A Comprehensive Hierarchical Model of Beach Resort Hotel Stays in Thailand: An Empirical Analysis

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A thesis

submitted in partial fulfilment

of the requirements for the Degree of

Doctor of Philosophy

at

Lincoln University

by

Rachata Channoi

Lincoln University

2014

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Beach resort hotels are unique service organizations in terms of their long stay duration and high customer involvement. Currently, beach resort hotels are in a very competitive marketing environment in Thailand. A study that develops a much deeper insight into the marketing constructs such as service quality and its dimensions, customer perceived value, satisfaction, corporate image, and customer loyalty is of vital importance for beach resort hotels to survive in the competitive market. Therefore, this study aims to adopt a comprehensive hierarchical modelling approach as a framework to identify the primary dimensions and sub-dimensions of service quality and to analyse the interrelationships between the five higher-order marketing constructs. This study uses mix method research to analyse the data.

The data was collected in Phuket Province between April 1st and August 20th 2012 using a self-administered survey. Three focus group interviews and a pre-test preceded the data collection process.
In addition, Exploratory Factor Analysis, Confirmatory Factor Analysis, and Structural Equation Modelling were used to analyse the data.

The results support a comprehensive hierarchical structure of service quality for beach resort hotel stays that consists of eleventh first order sub-dimensions: attitude, behaviour, professionalism, décor & ambience, room quality, design, location & convenience, facility & activity, valence, waiting time and sociability, three second order primary dimensions: interaction, physical environment and outcome quality and overall service quality. The sub-dimensions that drive the three primary dimensions vary in number and importance. However, outcome quality is the most important primary dimension for overall service quality performance.

Furthermore, customer satisfaction and corporate image are the two key determinants of customer loyalty. Service quality, corporate image and customer perceived value are three significant descriptors of customer satisfaction. Service quality is the most important determinant of customer satisfaction which is the most significant antecedent of customer loyalty. Service quality and customer perceived value are two significant determinants of corporate image. Lastly, customer satisfaction is a complete mediator on the relationship between service quality and customer loyalty, customer perceived value and customer loyalty.

Keywords: Thailand, Resort Hotels, Comprehensive Hierarchical Model, Service Quality and Structural Equation Modelling.

Acknowledgements

Completing a PhD degree is not a solitary journey; it would be impossible without support from others. Fortunately, I do have many lovely people who have consistently supported and assisted me throughout the PhD journey. The most sincere appreciation goes to my family especially Mr Prasun Channoi (my father) and Mrs Pen Channoi (my mother) who inspire me to study a PhD. Due to their great understanding and support, I finally passed through seveal arduous times in my life as well as several obstacles during study in New Zealand.

My deepest appreciation also goes to my main supervisor, Mr Michael D. Clemes, who provided wholehearted inspiration and assistance. Under his supervision, I could feel his enthusiastic support, guidance, ungrudging generosiy with time, resources and comprehensive comments; these made me comfortable and happy during my PhD experience at Licoln University. His sharp ideas and detailed reviews really helped to round off the very rough edges of my work. I would also like to thank Dr. David Dean, my associate supervisor, for his kindness and assistance. His enthusiastic support, sharp and comprehensive comments helped me to improve my thesis incredibly better.

Completing this PhD have been impossible without the support of the Graduate School of Public Administration, Burapha University, especially the former dean (Associate Prof. Dr. Sarut Sakulrat) who gave me permission and support to study English language and a PhD. in New Zealand.

Special appreciation goes to the owner of Chang Thai restaurant and Thai Pho Thong Restaurant who provided me a parttime job which really helped me save on living costs as well as release some stress from studying. Moreover, I would like to thank all of my lovely collegues from these two restaurants especailly Mrs.Titiporn Bunrueang who supplied me special Thai meals. I also would like to thank all of my Thai friends at lincoln univeristy, in Chrsitchurch city, in Thailand, and other places as well as my international friends at lincoln universtiy for their excellent relationships and support.

Lastly, I would like to extend my appreciation to everyone who supported and encouraged me to complete my PhD even though their names are not acknowledged here.

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Chapter 1

Introduction

1.1 Problem Setting

Thailand is a gateway to Indochina (Vietnam, Lao, Myanmar, China and Cambodia), and an ideal tourist destination. Thailand features a combination of sun, sand and sea, modernity and heritage, shopping, dining, golfing and friendly people (Al-Swidi & Shahzad, 2014). Thailand has an impressive growth record within the international tourism industry during the last decade (Al-Swidi & Shahzad, 2014).

