



**tourism**

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Tourism  
REPUBLIC OF SOUTH AFRICA

**CUSTOMER SATISFACTION INDEX FOR THE  
ACCOMMODATION SUB-SECTOR IN SOUTH  
AFRICA**

**FINAL REPORT**

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## **DEFINITIONS**

American Customer Satisfaction Index: ACSI

Analysis of Moment Structures: AMOS

Analysis of Variance: ANOVA

European Customer Satisfaction Index: ECSI

Geographic Study Area: GSA

Kruger National Park: KNP

National Department of Tourism: NDT

South African Accommodation Satisfaction Index: SAASI

Statistical Package for Social Science: SPSS

Structural equation modelling: SEM

Swedish Customer Satisfaction Barometer: SCSB

Swiss Index of Customer Satisfaction: SICS

Tourism Grading Council of South Africa: TGSA

# **1: Background and Context of the Study**

## **1.1. Introduction**

Accommodation is one of the largest components of the tourism sector (Deng, Yeh, and Sung 2013). The increasing competition in the accommodation sector has meant that establishments have started focusing a lot on improving customer satisfaction with a view to retain existing and attract new customers. Consequently, a number of studies have been carried out to assess customer satisfaction and its determinants in several sectors, including accommodation. Several of such research investigates the relationship between various service quality dimensions and overall customer satisfaction. For example, The American Customer Satisfaction Index (ACSI), established in 1994 and inspired by the Swedish Customer Satisfaction Barometer (SCSB) (Fornell et al., 1996), contains sets of causal relationship between the antecedents (e.g. customer expectations, perceived service quality and perceived value) and the consequences (e.g. customer complaints and customer loyalty) of customer satisfaction. Such studies are based on the premise that service quality influences customer satisfaction which in turn influences customer behavioural intention (i.e. their intention to return to the same accommodation again or complaints behaviour) (Kang, Okamoto, and Donovan, 2004). The latter empirically reported that increased customer satisfaction in the accommodation sector led to positive behavioural intention, prevented customer defection, and lowered marketing costs of the organisations. There is also considerable evidence to suggest that service quality and perceive value with a product or service are associated with customer satisfaction (Brady, Robertson, and Cronin, 2001).

## **1.2. Rationale for the Study**

In view of the importance of service quality and customer satisfaction, accommodation managers should continually provide and improve customization services to meet customer requirements and achieve competitive advantage. These customization services include more amenities, comfortable rooms, fast check-in/check-out, courtesy, and high-speed Internet service. Customization service describes the efforts of a hotel to provide services that match changing customer needs and lifestyles (Andreassen and Lindestad, 1998; Aydin and Ozer, 2005; Chi and Qu, 2008; Deng and Sung, 2013; Ryu, Han, and Kim, 2008;; Park, Robertson, and Wu, 2005; Schlosser, 1998).

Prompted by the importance of understanding customer satisfaction and service quality, the National Department of Tourism (NDT) in collaboration with the University of Johannesburg embarked on a series of research studies to determine the levels of customer satisfaction in various sub-sectors of the tourism industry. The first study, conducted in 2012/13 financial year focused on customer satisfaction at accommodation facilities. The 2012/13 study investigated the customer satisfaction of domestic tourists at different graded accommodation establishments in South Africa. The research was conducted in an attempt to identify the most important accommodation service level indicators for domestic tourists. These indicators were investigated during the three phases of the value chain – (i.e. prior to the visit, during the visit and after the visit). In the 2013/14 financial year, the research was extended to tourism attractions with accommodation in their premises. The study aimed to assess customer satisfaction with the services, facilities and experiences offered by

tourism attractions and perceptions of managers and employees at these attractions of what service quality they are delivering. This study was completed in the financial year 2014/15. The findings showed links between tourist expectation and satisfaction based on the influence of variables (e.g. accuracy in billing, physical facilities, appearance of service personnel etc.) experienced along the length of a tourism satisfaction value chain. The findings further show the importance of the role of employees at the attraction in creating value for tourist satisfaction. The ten (10) SERVQUAL determinants (i.e. access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles and understanding/knowing the customer) were found to be integral in the process of moving from expectation to experience and satisfaction.

### **1.3. Problem Statement**

Although the two studies carried out by NDT provide valuable insights to accommodation managers and NDT, they did not identify gaps in terms of expectations from tourists before the visits and their experiences during their stay. Furthermore, the studies did not explicitly measure service quality in the accommodation sector which has specific service quality attributes influencing customer satisfaction. Regardless of the sector, different service quality dimensions are likely to be important determinants of overall satisfaction (Deng et al., 2013). It is therefore important to identify such service quality dimensions relevant to the accommodation sector which has specific characteristics not present in other service sectors. However, the two previous studies conducted by NDT did not identify such specific service quality dimensions influencing customer satisfaction which is the

purpose of the present research. Furthermore, although a number of accommodation establishments conduct regular guest satisfaction surveys using guest comment cards, such a method has been found to have several limitations related to quality of the sample, design of the guest comment cards, and data collection and analysis (Gilbert and Horsnell, 1998). Thus, the present study also addresses such methodological and research design issues. The research, therefore, is expected to make some important theoretical and practical contributions to researchers and accommodation managers.

#### **1.4. Purpose of the Study**

The present exploratory study is an extension of the two previous research conducted by NDT. The study also builds upon previous indices of customer satisfaction such as SCSB, ACSI, European Customer Satisfaction Index (ECSI), and the Swiss Index of Customer Satisfaction (SICS), but also extends such indices by incorporating new evidences from and recent theoretical developments in literature on customer satisfaction (e.g. Deng and Sung, 2013; Hao, Yu, Law, and Fong, 2015; Ren, Zhang, Ye, 2015) to develop a SAASI. The latter studies are important to ensure that new dimensions of service quality, relevant to the accommodation sector are included in the present study to ensure a comprehensive and accurate SAASI. This index was developed using the method and formula used by Fornell et al. (1996) to develop the ACSI.

## **1.5. Study Objectives**

More specifically, the study has the following objectives:

- 1) Explore existing indices used by other countries to measure customer service satisfaction in a tourism sector, with particular reference to accommodation;
- 2) To identify service quality gaps (expectation versus actual) in the South African accommodation sector;
- 3) To investigate the determinants of service quality and customer satisfaction in the South African accommodation sector;
- 4) To develop and test a South African Accommodation Satisfaction Index (SAASI);

## **2: Theoretical Background and Literature Review**

Customer satisfaction is not a novel concept and has been conceptualised a few decades ago. Among the first definition of customer satisfaction is that provided by Oliver (1980) who stated that customer satisfaction is a measure of the discrepancy between the customer's expectation before purchasing the service/product and his/evaluation of the service/product after consumption. Satisfaction of customers' is thus determined by a cognitive and affective mechanism which involve the comparison of the performance of a service to a certain standard (Oliver, 1997). This standard is based on the individual expectation of each customer (Oliver, 2000). When the performance of the service provider is above what was expected then positive disconfirmation happens which therefore results in customer satisfaction



(Oliver, 2000). Thus, it is the extent to which a product or service fails to meet, meets, or surpasses customers' expectations.

A major debate surrounding the conceptualization of customer satisfaction in the services industry and which in fact still persists is whether customer satisfaction should be regarded as being transaction-specific concept or a cumulative concept (Johnson et al., 2001). Johnson et al. (2001) makes a strong case for the adoption of the cumulative conceptualization and operationalization of customer satisfaction and a review of the various studies on customer satisfaction index clearly demonstrates that the vast majority of authors conquer with this viewpoint. The major advantage of the transaction-specific conceptualization of customer satisfaction is that they provide a richer evaluation of the service by considering the various services attributes (Oliver, 1997). Since customer satisfaction models also include the service quality construct which does take into account the evaluation of specific attributes it is therefore redundant to measure satisfaction using the transaction-specific approach. It is worth noting that the main customer satisfaction indices, namely, the SCSI (Fornell, 1992), the ASCI (Fornell et al., 1996) and the ESCI (Eklof, 2000) all adopt the cumulative conceptualisation of customer satisfaction. The operational definition used in all three customer satisfaction indices follows the one of Fornell (1992). According to Fornell (1992, p.11) customer satisfaction "is defined as a function of three indicators..." The three indicators referred which the author referred to are: general satisfaction, confirmation of expectations and the distance from the customers' hypothetical ideal product (Fornell, 1992). Similarly in the seminal work of

Fornell *et al.* (1996) on the American Customer Satisfaction Index, the same three indicators were used to measure customer satisfaction in a reflective model.

## **2.1 Customer Satisfaction Indices**

In view of identifying the best method for constructing the Customer Satisfaction Index (CSI), an extensive review of the existing academic literature on Customer Satisfaction Index was carried out. This comprised of an in-depth study of the Swedish Customer Satisfaction Barometer (SCSB), the American Customer Satisfaction Index (ACSI), the European Customer Satisfaction Index (ECSI) and some other recent customer satisfaction index models.

### **2.1.1 Swedish Customer Satisfaction Barometer**

The first Customer Satisfaction Index developed was the Swedish Customer Satisfaction Barometer (SCSB, see Figure 1) in 1989 (Fornell, 1992). The SCSB allows for the measurement of customer satisfaction both at company and at industry level (Fornell *et al.*, 1996). The SCSB model contains two main antecedents of customer satisfaction which are perceived performance (value) and customer expectations. It also contains two consequences of customer satisfaction which are customer complaints and customer loyalty. The SCSB model therefore contains five latent variables and six hypothesised relationships between them. Customer satisfaction is expected to negatively influence customer complaint, that is, the more satisfied customers are the less likely they are to complain.



Figure 1: Swedish Customer Satisfaction Index (SCSI), Source: Fornell (1992)

Customer satisfaction is also expected to positively influence customer loyalty, that is, the more satisfied customers are the more loyal they would be. Customer satisfaction itself predicted to be positively influenced by both perceived performance (value) and customer expectations. Finally the model also includes a link between customer expectations and perceived performance as well as a link between customer complaints and customer loyalty. The methodology used for the empirical testing of the SCSI model consisted of a survey among customers of 100 companies across 30 different industries. Around 25, 000 customers responded to the questionnaires (Fornell, 1992). The service/product evaluation questions required customers to rate the offering of the firms with respect to a specific brand.

## 2.1.2 The American Customer Satisfaction Index (ACSI)

Following the success of the Swedish Customer Satisfaction Barometer an adapted version of Customer Satisfaction Index Model was developed in America and was named the American Customer Satisfaction Index Model (ACSI, Hsu, 2008, see Figure 2). Like its predecessor, its primary goal is to provide a tool for assessing and improving performance at organisational level, industry level, and national level (Fornell et al., 1996). This is achieved by enabling the measurement of the level of customer satisfaction, together with its antecedents and consequences (Johnson et al., 2001). The ACSI model includes six constructs (latent variables).

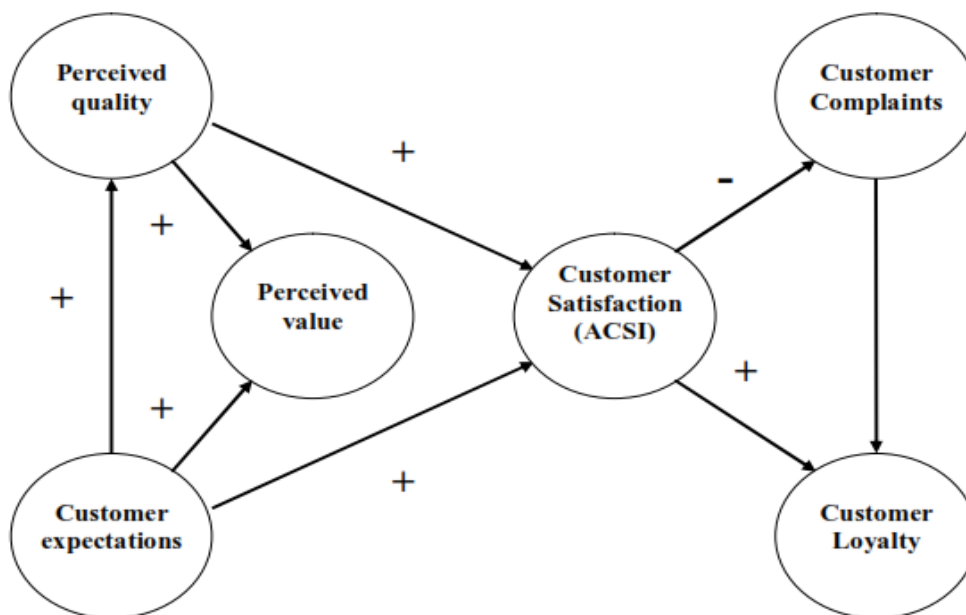


Figure 2. The ACSI: Source: Anderson et al. (1994)

It contains three antecedents of customer satisfaction (perceived value, perceived quality, customer expectations) and two consequences of customer satisfaction (customer complaints and customer loyalty). This is shown graphically in the figure below. There are two primary differences between the ACSI model and the SCSB

model. The first one is that, in the ACSI model the perceived quality construct is added and is clearly discriminated in relation to the perceived value construct (Johnson et al., 2001). Secondly, new measures were included for the customer expectation construct (Johnson et al., 2001). Like all the other customer satisfaction index models, the ACSI model is founded on two theories, namely the quality, satisfaction and performance (QSP) paradigm and the exit voice theory (Hsu, 2008).

