

CHAPTER 3

THE SERVICE QUALITY CONSTRUCT

3.1 INTRODUCTION

In Chapter 2 it was established that services should be defined with regard to the inherent characteristics of the service. It was also determined that quality should be defined using predominantly a user-based approach.

The objective of the present research is to develop a service quality model that can be used as a framework in developing a measuring instrument to establish the perceptions that tax practitioners hold with regard to the services SARS provides. In order to achieve the objective of the present research, a thorough understanding of the combined term “service quality construct” is required in order to understand exactly what the proposed model should capture. The understanding of the service quality construct is also important for the present research to assist with the development of the proposed service quality model.

Most of the prior research on service quality was conducted in the context and from the perspective of the marketing discipline. However, the present research is not performed in the context of marketing as such. Therefore a detailed analysis of the construct is required in order to develop (an) appropriate measuring tool(s). In line with a user-based approach to defining quality, this chapter presents the results of a comprehensive literature review of the perspectives that relate to the research on the service quality construct that focuses on the customer’s (external) evaluation of quality. The outcome of the literature review of the service quality construct forms the theoretical underpinning for the development of the proposed service quality model.

3.2 DEFINING SERVICE QUALITY

Scholars from across the academic spectrum have contributed to an understanding of service quality, but, despite two decades of study and much lively debate, conceptual work on service quality can best be described as divergent. There is still much debate and many of the concepts are still in flux (Brady & Cronin 2001:44; Schneider & White 2004:29). At the core of the debate are two competing perspectives, sometimes termed the

Scandinavian and the American schools. The Scandinavian school defines service quality using overall categorical terms, whereas the American school uses descriptive terms (Brady & Cronin 2001:44). Both schools of thought highlight important aspects of service quality, but neither fully captures the construct. Because the literature has not yet arrived at any real agreement on many of the issues concerned, it is important to review many different perspectives, both old and new, and from several different conceptual and empirical approaches (Schneider & White 2004:29).

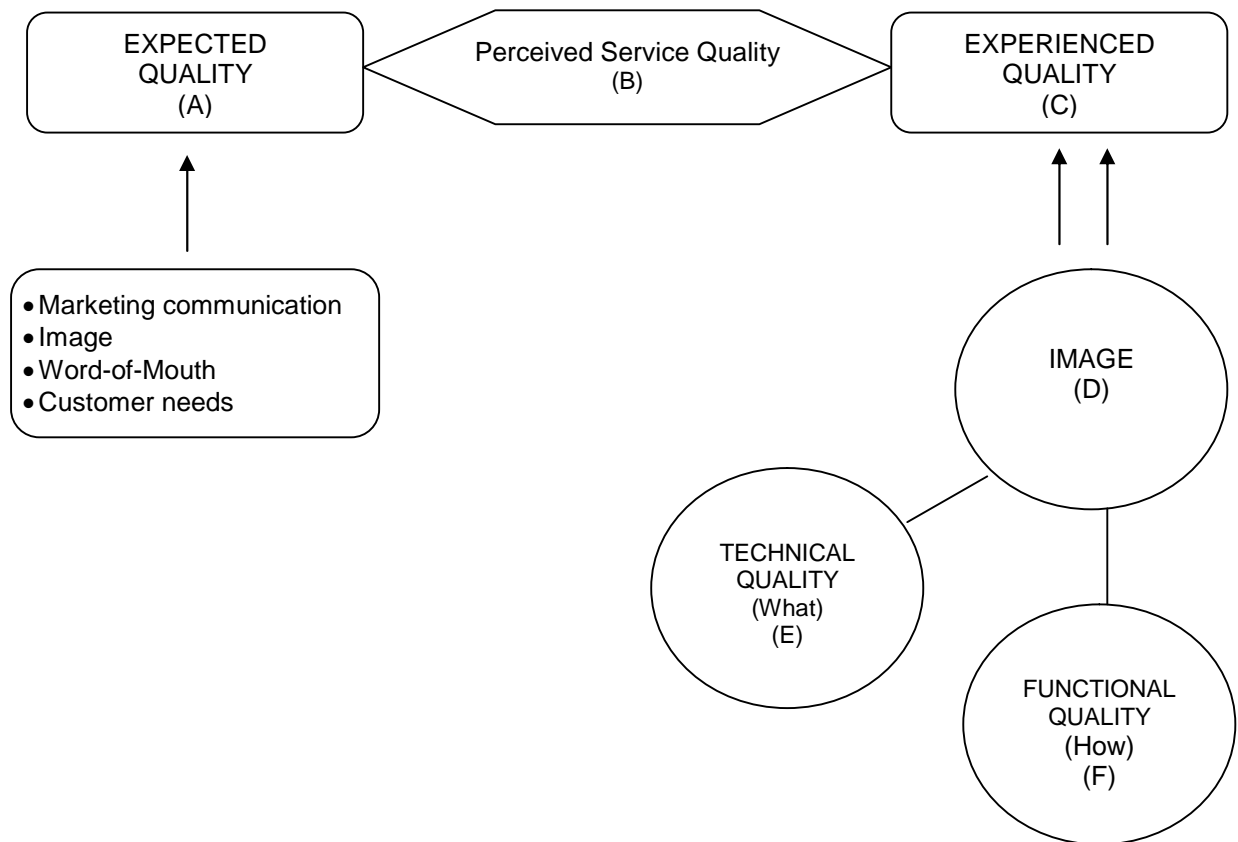
In line with definitions of quality using the user-based approach, some definitions of service quality focus on meeting customers' needs and requirements and on how well the service that is delivered matches the customers' expectations (Gaster & Squires 2003:5; Marx 2005:7; Venter & Dhurup 2005:30). Philip and Hazlett (1997:262) maintain that an all-embracing definition of service quality is notoriously difficult to produce. Grönroos (1984:36) argues that what is required is a conceptual model of service quality, in other words, a model which describes how the quality of services is perceived by customers. When the components of the service quality umbrella are known and understood, it is much easier to measure service quality. A conceptual model attempts to show the relationship that exists between salient variables. It represents a simplified description of reality (Philip & Hazlett 1997:264; Seth *et al.* 2005:914). Several authors have attempted to define service quality using conceptual models in describing the construct, including Becker and Wellins (1990), Berry *et al.* (1988), Brady and Cronin (2001), Cronin and Taylor (1992), Dabholkar *et al.* (2000), Gaster and Squires (2003), Grönroos (1984, 1988), Gummesson (1992), Haywood-Farmer (1988), Kang and James (2004), Klaus (1985), Parasuraman *et al.* (1985, 1986, 1988), Parasuraman, Berry and Zeithaml (1991a), Parasuraman, Zeithaml and Malhotra (2005), Rust and Olivier (1994), Philip and Hazlett (1997), Rust *et al.* (1995), Santos (2003), Speller and Ghobadian (1993b), Zeithaml, Parasuraman and Malhotra (2002) and Zhu, Wymer and Chen (2002). These models require a more in-depth analysis. In the present research, the models for services in general are considered first. As the present research evaluates the services of SARS, an entity in the public sector rather than in the private sector, the relevance of these general models for the public sector needs to be evaluated. Finally, given the rapid expansion of the use of e-services, specific models in the electronic service environment are also investigated.

3.3 SERVICES IN GENERAL

3.3.1 Grönroos's service quality model

Grönroos (1984, 1988) began to develop a service quality model by, first, attempting to define how service quality is perceived by consumers and, second, determining in what way service quality is influenced (Figure 3.1 illustrates this model).

Figure 3.1: The service quality model



Source: Grönroos (1988:12)

Grönroos (1984:37) found that it is reasonable to state that the perceived service quality (B) of a given service is the outcome of an evaluation process where the consumer compares his or her expectations (A) with the service he or she perceives that he or she has received (C). The quality of the service therefore depends on two variables: expected service and perceived service.

In determining how service quality can be influenced, Grönroos (1988:11) was the first to identify that the experienced quality of a service (C) has two dimensions: a technical or outcome dimension (E), and a functional or process-related dimension (F). An example of the technical dimension of the service production process relating to taxation might be the registration of a taxpayer after the relevant registration form has been submitted. The technical dimension is what customers are left with when the production process and buyer-seller interactions have been completed (Grönroos 1988:11). Frequently, but by no means always, this dimension can be measured fairly objectively by customers because of its nature (it is a technical solution to a problem) (Grönroos 1988:11). In the context of submitting a registration form for taxation, possible measures include the level of accuracy with which the data is captured and the timeousness of the process. However, as there are a number of interactions between providers and customers, the technical quality dimension does not account for the total quality which the customers perceive themselves to have received. They are also influenced by the way in which the technical quality, the end result of the process, is transferred to them. Customers are thus also influenced by “how” they receive the service and how they experience the simultaneous production and consumption process.

The accessibility of SARS employees to assist the taxpayer with information required to complete the tax registration form, their appearance and behaviour, how the service employees perform their tasks, what they say and how they do it, all influence the customer's view of the service. Other customers who simultaneously consume the same or similar services may also influence the way in which a given customer perceives a service. These interactions are called the functional performance and they are related to the "psychological" level of performance. In a service context, the functional performance would be related to the buyer-seller interactions, in other words, to the contacts the consumer has with various resources and activities of the service firm during the service production process when the technical outcome is created (Grönroos 1984:38). It is understandable that the functional quality dimension cannot be evaluated as objectively as the technical quality dimension and that very frequently it is perceived quite subjectively (Grönroos 1988:11).

A third dimension was identified by Grönroos (1984:39). He suggested that the consumers are also influenced by their view of the supplier, in other words, the corporate image (D). If,

for example, a consumer believes that he or she is eating at a good restaurant but the meal is not perfect, or the behaviour of the waiter is irritating, the consumer may still find the perceived service satisfactory (Grönroos 1984:40). The consumer's positive image of the restaurant encourages the consumer to find excuses for his or her negative experiences. Obviously, if the consumer is disappointed many times, that person's image of the restaurant will deteriorate (Grönroos 1984:40). Similarly, a negative image may easily increase perceived problems with service quality. As far as the service quality perception is concerned, the supplier's image can be regarded as a filter (Grönroos 1984:43, 1988:11).

Grönroos (1984:43) stresses that one should remember that the various quality dimensions are interrelated. An acceptable technical quality can be thought of as a prerequisite for a successful functional quality. Grönroos (1984:41) found that functional quality is more important to the perceived service quality than the technical quality, as long as the technical quality dimension is at a satisfactory level. In fact, functional quality is so important that a high level of functional quality (contact personnel performance) may compensate for temporary problems with the technical quality (Grönroos 1984:42). However, functional quality can only overcome small deficiencies in technical service quality, namely those which are within the normal latitude of acceptance of the client. Functional quality cannot compensate for a service that has never been performed – thus where there is no technical quality (Czepiel *et al.* 1985:13). Although functional quality could compensate for minor problems with the technical quality, Czepiel *et al.* (1985:13) argue that functional quality cannot be affected by the satisfaction with the technical service quality.

Apart from the dimensions that influence service quality (technical quality, functional quality and corporate image), Grönroos (1988:13) also summarised the service quality determinants in a list of six determinants on which good perceived service quality might be based. It is not clear what process he followed to identify these six determinants. He mentioned that his listing was based on the quality studies already performed, including those by Parasuraman, Zeithaml and Berry (1985, 1986, 1988), so it is not clear why these determinants do not agree fully with those suggested by the previous studies. It is important to note from the identification of the determinants that Grönroos (1988:13) takes these determinants and classifies them into his three-dimensional service quality model.

One of the six criteria, professionalism and skills, is outcomes-related and it is therefore a technical quality dimension (Grönroos 1988:13). Another criterion, reputation and credibility, is image-related, thus fulfilling a filtering function (Grönroos 1988:13). However, four of the criteria, behaviour and attitudes, accessibility and flexibility, reliability and trustworthiness and recovery, are clearly process-related and thus represent the functional quality dimension (Grönroos 1988:13). Although it is not identified as such, one determinant, recovery, could, however, also possibly relate to the technical quality dimension, as it will have an effect on the “what” of the service that is either changed or corrected.

It is important to note that the six determinants of perceived service quality pertain essentially only to the functional (how), rather than to the technical (what) dimensions (Schneider & White 2004:33). This may be so because clients are able to independently judge the quality and satisfaction of human interactions better than they can judge the quality of technical services (Czepiel *et al.* 1985:13). An alternative explanation is that in the past technical quality considerations were the paramount quality issue, but they are now virtually disregarded – most firms can produce more or less the same technical quality, because competitors can introduce a similar solution fairly quickly (Grönroos 1988:11). In the case of SARS, there are no competitors, and for this reason, the technical quality considerations might be all the more important to the customers (taxpayers), as customers have nowhere else to go.

In developing his service model, Grönroos included a wide range of service industries in his sample. He also included a range of institutions from the public sector (Grönroos 1984:41). It is also important to note that the results did not change when the data was broken down according to the background variables used, such as industry, size, position of the respondent and type of customer (Grönroos 1984:41). The results can thus be seen as valid for both the private and the public sector.