Currently, the tourism industry is a 'kingpin' of the Thailand's economy and the industry has become a major income source for Thailand (Al-Swidi & Shahzad, 2014; Tourism Authority of Thailand, 2014a). In 2010, income from the tourism industry was 592.79 billion Thai Baht (NZ$21.93 billion), increasing 30.94 percent to 776.22 billion Thai Baht (NZ$28.75 billion) in 2011. In 2012 income generated by domestic and international tourists increased 26.76 percent 983.92 billion Thai Baht (NZ$36.44 billion). In 2013, tourism revenue increased by 19.08 percent, or 1171.65 billion Thai Baht (NZ$43.39 billion). Tourism income is projected to be 1350 billion Thai baht (NZ$50 billion) in 2014 (Department of Tourism, 2014).

A primary reason for the projected rise in tourism revenue is the increasing number of international tourists visiting Thailand. The number of international tourists visiting Thailand has been increasing every year (Department of Tourism, 2014). For example, the number of international tourists visiting Thailand was 22,353,903 in 2012, rising to 19.60% in 2013 (26,735,583), with 29.92 million visitors predicted in 2014 (Department of Tourism, 2014). This increase has acted to maximize the income from the tourism industry for Thailand, as international tourists usually spend twice the amount of money when compared to domestic tourists (Department of Tourism, 2014; The Office of SMEs Promotion, 2010). For example, domestic tourists spend approximately 2,000 Thai Baht per day, while Australian tourists spend approximately 5,088.31 Thai Baht per day.
Tourists from the United States spend approximately 4,606 Thai Baht per day (Department of Tourism, 2014; The Office of SMEs Promotion, 2010).

International tourists normally have a longer duration of stay than domestic tourists, as the majority of international tourists visit Thailand for a longer vacation period (Department of Tourism, 2014; The Office of SMEs Promotion, 2010).

For instance, the average length of stay for Asian tourists is from 5 to 7 days, whereas from 12 to 17 days is the norm for tourists from Europe, America and Oceania (primarily Australia and New Zealand) (Department of Tourism, 2014; The Office of SMEs Promotion, 2010). In addition, one half of their budget spent by international tourists is for accommodation (The Office of SMEs Promotion, 2010).

The rapid growth of the tourism industry has directly impacted on the accommodation market in Thailand by increasing the demand for all types of accommodation (Business Monitor Interantional, 2014). Buoyant demand has led to the establishment of several types of accommodation, including hotels, serviced apartments, guest houses and condominiums. For example, the number of hotels in Thailand was approximately 6,992 in 2009, increasing to 7,334 in 2010 and 9,865 in 2011 (National Statistical Office, 2012).

The service liberation agreement among the ASEAN member nations (Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Vietnam and Thailand) also aims to liberalise trade in services in the region, in conjunction with the vision to create the ASEAN Economic Community (AEC). This agreement is predicted to have a positive impact on the hotel industry in Thailand as it will allow foreign shareholders in ASEAN-based companies to increase their shareholding to up to 70 percent by 2015. The agreement is projected to lead to the expansion of the Thailand hotel industry as international hotel chains invest in the region as well as ASEAN based investors. One of the expected results of this process is that Thailand's hotel industry will face an increasing competitive environment (Department of Tourism, 2012).

In addition, Thailand has faced political instability since 2012 (Tourism Authority of Thailand, 2014a). In May of 2014, the Thailand's army took control of the government (Tourism Authority of Thailand, 2014b). This prompted several cautions to tourists regarding travel and staying in Thailand. Thailand's army has assured tourist that the nation is a safe and peaceful holiday destination and have welcomed them to enjoy the country (Tourism Authority of Thailand, 2014b).
However, the political unrest is expected to put competitive pressure on Thailand's accommodation market and to counter the competition a high level of service quality must be delivered by beach resort hotels (Tourism Authority of Thailand, 2014b). This is a critical strategy as several of Thailand's neighbouring countries offer beach resort hotel stays (e.g. Vietnam, Indonesia, and Malaysia).

1.2 Resort Hotels

Resort hotels are an important part of the accommodation business segment and they are extremely important for the Thailand's local economy, as 72.8 percent of resort hotel entrepreneurs are primarily owned by citizens of Thailand (The Office of SMEs Promotion, 2010). Resort hotels also create substantial local employment as they are positioned widely across Thailand (The Office of SMEs Promotion, 2010).