Therefore the ACSI model contains eight hypothesised relationships in total. First, the variable “customer expectations” is hypothesised to positively influence “perceived quality”. Second, the perceived quality construct is hypothesized to have a positive effect on perceived value. Third, “customer expectations” construct is hypothesised to positively influence “perceived value”. Fourth, “perceived quality” is hypothesized to have a positive effect on “customer satisfaction”. Fifth, “customer expectations” is hypothesised to have a positive effect on “customer satisfaction”. The sixth hypothesis stipulates that customer satisfaction has a negative influence on customer complaints. Seven, “customer satisfaction” is also hypothesised to have a positive influence on “customer loyalty”. Finally, “customer complaints” is hypothesised to have a positive influence on “customer loyalty”.

The overall methodology adopted was quite similar to that of the Swedish Customer Satisfaction Index Model (Johnson et al., 2001). The survey methodology was employed for data collection. It comprised of customers from 200 different organisations from both the manufacturing and services sector. The organisations

chosen covered seven sectors of the US economy namely: manufacturing/nondurables, manufacturing/durables, transportation/communication/ utilities, retail, finance/insurance, other services, and public administration/ government.

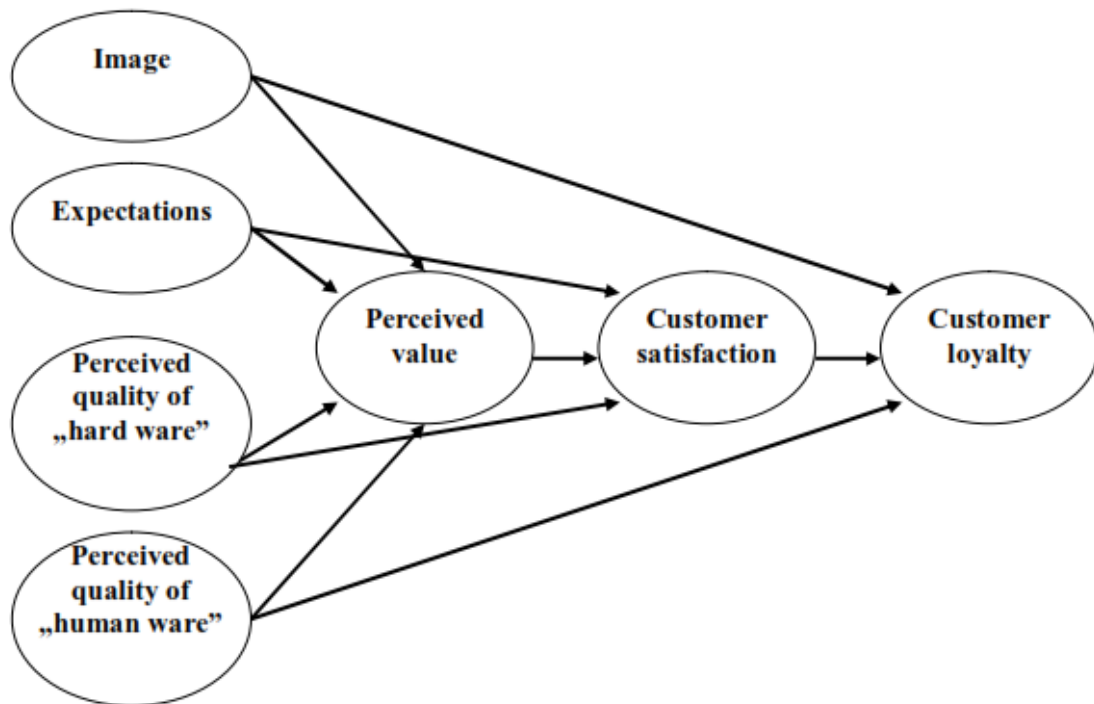
The units of analysis were the customers of those firms and accordingly around 250 customers were selected at random from each of the organisations. The six latent variables in the ACSI model included 15 indicators (observable variables) in total, which were thus used to operationalise the constructs. The indicators for perceived quality, customer expectations, perceived value and customer satisfaction which took the form of statements in the questionnaire were all rated using a 5-point Likert scale. The perceived quality construct was operationalised using the definition of quality provided by Deming (1981) and Juran and Gryna (1988). It focused on two dimensions of quality, namely the degree to which a service or product meets customer requirements and the extent to which the requirements delivered are reliable. The perceived quality scale thus included three statements, with two items related to the later components and an additional item about overall quality. Customer expectations in contrast to the SCSB also included the same three items as perceived quality, that is, overall expectations, expected customisation and expected reliability. Partial least Squares (PLS) method was used to test the ACSI model. The model was estimated for the seven economy sectors separately by Fornell et al. (1996). The customer satisfaction index construct was successfully tested for convergent and discriminant validity Fornell et al. (1996).

### **2.1.3. The European Customer Satisfaction Index (ECSI)**

The proven usefulness of the use of national customer satisfaction index models in Sweden and America led to the creation of another major customer satisfaction index model, the European Customer Satisfaction Index (ECSI) model (Figure 3). The aim of the ECSI was thus to provide European countries with a standard diagnostic instruments that would allow them to measure customer satisfaction, its antecedents and consequences. Thus, allowing the benchmark of customer satisfaction between countries within the European continent and between Europe and America. As noted by Eklof (2000) the ECSI model is founded on the SCSi model and the ACSI model. The inter-relationships specified between the customer expectations, perceived value, perceived quality, customer satisfaction and customer loyalty contained in the ECSI model are identical to that of the ACSI model.

However, there are some changes that have been made which make the ECSI model dissimilar to the ACSI model (Eklof, 2000). A major difference was the addition of the image construct which was hypothesised to influence perceived value, customer satisfaction and loyalty (Johnson et al., 2001). Moreover, the customer complaint construct was omitted (Johnson et al., 2001). Finally the perceived quality construct was broken into two dimensions, hardware quality which relates to the performance of the product/service attributes and human ware which is about the quality of service offered to the customer (Juhl et al., 2002). Therefore the ECSI model includes seven latent constructs with a total of 10 hypothesised relationships.

Figure 3. The European Satisfaction Index: Source: Jhul et al., (2002)



The survey conducted to test the ECSI model took place in 1999 and 2000. The sample included customers from twelve European countries and covered various industries such as telecommunication, banking and supermarkets. Around 250 customers responded to the survey questionnaire from each companies and a total of 55, 000 filled in questionnaires were received (Juhl et al., 2002). In line with the ACSI model all the latent variables were measured using a set of indicators (latent variables). A 10-point Likert scale rating was used. Among the changes made is that the measurement scale for customer loyalty is different (Johnson et al., 2001). The three measures used in the ECSI model are extent to which customers are likely to stay with the same organization, probability of recommending the company or brand, and whether the quantity frequency of purchase will rise in future.



## **2.2. Antecedents of Customer Satisfaction**

This section aims at providing a description of the antecedents of customer satisfaction applicable to accommodation services based on the extant literature. It includes relevant dimensions of service quality, perceived value and image. The most widely used instrument for measuring perceived quality in the service industry is the SERVQUAL scale developed by Parasuraman *et al.* (1988). SERVQUAL is a multi-dimensional scale consisting of five service quality dimensions: reliability, assurance, tangible, empathy and responsiveness. Alongside the SERVQUAL scale, a performance-only measure of service quality has been proposed by Cronin and Taylor (1992), known as the SERVPERF scale. A number of studies have sought to adapt the SERVQUAL scale or its performance-only equivalent SERVPERF to the accommodation services. However subsequent studies have found that the generic five dimensional structure of service quality did not include all the essential attributes of accommodation services. ACSI has also been criticized because several studies have found that the construct of customer expectations does not significantly influence customer satisfaction (Johnson *et al.*, 2001; Martensen *et al.*, 2001). The extant literature is rich with respect to the identification of relevant service quality attributes and dimensions in the domain of accommodation services. The following is a description of the main dimensions identified for the present study.

### **2.2.1 Attitude and Behaviour of Employees**

Attitudes of employees have been found to be an important dimension of service quality (Cronin *et al.*, 2001). According to Ajzen (1988, p.4) an attitude can be defined

as “an individual’s disposition to respond favourably or unfavourably to an object, person, institution, or event”. Fishbein and Ajzen (1975) opined that someone's attitude depends on his/her behavioural beliefs and assessment of results. Employee attitude has also been considered as a trait characteristic by Czepiel et al. (1985) - for instance degree of sociability, tenderness, graciousness, demeanour, distress, honesty, care and so on. Behavior of employees has been shown to be determined by employees' attitude towards their job (Williams, 2005). Employees’ behaviour has also been found have a major influence on customer satisfaction (Bitner et al. 1990; Parasuraman et al. 1988). Consequently, as highlighted by Wong and Keung (2000), accommodation service providers have much to gain by understanding customers' evaluation of employees' behaviours.

### **2.2.2. Expertise**

The second service quality dimension and antecedent of customer satisfaction is expertise. Indeed expertise of employees was found to be an important determinant of customer satisfaction (Crosby et al., 1990). More specifically, studies have pointed out that the quality of the interaction with the service provider is largely determined by the perception of expertise (Brady and Cronin, 2001; Ko and Pastore, 2005). Expertise has been described as the extent to which the customer-employee interaction is influenced by the skills and knowledge of employees in accomplishing specific tasks (Czepiel et al., 1985). Kim and Cha (2002) identified four criteria that determine the level of expertise present in the context of accommodation services. The first one is that the employee must have had some service oriented professional training and education. Second, the employee should possess and show appropriate

knowledge with respect to the service provider's products and services. Third, the employee demonstrates concern in developing his/her own personal capabilities to offer a higher level of service. Finally, the employee should simply be seen as being competent in delivering the services to customers. Expertise of employees is also judged by their ability to solve problems faced by customers. A number of studies have demonstrated that the problem solving skills of employees also contribute in the evaluation of the quality of interaction with the service provider (Dabholkar et al., 1996; Cronin et al, 2001; Ko and Pastore, 2005; Caro and García, 2008).

### **2.2.3 Customer Interaction**

The third service quality dimension identified as being an important antecedent of customer satisfaction in the accommodation sector is customer interaction. Lehtinen and Lehtinen (1985) suggested that the interaction of customers with other customers was an important element of service quality. Customer interaction can be defined as “a direct or indirect, face-to-face or technology mediated, active or passive interaction between two or more customers occurring inside or outside the service setting, which may or may not involve verbal communication” (Venkat, 2008, p. 2). According to Ko and Pastore (2005) customer interaction is the subjective evaluation of customers with regards to the attitudes and behaviours of other customers during the service delivery process. Various studies supported the view that customer interaction is a determinant of customers' service quality evaluation (Lovelock, 1991; Brady and Cronin, 2001, Ko and Pastore, 2005).

### **2.2.4 Sociability**

The fourth accommodation service quality dimension is sociability. Sociability has been conceptualized as the positive social experiences that were gained from the sense fulfillment of being with other people who also participated in the same activity together and shared their enjoyment (Milne and McDonald, 1999). Baldacchino (1995) therefore advocates that family members, friends and other acquaintances could be viewed as significant social factors accommodation residents. It is important to note that the social experience which is more of an after-consumption outcome should be differentiated with customer interaction that occurs during service delivery (Ko and Pastore, 2005).

### **2.2.5 Waiting Time**

Waiting time is the fifth service quality dimension identified. Waiting time is the amount of time that customers need to wait for a service (Hornik, 1982). When customers enter a service system, they have, to some extent, expectations regarding an acceptable waiting time that contributed to satisfaction (Taylor, 1994). In the service industry, waiting for service has generally been a frustrating experience for many customers (McDougall and Levesque, 1999). Several researchers suggest that longer waiting periods result in customers' negative perceptions of service quality (Taylor, 1994). Thus, Katz et al. (1991) presented that speed of service has increasingly become a highly important service attribute. Houston, Bettencourt and Wenger (1998) incorporated waiting time into their analysis of service encounter quality, and found that waiting time was an important predictor of outcome quality.

## **2.2.6 Accommodation Infrastructure**

The sixth dimension of service quality identified is accommodation infrastructure. This dimension includes the overall physical environment of the service provider, such as décor, design, cleanliness and ambience of the accommodation. Several researchers maintained that interior décor was important in customer selection of hotels (Wu and Weber, 2005; Lockyer, 2002). Together with decor is the design of the infrastructures. Bitner (1992) and Baker (1987) showed that design indeed existed at the forefront of customer awareness. Veronique (1997) and Bitner (1992) demonstrated that design has a comparatively greater potential for producing positive customer perceptions of service quality of an organization. Ambience is another aspect of accommodation infrastructure that needs to be considered. Ambience may include attributes such as lighting, music, noise, temperature, signage, and wall colour (Bonn and Joseph-Mathews, 2007). Based on the services marketing literature, Heide et al. (2007) found that ambience had an association with customers and was seen as a tool for changing customers' attitudes and behaviours. In order to increase the level of service quality, hospitality managers attempted to improve the ambience of an organization (Heide et al., 2007). Evaluation of accommodation infrastructure also includes cleanliness. Many hotel studies indicated that cleanliness was a highly important factor in customers' selection of accommodation (Ryan and Qu, 2007; Nash, Thyne and Davies, 2006; Lockyer, 2002, Callan, 1996; Weaver and Oh, 1993). Some studies proposed that cleanliness was a factor in influencing whether customers returned to a hotel and thus the level of repeat business (Lockyer, 2005; Weaver and Oh, 1993). Taninecz (1990) reported that room cleanliness, particularly,

was one of the most important attributes for business customers in their hotel selection. Weaver and McCleary (1991) indicated that over 90 percent of hotel business customers ranked cleanliness as the most important aspect when selecting hotels for their accommodation.