3.3.2 Parasuraman, Zeithaml and Berry’s model

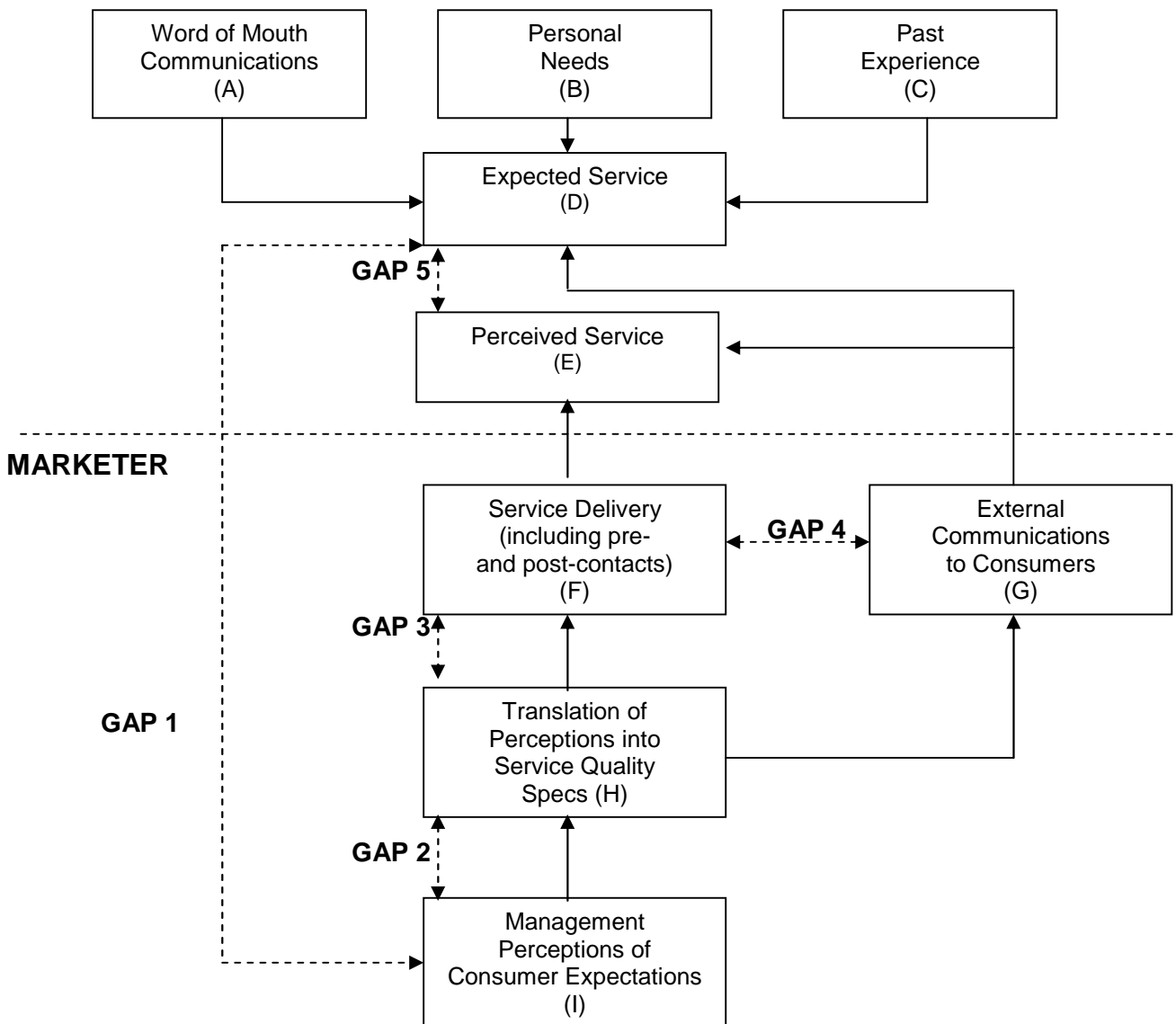
In the mid 1980s, Parasuraman, Zeithaml and Berry did groundbreaking work and made a substantial contribution to the theory of service quality with their SERVQUAL model (Gaster & Squires 2003:81; Parasuraman *et al.* 1985, 1986, 1988; Parasuraman *et al.* 1991a; Philip & Hazlett 1997:263). The conceptual base for the SERVQUAL scale was derived, firstly, from the work of a handful of researchers who had examined the meaning

of service quality up to that time and, secondly, from a comprehensive qualitative exploratory research study that defined service quality and illuminated the determinants which customers use to perceive and evaluate service quality.

The most fundamental insights obtained from the exploratory study by Parasuraman *et al.* (1985:44) were the identification of a set of gaps which are the major hurdles in attempting to deliver a service which consumers perceive as being of high quality. These are the gaps between what is expected and what is actually done, by both the consumer and the organisation, and **within** the organisation itself (Gaster & Squires 2003:81). These gaps are illustrated in Figure 3.2, and are explained below the figure.

Figure 3.2: Service quality model – identification of gaps

CONSUMER



Source: Parasuraman *et al.* (1985:44)

Gap 1: Consumer expectation – management perception gap

There are discrepancies between executive perceptions (I) and consumer expectations (D), that is, service firm executives may not always understand what features connote high quality to consumers, and this lack of understanding may affect the service quality perceptions of consumers (Parasuraman *et al.* 1985:44).

Gap 2: Management perceptions – service quality specification gap

Resource constraints, market conditions, and/or management indifference may result in a discrepancy between management perceptions of consumer expectations (I) and the actual specifications established for a service (H). This discrepancy may affect the service quality perceptions of consumers (Parasuraman *et al.* 1985:45).

Gap 3: Service quality specifications – service delivery gap

The gap between service quality specifications (H) and actual service delivery (F) will affect service quality from the consumer's point of view (Parasuraman *et al.* 1985:45). This gap exists even when there are guidelines for performing services well and treating consumers correctly, as a firm's employees exert a strong influence on the service quality perceived by consumers. Hence, employee performance cannot always be standardised.

Gap 4: Service delivery – external communications gap

Discrepancies between service delivery (F) and external communications (G) in the form of exaggerated promises and/or the absence of information about service delivery aspects affect consumer perceptions of service quality (Parasuraman *et al.* 1985:46).

Gap 5: Expected service – perceived service gap

The quality that a consumer perceives in a service is a function of the magnitude and direction of the gap between expected service (D) and perceived service (E) (Parasuraman *et al.* 1985:46). Organisations such as SARS that offer services that are sometimes highly interactive, that are labour-intensive and that are performed in multiple locations are especially vulnerable to this gap (Berry *et al.* 1988:38). Parasuraman *et al.* (1985:46) also argue that there is a relationship between Gap 5 and the first four gaps,

and that Gap 5 can be regarded as a function of the first four gaps. In the present study, the proposed service quality model is developed with the purpose of measuring Gap 5.

Apart from identifying the five gaps, Parasuraman *et al.* (1985:46-47) also recognised that, regardless of the type of service, consumers basically use similar criteria in evaluating service quality. These authors identified ten key categories which they called service quality determinants. Berry *et al.* (1985:45) believe that although the relative importance of the determinants would vary from one service industry to the next, the determinants of service quality in most (if not all) consumer service industries are included in the list (see Table 3.1).

Table 3.1: Determinants of service quality

Determinant	Examples of evaluative criteria
Tangibility	Appearance of physical facilities and personnel
Reliability	Performing services right the first time
Responsiveness	Willingness and ability to provide prompt service
Communication	Explaining service to customers in a language they can understand
Credibility	Trustworthiness of customer-contact personnel
Security	Confidentiality of transactions
Competent personnel	Knowledge and skill of customer-contact personnel
Courtesy	Friendliness of customer-contact personnel
Understanding/ Knowing customers	Making an effort to ascertain a customer's specific requirements
Access	Ease of contacting service

Source: Parasuraman *et al.* (1986:6-7)

Only two of the ten determinants – tangibility and credibility – are search properties (those determinants that can be known in advance), thereby keeping the number of search properties low. Most of the determinants of service quality identified in this exploratory study were experience properties: access, courtesy, reliability, responsiveness, understanding or knowing the customer and communication. Each of these determinants can only be known when the customer actually purchases or consumes the service (Hensel & Baumgarten 1988:26; Parasuraman *et al.* 1985:48). Two of the determinants that surfaced in the focus group interviews probably fall into the category of credence properties (properties which consumers cannot evaluate even after purchase and consumption). These include competence (the possession of the required skills and knowledge to perform the service) and security (freedom from danger, risk or doubt) (Parasuraman *et al.* 1985:48). Because few search properties exist with services and

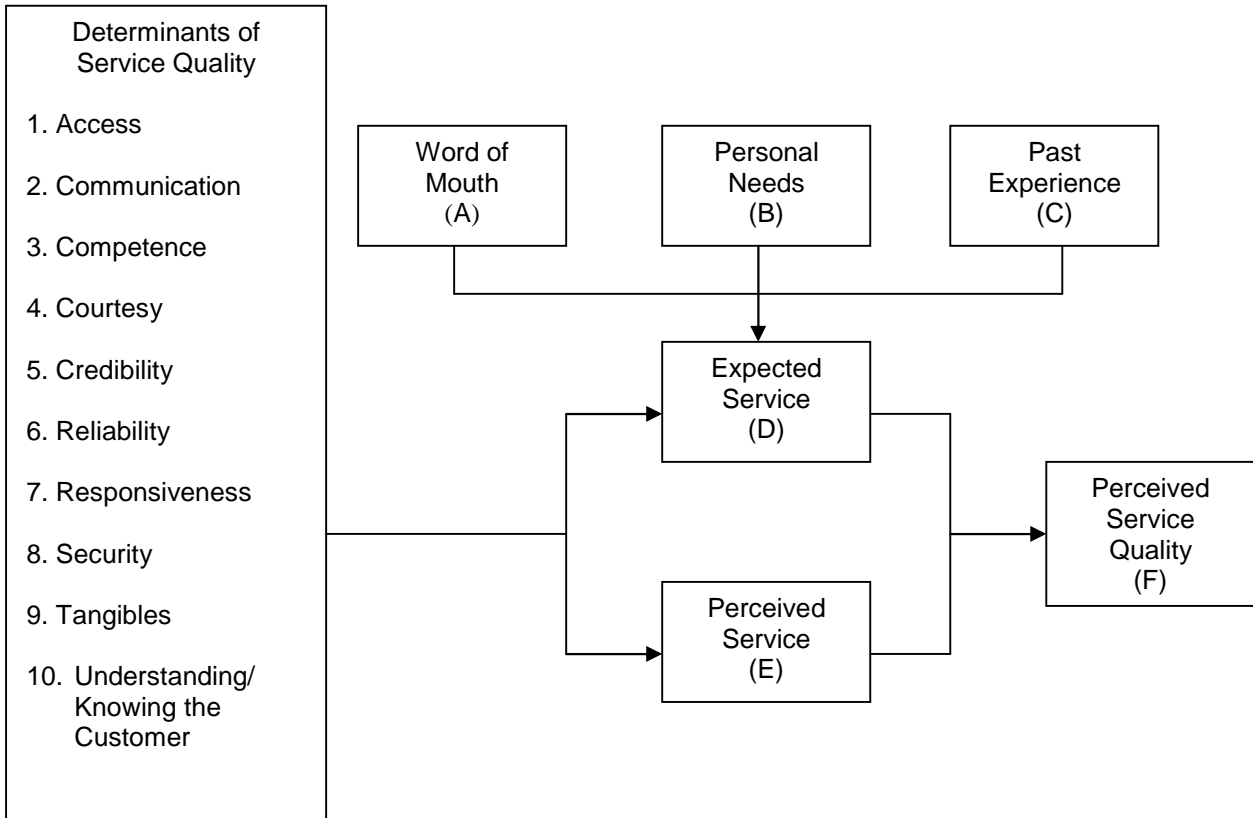
because credence properties are too difficult to evaluate, Parasuraman *et al.* (1985:48) suggest that consumers typically rely on experience properties when evaluating service quality.

Perceived service quality is also positioned along a continuum ranging from ideal quality to totally unacceptable quality, with some point along the continuum representing satisfactory quality (Parasuraman *et al.* 1985:48). The position of a consumer's perception of service quality on the continuum depends on the nature of the discrepancy between the expected service (ES) and the perceived service (PS):

- when $ES > PS$, perceived quality is less than satisfactory and tends toward totally unacceptable quality, with an increased discrepancy between ES and PS;
- when $ES = PS$, perceived quality is satisfactory;
- when $ES < PS$, perceived quality is more than satisfactory and tends toward ideal quality, with an increased discrepancy between ES and PS (Parasuraman *et al.* 1985:48).

Figure 3.3 indicates that the perceived service quality (F) is the result of the consumer's comparison between the expected service (D) and the perceived service (E).

Figure 3.3: Determinants of perceived service quality



Source: Parasuraman *et al.* (1985:47)

After initial tests had been performed and after further refinement of the scale, five of the original ten determinants (as listed in Figure 3.3) – tangibility, reliability, responsiveness, understanding or knowing customers and access – remained distinct (see Table 3.2).