Gee (1981) describes resort hotels as a type of accommodation that creates an environment to promote and enhance a feeling of well-being and enjoyment for guests. Richadson (2000) identifies two core concepts of a resort hotel: a location in pleasant physical surroundings and supplying recreational amenities. Richadson (2000) explains that a resort hotel should be located in a unique vacation spot that is desirable because of its pleasant physical surroundings, such as climate and scenery, plus its access to recreational attractions. A resort hotel should also provides indoor amenities, entertainment and other facilities to provide a superior quality of service (Richadson, 2000). Yang and Chan (2010) suggest that resort hotels should have a sufficient outdoor area with beautiful views and recreational facilities to create a more leisurely surrounding.

The Centre for Resort and Hospitality Business (2009) defines a resort hotel as an accommodation located in a vacation-oriented setting which provides a full-service lodging facility that includes access to, or offering a range of amenities and recreation facilities to emphasize a leisure experience. The Centre for Resort and Hospitality Business (2009) also reports that there are several criteria that a lodging property must meet for it to be considered as a resort hotel. Firstly, a lodging property needs to provide a signature amenity, attractions and/or geographically significant attributes such as golf, skiing, mountain, beach, ocean, lakeside, casino/ gaming, along with all-inclusive facilities such as spa/health/ wellness, and marina, tennis courts and a water park. Secondly, it may be necessary that a lodging property provides further amenities, called “anchor attributes” that refers to a non-typical theme linking tertiary or secondary resort amenities and attributes to provide a signature amenity, for example, a dude ranch. Thirdly, a resort hotel should create recreation/ leisure/ entertainment experiences (RLE-E) which refer to secondary amenity which add to the resort experience for guests such as beach volleyball or organized activities for children. Fourthly, a resort hotel should provide a comprehensive service, including a range of amenities and services to address customer wants and needs, including offering a variety of amenities and activities such as restaurant, room service and concierge.

In addition, there are several criteria applied to classify resort hotels into different typologies. Lawson (1995) uses geographical and characteristic service features to classify resort hotels.
For example, beach resort hotels, mountain resort hotels, spa resort hotels and rural resort hotels.
Mill (2001) uses the number of rooms for classification purposes: 25 rooms or fewer, 25-125 rooms, 125-400 rooms and more than 400 rooms. Power and Barrow (2003) use seasonal basis as a criterion to classify resort hotels: summer resorts, cold winter resorts, year-round resorts.
Dittmer (2002) uses property types to classify resort hotels: traditional resorts, all-inclusive resorts, condominium resorts and resort motels.

This current study concentrates on beach resort hotels only, which are the dominant resort hotels in Phuket Province, Thailand. Beach resort hotels in Thailand meet the criteria and offer several combinations of the amenities described by The Centre for Resort and Hospitality Business (2009). Beach resort hotels in Thailand must also be prepared to face an intense competitive environment as the changes fostered by the ASEAN agreement increase the number of resort hotels and other types of accommodation nationwide. In this intense environment, resort hotel entrepreneurs need to investigate, establish, and then implement successful marketing strategies to remain competitive and profitable in order to ensure their survival.

1.3 The Higher Order Marketing Constructs

A study that develops a much deeper insight into the interrelationships between the higher order marketing constructs such as service quality, customer perceived value, satisfaction, corporate image, and customer loyalty, that is important for the hotel industry in general, is also extremely important for resort hotels if they are going to flourish in a very competitive marketing environment (Clemes, Gan, & Ren, 2011; Hu, Kandampully, & Juwaheer, 2009). In addition, the empirical results of several studies identify a significant statistical relationship between these five important service marketing constructs and the financial performance of firms (Chand, 2010).

Among the higher order constructs, service quality is recognized as extremely important by the hospitality industry. Favourable customer perceptions of service quality often leads to favourable perceptions of the other higher order constructs (customer perceived value, corporate image, customer satisfaction and customer loyalty) which then drive an impetus to enhance the financial performance of service firms (Chand, 2010; Clemes, Gan, et al., 2011; Hu et al., 2009). Ladhari (2009) reports that providing superior service quality enables service organizations to increase customer satisfaction, customer retention rates, positive word of mouth, reduce staff turnover, decrease operating costs, and enlarge market share, all of which ultimately lead to increased profitability and improved financial performance. Chand (2010) notes a significant and positive relationship between service quality, customer satisfaction and organizational performance (sales growth, profitability within unit, profitability within industry, sales volume, and market share within industry) for the Indian hotel industry. Chad's (2010) results suggest that providing superior service quality leads to high perceptions of satisfaction and to a firm's profitability (Chand, 2010).

The importance of service quality has been broadly analysed by both academics and practitioners, and numerous service marketing scholars have studied and conceptualised service quality for various industries (Ladhari, 2008; Rawida, 2013; Wilkins, Merrilees, & Herington, 2007).