Another important component of accommodation infrastructure is safety. In general, safety considerations involved protecting people, but security factors embraced protecting the hotel property and customers' possessions, in addition to ensuring employees' and customers' individual safety (Enz and Taylor, 2002). Enz and Taylor (2002) illustrated that security features included electronic locks and security cameras whereas safety facilities included items such as sprinklers and smoke detectors. McGoey (2008) noted that security and safety have become pivotal concerns among travellers throughout the world.

### **2.2.7 Perceived Value**

Perceived value has been identified as a major determinant of customer satisfaction (Anderson et al., 1994; Fornell et al. 1996; Patterson and Spreng, 1997; Cronin et al., 2000). Zeithaml (1998, p.14) defined perceived value as "the customer's overall assessment of the utility of a product based on perceptions of what is received and what is given". Perceived value can thus be viewed as the perceived utility or worth resulting from the trade-off of "get" versus "give-up." Parasuraman (1997) identified perceived value as one of the most important measures for an organization seeking to gain a competitive edge. Accordingly, perceived value has been identified as having an important role in increasing the competitiveness of the service

organization. A seminal study on the topic is that of McDougall and Levesque (2000). The study was conducted across four different service sectors, namely, dental services, auto service, hairstylist and restaurant and it concluded that perceived value was one of the main explanatory variables of customer satisfaction. The same conclusion was reached in a study focusing on the hotel services (Chen and Chen, 2010).

### **2.2.8 Image**

Barich and Kotler (1991) described image as the general idea retained in the minds of the public with regards to a particular organisation. Similarly, Dowling (1993, p.104) stated that the concept of image was “the total impression an entity makes on the minds of people”. Several empirical studies conducted in various service contexts found a significant positive effect of image on customer satisfaction (Andreassen and Lindestad, 1998; Kristensen et al., 1999; Bloemer and Ruyter, 1998; Kandampully and Suhartanto, 2000). For instance, one seminal research conducted on the topic was that Andreassen and Lindestad (1998) which investigated into the relationship between image and satisfaction in services of varying degree of expertise. A more recent study by Ryu et al. (2008) also found a direct positive effect of image on customer satisfaction in the hospitality sector.

### **2.2.9 Consumption Emotions**

Consumption emotions is defined as the subjective feeling states when buying or using a product. Such a feeling represents the actual perceptions and feeling of a customer vis-a-vis a product. Since emotions differ in various contexts and are

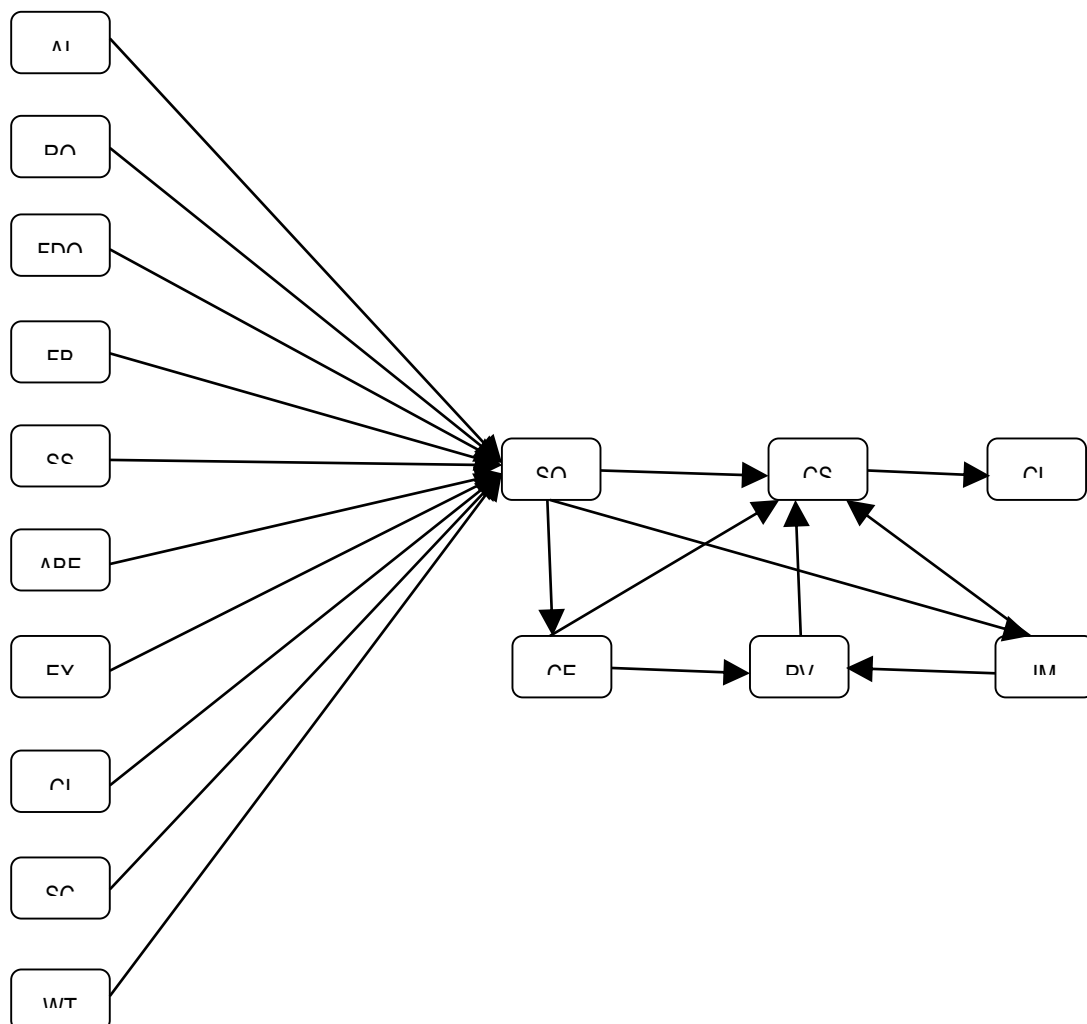
usually broad (Hosany and Gilbert, 2010). Scholars use the term consumption emotion as it is related to emotions felt as a result of products or services consumed and the consequences can be of positive or negative nature (Richins 1997). Consumption emotions can be felt as a mixture of several consumption emotions simultaneously and can be studied on its own as an isolated format or with multiple variables such as attitudes, loyalty (Ruth, Brunel and Otnes 2002) and satisfaction. Strong interactions between employees and guests in accommodation establishments influence customer emotions (Mattila and Enz, 2002). A number of studies found consumption emotions to influence customer satisfaction (e.g. Jung and Yoon, 2011; Han and Back, 2006, 2008).

### **3. The Proposed Model of the Study**

The proposed model of the study is presented in Figure 4 below. Its development has involved several stages to ensure a model which is theoretically sound and rigorous and up-to-date. An in-depth literature review on the various customer satisfaction indexes has been carried out. Such indexes include the SCSB, ACSI, and ECSI amongst others. The purpose was to review the various approaches to understanding customer satisfaction. While the focus of such index was to develop a comprehensive measure of customer satisfaction, we found that they differ in the ways they have been conceptualized, measured, and developed. The purpose of this review was to understand such various approaches with the objective of ensuring the customer satisfaction index for the present study is measured and developed using the most appropriate and rigorous method and approach. However, our review



has indicated that although comprehensive, the indexes are “old” in that recent years have seen a number of other customer satisfaction dimensions relevant to the accommodation sector such as sociability, emotions etc., which existing indexes fail to take into account. Our review also indicates that customer satisfaction influences future behaviour of customers, a relationship that existing indexes fail to consider. Using such evidences, the model of the study is developed and presented in Figure 4 below.



AI: Accommodation infrastructure; RQ: Room quality; FDQ: Front desk quality; FB: Food and beverage; SS: Safety and security; ABE: Attitude and behaviour of employees; EX: Expertise; CI: Customer interaction; SC: sociability; WT: Waiting time; SQ: Service Quality; CS: Customer satisfaction; CL: Customer loyalty; CE: Consumption emotions; PV: Perceived value; IM: Image

Figure 4. The Proposed Model of the Study

The ultimate dependent variable of the study is given as behavioural intention of guests, defined as their intention to re-visit and recommend the accommodation to others. The model proposes that satisfaction with accommodation establishments directly and positively influences behavioural intention. In turn, satisfaction with accommodation is influenced by service quality, treated as a second-order factor model comprising of 10 service quality dimensions relevant to the accommodation sector.

Three additional dimensions namely, consumption emotions, perceived value, and accommodation image are proposed to influence accommodation satisfaction. The latter three variables are the “new” dimensions existing literature suggests are important to understanding customer satisfaction, but which are missing in the various customer satisfaction index reviewed above. Based on existing theoretical and empirical evidence, a number of relationships are also proposed among service quality, customer satisfaction, consumption emotions, perceived value, and image.

## **4. Research Design and Methodology**

### **4.1. Data Collection and Measurement of Variables**

Data were collected using a structured questionnaire designed following an exhaustive review of existing literature on customer satisfaction and service quality (see Table 1). The dimensions of service quality include five tangible aspects of an accommodation establishment (1) Accommodation infrastructure; (2) Room quality; (3) Food and Beverage; (4) Safety and security and (5) front desk quality and eight

intangible aspects of an accommodation establishment: (1) Attitudes and behaviour of employees; (2) Expertise of employees; (3) Customer interaction; (4) Sociability; (5) Waiting time; (6) Perceived value; (7) Image; and (8) Consumption emotions.

Table 1. Measurement of Constructs

Constructs	Item scale	Literature sources
Overall customer satisfaction	I feel satisfied of the accommodation's overall performance. The performance of this accommodation has met my expectations. The satisfaction level of this accommodation is quite close to my ideal accommodation.	ACSI; Deng et al., (2013)
Accommodation infrastructure	The style of décor is to my liking at this accommodation. The accommodation is generally clean. The design of the accommodation is attractive. The physical environment is what I expect in this accommodation.	Ekinici and Riley (2001); Ko and Pastore (2005); Lockyer (2003)
Room quality	The room size of this accommodation is adequate. The bed/mattress/pillow are comfortable. This room in this accommodation is quiet. In-room temperature control is of high quality at this accommodation	Choi and Chu (2001); Min and Min (1997)
Food and beverage	The food and beverage in this accommodation are of high quality. There are a variety of food and beverage facilities at this accommodation Cultural differences are taken into account in the menu proposed	Akbaba (2006); Chu and Choi (2000)
Safety and security	There are accessible fire exits at this accommodation. There are noticeable sprinkler systems at this accommodation. A secure safe is available in the room of this accommodation.	Choi and Chu (2001)
Attitudes and behaviours of employees	The attitude of employees of this accommodation demonstrates their willingness to help me. The attitude of employees of this accommodation shows me that they understand my needs. The behaviour of the employees of this accommodation allows me to trust their services. The employees of this accommodation always provide the best service for me.	Caro and Garcia, (2008), (2007); Caro and Roemer (2006)
Expertise of employees	The employees of this accommodation understand that I rely on their professional knowledge to meet my needs. I can count on the employees of this accommodation knowing their jobs/responsibilities. The employees of this accommodation are competent.	Caro and Roemer (2006)
Customer interaction	I am generally impressed with the behaviour of the other customers of this accommodation. My interaction with the other customers has a positive impact on my perception of this accommodation's services.	Ko and Pastore (2005)
Sociability	This accommodation provides me with opportunities for social interaction. I feel a sense of belonging with other customers at this accommodation. I have made social contacts at this accommodation.	Ko and Pastore, (2005); Brady and Cronin (2001)
Waiting time	The waiting time for service is reasonable at this accommodation. The employees of this accommodation try to minimise my waiting time. The employees of this accommodation understand that waiting time is important to me.	Caro and Garcia (2008); Dagger et al., (2007); Caro and Roemer (2006); Brady and Cronin (2001)
Perceived value	Appropriateness of accommodation's price under given quality Overall value you get from your accommodation for what you give Overall value you get from the accommodation for your money	ACSI; Deng et al., (2013)
Image	I believe that this accommodation has a better image than its competitors. In my opinion, this accommodation has a good image in the minds of its customers.	Clemes et al., (2007); Kao, (2007); Kayaman and Arasli, (2007); Park et al., (2005, 2004)
Consumption emotions	I feel amaze with the consumption process. I feel comfortable with the consumption process. I feel disappointed with the consumption process.	Deng et al. (2013)
Customer loyalty	Recommend the accommodation to friends and relatives Say favourable things about the accommodation to others	Deng et al. (2013)

Constructs	Item scale	Literature sources
	Choose the same accommodation again if you could start all other Stay in the same accommodation in future	

All items were measured on a 1-5 Likert scale, where 1 = “strongly disagree” and 5 = “strongly agree”. Higher mean values on these scores would indicate better service quality across all the dimensions. Respondents also had the option of checking “not applicable” option across all the items measuring service quality. This provided guests an easy way to answer a question that may not apply to them (Schall, 2003).

Because researchers and managers conquer that service quality involves a comparison between comparison of expectation with actual performance (Parasuraman, Zeithaml, and Berry, 1985), respondents was also asked to rate their expected and their actual experiences with the various tangible and intangible dimensions of the accommodation establishment. Difference in mean score indicated favourable or unfavourable service quality gaps (Objective 1).