Table 3.2: Refined determinants of service quality

Determinant	Examples of evaluative criteria
Tangibility	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 convey trust and confidence.
Empathy	Caring, individualized attention the firm provides its customers.

Source: Parasuraman *et al.* (1986:14-15)

The last two determinants (assurance and empathy) contain items representing seven original dimensions (communication, credibility, security, competence, courtesy, understanding or knowing customers, and access) that did not remain distinct after the two stages of scale purification and that collapsed into these two determinants (Parasuraman, *et al.* 1986:15). Therefore, while SERVQUAL has only five distinct dimensions, these dimensions capture facets of all ten dimensions of the conceptual service quality domain with which the scale development began (Parasuraman *et al.* 1986:15).

Berry *et al.* (1988:37) requested customers of various sectors to rate the importance of each of the refined five determinants on a scale of “1” (“not at all important”) to “10” (“extremely important”). They found that all were considered important. The scores for tangibility, however, ranged from a relatively low 7.14 to 8.56, while reliability, responsiveness, assurance, and empathy received average scores well above 9 for all the services studied. Reliability clearly emerged as the most important determinant, irrespective of which service was being studied (Berry *et al.* 1988:37). The customer's message to service providers is clear: “Be responsive, be reassuring, be empathetic, and most of all, be reliable – **do what you say you are going to do**” (Berry *et al.* 1988:37) (Berry *et al.*'s emphasis). There is another message: human performance plays a major role in customers' perceptions of service quality. Three of the five determinants, responsiveness, assurance, and empathy, result **directly** from human performance. Moreover, reliability often depends largely on human performance (Berry *et al.* 1988:37).

By 1984, Grönroos (1984) was in the process of developing a new model. However, although Grönroos did influence the study by Parasuraman and his co-researchers, they only consulted the work of Grönroos up to 1982 for their 1986 published study. The reason for this may have been that the 1984 work of Grönroos was not readily available at that time. The Parasuraman *et al.* (1986) study therefore did not attempt to react to Grönroos's model. Thus, although Parasuraman *et al.* (1986) identified the determinants of service quality, they did not reject the three service dimensions. Unfortunately, they also did not comment on the categorisation of the different determinants into the three dimensions. The use of service dimensions instead of determinants is precisely the difference between the work of Scandinavian researchers (of whom Grönroos is one) and that of the American researchers (to which the study by Parasuraman and his co-researcher belongs). Although Grönroos (1988:13) belongs to the Scandinavian school, he summarised service quality

determinants in a list of six determinants on which good perceived service quality is based. The first five of these criteria identified by Grönroos (1988:13) are

- professionalism and skills (they may fall under the assurance determinant in SERVQUAL);
- behaviour and attitudes (they may fall under SERVQUAL's empathy determinant);
- accessibility and flexibility (they probably also fall under the empathy determinant in SERVQUAL). Schneider and White (2004:34) are of the opinion that the empathy determinant in SERVQUAL does not focus on certain issues that are listed in the accessibility and flexibility determinant of Grönroos (1988). The accessibility and flexibility determinant can therefore be regarded as much broader than the empathy determinant in SERVQUAL;
- reliability and trustworthiness (this may fall under the reliability determinant in SERVQUAL); and
- recovery (this probably falls under the reliability determinant in SERVQUAL – although recovery is usually more narrowly defined than responsiveness, responsiveness can be seen as including recovery). Schneider and White (2004) are of the opinion that service recovery is an important process of the service delivery process and that it perhaps deserves to be studied as a separate dimension as suggested by Grönroos (1988).

The sixth determinant identified by Grönroos (1988) is reputation and credibility. This is the only criterion identified by Grönroos (1988) that was not specifically incorporated as a dimension in the SERVQUAL model. Grönroos (1988) expressly stated that this determinant is the only criterion that relates to the corporate image dimensions. He argued that this determinant acts as the filter through which the other quality dimensions are evaluated. It is possible that it does not stand up as a quality determinant on its own.

Lewis (1993:4) claims that Grönroos (1988) just added a sixth dimension. This could imply that Lewis (1993) does not agree that recovery should be incorporated in SERVQUAL's responsiveness determinant. It also suggests that Lewis (1993) regards reputation and credibility as part of one of the five SERVQUAL determinants (probably the assurance determinant). Lewis (1993), unfortunately, did not specify under what determinant he would place reputation and credibility. Schneider and White (2004:33) suggest that recovery could be seen as part of the responsiveness determinant in SERVQUAL, but they

see reputation and credibility as part of the assurance determinant in SERVQUAL. However, the fact that reputation and credibility is listed separately by Grönroos (1988) implies that the importance thereof as part of the image dimension may disappear if the reputation and credibility aspect is not measured separately.

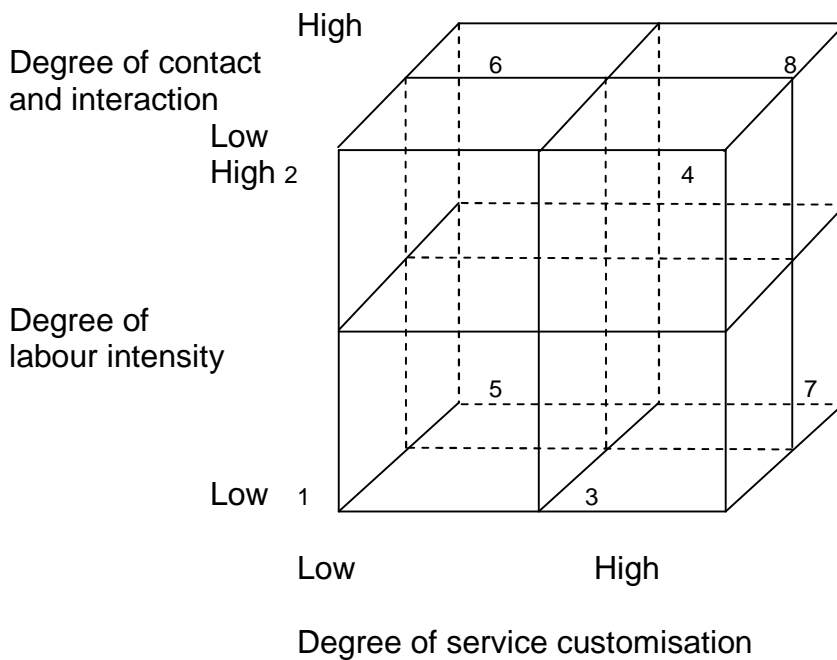
3.3.3 Haywood-Farmer's conceptual model of service quality

Haywood-Farmer (1988:21) did not comment on the different service dimensions, but suggested that services have three basic attributes, called the three Ps of service quality. These three Ps stand for

- **P**hysical facilities, processes and procedures;
- **P**eople's behaviour elements; and
- **P**rofessional judgement.

The choice of elements from each of these three groups of service quality factors is an important, strategic managerial decision. Managers must choose the combination very carefully to ensure an appropriate balance between the three Ps. What constitutes an appropriate mix is, in part, determined by the relative degrees of labour intensity, service process customisation, and contact and interaction between the customer and the service process (Haywood-Farmer 1988:28). Haywood-Farmer (1988:25) also suggests a three-dimensional classification scheme for services to assist managers in classifying each service correctly, to be able to get the correct mix of the three Ps (see Figure 3.4).

Figure 3.4: A three-dimensional classification scheme



Some examples of services in each octant:

1. Utilities, transportation of goods
2. Lecture teaching, postal services
3. Stock broking, courier services
4. Repair services, wholesaling, and retailing
5. Computerised teaching, public transit
6. Fast food, live entertainment
7. Charter services, hospitals
8. Design services, advisory services, healing services

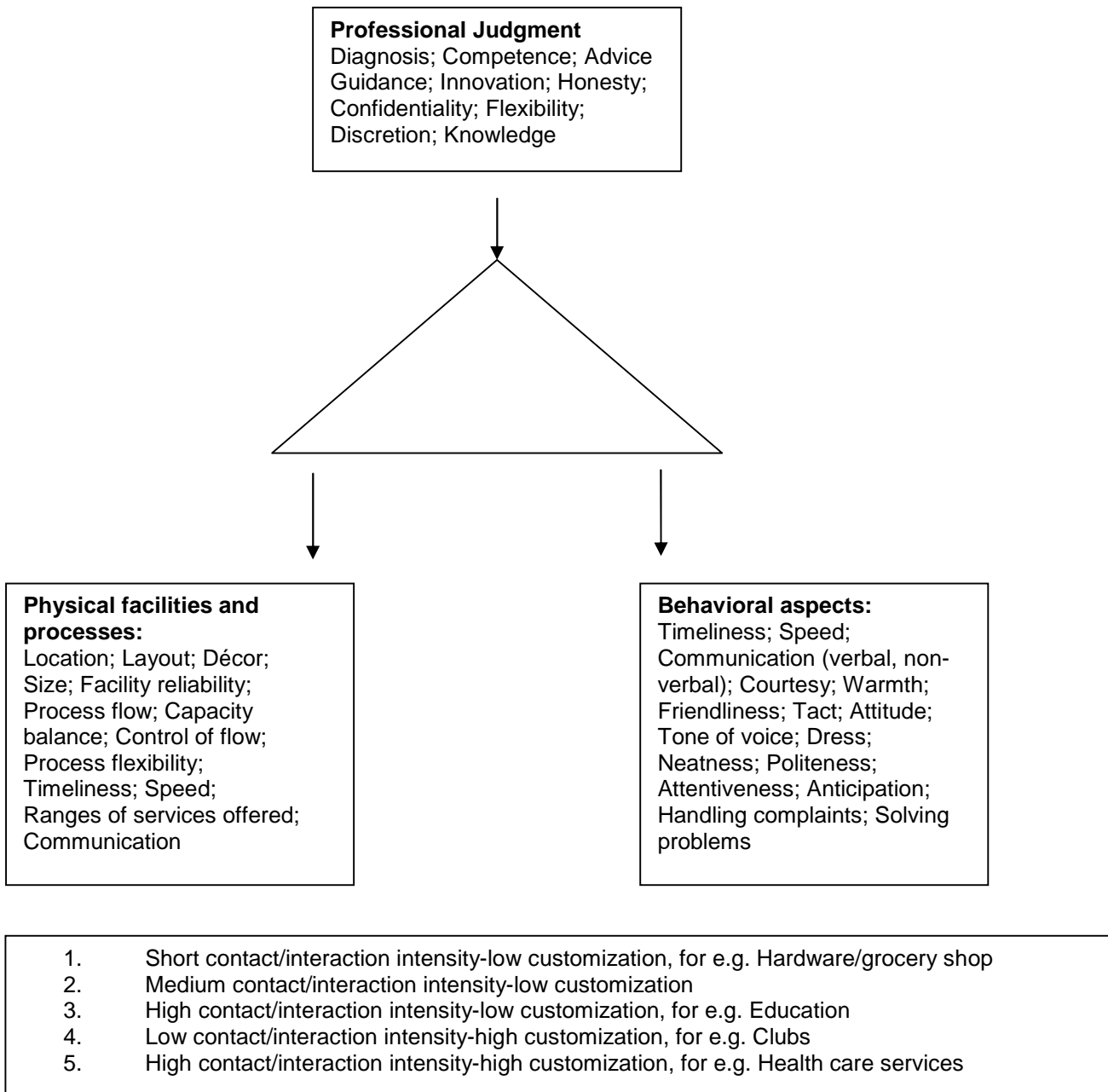
Source: Haywood-Farmer (1988:25)

In services low in labour intensity, the customers' impression of the physical facilities, processes and procedures is important (Haywood-Farmer 1988:26). If service contact increases, services increase in labour intensity. Hence, more attention must be paid to making sure that staff members behave appropriately. SARS, like banks, processes large volumes of routine-type forms and may need procedures which allow fast, efficient, error-free processing, as suggested by Haywood-Farmer (1988:28). On the other hand, the department that deals with objections and appeals may be more similar to a consulting firm, with high labour intensity. There should therefore be more of a focus on professional judgement.

Haywood-Farmer (1988:28) suggests that, because the three Ps are not scales ranging from low to high, and because of differences in the concepts, it is not possible to map the

model of service quality directly onto the triangular model of the three Ps. Seth *et al.* (2004:919) plotted some of the different types of services directly onto the Haywood-Farmer model. The results are set out in Figure 3.5.

Figure 3.5: Attribute service quality model



Source: Haywood-Farmer (1988) as adapted by Seth *et al.* (2005:919)

This model may be suitable for managers in designing the processes of the services offered, but it may also be relevant in determining the importance of the various determinants to be measured. In interpreting the three-dimensional service classification model (see Figure 3.4), it can also be concluded that SARS as a whole cannot be plotted on the model,

but that the different departments within SARS can be plotted differently, as the departments should have different degrees of service contact and interaction, different degrees of labour intensity and different degrees of customer customisation. When measuring the services, the results may indicate where the design of the service offering is lacking. This model implies that it may be important to rate the services rendered specifically with regard to individual departments within SARS to ensure that any results from the survey can be used in practice to improve the design of the processes of the service offerings. It can also be concluded that the relevance of the different determinants of the service quality construct may even differ between different departments within the same organisation.

