of the service organization on Schmenner’s matrix.*

7.5.1.5 Mills [Mills 1986; Mills and Margulies 1980; Mills and Morris 1986], Kelley, Donnelly and Skinner [1990]

These authors make specific proposals with regard to research in the area of service quality, and the typology of service organizations they suggest. While these will not be specifically discussed here, the researcher will find their work rich in future investigation potential.

7.5.1.6 The Larsson and Bowen Contingency Framework [1989]

A major focus of the work of Larsson and Bowen is on the role the customer plays in producing the service, and hence, the customer's own role in delivering the service quality he or she receives. The authors offer a number of major research propositions, hinging chiefly on the effects of uncertainty, as discussed, and its effect on coordination and management mechanisms in service organizations. They make no specific proposals for the relevance of their work to the measurement of service quality. For a start, an adaptation of some of their propositions in this regard is made (*Italicised bold text the additions*):

Research Proposition 5.1: *The higher the degree of demand diversity, the higher the degree of customization and the greater the variation in measures of service quality.*

Research Proposition 5.2: *The higher the customer disposition to participate, the greater the amount of service work shifted to the customer; the lower the customer disposition to participate, the greater the amount of service work shifted to back-office employees therefore it is perhaps important to measure customer's perceptions of the service quality they provide themselves; that customers are not always aware of their own participation, and its effects on the service quality they receive.*

Research Proposition 5.3: *The higher the demand diversity, the greater the amount of service work shifted to front-office employees in interaction with either the customer or back-office employees, depending on the customer disposition to participate (as in proposition 5.2 before amendments) therefore it may frequently be as necessary to measure service quality intra-organizationally (e.g the service front-office gets from back) as it is to measure customer perceptions of the service quality they receive under divers service conditions.*

Research Proposition 5.4: *The lower demand diversity is, the more decoupled are service designs between front and back office which may also emphasise the need for the measurement of service quality between departments, and accentuate gaps as for example in the other gaps in the Parasuraman, Zeithaml and Berry [1985] model.*

Following the observation in this study that the SERVQUAL questionnaire does not possess the same degree of construct validity in lower demand diversity situations, and that there may indeed be fewer dimensions to service quality in this type of organization, a further research proposition can be made:

Research Proposition 5.5: *There may be a difference in the number of dimensions of service quality between higher and lower demand diversity service organizations. Further, that the number of service quality dimensions may be fewer in lower demand diversity situations, and following this, that the instrument used to measure service quality, may be a shorter, more simple one.*

7.5.2 The SERVQUAL questionnaire and the “Gaps” Model

This study has to an extent confirmed what other replicative studies [see for example Carman 1990; Oosthuizen and Pitt 1991] have observed with regard to the discriminant validity of the SERVQUAL questionnaire. The instrument does not perform very well when the test for discriminant validity requires that the factors in a factor analysis be truly different from each other. To some extent the same can be said for construct validity, which requires that the same items which loaded together in the original PZB [1988] factor analysis should do so again. These constraints may indeed be somewhat harsh. There may be research potential in examining alternative ways of establishing construct and discriminant validity. For example, respondents could be given a shuffled pack of cards bearing the 22 SERVQUAL items, and required to sort them into groups of items which they believe assess the same “thing” [a dimension or characteristic of service quality], with regard to a particular service provider. The researcher can then determine the extent to which the groupings, or dimensions resulting, reflect the original SERVQUAL dimensions (construct validity), and perhaps require the respondents to score on a rating scale the extent to which groups of questions are truly different from each other (discriminant validity).

In 1990 [Zeithaml, Parasuraman and Berry 1990] the developers of the SERVQUAL questionnaire published the instruments for the measurement of the other gaps in the “Gaps” model. To date no attempts have been made to establish the reliability and validity of these measures. It would seem that there is much room for fruitful research in this regard.

7.5.3 Service quality research in South Africa

There has not been a great deal of research work done in the area of service quality in South Africa, so in general there is scope for much continued effort in this regard. Additional replications alone will provide a great deal of further insight. However, it is in the areas of communication, and cross-cultural

comparisons that the richest advances may be made. If the SERVQUAL questionnaire is to be translated, it will be important to ascertain what effects [accurate] translation have on its reliability. Recently some interesting work has also been done on the effects of using iconic and graphic rating scales, and simple graphic instructions on an adapted version of the SERVQUAL questionnaire [Labadie and Harrison 1991]. Where much marketing research will have to be done using illiterate consumers as respondents in South Africa in the future, ways of communicating with them will need to be the focus of a great deal of research. In its present form, the SERVQUAL questionnaire requires a reasonably high degree of literacy, whether it be communicated to the respondent by mail, telephone or personally.

Cross-cultural comparisons of service quality perceptions will also provide for rewarding research in South Africa. Do different cultural groups have different expectations, and perceptions of service quality of different providers? Are the dimensions of service quality equally important to these different groups? These are questions which will need to be answered if service quality is to be measured and managed in South Africa in the future.

7.6 Conclusion

This study has examined the critically important issue of service quality in the strategy of organizations today. More specifically it has considered the applicability of the SERVQUAL instrument for the measurement of service quality across a range of organizations. Aspects of reliability and validity of the instrument have received particular attention. While it was found that the instrument performed well with regard to reliability and some aspects of validity, it did not perform as expected in the cases of construct and discriminant validity. Nevertheless, it is believed that the SERVQUAL questionnaire has great potential in the assessment of service quality across a broad range of organizations in South Africa, particularly if further research and development work is undertaken.

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