However, the exact number and characteristics of the dimensions of service quality are still contentious across industries and cultures as the dimensions of service quality depend on the type of service examined and its cultural setting (Akbaba, 2006; Brady & Cronin, 2001; Pollack, 2009; Prakash & Mohanty, 2013). Akbaba (2006) concludes that conceptualising service quality for the hotel industry may be more complicated than other service industries, as the hotel industry has unique attributes. Characteristics including imprecise standards, a short distribution channel, reliability and consistency, face to face interaction and information exchange, and fluctuating demand are identified as further complicating the task of defining, delivering and measuring service quality in the hotel industry. Akbaba (2006) also clarifies that different types of hotels (resort hotels, motels, airport hotels, convention hotels) are designed to serve different customer segments that all have distinguishing characteristics and differing lengths of customer contact time.

Akbaba (2006) notes that the dimensions of service quality may even vary across the different type classifications of hotels. For example, resort hotels mostly serve holiday travellers who have a longer duration of stay and more frequent contact with service providers and other customers. Conversely, motels mainly serve both holiday travellers and business travellers who normally require a shorter length of stay and a lower level of contact with service providers and other customers, as motel customers usually interact with motel staff only for checking in, checking out, and sometimes for particular service requirements (Clemes, Gan, et al., 2011).

1.4 Comprehensive Hierarchical Modelling

Several researchers have developed instruments to measure service quality and its dimensions for the hotel industry based on the SERVQUAL instrument (for a discussion of the SERVQUAL instrument see Parasuraman et al., 1985, 1988). Replications of the SERVQUAL instrument include: LODGQUAL (Getty & Thompson, 1994), HOLSERV (Mei, Dean, & White, 1999), LODSERV (Knutson, Stevens, Wullaert, Patton, & Yokoyama, 1990). However, the conceptual and empirical problems associated with SERVQUAL and its replications have been discussed in several studies (Babakus & Boller, 1992; Brown, Churchill, & Peter, 1993; Buttle, 1996; Carman, 1990; Cronin & Taylor, 1992; Ladhari, 2009). For example, the SERVQUAL and its replications do not measure the service outcome, even though the empirical evidence from several studies confirms that service outcome is an essential aspect of any service quality evaluation (Ladhari, 2009) (See Section 2.3.1.1). In addition, several researchers have noted that service quality and its descriptors should be more thoroughly evaluated across and within industries and cultures (Brady & Cronin, 2001; Clemes, Shu, & Gan, 2014; Pollack, 2009).

Numerous scholars suggest that service quality is a multi-dimensional and hierarchical construct, and that it consists of various sub-dimensions (Brady & Cronin, 2001; Clemes et al., 2014; Dagger, Sweeney, & Johnson, 2007; Prakash & Mohanty, 2013).

In addition, several scholars provide empirical evidence for applying a multi-dimensional and hierarchical approach to conceptualise service quality for a variety of service industries and cultural settings, such as mobile phone services (Clemes et al., 2014), education (Clemes, Cohen, & Wang, 2013; Clemes, Gan, & Kao, 2007), health services (Dagger et al., 2007), hotel stays (Clemes, Wu, Hu, & Gan, 2009), motel stays (Clemes, Gan, et al., 2011), ski resorts (Kyle, Theodorakis, Karageorgiou, & Lafazani, 2010) and professional sport (Clemes, Brush, & Collins, 2011).

A multi-dimensional and hierarchical modelling approach to conceptualize service quality has not been applied in a resort hotel stay context, which is unique in the accommodation market in terms of a typical longer duration of stay and higher customer/provider interactions (Clemes, Mollenkopf, & Burn, 2000; Lovelock & Wirtz, 2011). Customers of resort hotels regularly become actively involved with the service organization throughout the service process over an extended period of time. Customers may also have a high degree of interaction with other customers during their stay and this is not typical of most hotel/motel stays. Normally, customers will have several encounters with service providers and may use several of the service products offered by the resort hotel many times during their stay. This longer period of interaction may influence the type and number of service quality dimensions when they are compared to those of other types of hotels (Akbaba, 2006; Shergill & Sun, 2004; Yang & Chan, 2010).

Recently, comprehensive hierarchical modelling has been used to determine the type and number of dimensions of service quality and to determine the interrelationships between service quality and the other higher marketing constructs in a path model. In comprehensive hierarchical modelling, the service quality measurement model and the interrelationships between the higher order constructs in a service setting are simultaneously analysed using the perceptions from a single sample (Clemes, Brush, et al., 2011). However, comparatively few studies have developed and tested comprehensive hierarchical models. To date, no published studies have focused on resort hotels (See Section 2.6). Therefore, this study applies a comprehensive hierarchical model as a framework to identify the sub-dimensions and primary dimensions of service quality specifically relevant to resort hotel stays in Thailand (a third order conceptualization), as well as testing the interrelationships between the five higher-order marketing constructs.