These three service attributes cannot be directly compared with the three service dimensions of Grönroos (1984, 1988) or the five determinants of Parasuraman *et al.* (1985, 1986).

3.3.4 Becker and Wellins's service dimensions

Becker and Wellins (1990) focused on customer service. They developed 17 determinants (which they called dimensions), which they believed would relate to effective customer service. These determinants were used in a survey of more than 1 300 customers from a wide geographic area (including 50 states in the United States, Canada and Great Britain) (Becker & Wellins 1990:50). Customers rated all 17 dimensions between "important" and "very important," with means ranging from 3.56 to 4.10 in relation to a maximum measure of 5 (Becker & Wellins 1990:50). The results are set out in Table 3.3.

Table 3.3: Customer ratings of the relevant importance of the various determinants

Customer-service determinants, customer sample	
Dimensions	How important
Communication	4.05
Customer sensitivity	3.92
Decisiveness	3.84
Energy	3.87
Flexibility	3.71
Follow-up	4.09
Impact	3.80
Initiative	3.67
Integrity	3.87
Job knowledge	4.10
Judgement	3.82
Motivation to serve customers	3.97
Persuasiveness/sales ability	3.56
Planning	3.76
Resilience	3.84
Situation analysis	3.71
Work Standards	3.93

Ratings are on a five-point scale ranging from 1 (not important, or never done well) to 5 (extremely important). All differences are significant ($p < .001$).

This study by Becker and Wellins (1990) does not really result in a new service quality model, but it helps to clarify the importance of various service determinants. Even given a possible limitation on the length of the questionnaire that will flow from the service quality model proposed in the present research, this could assist in choosing the best determinants relevant to the customers. This study focuses only on customer service (thus service encounters), not the full service offering, but, as it has been decided that a business process approach will be used for the present research in the design of the service quality model, this study may be very relevant to the customer service departments in SARS (for example, the call centres) and could assist in defining the relevant service determinants for these departments.

The study by Becker and Wellins (1990) can be regarded as a refinement of the determinants that had already been previously identified. Their study did not indicate whether the distinctness of the determinants was tested. Although the importance measures are relevant, this list of determinants may be too exhaustive. Without any proof that they are

really distinct determinants, the testing of all the determinants may result in a multiple measurement of the same aspect of the service offering. The determinants were also not defined by the customers themselves, but the customers only had to rate pre-identified service determinants. Therefore there may be other determinants that can be regarded as more important, but that were not provided as alternatives on the rating list.

3.3.5 Cronin and Taylor's model

Cronin and Taylor (1992) are of the opinion that perceived service quality is best conceptualised as an attitude of the client with regard to the current performance of the service offered by a specific service provider. They suggest that service quality is better predicted only by performance and not as the difference between performance and expectations. Cronin and Taylor (1992) do not disagree with the definitions of service quality that regard it as the difference between expectations and the perceptions of the performance of the customers, but they do differ from such definitions on how to measure perceptions of such services. They argue that performance scores alone may be as reliable as scores obtained by subtracting expectations from perceptions. In other words, the estimation of a firm's perceived performance may already lead a respondent through a mental process of comparing the perceptions to the expectations.

They agree with Parasuraman *et al.* (1985) that the service quality concept is adequately defined by different determinants. However, they argue that the determinants are unidimensional and can therefore not be fitted into a five-component structure.

3.3.6 Gummesson's dimensions

Gummesson (1992) divided service quality into three quality dimensions, one for service, one for tangibles, and one for software. The service dimension relates to what Grönroos (1984, 1988) refers to as the technical quality of the service. The term "tangibles" relates to any goods, physical environments and people (with regard to people, this notion only refers to their appearance and not to their activities, as this would be included with "services") (Gummesson 1992:186). This tangible dimension can be regarded as the same as the functional dimension described by Grönroos (1984, 1988). The term "software" relates to the programmes, procedures and any associated documentation pertaining to the operations of a data processing system. Software is thus an intellectual creation that is independent of the medium on which it is recorded (Gummesson 1992:192). In Grönroos's (1984, 1988) model, the software would probably be part of the technical quality dimension (insofar as software is

used to perform a function), or even part of the functional dimension (insofar as software is used as the interface).

Gummesson (1992:193) identifies software as a dimension on its own because he believes, firstly, that many service delivery systems depend on software (for example, when a taxpayer phones the call centre at SARS to enquire on the status of his or her account, the employee is completely dependent on both the hardware and the software to be able to service the taxpayer). Gummesson (1992:193) suggests that the taxpayer can also interface directly with either a contact person or a computer and therefore indirectly interfaces with the software (for example, using the e-filing system for SARS or visiting SARS's website to obtain a relevant tax form).

In the context of SARS, the service quality of submitting a tax return and receiving proof of submission depends on the interaction with the SARS employee in receiving proof of submission (service), the location and lay-out of the SARS office (tangibles), and the computer system used in recording the submission of the tax return (software).

Gummesson (1992:198) also analysed research up to 1992. Some of his sources (not cited in the bibliography to the present study unless directly consulted) included Baker (1987), Garvin (1988), Grönroos (1990), Norman (1988) and Zeithaml, Parasuraman and Berry (1990). From his literature review, he derived a comprehensive list of service quality determinants for each of his service quality dimensions (see Table 3.4).

Table 3.4: Tentative integration of general quality dimensions relating to the total offering and the services, tangibles and software

Dimensions of customer perceived quality of total offering

For Service Elements
 Reliability
 Responsiveness
 Assurance
 Empathy

For Tangible Elements

<i>Goods perspective:</i>	<i>Psychological perspective:</i>	<i>Environmental perspective:</i>
Reliability	Visibility	Ambient factors
Performance	Mapping	Functionality
Features	Affordance	Aesthetics
Conformance	Constraints	Service personnel
Service ability	Customer control	Other customers
Aesthetics	Knowledge needed	Other people
	Feedback	

For Software Elements
 Reliability
 Extendibility
 Integrity
 User-friendliness

Source: Gummesson (1992:198)

Although some determinants are valid for more than one dimension, for example, reliability, Gummesson (1992) suggests that it is important that each of the given determinants be defined and evaluated with regard to each of the three dimensions, as the definition of the determinant would differ for each dimension.

Although Grönroos (1988) also classified the six determinants he had identified under his three different quality dimensions, he did not acknowledge that a specific determinant could be relevant to more than one dimension. Gummesson (1992) was also the first to specifically identify software as a dimension on its own. It might be argued that this dimension is part of the technical dimension Grönroos (1984, 1988) had already identified, as there should be no difference between the situation where, for example, money is counted by a teller rather than by a machine. The outcome of both is the counting of the money. It should, however, be acknowledged that the counting of the money by the machine is not visible to the taxpayer. Therefore the outcome is more intangible. When software results in an error, the error is also multiplied to many users. These reasons may justify the importance of software as a dimension on its own.

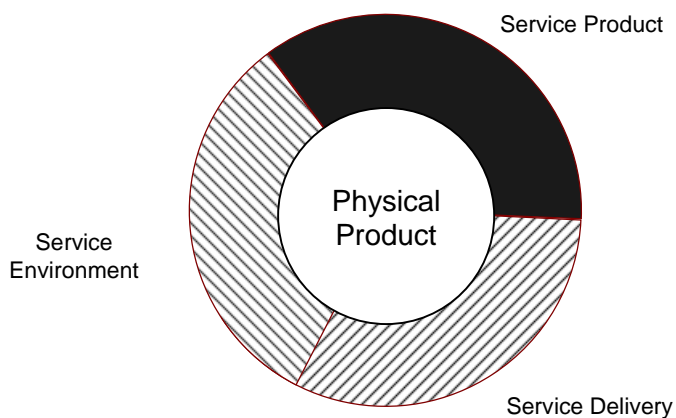
3.3.7 The three-component model of Rust and Olivier

Rust and Olivier (1994) proposed a three-component model (see Figure 3.6):

- the service product (the service as it is designed to be delivered – technical quality);
- the service delivery (the sequence of events and service provider role expectations);
and
- the service environment (physical ambience of the service setting).

The functional quality identified by Grönroos (1984, 1988) incorporates both tangibles (environment) and the service delivery, but Rust and Olivier (1994) identify tangibles as a separate dimension on its own. Parasuraman *et al.* (1985) identified tangibles as a determinant (not a dimension) on its own. Berry *et al.* (1988:37) found that although tangibles was considered to be important, the scores for tangibles ranged from a relatively low 7.14 to 8.56, while all the other determinants received average scores well above 9 for all the services studied. It is therefore not clear whether tangibles should be classified as a higher order dimension, or as a determinant.

Figure 3.6: The three-component model



Source: Rust and Olivier (1994:11)

3.3.8 The return-on-quality approach of Rust, Zahorik and Keiningham

The various service quality models presented thus far have all been organised from the customers' point of view. Rust *et al.* (1995:7) adhere to the idea of defining service quality by asking customers about the service they receive, but they argue that the dimensions of service quality to be measured should relate to the business processes of the organisation. The rationale for this is that they want to be able to use the survey data to facilitate change and that they want the change to be actionable. In order for this to happen, quality improvement efforts must be targeted at the process and sub-process level (Rust *et al.* 1995:7). Schneider and White (2004:38) also believe that the customer should be able to assess, for example, responsibility and ownership for business processes much more easily than responsibility for a determinant such as empathy. Rust *et al.* (1995) still recommend the use of customer focus groups in order to ensure that no major areas of concern are omitted from customer surveys, and to make sure that survey items are worded in the customers' terminology.

Apart from being organised according to business processes, the return-on-quality approach is characterised by four assumptions, namely that

- quality is an investment;
- quality efforts must be financially accountable;
- it is possible to spend too much on quality; and
- not all quality expenditures are equally valid.

This approach treats quality improvement efforts as investments and assumes that these efforts must be made financially accountable (Rust *et al.* 1995:16). The financial viability of a quality expense is measured by the return-on-quality approach by quantifying the market share implications, net present value of the resulting profit stream, and return-on-quality of a proposed quality expenditure (Rust *et al.* 1995:15). As one of the two main measurement foundations of the return-on-quality model is based on customer retention or repurchase behaviour, the use of the exact model is not suitable for measuring service quality at SARS, as neither customer retention nor repurchase behaviour are relevant to SARS. However, the principles of the model linking the service quality model with business processes may still be useful, as they may ensure more actionable results.

3.3.9 P-C-P service attributes model

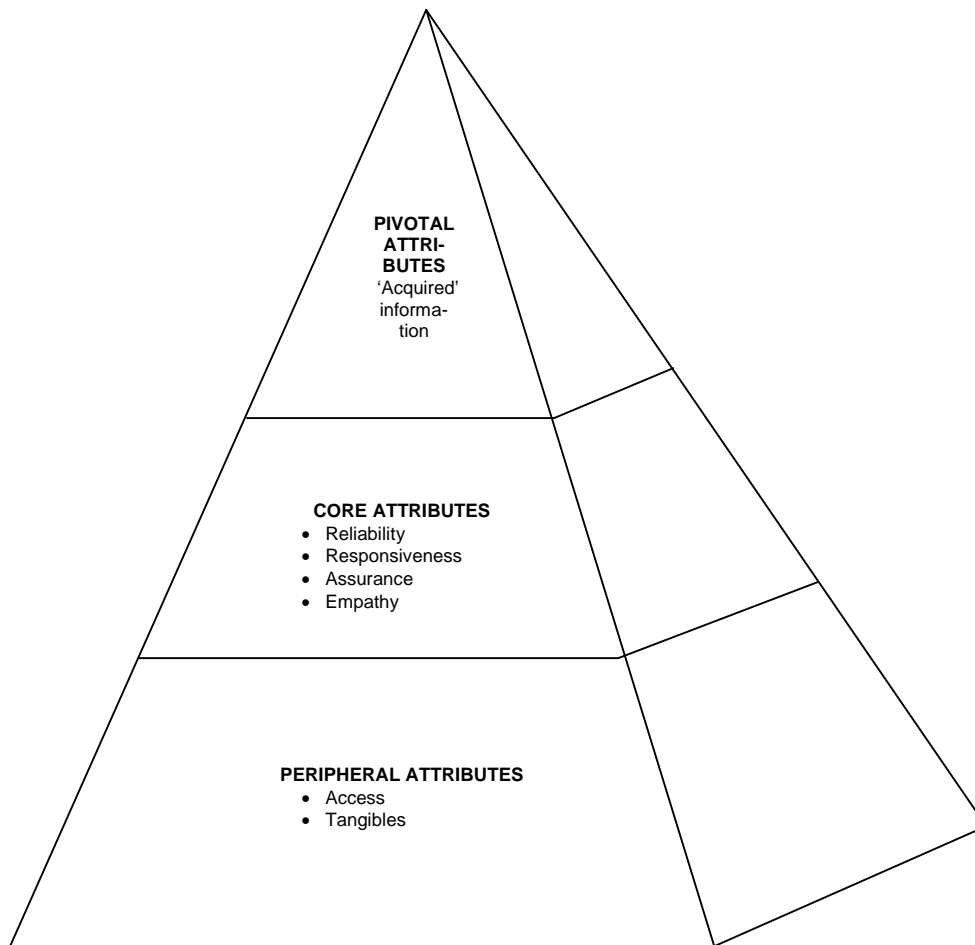
In order to measure the service quality in a particular organisation (as seen through the eyes of its customers), Philip and Hazlett (1997:273-274) proposed a hierarchical model in the form of a pyramid, based on three main classes of attributes that they called the P-C-P attributes, namely pivotal, core and peripheral attributes. These ranked levels can be loosely defined as the inputs, processes and outputs of a service organisation. This model is similar in some ways to the systems model of an organisation with regard to the division of the model into three hierarchical levels – pivotal (outputs), core and peripheral attributes (jointly representing inputs and processes).