Customer satisfaction with the accommodation establishment was measured using items developed by Deng, Yeh, and Sung (2013). The items to measure the various constructs and their literature sources are presented in Table 1. Some of those items were slightly modified to suit the context of the study. However, such changes were contextual rather than conceptual. The questionnaire also collected information on the types of accommodation and demographic profile of respondents. For confidentiality and other ethical reasons, neither such personal details on respondents nor any such information on the accommodation establishments that

could identify them were collected. Likewise, no information that could identify the accommodation establishments in which our respondents stayed was collected.

## **4.2. Study Method and Sample**

Data were collected from guests staying in park accommodation establishments as well as non-park accommodation establishments located in South Africa. Non-parks accommodation establishments are graded establishments by Tourism Grading Council of South Africa (TGSA) while accommodation establishments located in parks are mostly ungraded<sup>1</sup> ones. In this study, non-park accommodation establishments included those located in Western Cape, Kwazulu-Natal, and Gauteng. These provinces were chosen because they host more than 65% of the graded accommodation establishments registered by TGSA. Accommodation establishments in each province were selected using a cluster sampling. According to TGSA, three star and four star accommodation establishments comprise more than 60% of the total number of graded accommodation establishments in South Africa. Thus, the sample was structured in a way to ensure that the majority of respondents stayed in three star and four star establishments.

The sample also included respondents staying in park accommodation establishments. Inclusion of this type of accommodation was necessary because park visitors accounts for a significant proportion of the total number of visitors to South Africa (Butler and Richardson, 2015). For the purpose of the study,

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<sup>1</sup> The word ungraded as used in the present research does not mean poor quality accommodation or similar terms. It refers to accommodation establishments not graded by Tourism Grading Council of South Africa (TGSA).

accommodation establishments in Kruger National Park (KNP), located in Mpumalanga province and managed by SANParks, was chosen for three main reasons. First, KNP is the largest park managed by SANParks. It occupies around 1, 962, 362 hectares of land and is considered to be the icon for tourism in South Africa. From March 2014 to March 2015, KNP received 1 659 793 visitors, representing an increase of 6.6 from March 2013 to March 2014 (SANParks, 2015). Second, 67% of all SANParks activities took place in KNP from March 2014 to March 2015 (SANParks, 2015). Third, KNP accounted for the largest proportion of accommodation units sold (383 569) and bed nights sold (923,310) among all other parks managed by SANParks (SANParks, 2015). Inclusion of parks as well as non-park accommodation in the study sample was important as there may be differences in service quality and satisfaction levels between park and non-park accommodation establishments.

To minimize selection bias, the sample consisted of respondents with diverse socio-demographic characteristics, staying in different those different types of accommodation, enhancing the study's generalizability. The sample size for the study was in line with established recommendations for effective use of structural equation modelling (Hair et al., 2012; Nunkoo and Ramkissoon, 2012; Nunkoo et al., 2013). In the absence of an adequate sampling frame, a convenience sampling method was utilized to select guests. A total of 690 questionnaires were filled. However, 18 of them were eliminated because they contained more than 10% missing values across the scales (Hair et al., 2006), resulting in a usable sample of 672 cases.

The survey was carried out in the months of September and October 2015 by second and third year undergraduate students of the tourism programs offered by the School of Tourism and Hospitality (STH), University of Johannesburg under the close supervision of a supervisor who was assigned to each province in which data collection took place. The supervisors had a good track record of conducting field work and were briefed fully about the research by Dr Peta Thomas. The number of field workers in each province varied depending on the scale of data collection and on their personal obligations. Supervisors who were not employees of STH signed a confidentiality statement as regards use of the collected data and the questionnaire.

Both face-to-face and the drop off-pick-up method were used to collect the data. In the former case, in line with previous studies (e.g. Deng et al., 2013), respondents were surveyed through an on-site intercept method. While some accommodation establishments allowed the survey team to interact with the guests directly, others preferred that the questionnaires were left to be administered by the accommodation management. There was considerable resistance from some establishments who felt that they already did their own customer satisfaction surveys and did not want to harass the clients with yet another survey. Respondents who were willing to participate in the survey and who had experience in staying at the accommodation completed the questionnaire. Where possible, the survey was conducted at the front desk of the accommodation establishment so that respondents could seek further clarifications should these be necessary. For example, in some cases, respondents sought further clarifications from the accommodation management on safety and

security issues before filling the questionnaire. As per Schall's (2003) recommended good practices to measure guest attitudes toward a service provider, the survey was administered to guests during their stay in the accommodation establishment or just before their departure. This ensured that guests had a full appreciation and understanding of the various aspects of the accommodation when filling the survey, leading to more accurate responses and enhancing the quality of the survey. Furthermore, the timing proposed for the survey ensured that questions about one accommodation establishment cannot be confused with attitudes about another (Schall, 2003).

### **4.3. Data Analysis**

Statistical Package for Social Science (SPSS) and AMOS (Analysis of Moment Structures) were used to analyze the data. The data were analyzed in four stages. In Stage 1, the measurement scales were tested using a confirmatory factor analysis (CFA). The confirmatory factor model is also known as the measurement model because it outlines the items that constitute the measurement of an underlying LV (Bryne, 1994). CFA makes use of only the measurement model which is that component of the general model in which latent variables (LVs) are prescribed (Hoyle, 1995). It represents a set of  $p$  observable variables as multiple indicators of a smaller set of  $m$  LVs (McDonald and Ho, 2002). The measurement model specifies the relationships between LVs and their measures (MVs) and illustrates the ways in which the LVs are operationalised through the MVs (indicators). The indicators chosen by the researcher define the LVs in the measurement model. An LV is defined more accurately to the extent that the MVs that define the construct are strongly related to



one another. If one MV is poorly correlated with other MVs which define the LV, the latter will be poorly defined. This illustrates a case of model misspecification (Weston and Gore, 2006). The measurement model was also tested for its reliability and validity.

Once the reliability and validity of the latent variables were determined, in Stage 2, descriptive statistics (mean and standard deviation) were used to calculate mean scores for each item measuring the various constructs. The mean score for expectations were then compared with mean score for actual performance across the various items representing the different dimensions. Higher mean score for actual compared to expectation for an item in the scale indicated favourable service quality while a higher mean score for expectation compared to actual for an item scale indicated unfavourable service quality.

Stage 3 involved an analysis of group differences. The purpose of this data analysis stage was to investigate whether the level service quality and customer satisfaction differed across the various types of accommodation and demographic profiles of guests. Independent sample *t*-test and one way analysis of variance (ANOVA) were used to test the null hypothesis that the population mean is the same among several groups of cases respectively. Such analysis provided evidence whether types of accommodation (e.g. graded and ungraded) and demographic profiles of the travellers (age, gender, nationality, frequency of visits, level of education, etc.) influenced service quality and customer satisfaction.

In stage 4, the model was tested using structural equation modelling. The structural model is the hypothetical model that prescribes relationships among LVs and their observed variables, together with the direct arcs connecting them, and the disturbance error for the variables (Hoyle, 1995; Reisinger and Movondo, 2007). The structural model represents the combined measurement and path models. It is known as the component of a general model that relates the constructs to other constructs by providing path coefficients (parameter values) for each of the research hypothesis. The linkages between the LVs reflect the proposed hypotheses. Each hypothesis can be tested for its respective statistical significance while including standard errors and calculated t-values (Bollen, 1989; Hair et al., 1998, 2002). Using the structural equation model, researchers can answer questions regarding the reasons for customer satisfaction or dissatisfaction, and how to improve customer satisfaction (Hsu et al., 2006). Moreover, structural equation modeling is a useful tool in research intended to obtain indicator weights and predict latent variables.

Step 5 involved the calculation of the customer satisfaction index – the SAASI using the recommendations of Fornell et al., (1996) who developed the American Customer Satisfaction Index. To create a single SAASI, the following formula will be utilized:

$$SAASI = \frac{\sum_{i=1}^3 w_i \bar{x}_i - \sum_{i=1}^3 w_i}{9 \sum_{i=1}^3 w_i} \times 100$$

Where,

In the formula:

$w_i w_i$  represents the standardised regression weight for the  $i$  scale item of customer satisfaction

$\bar{x}_i \bar{x}_i$  represents the average perception of the  $i$  scale item of customer satisfaction;

$\sum_{i=1}^3 w_i \bar{x}_i \sum_{i=1}^3 w_i \bar{x}_i$  represents the sum of the three products of standardized regression weight and the average score for each item;

$\sum_{i=1}^3 w_i \sum_{i=1}^3 w_i$  represents the sum of the three standardized regression weights.

## 5. Results

### 5.1. Sample Profile

The various characteristics of the sampled accommodation customers were analysed using relevant descriptive statistics. The characteristics considered were gender, age, marital status, highest level of qualification completed, approximate income, nationality, travel party composition, length of stay in present accommodation, purpose of visit, number of previous visits to the accommodation, grading of accommodation, type of accommodation and province as presented in Table 2. Among the sampled respondents, a majority of customers were male (54.2%,  $n = 364$ ) compared to female customers comprising of 45.8% ( $n = 308$ ). The average age of the customers was 39.9 years old (SD = 13.28). With respect to marital status, the most frequent group was married which accounted for 54.5% ( $n = 366$ ), followed by single (36.9%,  $n = 248$ ). 3.4% reported to be widowed and the remaining 5.2% were divorced or separated.

Table 2: Sample Profile

Characteristics	Sample	
	Frequency(n)	Percentage (%)
<i>Gender (N = 672)</i>		
Male	364	54.2
Female	308	45.8
<i>Marital Status (N = 672)</i>		
Widowed	23	3.4
Single	248	36.9
Married	366	54.5
Divorced/ Separated	35	5.2
<i>Highest Level of Qualification (N = 671)</i>		
Less than high school	14	2.1
High school	59	8.8
Apprenticeship/ Trade Certificate	26	3.9
College	201	30
University	371	55.3
<i>Approximate Income Level (N = 646)</i>		
Less than ZAR 15,000	110	17
ZAR 15,000 to ZAR 24,999	131	20.3
ZAR 25,000 to ZAR 34,999	107	16.6
ZAR 35,000 to ZAR 44,999	99	15.3
ZAR 45,000 to ZAR 59,999	84	13.0
ZAR 60,000 to ZAR 79,999	54	8.4
ZAR 80,000 to ZAR 99,999	31	4.8
ZAR 100,000 or more	30	4.6
<i>Purpose of visit (N = 671)</i>		
Business	243	36.2
Visiting friends and relatives	73	10.9
Holidays	289	43.1
Others	66	9.8
<i>Grading of Accommodation (N = 671)</i>		
One star	56	8.3
Two star	95	14.2
Three star	138	20.6
Four star	143	21.3
Five star	45	6.7
Ungraded	194	28.9
<i>Type of Accommodation (N = 671)</i>		
Park accommodation	199	29.7
Non-park accommodation	472	70.3
<i>Province (N = 671)</i>		
GP	132	19.7
KZN	150	22.4
MP	198	29.5
WC	191	28.5

Metric Variables

	Mean( $\bar{x}$ )	Standard Deviation(SD)
Age	39.89	13.284
Length of Stay	7.60	14.844
Number of previous visits	1.88	5.305

The surveyed customers were also required to provide their highest level of qualification. The majority of them (55.3%, n = 371) reported to have attained up to

university level education many of them had college level qualification (30%, n = 201). Regarding the income level of the customers who responded to the survey, most of them (20.3%, n = 131) stated that they were currently earning between ZAR 15,000 to ZAR 24,999. 17% of them reported to be earning less than ZAR 15,000 (n = 110) while only 4.6% (n = 30) said that their income were in excess of ZAR 100,000.

The mean age of the respondents was 38.89 years. Respondents also reported to have stayed on average 7.6 days, that is, more than one week at their respective accommodation establishment. The purpose of visit of the customers was also recorded and according to the results, the most common one was holidays with 43.1 % of responses (n = 289) followed by business (36.2%, n = 243). Further questions addressed some characteristics of the accommodation which the customers had visited. Information was collected about the grading of the accommodation, the type of accommodation and its location. With regards to accommodation grading, it was observed that 20.6% (n = 138) of respondents had visited a three star accommodation while 21.3% (n = 143) had visited a four star accommodation. Concerning type of accommodation, 70.3% (n = 472) were non-park accommodation and the remaining 29.7% (199) were park accommodation. Finally, regarding the location of the accommodation it was found that respondents were evenly distributed in the targeted provinces.

## 5.2. Scale Purification and Validation

To purify the scale measuring the different variables of the study, we evaluated the performance of the measurement model (Figure 5) using Confirmatory Factor Analysis with AMOS 21 on the sample data ( $N = 672$ ).