The management of beach resort hotels in Thailand are facing increasing competition and they need to investigate, establish and implement successful marketing strategies to remain competitive and profitable to ensure their survival. Therefore, a study that develops a much deeper insight into the interrelationships between marketing constructs such as service quality, customer perceived value, satisfaction, corporate image, and customer loyalty is of vital importance for the resort hotels to flourish in a very competitive market (Clemes et al., 2009; Hu et al., 2009).

The empirical results of several studies assert the positive impact of these five important service marketing constructs on the financial performance of hotels in general (Chand, 2010; Hu et al., 2009; Kandampully & Suhartanto, 2003).

1.5 Research Gaps

The first research gap stems from the empirical results of several previous studies that support the capability of multi-dimensional and hierarchical modelling in capturing the complexity of customers' perceptions of service quality for several types of services (Clemes, Brush, et al., 2011). However, to date no study has identified a specific set of service quality dimensions and examined how these dimensions contribute to customers' perceptions of service quality for beach resort hotels (a long-duration and high customer involvement service) located in Thailand. Brady and Cronin (2001) advocate a multi-dimensional and hierarchical approach to model service quality as it overcomes several disadvantages of the SERVQUAL instrument and its replications. In addition, several scholars suggest that the multi-dimensional and hierarchical modelling approach still needs to be further investigated within different marketplaces in order to validate this type of model (Brady & Cronin, 2001; Clemes et al., 2014; Pollack, 2009; Prakash & Mohanty, 2013).

The second research gap relates to a lack of published research that identifies the most and the least important service quality dimensions, as perceived by beach resort hotel customers in Thailand. Several studies have advocated identifying the relative importance of the sub-dimensions for resource allocation and strategic planning purposes (Clemes et al., 2014; Clemes et al., 2009).

The third research gap relates to developing and testing a comprehensive hierarchical model in the accommodation industry (Clemes, Gan, et al., 2011). To date, a comprehensive hierarchical model has not been developed or tested for any classification of resort hotels as no study has measured the important and complex interrelationships between the higher order service marketing constructs such as service quality, customer satisfaction, customer perceived value, corporate image, and customer loyalty using a single, causal path model. In particular, no study has identified or measured the interrelationships between these constructs within a beach resort hotel context. Nor has any study tested the mediating impacts of the relationships between service quality, customer perceived value and customer loyalty for beach resort hotels located in Thailand. Several scholars advocate continue research into these relationships as they may not be stable within industries, across industries, or across cultures (Clemes et al., 2014; Howat & Assaker, 2013; Pollack, 2009).

1.6 Research Objectives

The main purpose of this study is to develop and test a comprehensive hierarchical model in order to analyse the interrelationships between the sub-dimensions and primary dimensions of service quality, and the interrelationships between the higher order constructs (overall service quality, customer satisfaction, customer perceived value, corporate image and customer loyalty) for a long-duration and high customer involvement service as represented by beach resort hotel stays.

The three specific research objectives are to:

1. Identify the sub-dimensions and primary dimensions of service quality, as perceived by beach resort hotel customers in Thailand.
2. Identify the order of importance of the service quality primary dimensions and sub-dimensions as perceived by beach resort hotel customers in Thailand.
3. Analyse the interrelationships between the higher order marketing constructs (service quality, perceived value, customer satisfaction, corporate image and customer loyalty) as perceived by beach resort hotel customer in Thailand using a comprehensive hierarchical model.

1.7 Contribution of this research

Satisfying the three research objectives will contribute to the service marketing literature from both an academic and a practical perspective.

First, from a theoretical perspective, this study will enhance the body of knowledge about how service quality perceptions are formed in long duration and high customer involvement services such as beach resort hotels. In addition, this study will provide a tailored and valuable instrument for conceptualising the perceptions of service quality for beach resort hotel stays that will enable researchers to overcome several weaknesses of traditional instruments such as the SERVQUAL and its replications: LODSERV, LODQUAL and HOLSERV.

Secondly, to date, only a few studies have developed and tested a comprehensive hierarchical model (see Section 2.6). Currently, there is no published study which has developed and tested a comprehensive hierarchical model that has included a set of first-order (sub-dimensional level), second-order (primary dimensional level), third-order (overall service quality) and the higher order constructs (service quality, corporate image, customer perceived value, customer satisfaction and customer loyalty) in a long duration and high customer involvement service as represented by beach resort hotels in Thailand.