The pivotal (output) attributes, located at the apex of the pyramid, are defined as the “end product” or “output” from the service encounter (Philip & Hazlett 1997:274). Core attributes, centred around the pivotal attributes, can best be described as the amalgamation of the people, processes and the service organisational structure through which consumers must interact and/or negotiate so that they can achieve or receive the pivotal attribute (Philip & Hazlett 1997:274). The third level of the model focuses on the peripheral attributes which can be defined as the “incidental extras” designed to make the whole experience for the consumer a complete delight (Philip & Hazlett 1997:274).

The SERVQUAL and P-C-P dimensions were outlined to the providers and users of a cancer information support service after initial interviews and using two different focus groups (Philip & Stewart 1999:4). When the researchers had listened to all the parties, it became very clear to them that the information and advice provided by the service (the output or pivotal attributes) were as important as (and perhaps more important than) the personal qualities (the SERVQUAL dimensions) of the staff involved in the delivery of the service (Philip & Stewart 1999:4). This confirmed the researchers' view that the P-C-P attributes model is more appropriate than SERVQUAL for evaluating the quality of a service (Philip & Stewart 1999:4).

Philip and Stewart (1999:279) plotted the SERVQUAL dimensions on the P-C-P model (see Figure 3.7).

Figure 3.7: P-C-P service attribute model of service quality



Source: Philip and Stewart (1997:279)

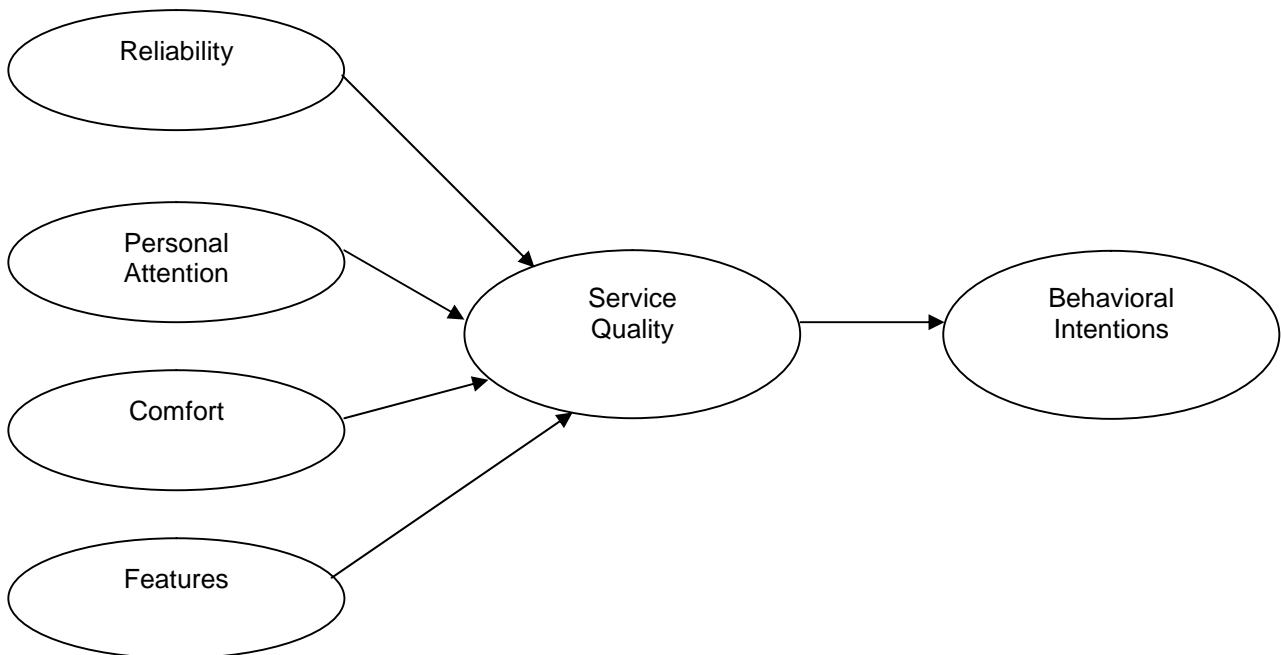
The P-C-P model is therefore clearly a combination of SERVQUAL, which represents the core and the peripheral grouping, plus the pivotal grouping, which is the technical quality of the services advocated by Grönroos (1984, 1988).

The basic premise of the P-C-P model holds, firstly, that there is a need to develop service-specific dimensions or determinants, as the determinants in SERVQUAL and other models do not address some of the more critical issues associated with the assessment of individual services adequately (Philip & Hazlett 1997:273). Secondly, although Philip and Hazlett (1997) acknowledge that perceived services are the difference between the expected service and the performed service, like Cronin and Taylor (1992), they argue that a combined (single) scale should be used to measure the “gap” between expectations and perceptions, rather than two separate scales (Philip & Hazlett 1997:273).

3.3.10 Dabholkar, Shepherd and Thorpe's antecedents model

None of the previous studies regard service quality as a separate construct, but regard it as the sum of the components required to obtain an estimate or average of service quality. Dabholkar *et al.* (2000:141) argue that service quality is better conceived as its antecedents rather than its components, and that consumers evaluate different components (factors) related to the service, but also form a separate overall evaluation of the service quality (which is not the sum or average of the components) (see Figure 3.8) (Dabholkar *et al.* 2000:166). The factors were, however, important predictors of total service quality and Dabholkar *et al.* (2000:166) are of the opinion that, for diagnostic purposes, the different components should still be measured and evaluated. One can therefore conclude from this model that, in addition to measuring the different determinants of service quality, a global measurement is also required and should be added to the measuring instrument.

Figure 3.8: Antecedents model of service quality



Source: Dabholkar *et al.* (2000:157)

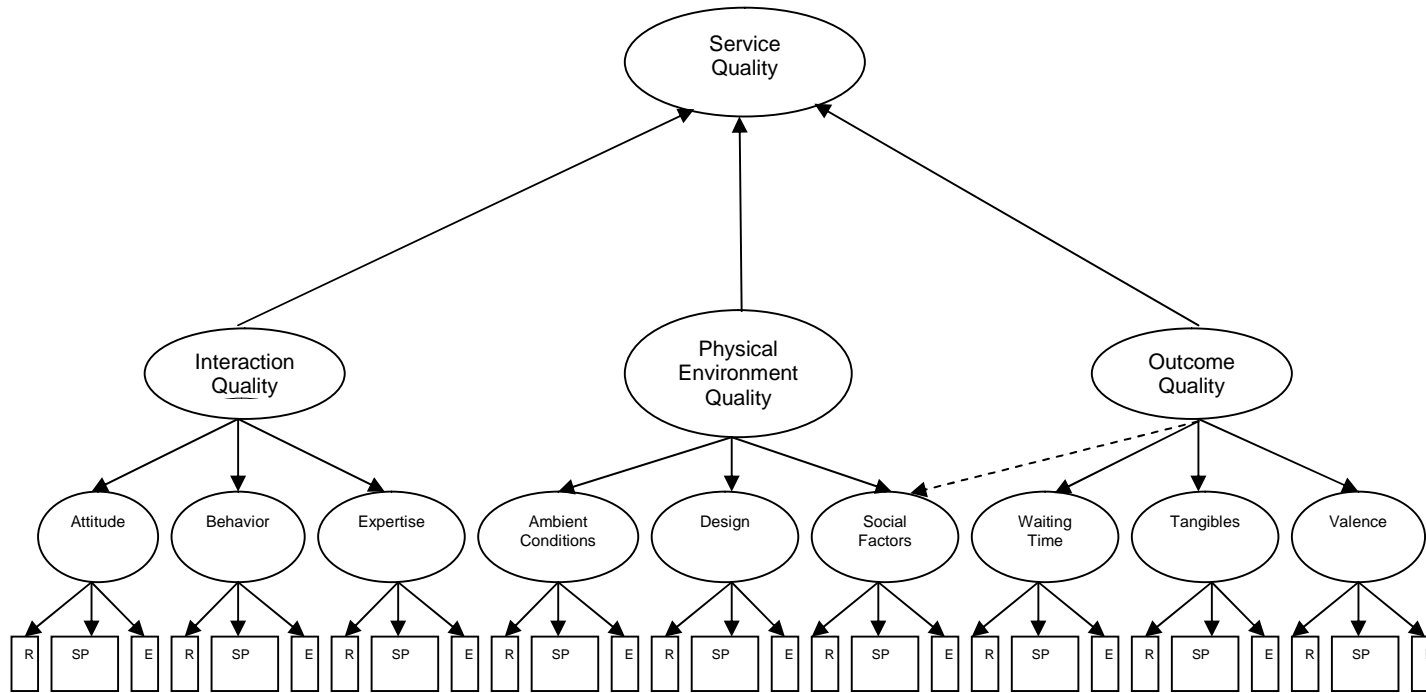
3.3.11 Brady and Cronin's hierarchical approach

Until the start of the new millennium, the service quality debate was polarised around two competing perspectives, the Scandinavian and the American schools. Brady and Cronin (2001:44) maintain that both perspectives highlight the important aspects of service quality, but that neither fully captures the construct. They therefore attempted to integrate the two schools of thought and to provide qualitative and empirical evidence that service quality is a multidimensional, hierarchical construct.

They made an attempt to provide the first empirical evidence that customers form service quality perceptions on the basis of their evaluations of three primary dimensions: outcome, interaction and environment (Brady & Cronin 2001:44). The first two are adapted from Grönroos's (1984,1988) model (from the Scandinavian school), in particular his notion that service quality is assessed according to customer evaluations of outcomes and interactions with service employees. Although for semantic reasons Brady and Cronin (2001) prefer not to call the first two dimensions "technical" and "functional quality", and prefer more descriptive terms such as "outcome" and "interaction", their first two constructs could represent the technical and functional quality dimensions of Grönroos (1984, 1988). Brady and Cronin (2001:44) also provided the first empirical evidence of Rust and Olivier's (1994) three-component model conceptualisation of service quality, in that they suggest that, although consumers did not rate the service environment as the most important, it should not be a mere determinant, but should be a dimension on its own.

Brady and Cronin (2001:37) argue that each of the primary dimensions of service quality, namely interaction, environment and outcome have three sub-dimensions. Furthermore, customers aggregate their evaluations of the sub-dimensions to form their perceptions of an organisation's performance based on each of the three primary dimensions. Those perceptions then lead to an overall service quality perception (Brady & Cronin 2001:37). In other words, customers form their service quality perceptions on the basis of an evaluation of performance at multiple levels and ultimately combine these evaluations to arrive at an overall service quality perception (Brady & Cronin 2001:37). Based on these findings, a hierarchical conceptualisation of service quality seems appropriate (Brady & Cronin 2001:44). See Figure 3.9 for their hierarchical service quality model.

Figure 3.9: The hierarchical approach



Note: R = a reliability item; SP = a responsiveness item; E = an empathy item.
 The broken line indicates that the path was added as part of model respecification.

Source: Brady and Cronin (2001:37)

Lastly, the results of their study also indicate that three of the nine sub-dimensions as presented by the American School, namely the reliability, responsiveness and empathy of service providers, are important to the provision of superior service quality (Brady & Cronin 2001:44). However, Brady and Cronin (2001:44) argue that these items are modifiers of the sub-dimensions, as opposed to direct determinants. The implication is that they represent how each sub-dimension is evaluated (reliable or not, responsive or not, and so on), whereas the sub-dimensions answer the question as to what about the service should be reliable, responsive and empathetic.

3.3.12 Grönroos's model as adapted by Kang and James

Grönroos's (1984, 1988) conceptual model was empirically tested by Kang and James (2004), whose results confirmed the five-factor structure of the SERVQUAL instrument (Kang & James 2004:274). The high correlations between the five SERVQUAL factors suggested that the constructs are represented by a second-order latent variable, functional quality (Kang & James 2004:274). It is reasonable to consider, however, that there are other sub-dimensions of service delivery that should be assessed as part of a firm's functional quality (Kang & James 2004:275).