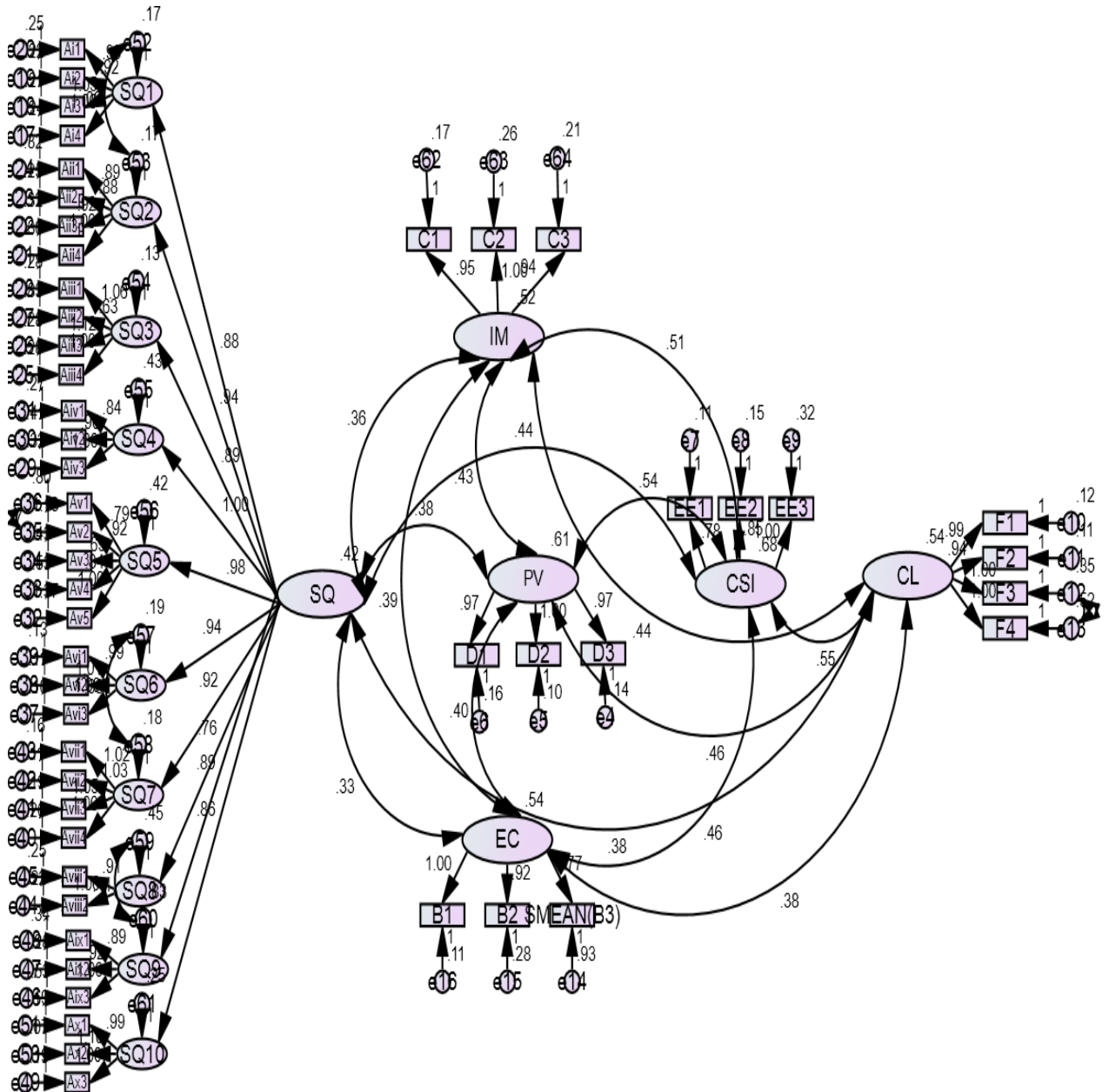


Figure 5: Measurement Model including Observed Variables from AMOS output

As this estimation method relies on data normality, the distribution of the collected data was examined. Normality is attributed to both skewness and kurtosis. While skewness affects analysis of means, kurtosis severely influences tests of variances and covariances which underlie SEM. Therefore, the kurtosis of all items was evaluated. According to West, Finch, and Curran (1995), a rescaled value of greater than 7 is indicative of early departure from normality. An inspection of the kurtosis values produced by AMOS suggested that no item was substantially kurtotic, therefore satisfying the assumption underlying maximum likelihood estimation of SEM. The measurement model developed consisted of six constructs. Service quality was measurement through a second order factor model consisting of ten sub-dimensions which were treated as indicators of service quality. Such an approach allowed for greater diagnostic information with regards to the specificities of the service quality construct. The overall measurement model and its standardized coefficient, presented in Figure 5, showed satisfactory level of fit ( $\chi^2/df=2.374$ ; CFI = 0.940; TLI = 0.936; IFI = 0.94; RMSEA = 0.045) as presented in Table 3.

Table 3: Fit indices of the measurement model

	CMIN/DF	CFI	TLI	IFI	RMSEA
Model fit	2.374	0.940	0.936	0.940	0.045
Evaluative criteria	$1 < \chi^2/df < 3$	> 0.90	> 0.90	> 0.90	< 0.05

*Notes: CFI - Comparative Fit Index; TLI - Tucker Lewis Index; IFI - Incremental Fit Index; RMSEA - Root Mean Square Error of Approximation*

As recommended by Bagozzi and Yi (1988) and Hair et al. (2006), the normalised chi-square value should be below the cut off value of 3.0, hence the value of 2.374 shows evidence of an adequate level of model fit. Moreover the value of 0.940 for the comparative fit index (CFI) was found to be above the 0.9 criteria suggested. The

Tucker Lewis Index obtained was also above the 0.9 threshold value and the Root Mean Square Error of Approximation was below the 0.05 score. After achieving adequate fit indices, the overall measurement model is further evaluated for its reliability and validity. Composite reliability and average variance extracted are used as reliability measures.

Table 4. Properties of the confirmatory factor model

Variables and their indicators		SL	Critical ratio	CR	AVE
<i>Service quality (second order factor model)</i>				.93	.55
SQ1	Accommodation General Infrastructure	.814	15.037		
SQ2	Room Quality	.828	14.594		
SQ3	Front Desk Quality	.852	14.981		
SQ4	Food and Beverage	.705	-		
SQ5	Safety and Security	.700	11.173		
SQ6	Attitude and Behaviors of Employees	.809	15.682		
SQ7	Expertise of Employees	.819	15.561		
SQ8	Customer Interaction	.592	12.084		
SQ9	Sociability	.536	11.198		
SQ10	Waiting Time	.747	14.724		
<i>Consumption emotions</i>				.79	.57
B1	I feel pleased with the consumption process	.910	-		
B2	I feel comfortable with the consumption process	.787	23.150		
B3	I feel disappointed with the consumption process.	.503	13.292		
<i>Image</i>				.87	.69
C1	I think that this accommodation has a good reputation in the region	.852	25.30		
C2	This accommodation has a better image than its competitors	.815	-		
C3	This accommodation has a good image in the minds of its customers	.829	24.38		
<i>Perceived value</i>				.93	.82
D1	Appropriateness of accommodation's price under given quality	.884	36.631		
D2	Overall value you get from your accommodation for what you give	.931	-		
D3	Overall value you get from the accommodation for your money	.897	38.059		
<i>Accommodation satisfaction</i>				.90	.75
E1	I feel satisfied with the accommodation's overall performance	.889	28.614		
E2	The performance of this accommodation has met your expectations.	.875	27.948		
E3	The satisfaction level of this accommodation is quite close to my ideal accommodation.	.824	-		
<i>Customer loyalty</i>				.90	.69
F1	Recommend the accommodation to friends and relatives	.902	26.291		
F2	Say favorable things about the accommodation to others	.902	26.304		
F3	Choose the same accommodation again if you could start all other	.779	-		
F4	Stay in the same accommodation in future	.712	32.112		

Notes: SL – Standardized loadings; CR – Composite reliability; AVE – Average variance extracted



To assess validity, discriminant and convergent validity are usually used. Convergent validity was evidenced with statistically significant ( $p < .01$ ) item factor loadings (Anderson and Gerbing 1988). Furthermore, AVE values of higher than 0.50 also demonstrate convergent validity. Discriminant validity is tested by calculating the difference between one model where the correlation between the constructs (with multiple indicators) is constrained to unity (i.e. perfectly correlated), and another model which allows the correlations to be free (Anderson and Gerbing, 1988). This is carried out for one pair of construct at a time. The first model is the constrained model where the correlation parameter is constrained between each pair of constructs to 1.0. The second model is the unconstrained model where the correlation parameter between two constructs is not manipulated (not fixed at 1.00).

Table 5. Discriminant validity of the measurement model

Comparisons		Constrained Model		Unconstrained Model		Chi-Square Difference		Discriminant Validity
		$\chi^2$	df	$\chi^2$	df	$\Delta\chi^2$	$\Delta df$	
SQ	IM	1985.40	652	1845.29	651	140.11	1	Yes
	PV	1914.60	652	1779.52	651	135.08	1	Yes
	EC	1921.09	652	1744.99	651	176.1	1	Yes
	CSI	1948.09	652	1805.13	651	142.96	1	Yes
	CL	2375.35	689	2213.99	688	161.36	1	Yes
IM	PV	177.62	9	23.84	8	153.78	1	Yes
	EC	202.72	9	29.81	8	172.91	1	Yes
	CSI	228.42	9	46.36	8	182.06	1	Yes
	CL	496.37	14	340.4	13	155.97	1	Yes
PV	EC	173.07	9	10.02	8	163.05	1	Yes
	CSI	201.94	9	46.16	8	155.78	1	Yes
	CL	459.88	14	322.29	13	137.59	1	Yes
EC	CSI	304.69	9	92.61	8	212.08	1	Yes
	CL	617.85	14	434.39	13	183.46	1	Yes
CSI	CL	160.84	13	91.46	12	69.38	1	Yes

Afterwards, a  $\chi^2$  difference test on the values obtained for the constrained and unconstrained models is performed (Anderson and Gerbing, 1988). A significantly lower  $\chi^2$  value for the unconstrained (free) model indicates that discriminant validity has been achieved (Anderson and Gerbing, 1988). As shown in Table 5, discriminant validity was achieved.

### **5.3. Gap Analysis**

Now that the measurement model has been validated and its reliability and validity established, descriptive statistical analysis was conducted to assess the level of customers' service quality expectation and their perceived actual performance with regards to the accommodation services in South Africa. All the observable variables used as measures of accommodation service quality were measured on a 5 point Likert scale, where 1 represented "very low", 2 represented "low", 3 represented "moderate", 4 represented "high" and 5 represented "very high", implying that the closer the obtained mean is to the maximum rating of 5 the higher the expectation or performance rating of the customer. Secondly, a paired-samples t-test was carried out to test for the significance of differences between the expectation and performance scores, if any.

#### **5.3.1. Descriptive Statistics**

Accommodation Services comprised of ten service quality dimensions which were: (1) general infrastructure, (2) room quality, (3) front desk quality, (4) food and beverage quality, (5) safety and security, (6) attitude and behavior of employees, (7)

expertise of employees, (8) customer interaction, (9) sociability and (10) waiting time. Results of the gap analysis are presented in Table 6. The accommodation service quality dimension with the highest performance rating was attitude and behavior of employees, whereby the customers reported an average score of 4.32 ( $SD = 0.78$ ). This rating indicates that the customers perceive accommodation services to be performing quite well with regards to this service quality dimension. This was followed by the “expertise of employees” dimension ( $\bar{x}\bar{x} = 4.23$ ,  $SD = 0.88$ ).

Table 6. Gap analysis

	Mean ( $\bar{x}\bar{x}$ )		GAP	Standard deviation (SD)	
	Performance	Expectation		Performance	Expectation
General Infrastructure	4.14	3.90	+	.74	.84
Room Quality	4.12	3.93	+	.74	.82
Front Desk Quality	4.08	3.91	+	.80	.79
Food and Beverage Quality	3.82	3.91	-	.95	.88
Safety and Security	3.84	4.03	-	.93	.82
Attitude and Behaviour of Employees	4.32	4.07	+	.78	.81
Expertise of Employees	4.23	4.01	+	.78	.81
Customer Interaction	3.92	3.71	+	.88	.89
Sociability	3.63	3.57	+	1.13	.94
Waiting Time	4.13	4.00	+	.81	.86

The service quality dimension having the lowest performance rating was sociability ( $\bar{x}\bar{x} = 3.63$ ,  $SD = 1.13$ ). Three other service quality dimensions also had a mean less than 4, thus indicating that customers perceived them to be lesser than high level of quality. These were food and beverage quality ( $\bar{x}\bar{x} = 3.82$ ,  $SD = 0.95$ ), safety and security ( $\bar{x}\bar{x} = 3.84$ ,  $SD = 0.93$ ) and customer interaction ( $\bar{x}\bar{x} = 3.92$ ,  $SD = 0.88$ ).

Finally, the remaining service quality factors received ratings just above the score of 4, namely, front desk quality ( $\bar{x}\bar{x} = 4.08$ ,  $SD = 0.80$ ), room quality ( $\bar{x}\bar{x} = 4.12$ ,  $SD = 0.74$ ), waiting time ( $\bar{x}\bar{x} = 4.13$ ,  $SD = 0.81$ ) and general infrastructure ( $\bar{x}\bar{x} = 4.14$ ,  $SD = 0.74$ ).

With regards to customers' expectations, the service quality dimension with the highest rating was attitude and behavior of employees ( $\bar{x}\bar{x} = 4.07$ ,  $SD = 0.81$ ) followed by safety and security ( $\bar{x}\bar{x} = 4.03$ ,  $SD = 0.82$ ) and waiting time ( $\bar{x}\bar{x} = 4.00$ ,  $SD = 0.86$ ) all above the score indicating a high level of expectation. The remaining seven service quality dimensions had average ratings ranging from 3.57 for the sociability dimension to 3.93 for the room quality dimension.

In view of gaining better understanding of the service quality dimensions that require most urgent consideration, a gap analysis was conducted to find out if there were differences if any between performance and expectation of customers with regards to the various service quality dimensions. This was done by simply taking the performance rating subtracted by the expectation rating (performance – expectation). While a positive gap would indicate that customers' were satisfied a negative gap would mean that the accommodation service providers were not able to exceed the expectations of customers. As can be seen in Table 6 above, positive gap scores were obtained for eight out of the ten service quality dimensions. The two service quality dimensions having a negative gap score were food and beverage quality and safety and security.