Testing a comprehensive hierarchical model, developed for beach resort hotel stays, will contribute to the service marketing literature by introducing an integrated conceptual modelling framework that may be adopted by researchers who aim to determine the complex interrelationships existing between these higher order constructs for different types of hotels, as well as for resort hotels located in other countries.

Moreover, this study includes assessment of the mediating impact of customer satisfaction on the relationship between service quality and customer loyalty, and the relationship between customer perceived value and customer loyalty.

This analyses will add to the body of knowledge and help future researchers overall understanding of the comprehensive and complex interrelationships between these higher-order constructs in a beach resort hotel stay context.

From a practical perspective, this study will benefit resort hotel entrepreneurs by providing them with a framework that will help them develop and implement successful service marketing strategies which, in turn, will promote the attraction of new customers and the retention of existing customers.
In addition, resort hotel management teams will have an improved understanding of how to meet customer needs and wants, thus allowing more effective targeting of resources.

This study will illustrate a reliable and valid measurement instrument that can be used as a tool to evaluate service quality for the resort hotel industry in general, which will benefit resort hotel operators who seek to improve their strategic marketing. Moreover, the information gained about the interrelationships between the higher order constructs will also be a source of valuable information for resort hotel marketers to create marketing strategies to increase the number of loyal customers.

1.8 Structure of Thesis

The structure of this thesis is composed of six chapters.

Chapter 1 illustrates the background of the research which consists of problem-setting, definition of resort hotel, research gaps, research objective, theoretical contribution and practical contribution.

Chapter 2 presents the literature related to the comprehensive hierarchical modelling that includes service quality, other higher service marketing constructs (customer perceived value, corporate image, customer satisfaction and customer loyalty) and applying the comprehensive hierarchical modelling.

Chapter 3 Chapter 3 begins with the discussion of the proposed theoretical frame work in this study, followed by the discussion of the literature relevant to all the constructs used to develop the 19 research hypotheses in order to satisfy the research objectives.

Chapter 4 illustrates the research methodology including: instrument development, data collection procedures and data analysis procedure.

Chapter 5 describes the result of the data analysis that begins with the result of testing the response rate and the preliminary data analysis, the characteristics of the samples, the exploratory factor analysis (EFA) of each primary dimension (interaction quality, physical environment quality and outcome quality), and the Structural Equation Modelling (SEM) which includes: the confirmatory factor analysis (CFA), the path analysis and the mediating analysis.

Chapter 6 is the conclusion of this study, and consists of the discussion related to the conceptualisation of service quality for resort hotels, the relative importance of primary dimensions and sub-dimensions, and the interrelationships between the higher order constructs. Then, the theoretical implications, the managerial implications, the limitations, and the direction for future research are presented respectively.

Chapter 2

Literature Review

2.1 Introduction

This chapter reviews the multidimensional and hierarchical modelling of service quality and the potential interrelationships between the higher order constructs such as service quality, customer satisfaction, customer perceived value, corporate image and customer loyalty. The following sections discuss the conceptualisation of service quality, customer satisfaction, customer-perceived value, corporate image and customer loyalty, followed by the interrelationships between these constructs and the application of the comprehensive hierarchical modelling in detail.

2.2 Conceptualization of Service Quality

Parasuraman et al. (1988) identify service quality as the degree and direction of discrepancy between service perceptions and expectations of customers. Service quality is also described as a form of attitude and a judgement by customers about the overall superiority of a service (Carman, 1990; Cronin & Taylor, 1992; Parasuraman et al., 1988). The conceptualisations of service quality and satisfaction may seem equivalent; nevertheless, these constructs are different, with two distinctive aspects.

First, service quality is a long-term overall evaluation, compared to satisfaction, which is a specific transaction measurement (Bitner, 1990; Parasuraman et al., 1988). Second, both service quality and satisfaction are described as a gap in the comparison between expectation and service performance in the disconfirmation paradigm. However, the literature clearly indicates that the term “expectation” in service quality and satisfaction conceptualisations are viewed differently. Expectation, in the satisfaction literature, is viewed as customers’ predictions about service performance, whereas in the service quality literature, expectation is viewed as customers’ desires or wants (Parasuraman et al., 1988).

There are two dominant schools of thought in the conceptualization of service quality: the Nordic and the American perspectives (Bowen & Chen, 2001). The Nordic perspective defines service quality as the outcome of an evaluation process; a comparison between service expectations and service perceptions through technical quality and functional quality (Grönroos, 1984) (see Section 2.2.1). Alternatively, the American perspective defines service quality as a result of comparisons between expectation and perception of service performance via reliability, responsiveness, empathy, assurances, and tangibles (Parasuraman et al., 1988) (see Section 2.2.2).