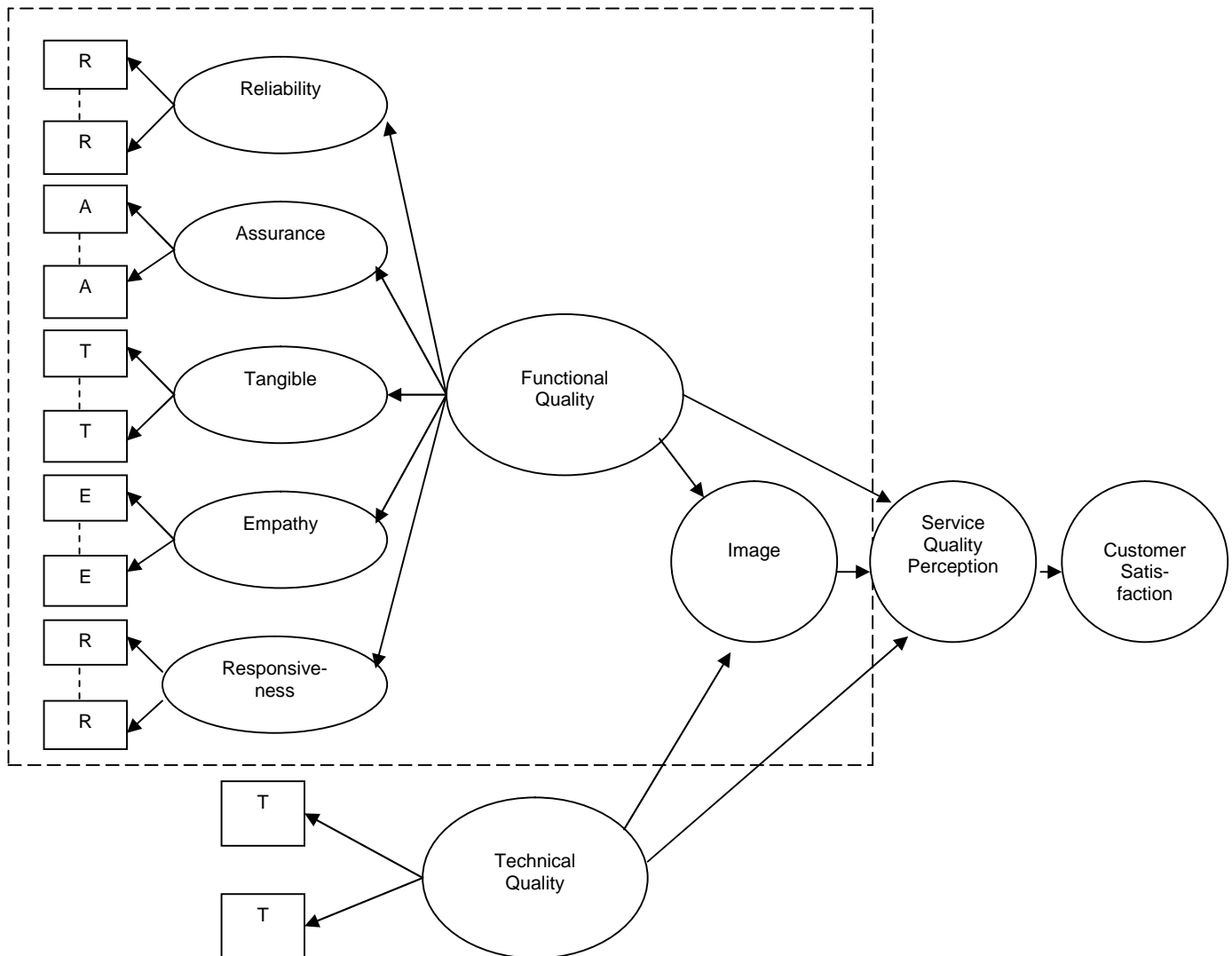
A second finding of their study is the confirmation of the multidimensional nature of service quality supporting the Scandinavian (European) perspective (Kang & James 2004:274). The results indicated that functional and technical quality influence perceptions of overall service quality (Kang & James 2004:274). The mediating role of a business's image in a consumer's perception of overall service quality is a third finding of the study performed by Kang and James (2004). Another finding of their study was the influence of functional quality on an individual's mental image of an organisation, which suggests that the interaction between a consumer and an organisation's representatives has an important effect on a consumer's mental image of the organisation, and the consumer's subsequent evaluation of service quality (Kang & James 2004:275). The final finding was that the effect of functional quality on a business's image was larger than the effect of technical quality (Kang & James 2004:274).

The results from their study suggest that technical quality, functional quality and a business's public image should be measured to capture fully an individual's overall

perception of service quality (Kang & James 2004:275). Traditionally, technical quality has been disregarded, since it was believed that customers would not be able to discern the technical quality of services, and therefore they would rely on other attributes associated with the process of service delivery and functional quality to rate service quality (Kang & James 2004:275). While functional quality may have a larger influence on perceptions of service quality for services such as health-care and law, it is important to recognise the differential influence of functional and technical quality, particularly for other service organisations that do not have such high credence properties (Kang & James 2004:275).

Kang and James (2004) therefore confirmed the hierarchical approach to service quality (the fact that the construct is multidimensional with sub-dimensions or determinants for each dimension). They adapted Grönroos's (1984, 1988) model (see Figure 3.10).

Figure 3.10: Adaptation of Grönroos's model by Kang and James



Source: Kang and James (2004:269)

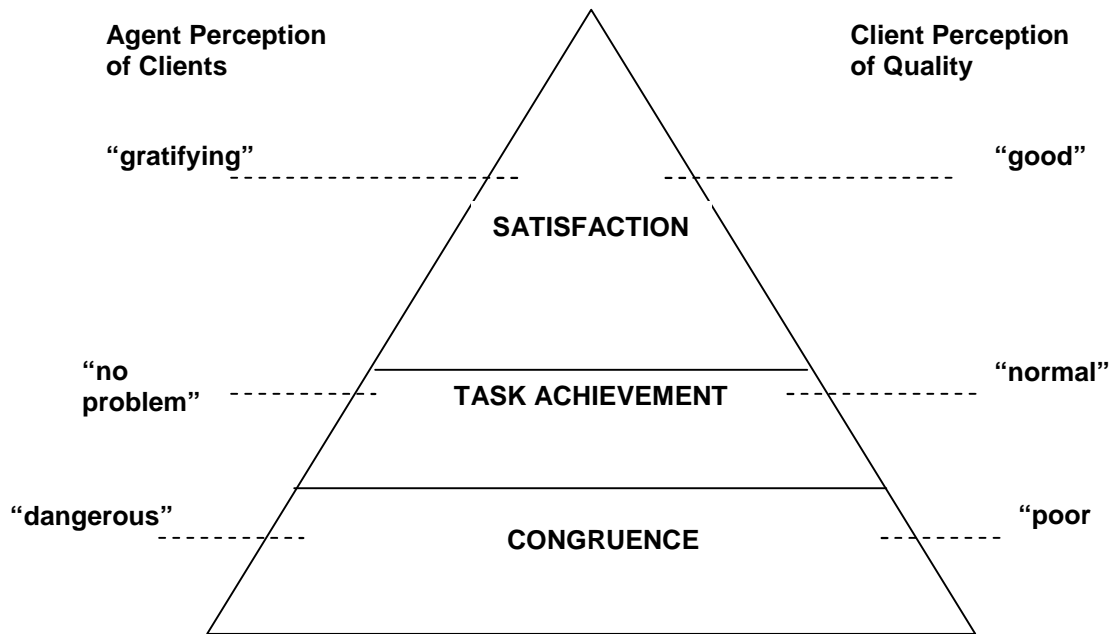
3.4 PUBLIC SECTOR SERVICES

The fundamental difference between service offerings in the private and public sector is that some services offered by the public sector are imposed by legislation. They are therefore mandatory and not discretionary (Gaster & Squires 2003:43; Speller & Ghobadian 1993b:2). Even so, Edvardsson and Enquist (2006:19) argue that customers have the same needs, expectations and requirements from both the public and the private sector. This implies that quality is assessed in more or less the same way. However, a few authors (Gaster & Squires 2003; Klaus 1985; Speller & Ghobadian 1993b) have attempted to define quality more specifically within the public domain.

3.4.1 Klaus's pyramid of quality

Klaus (1985:30), who focused on public service encounters, refers to perceptions in evaluating service quality. Although he does not define how these perceptions are formed, he argues that clients have certain needs. The fulfilment of those needs is rated against expectations. This therefore implies a comparison of the actual service encounter with consumers' expectations to form the perceptions (as is the case in the private sector). Klaus (1985) also agreed that service quality has different levels, arguing that these levels are interrelated in such a way that they can be depicted as a pyramid of quality (see Figure 3.11).

Figure 3.11: The pyramid of quality



Source: Klaus (1985:30)

An experience of good quality in a service encounter depends on the degree to which a client has positive experiences in respect of each of the consecutive levels (or conditions of good quality) in the pyramid (Klaus 1985:31). The pyramid diagram represents quality levels in an intentional analogy to Maslow's well-known hierarchy of human needs – so, for example, service quality can only be experienced with regard to task achievement once the lowest level of congruence has been satisfied (Klaus 1985:30). According to Klaus (1985:30), congruence is the first condition of good service quality. It refers to the initial social interaction between the service provider and the client, for example, whether the parties have greeted each other to their respective satisfaction.

Only after the first level of the pyramid is satisfied can one move to the second level, namely task achievement. Klaus (1985) calls this second level "task achievement", but it seems to be much the same as the technical quality dimension referred to by Grönroos (1984, 1988) – it represents the "what" of the service. After successful task achievement, full satisfaction (the final level on the pyramid) is only achieved if the psychological aspects of the service encounter are also satisfied. Again, this final level can be compared to the functional level of service quality of Grönroos (1984, 1988). Congruence possibly also forms part of the functional level of service quality, but only insofar as it relates to the initial social interaction between the service provider and the client.

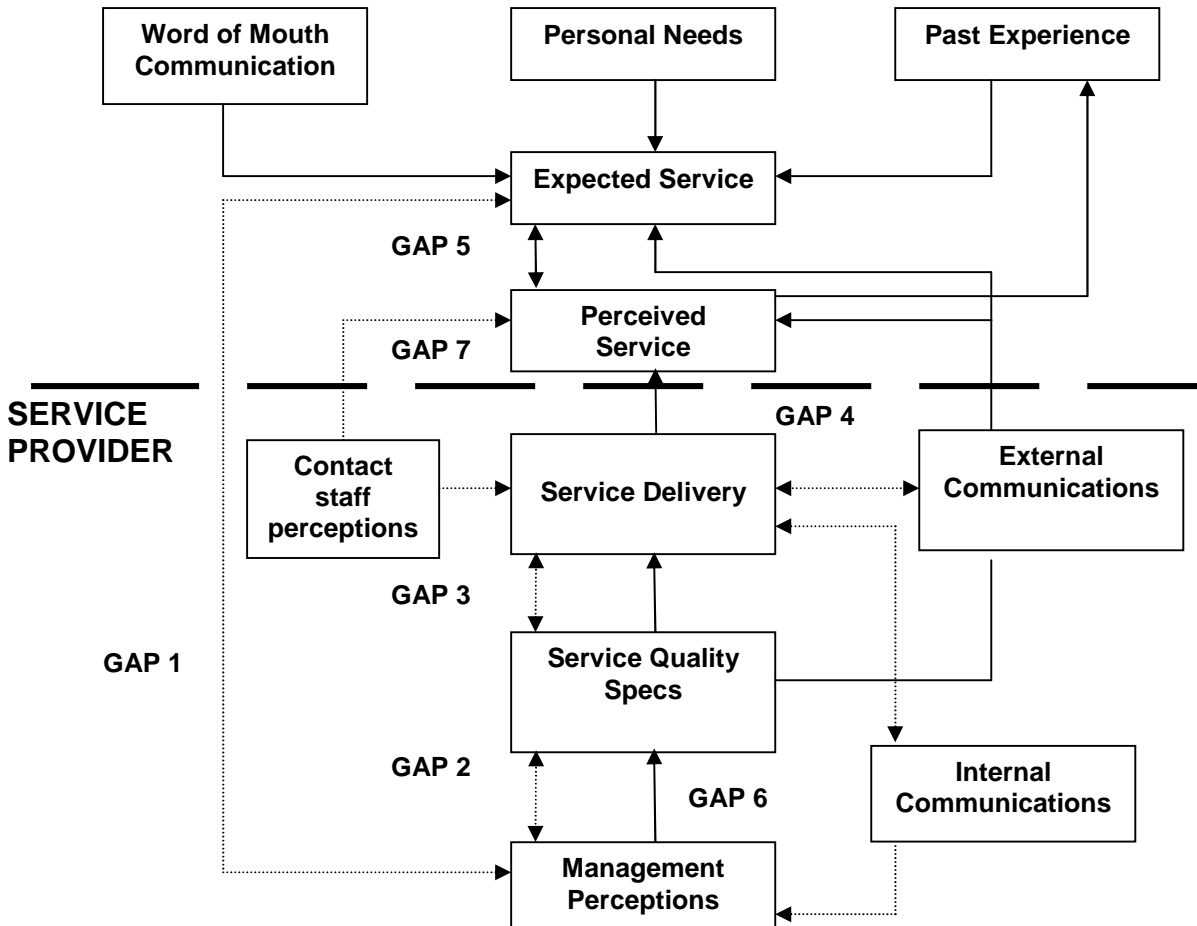
Grönroos (1984, 1988) found that the functional quality is more important than the technical quality, provided that the technical quality is of a satisfactory level. This may imply that the service quality in the technical dimension can also be regarded as being on a lower level than functional quality in a similar hierarchical approach. Grönroos (1984, 1988) derived his conclusions for services in general, whereas the research conducted by Klaus (1985) focused on face-to-face service encounters. Klaus (1985) did not specify whether the conclusions of his research could also relate to other service encounters or service settings where there is limited or no contact with the client. As the services of SARS do not consist only of face-to-face service encounters, the results of the Grönroos (1984, 1988) study may be more relevant to the present research. The similarities between the conclusions reached in the studies by Grönroos (1984, 1988) and Klaus (1985) confirm that public services are not completely different from other services. This implies that the general models might be equally valid in the public sector.