### 5.3.2 Testing for Significance of Differences

In order to test for the significance of the differences between performance and expectation scores obtained, a series of pair samples t tests were performed with respect to each service quality dimensions. The assumptions of the paired samples t-test were all verified first. Consequently, prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was considered satisfied, as the skewness and kurtosis estimated were all less than less than the maximum allowable values for a t-test (i.e., skewness  $|3.0|$  and kurtosis  $|8.0|$ ) as suggested by Kline (1998, 2011). For example, the first accommodation service quality dimension, general infrastructure had a skewness and kurtosis estimated at -0.34 and 1.60, respectively.

To test the hypotheses that the performance means of accommodation services were significantly different than the expectation means, paired-samples t tests were performed. As can be observed in Table 7 below, the results show that all the differences were significant to the exception of one service quality dimension which was not significant, at the 5% level of significance. For example, the test results for general infrastructure ( $t = 6.38, p < 0.05$ ), suggested that the mean difference of 0.24 was statistically significant. In other words, the performance mean score was statistically significantly higher than the expectation mean score. The results of the paired samples t-tests imply that except for the “sociability” dimension, the performance-expectation gaps observed for the other nine service quality dimensions are not due to sampling variation and there is enough evidence to suggest that

approximately the same gaps obtained from analysis of the sample data would be found in the study population.

Table 7. Paired sample t-test

		Mean Dif.	SD	t	Sig. (2-tailed)
Pair 1	General Infrastructure	.24	.98	6.38	.000
Pair 2	Room Quality	.19	.94	5.35	.000
Pair 3	Front Desk Quality	.17	.95	4.73	.000
Pair 4	Food and Beverage Quality	-.09	1.06	-2.08	.038
Pair 5	Safety and Security	-.19	1.08	-4.48	.000
Pair 6	Attitude & Behaviour of Employees	.24	.95	6.67	.000
Pair 7	Expertise of Employees	.22	.95	6.04	.000
Pair 8	Customer Interaction	.21	1.04	5.12	.000
Pair 9	Sociability	.06	1.12	1.38	.168
Pair 10	Waiting Time	.12	1.04	3.09	.002

The t-test result ( $t = 1.38$ ,  $p = 0.168$ ) obtained for the “sociability” dimension suggest that no significant difference exist between the mean performance and mean expectation scores. Therefore even though there was a slight positive gap score, that is, perceived service quality for “sociability” did slightly exceed customers’ expectations, there is not enough evidence to be sure that such a gap exists.

#### 5.4. Group Differences

Group difference tests such as t-test and ANOVA were used to analyze the various service quality dimensions, customer satisfaction, customer loyalty, consumption emotions, image, and perceived valued difference between park and non-park accommodation, among different types of visitors, provinces, and grading status.

### 5.4.1. Differences between Park and Non-Park Accommodation

An independent sample t-test was used to test whether differences exist between park and non-park accommodations across the various variables. Results are presented in Table 8 below.

Table 8: Differences between park and non-park accommodation

Dimensions	Park Accommodation		Non-Park Accommodation		t-test	
	M	SD	M	SD	Mean difference	t value
Accomm. Infrs.	4.39	.64	4.03	.76	.37	5.98***
Room quality	4.32	.63	4.04	.77	.27	4.30***
Front desk quality	4.37	.69	3.96	.82	.41	6.22***
Food and beverage	3.86	.80	3.81	1.00	.05	.64
Safety and security	4.28	.64	3.65	.99	.63	8.50***
Attitudes & behaviour	4.56	.62	4.21	.82	.35	5.34***
Expertise	4.49	.63	4.12	.82	.37	5.67***
Customer interaction	3.97	.90	3.90	.87	.07	.90
Sociability	3.73	1.17	3.59	1.11	.15	1.53
Waiting time	4.24	.74	4.08	.83	.17	2.43*
Con. emotion	4.28	.72	3.98	.76	.30	4.70***
Image	4.07	.64	3.96	.78	.11	1.80
Perceived value	4.31	.69	3.94	.81	.37	5.63***
Customer satis.	4.30	.72	4.00	.77	.31	4.83***
Customer loyalty	4.25	.68	4.05	.82	.07	3.07**

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

Park accommodation generally obtained higher scores across most of the service quality dimensions measured, with significant differences obtained for accommodation infrastructure ( $t = 5.98, p > 0.001$ ), room quality ( $t = 4.30, p > 0.001$ ), front desk quality ( $t = 6.22, p > 0.001$ ), safety and security ( $t = 8.50, p > 0.001$ ), attitudes and behaviour of employees ( $t = 5.34, p > 0.001$ ), expertise ( $t = 5.67, p > 0.001$ ), waiting time ( $t = 2.43, p > 0.05$ ), consumption emotions ( $t = 4.70, p > 0.001$ ), perceived value ( $t = 5.63, p > 0.001$ ), customer satisfaction ( $t = 4.83, p > 0.001$ ), and customer loyalty ( $t = 3.07, p > 0.01$ ). No significant differences were noted between

park and non-park accommodation for food and beverage, customer interaction, sociability, and image ( $p < 0.05$ ).

#### 5.4.2. Differences among Grading Status of Accommodation Establishments

One way ANOVA with post-hoc Scheffe test was used to analyze differences in service quality among the five grading status of accommodation. Results are presented in Table 9 below. Significant differences among the grading status of accommodation were found among across all dimensions analyzed ( $p < 0.001$ ).

Table 9: Differences among grading status of accommodation

	One Star <sup>a</sup>		Two Star <sup>b</sup>		Three Star <sup>c</sup>		Four Star <sup>d</sup>		Five Star <sup>e</sup>		ANOVA
	M	SD	M	SD	M	SD	M	SD	M	SD	
AI	3.82 <sub>d,e</sub>	.95	3.62 <sub>c,d,e</sub>	.85	4.00 <sub>b,e</sub>	.67	4.26 <sub>a,b</sub>	.57	4.39 <sub>a,b,c</sub>	.59	F = 15.90 ***
RQ	3.74 <sub>c,d,e</sub>	1.03	3.56 <sub>c,d,e</sub>	.84	4.11 <sub>a,b</sub>	.68	4.24 <sub>a,b</sub>	.55	4.41 <sub>a,b</sub>	.57	F = 20.64 ***
FDQ	4.04 <sub>b</sub>	.95	3.46 <sub>a,c,d,e</sub>	.88	3.94 <sub>b</sub>	.70	4.15 <sub>b</sub>	.70	4.33 <sub>b</sub>	.74	F = 14.63 ***
FB	3.41 <sub>d,e</sub>	1.19	3.34 <sub>c,d,e</sub>	1.00	3.80 <sub>a,b,e</sub>	.97	4.10 <sub>a,b</sub>	.83	4.29 <sub>a,b</sub>	.76	F = 14.04 ***
SS	2.93 <sub>c,d,e</sub>	1.14	3.38 <sub>c,e</sub>	.91	3.78 <sub>a,b,e</sub>	.82	3.72 <sub>a,e</sub>	.95	4.38 <sub>a,b,c</sub>	.56	F = 19.15 ***
ABE	4.22 <sub>b</sub>	.95	3.79 <sub>a,c,d,e</sub>	.91	4.21 <sub>b</sub>	.74	4.38 <sub>b</sub>	.69	4.56 <sub>b</sub>	.70	F = 10.80 ***
EX	4.17 <sub>b</sub>	.96	3.59 <sub>a,c,d,e</sub>	.89	4.13 <sub>b,e</sub>	.69	4.29 <sub>b</sub>	.67	4.54 <sub>b,c</sub>	.73	F = 16.50 ***
CI	3.75	1.10	3.53 <sub>d,e</sub>	.95	3.86 <sub>n</sub>	.84	4.15 <sub>b</sub>	.60	4.25 <sub>b</sub>	.81	F = 9.98 ***
SC	3.37 <sub>e</sub>	1.14	3.42 <sub>e</sub>	1.05	3.40 <sub>e</sub>	1.14	3.77	1.08	4.27 <sub>a,b,c</sub>	.79	F = 7.40 ***
WT	3.96	1.08	3.66 <sub>c,d,e</sub>	.82	4.13 <sub>b</sub>	.81	4.24 <sub>b</sub>	.67	4.36 <sub>b</sub>	.71	F = 9.64 ***
CE	3.82	.98	3.81 <sub>e</sub>	.85	4.01	.65	4.04	.67	4.24 <sub>b</sub>	.75	F = 3.40 ***
IM	3.90	.94	3.60 <sub>c,d,e</sub>	.84	3.92 <sub>b,e</sub>	.72	4.14 <sub>b</sub>	.64	4.33 <sub>b,c</sub>	.70	F = 10.33 ***
PV	3.77	.98	3.58 <sub>c,d,e</sub>	.83	3.98 <sub>b</sub>	.74	4.09 <sub>b</sub>	.70	4.23 <sub>b</sub>	.80	F = 8.66 ***
CS	3.95 <sub>b</sub>	.97	3.56 <sub>a,c,d,e</sub>	.85	4.01 <sub>b</sub>	.67	4.17 <sub>b</sub>	.58	4.31 <sub>b</sub>	.76	F = 12.42 ***
CL	3.72 <sub>d,e</sub>	1.05	3.72 <sub>c,d,e</sub>	.95	4.09 <sub>b</sub>	.66	4.26 <sub>a,b</sub>	.64	4.37 <sub>a,b</sub>	.80	F = 11.15 ***

1) \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ;

2) Subscripts denote groups that are significantly different from each other based on Scheffe post-hoc analysis;

3) AI: Accommodation infrastructure; RQ: Room quality; FDQ: Front desk quality; FB: Food and beverage; SS: Safety and security; ABE: Attitude and behaviour of employees; EX: Expertise; CI: Customer interaction; SC: sociability; WT: Waiting time; SQ: Service Quality; CS: Customer satisfaction; CL: Customer loyalty; CE: Consumption emotions; PV: Perceived value; IM: Image

As expected, five star accommodation establishments obtained the highest score across the ten service quality dimensions and the other constructs measured. Interestingly, one star accommodation establishments performed significantly better than two star ones for their accommodation infrastructure ( $\bar{x}\bar{x} = 3.82$  vs.  $\bar{x}\bar{x} = 3.62$ ), front desk quality ( $\bar{x}\bar{x} = 4.04$  vs.  $\bar{x}\bar{x} = 3.46$ ), attitude and behaviour of employees ( $\bar{x}\bar{x} = 4.22$  vs.  $\bar{x}\bar{x} = 3.79$ ), expertise of employees ( $\bar{x}\bar{x} = 4.17$  vs.  $\bar{x}\bar{x} = 3.59$ ).



Respondents also reported higher levels of customer satisfaction with one star accommodation establishments than two star establishments ( $\bar{x}\bar{x} = 3.95$  vs.  $\bar{x}\bar{x} = 3.56$ ). One star accommodation establishments also performed better than two star ones in other dimensions such as room quality ( $\bar{x}\bar{x} = 3.74$  vs.  $\bar{x}\bar{x} = 3.56$ ), food and beverage ( $\bar{x}\bar{x} = 3.41$  vs.  $\bar{x}\bar{x} = 3.34$ ), customer interaction ( $\bar{x}\bar{x} = 3.75$  vs.  $\bar{x}\bar{x} = 3.53$ ), waiting time ( $\bar{x}\bar{x} = 3.96$  vs.  $\bar{x}\bar{x} = 3.66$ ), image ( $\bar{x}\bar{x} = 3.90$  vs.  $\bar{x}\bar{x} = 3.60$ ), and perceived value ( $\bar{x}\bar{x} = 3.77$  vs.  $\bar{x}\bar{x} = 3.58$ ). However, such differences were not statistically significant, although these results are worth noting.

#### **5.4.3 Differences among Provinces**

One way ANOVA with post-hoc Scheffe test was used to analyze whether differences exist across the various service quality and other dimensions among the four provinces. Results are presented in Table 10 below. There were significant differences among the accommodation establishments located in the four provinces in terms of accommodation infrastructure ( $F = 17.49, p < 0.001$ ), room quality ( $F = 11.39, p < 0.001$ ), front desk quality ( $F = 17.47, p < 0.001$ ), safety and security ( $F = 30.32, p < 0.001$ ), attitude and behaviour of employees ( $F = 12.28, p < 0.001$ ), expertise of employees ( $F = 13.28, p < 0.001$ ), sociability ( $F = 9.64, p < 0.001$ ), waiting time ( $F = 3.98, p < 0.01$ ), consumption emotions ( $F = 11.70, p < 0.001$ ) and perceived value ( $F = 16.46, p < 0.001$ ). Customer satisfaction ( $F = 10.32, p < 0.001$ ) and customer loyalty ( $F = 4.66, p < 0.01$ ) also significantly differed across the four provinces. In general, accommodation establishments located in Mpumalanga province performed better across all attributes measured (see Table 10).