The two service quality perspectives have led to the development of several conceptual models of service quality, either based on the Nordic or the American approach or a combination of both perspectives. The following sections will discuss service quality models advanced in the literature, in more detail.

2.2.1 The Nordic Model

The Nordic model was the original perceived service quality model, developed and tested by Grönroos (1984). This model suggests that perceived service quality is an outcome of the gap which emerges from the differences between service expectations and service performance perceptions, through technical and functional quality dimensions (Grönroos, 1984). Functional quality refers to how a service is provided and delivered to customers, whilst technical quality refers to the actual outcomes received by customers after the service process and buyer-seller interaction have been completed (Grönroos, 1984). The model also suggests that 'images' are built up as a result of technical and functional quality. Thus, a favourable image can influence perceived service quality of service organizations and increase the likelihood that customers will continue to interact with the same service organizations. As a result, prior experiences and overall perceived service quality of the firms are held in customers' memories, and these form an image in customers' minds, which remains after the actual service encounters (Grönroos, 2001). Kang and James (2004), note that if customers hold a positive image of an organization in their minds, minor mistakes might be easily forgiven; whereas if a negative image exists in the customers' mindsets, the same mistakes could be magnified.

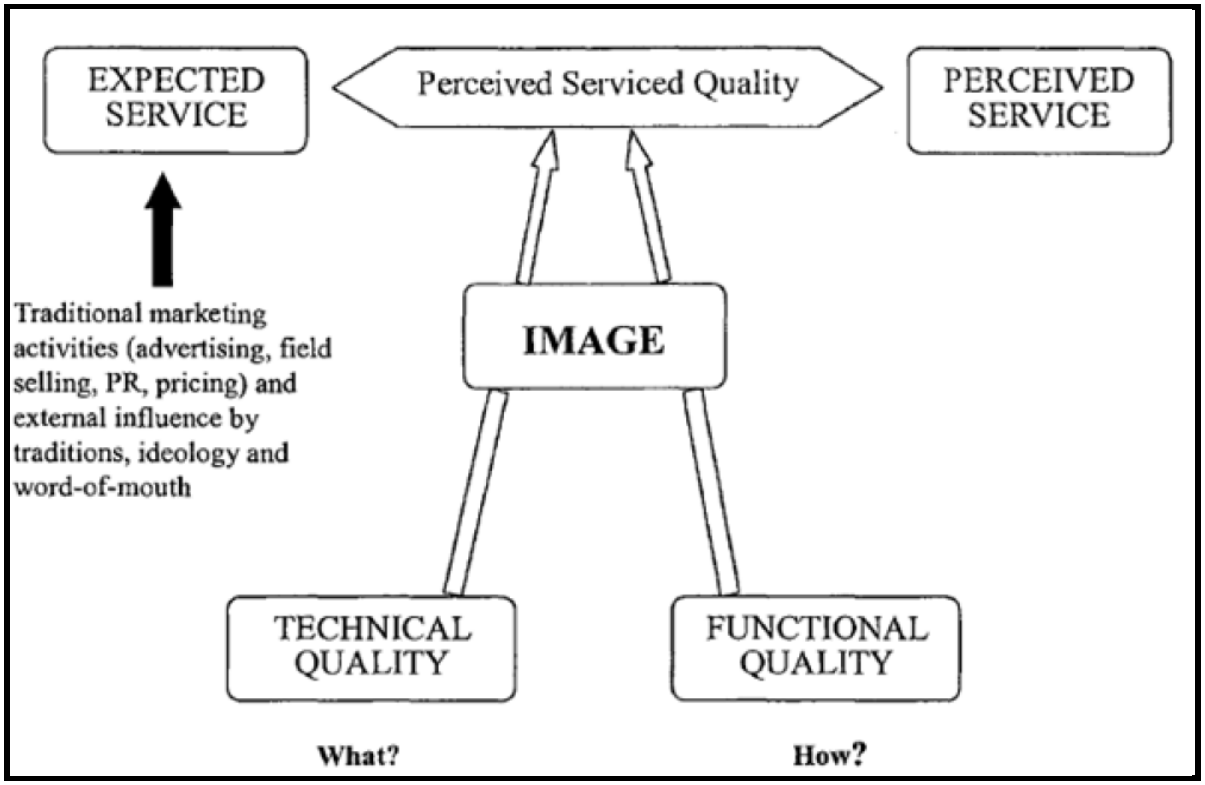

Figure 2.1 Perceived Service Quality Model (Grönroos, 1984)