3.4.2 Speller and Ghobadian's public service quality model

Speller and Ghobadian (1993b) adjusted Parasuraman *et al.*'s (1985) service quality gaps model for the public sector (see Figure 3.12).

Figure 3.12: Service quality model in the public sector

CUSTOMER



Source: Speller and Ghobadian (1993b:30).

Speller and Ghobadian (1993b:30) identified two additional internal gaps (Gaps 6 and 7). They promote the notion that the staff who deliver the service in both the “front line” and the “back line” are very important to the process. Gap 6 relates to the internal communication gap (the failure to empower staff and train them properly in delivering services to customers). Gap 7 relates to the contact staff perceptions gap (the failure to listen to contact staff about what the customers think of the services that have been delivered). Gap 6 directly influences the actual service delivered, and thus indirectly influences the perceived service quality experienced by the client. Gap 7, on the other hand, directly influences the services delivered, as well as the perceived service quality experienced by the client. When Gap 5 (the service quality gap) is then measured by using the service quality model as proposed in the present research, the existence of the two

additional gaps should possibly also be acknowledged when any recommendations for improvements are made.

Speller and Ghobadian (1993b:34) argue that most of the service quality models developed in the marketing literature appear to be equally applicable to public sector service operations.

3.4.3 Gaster and Squires's democratic service quality model

Gaster and Squires (2003) differ from Speller and Ghobadian (1993b). They argue that public services are different from private services, and that adjustments are therefore needed to the quality models for the private sector for such models to be fully adapted to the public sector. Gaster and Squires (2003) support the adjusted gaps model of Speller and Ghobadian (1993b), but they are of the opinion that the quality framework should also be adjusted to ensure that the needs of the customers (in the case of the public service, citizens) are met. Although there is no consensus on a definition of public sector service quality, according to Gaster and Squires (2003:253), the "best fit" seems to be a combination of four dimensions of quality (what they refer to as the democratic model of service quality):

- the technical dimension (what?);
- the non-technical dimension (how?);
- the environmental dimension (where?); and
- the democratic dimension (who for and with?).

At a general level, this means that a good quality service needs to

- do what it is designed to do, which is meeting the requirements of those for whom it is designed;
- be provided in such a way that the relationship between those providing the service and those receiving it makes the experience of the core service better, or at least more acceptable;
- be provided in surroundings that are efficient and easy to understand (signposting, queuing, seating, and so on), and gives the message to the public and to front-line staff that they are valued; and
- involves consumers and citizens from beginning to end (Gaster & Squires 2003:253).

This model of service quality is similar to the three-component model developed by Rust and Olivier (1994) and empirically confirmed by Brady and Cronin (2001). Upon closer inspection, it may also relate to Grönroos's (1984, 1988) model, as the technical dimension is the "what" of the service. Gaster and Squires (2003) split the functional dimension into two separate dimensions, the "how" and the "where". It is not certain where the "corporate image" dimension of Grönroos would fit in, but it cannot be ignored. Perhaps the filtering function is still implied. The additional dimension (the involvement of the consumers and citizens) also does not really add much to the existing literature, as the quality approach accepted for the present research is a user-based approach, which implies that the opinion of the client is very important. This additional dimension confirms that the correct quality definition is applied for the present research, and that gathering the opinions of the tax practitioners is the correct place to start. This model therefore confirms the use of general models in the public sector.

3.5 ELECTRONIC SERVICE QUALITY

Service quality literature is dominated by researchers who have studied the delivery of traditional services (Parasuraman *et al.* 2005:214). With the rapid expansion of information technology, it has now also become necessary to distinguish between traditional services and e-services. Traditional services refer to all non-internet or non-electronic customer interactions and experiences with suppliers (Parasuraman *et al.* 2005:214). Zeithaml *et al.* (2002) define electronic service quality as "the extent to which a Web site facilitates efficient and effective ... delivery of ... services". Santos (2003:235) defines the concept of electronic service quality as "the consumers' overall evaluation and judgment of the excellence and quality of electronic service offerings in the virtual marketplace".

For the purposes of the present research, e-services are regarded as all services provided through the internet or through SARS's e-filing. E-mail is therefore currently still classified as part of the traditional services, because, with modern technology, a facsimile (hereafter "fax") is often also delivered in the recipient's e-mail inbox. Thus it is difficult to distinguish between these two service channels. Hence, e-mail is regarded as only one of the service channels of traditional services.

Santos (2003) specifies that service quality should increasingly be recognised as an important aspect of e-services. Yang, Jun and Peterson (2004) concur that service quality

for e-services has become recognised as an important factor in determining the success or failure of the electronic service environment. It has also been widely acknowledged that the electronic service environment may present its own unique challenges. Several authors, such as Parasuraman *et al.* (2005), Santos (2003), Zeithaml *et al.* (2002) and Zhu *et al.* (2002) have attempted to develop service quality models for e-services.

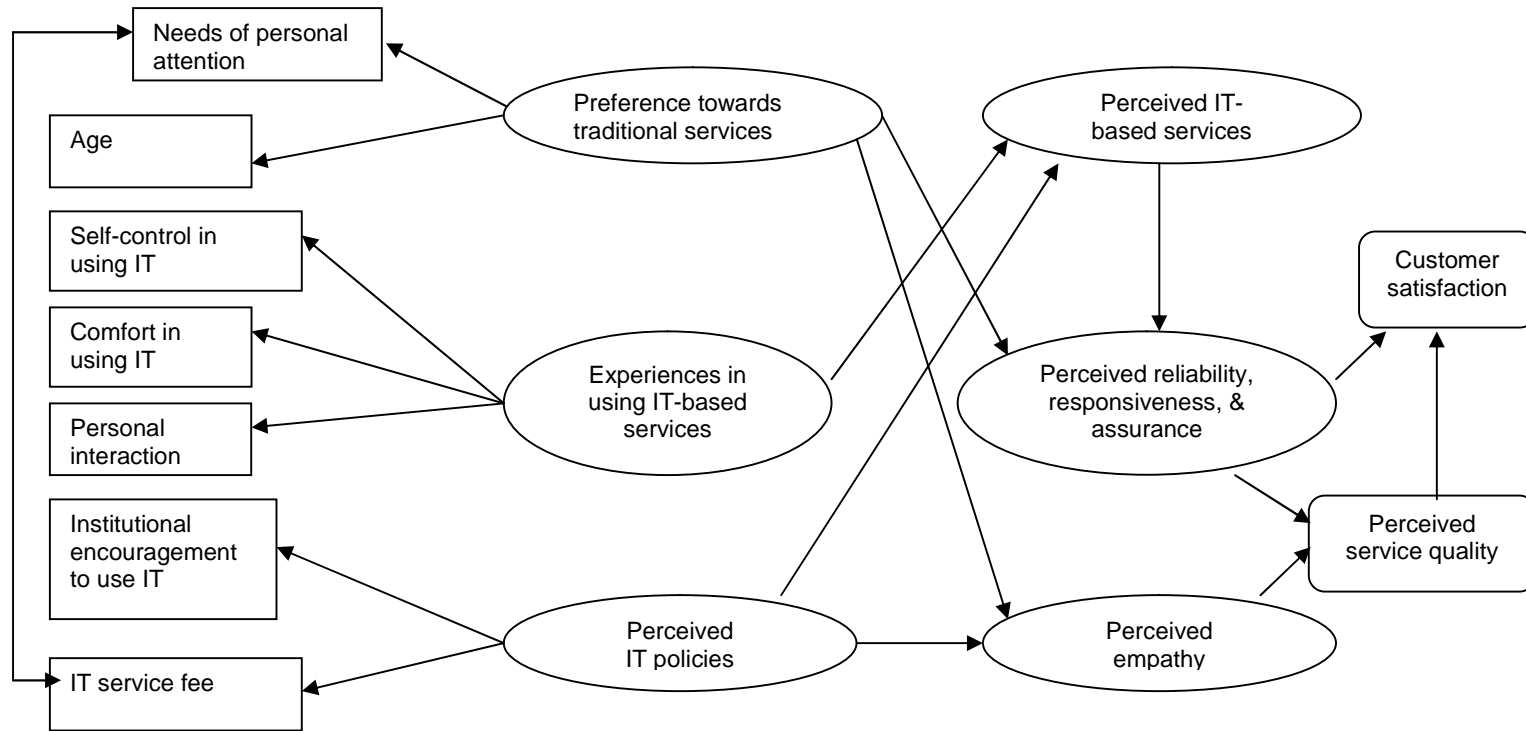
3.5.1 Zhu, Wymer and Chen's service quality model

Zhu *et al.* (2002:85) developed the model set out in Figure 3.13, which explains how electronic service quality affects service quality and customer satisfaction.

The empirical tests of the model suggest that perceived electronic service quality affects perceived overall service determinants, including reliability, responsiveness and assurance in SERVQUAL, and that it therefore indirectly affects perceived service quality and customer satisfaction. With regard to e-services, the tangible determinant in SERVQUAL does not have a significant influence on either service quality or customer satisfaction. The model further suggests that customer evaluations of e-services are affected by their experiences in using e-services and perceived electronic policies. For the purposes of the present research, electronic policies are regarded as the support and encouragement a customer receives, as well as the effect of the electronic service fee as perceived by the customer. Customers' preference for traditional services (including age and a need for personal attention) did not appear to have a direct effect on perceived electronic service quality. Results from the study by Zhu *et al.* (2002) identified the relevant criteria used in forming perceptions of electronic service quality as

- ease of use;
- the extent to which it saves time;
- convenience;
- the provision of accurate information;
- the ability to satisfy most of their needs; and
- privacy.

Figure 3.13: IT-based service quality model

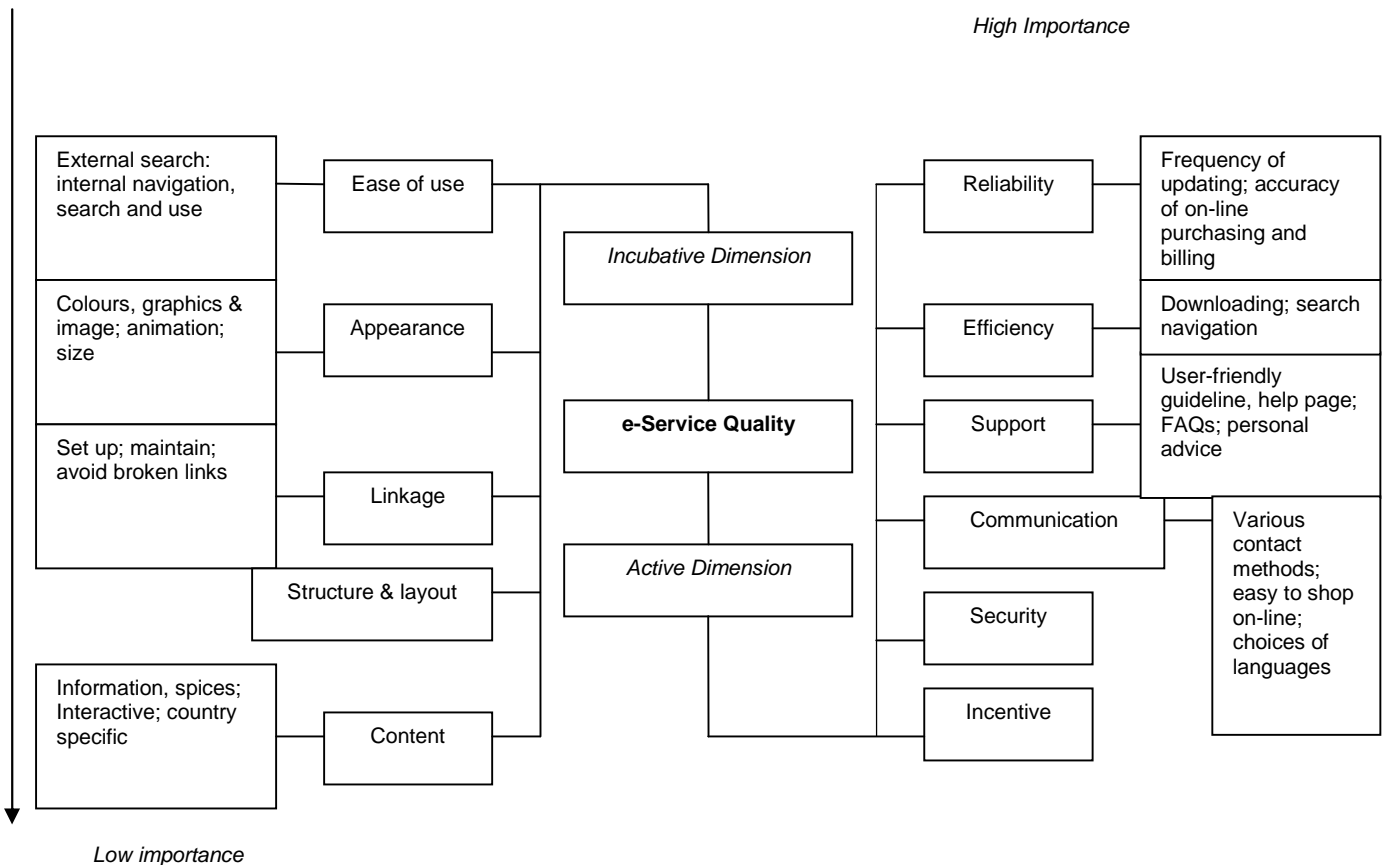


Source: Zhu *et al.* (2002:85)

3.5.2 Santos’s conceptual model of electronic service quality

Santos (2003) conducted a qualitative study on the basis of which she developed a conceptual model of electronic service quality (see Figure 3.14).