Table 10: Difference among Provinces

	GP <sup>a</sup>		KZN <sup>b</sup>		MP <sup>c</sup>		WC <sup>d</sup>		ANOVA
	M	SD	M	SD	M	SD	M	SD	
AI	3.95 <sub>c</sub>	.99	4.13 <sub>c</sub>	.62	4.43 <sub>a,b,d</sub>	.61	3.96 <sub>c</sub>	.66	F = 17.49 ***
RQ	3.95 <sub>b,c</sub>	1.00	4.20 <sub>a,d</sub>	.65	4.34 <sub>a,d</sub>	.60	3.97 <sub>b,c</sub>	.68	F = 11.39 ***
FDQ	3.84 <sub>c</sub>	1.06	4.04 <sub>c</sub>	.66	4.40 <sub>a,b,d</sub>	.66	3.95 <sub>c</sub>	.74	F = 17.47 ***
FB	3.87	1.14	3.77	1.10	3.87	.80	3.78	.81	F = .571
SS	3.72 <sub>c</sub>	1.11	3.60 <sub>c</sub>	.83	4.33 <sub>a,b,d</sub>	.58	3.59 <sub>c</sub>	.97	F = 30.32 ***
ABE	4.16 <sub>c</sub>	1.07	4.31 <sub>c</sub>	.60	4.58 <sub>a,b,d</sub>	.61	4.16 <sub>c</sub>	.76	F = 12.28 ***
EX	4.04 <sub>c</sub>	1.06	4.22 <sub>c</sub>	.60	4.50 <sub>a,b,d</sub>	.64	4.09 <sub>c</sub>	.74	F = 13.28 ***
CI	3.89	1.11	3.86	.78	3.98	.91	3.93	.76	F = .525
SC	3.64 <sub>b</sub>	1.18	3.21 <sub>a,c,d</sub>	1.24	3.76 <sub>b</sub>	1.17	3.82 <sub>b</sub>	.84	F = 9.64***
WT	3.99 <sub>c</sub>	1.06	4.20	.72	4.25 <sub>a</sub>	.75	4.04	.71	F = 3.98 **
CE	3.81 <sub>c,d</sub>	.96	3.98 <sub>c</sub>	.66	4.29 <sub>a,b</sub>	.73	4.09 <sub>a</sub>	.65	F = 11.70 ***
IM	3.96	1.02	3.92	.69	4.09	.64	3.98	.64	F = 1.57
PV	3.87 <sub>b,c</sub>	1.00	4.13 <sub>a,d</sub>	.67	4.31 <sub>a,d</sub>	.70	3.82 <sub>b,c</sub>	.73	F = 16.46 ***
CS	3.89 <sub>c</sub>	1.05	4.06 <sub>c</sub>	.62	4.32 <sub>a,b,d</sub>	.71	3.99 <sub>c</sub>	.63	F = 10.32 ***
CL	3.97 <sub>c</sub>	1.11	4.14	.69	4.26 <sub>a,d</sub>	.68	4.03 <sub>c</sub>	.66	F = 4.66**

1) \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ;

2) Subscripts denote groups that are significantly different from each other based on Scheffe post-hoc analysis;

3) GP: Gauteng; KZN: KwaZulu-Natal; MP: Mpumalanga; WC: Western Cape;

4) AI: Accommodation infrastructure; RQ: Room quality; FDQ: Front desk quality; FB: Food and beverage; SS: Safety and security; ABE: Attitude and behaviour of employees; EX: Expertise; CI: Customer interaction; SC: sociability; WT: Waiting time; SQ: Service Quality; CS: Customer satisfaction; CL: Customer loyalty; CE: Consumption emotions; PV: Perceived value; IM: Image

#### 5.4.4 Differences among Types of Visitors

To analyze whether the various service attributes differed across types of visitors, we conducted a one-way ANOVA with post-hoc Scheffe test. Results are presented in Table 11 below. As noted from the table, significant differences exist among the different types of visitors in terms of accommodation infrastructure ( $F = 17.81$ ,  $p < 0.001$ ), room quality ( $F = 14.41$ ,  $p < 0.001$ ), front desk quality ( $F = 12.97$ ,  $p < 0.001$ ), food and beverage quality ( $F = 7.70$ ,  $p < 0.001$ ), safety and security ( $F = 17.58$ ,  $p < 0.001$ ), attitude and behaviour of employees ( $F = 9.94$ ,  $p < 0.001$ ), expertise ( $F = 11.51$ ,  $p < 0.001$ ), customer interaction ( $F = 4.70$ ,  $p < 0.01$ ), and waiting time ( $F = 5.76$ ,  $p < 0.01$ ).

Table 11: Difference among Types of Visitors

	Business <sub>a</sub>		VFR <sub>b</sub>		Holiday <sub>c</sub>		Others <sub>d</sub>		ANOVA
	M	SD	M	SD	M	SD	M	SD	
AI	4.13 <sub>b,c,d</sub>	.63	3.72 <sub>a,c</sub>	1.00	4.31 <sub>a,b,d</sub>	.68	3.84 <sub>a,c</sub>	.78	F = 17.81***
RQ	4.17 <sub>b, d</sub>	.66	3.74 <sub>a, b</sub>	.94	4.25 <sub>b, d</sub>	.68	3.81 <sub>a, c</sub>	.84	F = 14.41***
FDQ	4.07 <sub>b</sub>	.74	3.67 <sub>a, c</sub>	1.09	4.25 <sub>b, d</sub>	.70	3.88	.84	F = 12.97***
FB	4.03 <sub>b, c</sub>	.91	3.48 <sub>a</sub>	1.13	3.78 <sub>a</sub>	.91	3.67	.84	F = 7.79***
SS	3.85 <sub>b</sub>	.88	3.18 <sub>a, c, d</sub>	1.06	4.03 <sub>b, d</sub>	.84	3.67 <sub>b, c</sub>	.99	F = 17.58***
ABE	4.28 <sub>c</sub>	.70	4.00 <sub>c</sub>	1.18	4.47 <sub>a, b, d</sub>	.67	4.09 <sub>c</sub>	.79	F = 9.94***
EX	4.21 <sub>b</sub>	.72	3.89 <sub>a, c</sub>	1.12	4.39 <sub>b, d</sub>	.68	4.99 <sub>c</sub>	.80	F = 11.51***
CI	4.07 <sub>b</sub>	.73	3.69 <sub>a</sub>	1.09	3.88 <sub>ns</sub>	.92	3.79 <sub>ns</sub>	.88	F = 4.70**
SC	3.72 <sub>ns</sub>	1.01	3.33 <sub>ns</sub>	1.33	3.62 <sub>ns</sub>	1.19	3.68 <sub>ns</sub>	.91	F = 2.20
WT	4.17 <sub>b</sub>	.76	3.81 <sub>a, c</sub>	1.08	4.21 <sub>b</sub>	.77	3.97 <sub>ns</sub>	.72	F = 5.76**
CE	4.03 <sub>b</sub>	.66	3.73 <sub>a, c</sub>	1.04	4.19 <sub>b</sub>	.74	4.06 <sub>ns</sub>	.74	F = 7.67***
IM	4.10 <sub>b</sub>	.65	3.55 <sub>a, c</sub>	.98	4.05 <sub>a, b, d</sub>	.70	3.85 <sub>c</sub>	.76	F = 12.23***
PV	4.03 <sub>b, c</sub>	.71	3.57 <sub>a, c</sub>	1.02	4.24 <sub>a, b, d</sub>	.74	3.76 <sub>c</sub>	.75	F = 18.68***
CS	4.11 <sub>b, d</sub>	.61	3.61 <sub>a, c</sub>	1.04	4.24 <sub>b, d</sub>	.74	3.81 <sub>a, c</sub>	.80	F = 17.40***
CL	4.17 <sub>b</sub>	.66	3.62 <sub>a, c</sub>	1.04	4.22 <sub>b</sub>	.75	3.95	.86	F = 13.41***

1) \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ;

2) Subscripts denote groups that are significantly different from each other based on Scheffe post-hoc analysis;

3) AI: Accommodation infrastructure; RQ: Room quality; FDQ: Front desk quality; FB: Food and beverage; SS: Safety and security; ABE: Attitude and behaviour of employees; EX: Expertise; CI: Customer interaction; SC: sociability; WT: Waiting time; SQ: Service Quality; CS: Customer satisfaction; CL: Customer loyalty; CE: Consumption emotions; PV: Perceived value; IM: Image

Differences were also noted for consumption emotions ( $F = 7.67$ ,  $p < 0.001$ ), image ( $F = 12.23$ ,  $p < 0.001$ ), perceived value ( $F = 18.68$ ,  $p < 0.001$ ), customer satisfaction ( $F = 17.40$ ,  $p < 0.001$ ), and customer loyalty ( $F = 13.41$ ,  $p < 0.001$ ). Business and holidays visitors generally reported the highest level of service quality. They were also more satisfied with the accommodation establishments and were more loyal customers than the other two groups. VFR visitors generally reported the lowest level of service quality across most of the attributed measured. They were also the least satisfied and were also less likely to recommend the accommodation product to others than the other types of visitors.

#### 5.4.5 Differences among Types of Visitors

A series one-way ANOVA with post-hoc Scheffe test were conducted to analyze whether the various service quality dimensions differed across the nationalities of respondents. Results are presented in Table 12.

Table 12: Differences among Nationalities of Visitors

	South African <sup>a</sup>		Other Africans <sup>b</sup>		Europeans <sup>c</sup>		Asians <sup>d</sup>		Americans <sup>e</sup>		ANOVA
	M	SD	M	SD	M	SD	M	SD	M	SD	
AI	4.07 <sub>c, e</sub>	.76	3.93 <sub>c, e</sub>	.61	4.34 <sub>a, b</sub>	.71	4.26	.68	4.42 <sub>a, b</sub>	.68	F = 7.15***
RQ	4.06 <sub>e</sub>	.79	4.00 <sub>e</sub>	.63	4.23	.67	4.23	.69	4.45 <sub>a, b</sub>	.63	F = 4.62**
FDQ	4.03	.78	3.91 <sub>c</sub>	.77	4.27 <sub>b</sub>	.76	4.19	.78	4.29	.99	F = 3.99**
FB	3.73 <sub>e</sub>	1.00	3.78	.92	3.91	.84	3.99	.88	4.16 <sub>a</sub>	.77	F = 3.25*
SS	3.72 <sub>c</sub>	.96 <sub>c, e</sub>	3.71	.92	4.13	.72	4.91	.90	4.22 <sub>a, b</sub>	.95	F = 7.27***
ABE	4.26	.73	4.21	.76	4.46	.65	4.36	.78	4.53	.78	F = 2.82*
EX	4.19	.80	4.16	.73	4.30	.76	4.34	.82	4.40	.78	F = 1.55
CI	3.82 <sub>e</sub>	.93	4.01	.77	3.98	.82	3.96	.91	4.31 <sub>a</sub>	.68	F = 4.24**
SC	3.47 <sub>e</sub>	1.20	3.74	.89	3.83	1.07	3.67	1.12	4.08 <sub>a</sub>	.81	F = 5.10***
WT	4.07	.83	4.08	.78	4.20	.73	4.33	.77	4.28	.84	F = 2.01
CE	3.96 <sub>c</sub>	.79	4.18	.53	4.21 <sub>a</sub>	.73	4.21	.78	4.28	.79	F = 4.91**
IM	3.94 <sub>e</sub>	.78	4.06 <sub>c</sub>	.61	4.05 <sub>b</sub>	.65	4.07	.82	4.14 <sub>a, b</sub>	.77	F = 1.45
PV	3.97	.83	3.84	.66	4.22	.76	4.22	.76	4.39	.75	F = 6.80***
CS	4.00 <sub>e</sub>	.79	3.98 <sub>e</sub>	.64	4.22	.76	4.21	.77	4.43 <sub>a, b</sub>	.68	F = 5.66***
CL	4.04 <sub>e</sub>	.81	4.00	.67	4.25	.72	4.17	.90	4.40 <sub>a</sub>	.78	F = 3.89**

4) \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ;

5) Subscripts denote groups that are significantly different from each other based on Scheffe post-hoc analysis;

6) AI: Accommodation infrastructure; RQ: Room quality; FDQ: Front desk quality; FB: Food and beverage; SS: Safety and security; ABE: Attitude and behaviour of employees; EX: Expertise; CI: Customer interaction; SC: sociability; WT: Waiting time; SQ: Service Quality; CS: Customer satisfaction; CL: Customer loyalty; CE: Consumption emotions; PV: Perceived value; IM: Image

Generally, American visitors reported higher level of service quality across most of the attributes measured. They were also those who reported the highest level of consumption emotions, had the most positive image about the accommodation establishments, were most satisfaction with the accommodation, and displayed the highest level of customer loyalty. Significant differences were noted among the five nationalities for accommodation infrastructure ( $F = 7.15$ ,  $p < 0.001$ ), room quality ( $F = 4.62$ ,  $p < 0.01$ ), font desk quality ( $F = 3.99$ ,  $p < 0.01$ ), food and beverage quality ( $F = 3.25$ ,  $p < 0.01$ ), safety and security ( $F = 7.27$ ,  $p < 0.001$ ), attitude and behaviour of employees ( $F = 2.82$ ,  $p < 0.5$ ), customer interaction ( $F = 4.24$ ,  $p < 0.05$ ), sociability ( $F = 5.10$ ,  $p < 0.001$ ), consumption emotions ( $F = 4.91$ ,  $p < 0.05$ ), perceived value

( $F = 6.80, p < 0.001$ ), customer satisfaction ( $F = 5.66, p < 0.001$ ) and customer loyalty ( $F = 3.89, p < 0.01$ ).

## 5.5. Testing the Structural Equation Model

Given that the validity and reliability of the measurement model have been established (see Section 5.2), the structural model of the study was tested using AMOS. The model exhibited a good fit to the data as presented in Table 12. As shown, all fit indices were within the recommended range ( $\chi^2/df=2.469$ ; CFI = 0.940; TLI = 0.936; IFI = 0.930; RMSEA = 0.047).