Figure 3.14: A conceptual model of electronic service quality



Source: Santos (2003:239)

Santos (2003) divided electronic service quality into an incubative and active dimension – before and after a website is launched – as a criterion for separating the dimensions. Santos (2003) found that both the active and incubative dimensions are equally important. The incubative and active dimension each consist of five or six related (and potentially) overlapping determinants, and the order of these determinants is listed according to their perceived importance. This model is in line with the traditional service quality concept of dimensions and determinants – a hierarchical approach as recommended by Brady and Cronin (2001) and confirmed by Kang and James (2004). The incubative dimension is

defined as “the proper design of a Web site, how technology is used to provide consumers with easy access, understanding and attractions of a website” (Santos 2003:238). The majority of the determinants could be developed before the website is launched, and they include

- ease of use;
- appearance (proper use of colour, graphics, images and animations);
- linkage;
- structure and layout; and
- content.

The active dimension is defined as “the good support, fast speed, and attentive maintenance that a Web site can provide to its customers” and it consists of

- reliability (accuracy and consistency, including frequent updating of the website and prompt reply to enquiries);
- efficiency (speed of downloading, search and navigation);
- support (technical help, user guidelines and personal advice);
- communications (language and medium);
- security (freedom from risk); and
- incentives (encouragement to use site) (Santos 2003:241).

Santos (2003:241) found that reliability is the most important determinant in the active dimension, and that achieving good electronic service quality in the active dimension is similar to achieving good customer service in the traditional services. This qualitative model has not, as yet, been empirically confirmed.

3.5.3 Electronic service determinants identified by Zeithaml, Parasuraman and Malhotra

Zeithaml *et al.* (2002:371) found that electronic service quality is not unidimensional, but multifaceted. It includes several relevant dimensions. They also divide e-services into core services and recovery services. The core services refer to the “normal” services, whereas the recovery services refer to non-routine or recovery service situations. It also appears that recovery service involves different dimensions from those in the core services, and that most of the traditional service issues are part of recovery service rather than of core service (Zeithaml *et al.* 2002:371). Technological readiness, a customer-specific construct,

was found to be related to perceptions of electronic service quality (Zeithaml *et al.* 2002:371).

Parasuraman *et al.* (2005) developed and tested a multiple-item scale (E-S-QUAL) for measuring core web-based electronic service quality. This scale consists of 22 items in four dimensions, which were labelled and defined as follows:

- **Efficiency** – the ease and speed of accessing and using the site;
- **Fulfilment** – the extent to which the site's promises about order delivery and item availability are fulfilled;
- **System availability** – the correct technical functioning of the site; and
- **Privacy** – the degree to which the site is safe and protects customer information.

A different scale, E-RecS-QUAL, was developed for electronic recovery services (Parasuraman *et al.* 2005:229). The E-RecS-QUAL scale consists of 11 items in three dimensions, namely

- **Responsiveness** – effective handling of problems and returns through the site;
- **Compensation** – the degree to which the site compensates customers for problems; and
- **Contact** – the availability of assistance through telephone or online representatives.

3.6 SUMMARY: SERVICE QUALITY

It is widely agreed that service quality depends on two variables: expected (desired) service and perceived service. Perceived service quality is the outcome of an evaluation process where the expected service is compared with the service received. Parasuraman *et al.* (1985) identified four “gaps” within the organisation, namely the consumer expectation and management perception gap, the management perception and service quality specification gap, the service quality specifications and service delivery gap and the service delivery and external communications gap. Speller and Ghobadian (1993b) identified two additional internal gaps that might be relevant to the public sector, that is, the internal communication gap (the lack of empowerment and training of staff in delivering the service) and the contact staff perceptions gap (the failure to listen to contact staff about what the customers think of the service that has been delivered). The perceived service quality gap is to be measured by the service quality model as proposed in the present research and it is a function of all the other internal quality gaps.

Service quality was defined mainly by means of service quality models. Two schools of thought emerged in the definition of service quality, namely the Scandinavian and American schools. In comparing service quality models, it was found that several of the models are equally suitable for different service settings, both in the private and public sectors.

The Scandinavian school defined service quality using categorical terms and divided the construct into different dimensions. Originally Grönroos (1984) identified three dimensions: the technical dimension (“what”), the functional dimension (“how”) and the corporate image.

Gummesson (1992) listed software as a separate dimension, but for Grönroos (1984) software forms part of the technical, or even the functional dimension, depending on whether the software assists in performing the service (the technical dimension), or whether the software assists in delivering the service (the functional dimension). The importance of the use of software should not be ignored in defining or measuring service quality, but the user of a service who evaluates the technical dimension may not always be familiar with the methods used in deriving the end product of a service, whether these methods are manual or whether they involve the use of software applied in performing such a service – the result of the service is all that is visible to the user. With regard to the functional dimension, the importance of software should be acknowledged in measuring this dimension, particularly when electronic service quality is measured.

Rust and Olivier (1994) split the functional dimension into the service delivery (the sequence of events) and the service environment (the physical ambience of the service setting or tangibles). Brady and Cronin (2001) found empirical evidence in support of Rust and Olivier’s (1994) service quality dimensions. Kang and James (2004) found empirical evidence for Grönroos’s (1984, 1988) service quality dimensions. Philip and Hazlett (1997) split the functional dimension into the core and peripheral attributes, where the peripheral attributes are the extras designed to make the whole experience a delight for the consumer.

Gaster and Squires (2003) defined service quality within the public sector, and added a democratic dimension to Rust and Olivier’s (1994) three-dimensional model.

The American school defined service quality using more descriptive terms and divided the construct into different determinants (Parasuraman *et al.* 1985, 1986, 1988; Parasuraman *et al.* 1991a). The determinants identified by Parasuraman *et al.* (1985, 1986, 1988, 1991a) are tangibility, reliability, responsiveness, assurance and empathy. Reliability emerged as the most important and tangibility as the least important of these determinants. Haywood-Farmer (1988) found that the relevance of the various determinants differs, depending on the degree of service contact, interaction and labour intensity. Physical facilities (tangibles) are far more important with services that are low in labour intensity and service contact. Where the labour intensity (thus the service contact) increases, it is more important for the staff to behave appropriately and tangibility thus becomes less important.

A more recent development is the hierarchical approach to service quality. This approach integrates the previous two schools of thought in that it acknowledges that these schools do not only define service quality differently, but that these two schools in fact define different levels of the service quality construct. Grönroos (1988) first classified six service determinants into his three-dimensional service quality model. Gummesson (1992) then listed service quality determinants for each of his service quality dimensions. He concluded that one determinant is valid for more than one dimension, but that the definition of a specific determinant might differ, depending on which dimension it is defined for. Brady and Cronin (2001) found both qualitative and empirical evidence that service quality is a multidimensional, hierarchical construct, as customers form their service quality perceptions on the basis of an evaluation of performance at multiple levels, and ultimately combine these evaluations to arrive at the overall service quality perception. Kang and James (2004) empirically tested Grönroos's (1984, 1988) service quality model and they agreed with Gummesson (1992) that all the SERVQUAL determinants are represented by a second-order latent (that is functional) quality. They therefore also acknowledge the hierarchical approach.

It was also found that the quality dimensions are interrelated. Grönroos (1984) argues that a bare minimum technical quality is always required, but that functional quality is the most important. He claimed that it could even compensate for temporary problems with the technical quality. According to Klaus (1985), congruence (initial social interaction) is the first condition of good service quality. Technical quality (which he refers to as task

achievement) is the second condition to be met for achieving service quality. The final level is the psychological aspects (functional quality, excluding initial social interaction).

The service quality model (SERVQUAL) of Parasuraman *et al.* (1985, 1986, 1988) and Parasuraman *et al.* (1991a) suggests that when they evaluate service quality consumers rely on experience properties – that is, all the determinants (excluding tangibles) that can be classified as part of the functional quality. The SERVQUAL model is based on the assumption that reliability (the most important determinant they identified) depends largely on human performance.

Philip and Stewart (1999) found that the technical quality (referred to as the pivotal attribute or output of the service) is as important (or even more important) than the functional quality of the service. Kang and James (2004) are of the opinion that the importance of functional quality varies depending on the type of service. It was also found that the SERVQUAL dimensions do not measure the technical quality of a service, but only its functional quality (Kang & James 2004; Philip & Stewart 1999). Philip and Stewart (1999) found that both the technical and the functional quality should be measured to be able to fully capture the service quality construct.

Services can also be divided into traditional services and e-services. The difference between traditional and e-services refers only to the method of service delivery and not to the service itself. This therefore clearly indicates that electronic service quality relates only to functional quality. Zhu *et al.* (2002) found that, for e-services, the tangibility determinant does not have a significant effect on overall service quality, and that customer evaluations of electronic service quality are affected by their experiences in using e-services and perceived electronic policies. Santos (2003) developed an electronic service quality model that was never empirically tested. The model may however be relevant in that it acknowledges that electronic service quality is influenced by determinants that differ from traditional service quality. Zeithaml *et al.* (2002) divided e-services into core services (normal services) and recovery services (non-routine services). They developed and tested two multiple item scales (E-S-QUAL for core services and E-RecS-QUAL for recovery services). They also found the determinants affecting these two types of services to be different.

3.7 CONCLUSION

For the purposes of the present research, it is acknowledged that service quality is a multidimensional, hierarchical construct, which means that customers form their service quality perceptions on the basis of an evaluation of performance at multiple levels. The first level is the evaluation of various determinants, the result of which can be combined into the evaluation of different service dimensions. Although the three-dimensional model developed by Rust and Olivier (1994) is the only model that is already defined from the perspective of the public sector, this model is merely a refinement of Grönroos's (1984, 1988) model. The main difference between these two models is that Rust and Olivier's (1994) model splits the functional dimension into the service environment (tangibles) and service interaction. As tangibility is regarded as the least important determinant, and as it is not important at all for electronic service quality, its distinctness as a separate dimension may only complicate the service quality model unnecessarily. In comparing service quality models, it was found that several of the models are equally suitable for different service settings, both in the private and public sectors. Hence, Grönroos's (1984, 1988) model was used in the present research as the basis for defining the dimensions used in developing the service quality model.

The role of the corporate image within the service quality model is not yet clear and should receive further attention. The additional dimension added by Gaster and Squires (2003), the democratic dimension, is already partly incorporated in the user-based definition of quality as accepted for the present research and would thus not form a separate dimension of service quality as such.

Rust *et al.* (1995) presented a return-on-quality model that focuses on the measurement of service quality processes with regard to different business processes. The conclusions based on Haywood-Farmer's (1988) service classification model also imply that it may be important for the service quality model proposed in the present research to rate the services rendered with regard to individual departments within SARS (which are different business processes) to ensure that any results from the survey would be actionable and can be used to improve the design of the processes.

The hierarchical approach was therefore followed in the present research for each separate department within SARS (each business process). Thus each service was

defined with regard to the relevant quality dimension. The relevant determinants for each of the dimensions is identified and defined for each separate department and service delivery modality within SARS.

Dabholkar *et al.* (2000) argue that consumers evaluate different components (determinants) of a service and that these different components should be measured for diagnostic purposes. However, they found that in addition to measuring the different components, an additional global judgement is also required and should be added to the measuring instrument. An additional global judgement was therefore also included in the model proposed in the present research.

Although there is no meaningful agreement as yet on the basic fundamentals of the service quality construct, understanding what is meant by service quality only partly solves the problem, as the service attributes, determinants and dimensions relevant to a service quality model for the tax agency environment, more specifically SARS, still needs to be established. In the next chapter the research methodology used in the present research to develop the proposed service quality model for SARS's services as perceived by tax practitioners is described.