Table 12: Fit indices of the structural model

	CMIN/DF	CFI	TLI	IFI	RMSEA
Model fit	2.469	0.940	0.936	0.930	0.047
Evaluative criteria	$1 < \chi^2/df < 3$	$> 0.90$	$> 0.90$	$> 0.90$	$< 0.05$

*Notes: CFI - Comparative Fit Index; TLI - Tucker Lewis Index; IFI - Incremental Fit Index; RMSEA - Root Mean Square Error of Approximation*

Results from the path analysis are presented in Table 13. Findings suggest a positive relationship between service quality and customer satisfaction with the accommodation establishments ( $\beta = .22, t = 4.04, p < 0.001$ ). Better service quality led to higher levels of customer satisfaction among our respondents. Consumption emotions ( $\beta = .13, t = 3.46, p < 0.001$ ), perceived value ( $\beta = .30, t = 7.79, p < 0.001$ ), and image ( $\beta = .39, t = 7.31, p < 0.001$ ) were also found to be significant predictors of customer satisfaction. In turn, customer satisfaction was found to be positively related to customer loyalty ( $\beta = .62, t = 12.47, p < 0.001$ ). Higher levels of customer satisfied led to more loyal customers. A significant positive relationship was also found between service quality and consumption emotions ( $\beta = .74, t = 14.59, p <$

0.001) and between service quality and image ( $\beta = .79, t = 14.62, p < 0.001$ ). Consumption emotions ( $\beta = .33, t = 8.00, p < 0.001$ ) and image ( $\beta = .56, t = 13.06, p < 0.001$ ) were significant predictors of perceived value.

Table 13. Results of path relationships

Path relationships	Results
Service quality → Customer satisfaction	$\beta = .22, t = 4.04, p < 0.001$
Consumption emotions → Customer satisfaction	$\beta = .13, t = 3.46, p < 0.001$
Perceived value → Customer satisfaction	$\beta = .30, t = 7.79, p < 0.001$
Image → Customer satisfaction	$\beta = .39, t = 7.31, p < 0.001$
Customer satisfaction → Customer loyalty	$\beta = .62, t = 12.47, p < 0.001$
Service quality → Consumption emotions	$\beta = .74, t = 14.59, p < 0.001$
Service quality → Image	$\beta = .78, t = 14.62, p < 0.001$
Consumption emotions → Perceived value	$\beta = .33, t = 8.00, p < 0.001$
Image → Perceived value	$\beta = .56, t = 13.06, p < 0.001$

## 5.6 Developing the SAASI

To create the SAASI, the following formula was utilized:

$$SAASI = \frac{\sum_{i=1}^3 w_i \bar{x}_i - \sum_{i=1}^3 w_i}{9 \sum_{i=1}^3 w_i} \times 100$$

Where,

In the formula:

$w_i$  represents the standardised regression weight for the  $i$  scale item of customer satisfaction

$\bar{x}_i$  represents the average perception of the  $i$  scale item of customer satisfaction;

$\sum_{i=1}^3 w_i \bar{x}_i$  represents the sum of the three products of standardized regression weight and the average score for each item;

$\sum_{i=1}^3 w_i$  represents the sum of the three standardized regression weights

The performance of the indicators of customer satisfaction (mean and standardized regression weight) is presented in Table 14. These values were substituted in the formulae to obtain the customer satisfaction index.

Table 14: Mean and Standardized Regression Weight

Indicators measuring customer satisfaction	Mean*	Standardized regression weight
I feel satisfied of the accommodation's overall performance.	8.42	0.874
The performance of this accommodation has met my expectations	8.30	0.859
The satisfaction level of this accommodation is quite close to my ideal accommodation.	7.78	0.822

\*Mean scores for the indicators have been converted to a 10-point scale as per Fornell et al. (1996)

$$SAASI = \frac{(0.874 \times 8.42) + (0.859 \times 8.3) + (0.822 \times 7.78) - (0.874 + 0.859 + 0.822)}{9(0.874 + 0.859 + 0.822)} \times 100$$

Findings indicated an overall customer satisfaction index of 79.9.

## 6. Discussion and Policy Implications

### 6.1 The South African Accommodation Satisfaction Index

The computed SAASI score of 79.9 out of 100 compares favourably with that of customer satisfaction index scores for the tourism and hospitality sector for other countries. For example, the ACSI score with regards to the hotel industry as at year 2015 was 75, which is lower than the SAASI by 4.9. The ACSI is also calculated for specific hotel groups and the highest score obtained in 2015 for particular hotel groups in the US, namely, Hilton, Hyatt, and Marriot was 80, only 0.1 above the SASSI. Likewise, for Singapore, the national customer satisfaction index for hotels in 2015 was 70.8 (Institute of Service Excellence, 2015) which is lower than that for

the US. Such benchmarks are indeed very encouraging for the South African accommodation industry and it is recommended that this is communicated to major stakeholders.

However, benchmarking customer satisfaction indices in a cross-sectional way across countries should be done with some caution. Satisfaction of accommodation is an evaluation of the accommodation service by customers. This evaluation process is explained by the expectancy disconfirmation theory proposed by Oliver (1980). The theory suggests that when customers purchase goods and services they do so while having a pre-purchase expectation about the performance of the goods or services. The customer then compares his or her consumption experience with the expectation. If the performance meets the expectation level of the customer is known as confirmation, if not, this results in disconfirmation which can be either positive or negative. Positive disconfirmation refers to a situation where performance exceeds expectations while negative disconfirmation happens when performance is below expectations. The implication of Oliver's (1980) theory is that a high customer satisfaction index scored compared to other countries may not necessarily mean that customers are more satisfied. Thus, the high customer satisfaction index score obtained from the present study may also mean that customers of accommodation services in South Africa have a lower expectation than customers of accommodation services in the USA or Singapore.

Customer satisfaction indices are usually used primarily to measure customer satisfaction over time at national or industry level and comparisons are made



between present scores and previous scores. For example the ACSI for the hotel industry has declined from a score of 77 in 2013 to 75 in 2014 and 2015. It is therefore recommended that the South African Accommodation Satisfaction Index should be computed on a regular basis, at least annually, so that the level of customer satisfaction can be monitored and necessary actions taken where needed.

A significant difference was found in level of customer satisfaction between park and non-park accommodations. Park accommodations had a significantly higher level of satisfaction, although most of them were ungraded establishments. Differences were also found to exist between accommodations of different grading. The five star accommodations were the best rated as expected followed by four star and three star accommodations. These findings therefore imply that emphasis should be laid on non-park and lower graded accommodations. Since customer satisfaction was found to be strongly influenced by service quality improving service quality is a major requisite as discussed next.

## **6.2 Service Quality**

Service quality of accommodation services in South Africa was found to be best represented using ten dimensions, namely, (1) general infrastructure, (2) room quality, (3) front desk quality, (4) food and beverage quality, (5) safety and security, (6) attitude and behaviour of employees, (7) expertise of employees, (8) customer interaction, (9) sociability and (10) waiting time. The gap analysis showed that two service quality dimensions had a negative gap score. Following the expectancy disconfirmation theory, the negative gap score indicates a negative disconfirmation

and hence demonstrates that customers of accommodation services in South Africa are not satisfied with regards to these two particular dimensions. The two dimensions are “safety and security” and “food and beverage quality”.

Safety and security has also been found to be a very important service quality dimension for hotels and other accommodation services by previous studies (Enz and Taylor, 2002; McGoey, 2008). Safety and security involves the protection of the customers from physical harm as well as their belongings. It also includes the security features of the accommodation itself. One of the indicators used to measure safety and security is about the general safety of the location where the accommodation is found. It is important that accommodation managers and policy makers take appropriate measures to enhance the sense of security of its customers. Also, if there are some places which are not really safe and the situation is really beyond the control of those responsible for decision making in relation to accommodation then it might be better to make sure that customers are aware of the potential lack of safety. Awareness of potentially unsafe environment will result in lower expectations, lowering the risk of negative disconfirmation of expectation, that is, dissatisfaction. Other indicators of the safety and security dimension include accommodation security features such as accessible fire exit, secured room door, sprinkle systems and availability of secure safe. Accommodations in South Africa should therefore ensure that such security features are not only conforming to health and safety regulations but up to the standard of customers' expectations.

Some significant group differences were also found regarding safety and security. Perceived safety and security was found to be significantly lower for non-park accommodations compared to park accommodations. Efforts to improve safety and security should therefore be focused on non-park accommodations. With regards to grading, there were significant differences between five star accommodation and those graded 3 stars or lower. As anticipated, grade four star and five star accommodations scored higher on safety and security. Hence lower graded accommodations are the one which need to make the most efforts to improve customers' perception of safety and security. Finally, it was also observed that significant differences exist between customers based on their purpose of visit. Customers who reported to be visiting friends and relatives had the lowest perception with regards to safety and security. A possible explanation could be that they travel with family and are therefore more concerned about safety and security issues. So emphasis should also be on taking care of such type of visitors.

The second service quality dimension which obtained a negative gap score is "food and beverage quality". This dimension comprised of indicators relating to the overall quality of food and beverage served at the accommodation, the variety of meals available, and whether cultural differences are taken into account with respect to the food and beverages being offered. It is therefore recommended that additional research is made on customers' food and beverage preferences. No differences were found between park and non-park accommodations or between various provinces with regards to perceived quality of food and beverage. However, as expected, there are significant differences between accommodations of different

grading. Four and five star accommodations establishments were rated much better than three star or lower graded accommodations for quality of food and beverage. Hence, special focus should be on these types of accommodations.

The testing of the structural model also provided some significant results that can be used to develop policies. Firstly the results suggest that customer satisfaction is influenced by service quality, consumption emotions, perceived value and image. The strongest determinant of customer satisfaction was image, followed by perceived value. As image is a service evaluation construct which is greatly influenced by past information about the organization, accommodation establishments need to make sure that their marketing activities helps to construct the best image possible in the minds of its existing and prospective customers. The grading of the accommodation also definitely impacts on its image and therefore, it might be worth for accommodation establishments to invest as far as possible to upgrade their rating which may well result in an improved image in the long run.

Perceived value was also found to have a positive influence on customer satisfaction. It is worth noting that taking initiatives to improve the quality of accommodation service will inevitably result in increase in cost, referred to as the cost of quality. A higher cost might result in higher charges for customers. Therefore, it is important that such an increase in costs do not negatively influence the extent to which customers view the accommodation services provide value. Since perceived value itself depends on service quality, this re-emphasises the need for quality initiatives to result in high level of perceived service quality and customer satisfaction. While this

does not actually lead to new practical recommendations as such, it does strengthen then need to take remedial actions to improve service quality, in particular with regards to the two negative gap scores identified.

## **7 Conclusion and Limitations**

The purpose of the study was to (1) explore existing indices used by other countries to measure customer service satisfaction in a tourism sector, with particular reference to accommodation, (2) identify service quality gaps (expectation versus actual) in the South African accommodation sector (3) investigate the determinants of service quality and customer satisfaction in the South African accommodation sector, and (4) develop and test a SAASI. These objectives were achieved using data collected on 672 travellers staying in the various types of accommodation establishments located in Mpumalanga Western Cape, Kwazulu-Natal, and Gauteng. To ensure representativeness, park and non-park as well as different grading of accommodation establishments were included in the study.

A confirmatory factor analysis confirmed the reliability and validity of the measurement model. Following this process, the gap analysis was carried out and indicated positive gaps for most of the service quality attributes. However, accommodation establishments did not meet the expectations of guests when it comes to quality of food and beverages and safety and security. Thus, it is very important for accommodation establishments to enhance their quality of service in these two areas. Further analysis revealed that park accommodation establishments were rated better by our respondents than non-park establishments. Contrary to what

one would have expected, one star accommodation establishments were rated better than two star establishments, although such a finding may be because guests staying in one star accommodation establishments have lower service quality expectations. The tested structural equation model also revealed a good model fit and explained a considerable amount of variance in customer satisfaction. Interestingly, the score obtained for the SAASI is comparable to international standards. In general, results are encouraging for destination marketers, tourism planners, and accommodation managers, although service quality performance should be improved in some areas. It is hoped that this piece of research provides policy makers such as those working at NDT and TGSA with enough substance to improve service quality in the South African accommodation sector.

Nevertheless, despite the practical and theoretical implications of the study, the latter is not without caveat. First, researchers face the challenge of maintaining a delicate balance between keeping the survey short so that respondents answer all questions and making it long enough to obtain all necessary information (Schall, 2003). Two factors influence a respondent's decision to complete a survey. First is the perceived amount of effort involved in filling out the survey. The longer the survey, the more time and effort is required of participants to complete the survey. That time and effort are seen as costs that may not be offset by the perceived value of providing responses. Second, the more salient the topic, the greater is the likelihood that respondents will complete a lengthy survey (Schall, 2003). These constraints may have influenced the sample size of the present study. A large sample may influence the magnitude and direction of the path relationship of the structural model.

Second, data collection was limited to four provinces of South Africa which may limit the generalizability of the results. Given that our study found some differences in service quality among the provinces, it is recommended that future research collects data from all provinces so that a better comparison of the level of service quality can be made. Finally, the ultimate dependent variable of the study is given as customer loyalty. Previous studies (e.g. Deng et al., 2013) suggest that variables such as customer complaints are inversely related to customer loyalty and customer satisfaction. It is therefore recommended that such a construct is included in future studies and its relationship with service quality, customer satisfaction and customer loyalty is investigated. This will provide marketers and accommodation managers with valuable insights on post-satisfaction behaviors.

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