2.2.2 The SERVQUAL Model

Parasuraman et al. (1985) developed and tested the SERVQUAL model based on Gronroos's (1984) view in which perceived service quality is the outcome of the gap emerging from the comparison between the service expectation and the service performance. The rationale is that the smaller the gap, the higher perceived service quality (Parasuraman et al., 1988). The original version of SERVEQUAL proposed ten dimensions of service quality, involving tangibles, along with reliability, responsiveness, understanding the customer, access, communication, credibility, security, competence and courtesy (Parasuraman et al., 1985). The original ten dimensions were later reduced to five but the method of measurement did not change (Parasuraman et al., 1988) (see figure 2-2).

Tangibles: Physical facilities, equipment, and appearance of personnel.
Reliability: Ability to perform the promised service dependably and accurately.
Responsiveness: Willingness to help customers and provide prompt service.
Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence.
Empathy: Caring, individualized attention which the firm provides to its customers.

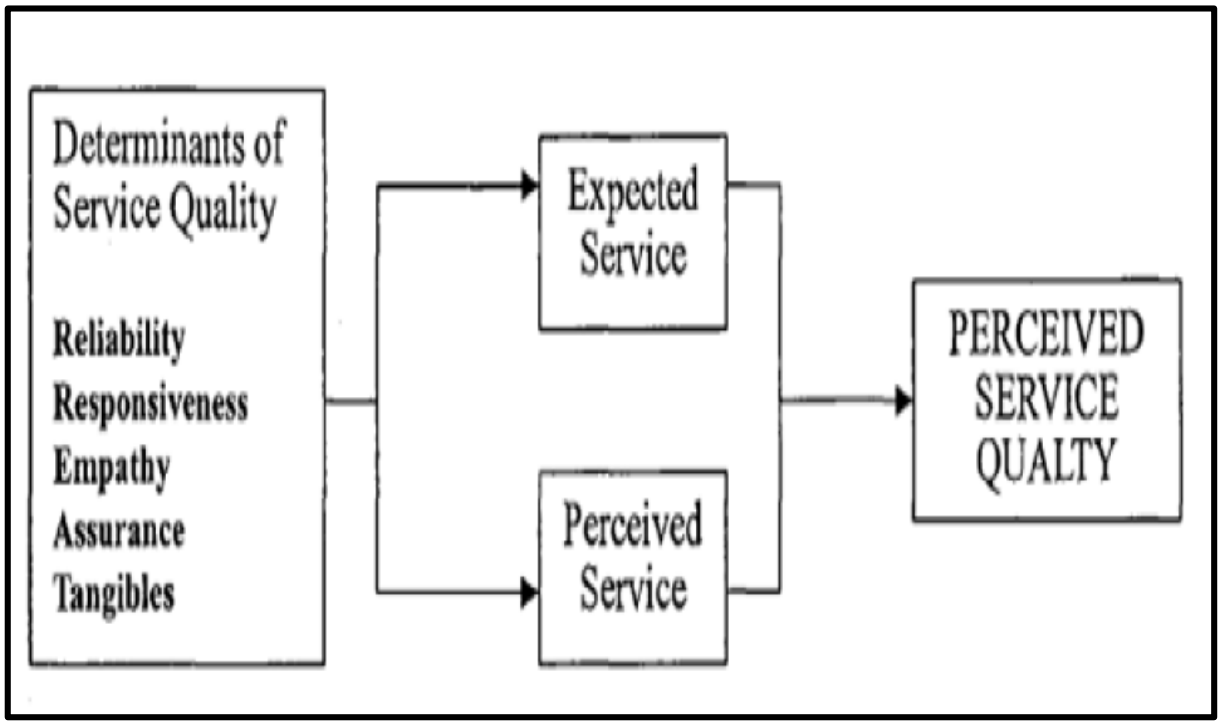

Figure 2.2 The SERVQUAL Model

2.2.3 The Three-Component Model

The three-component model proposed by Rust and Oliver (1994) was an expansion of the Nordic Model as the authors added a new service environment dimension (Rust & Oliver, 1994).
The three-component model suggests that perceived service quality stems from customers' evaluation through three service quality dimensions: the service product (or technical quality), service delivery (functional quality), and the service environment.

In the three-component model, the 'service product' refers to the result or outcome that customers gain from the service performance, but the 'service delivery' is the consumption process that occurs during the service act, and the 'service environment' refers to the internal and external atmosphere that can be viewed as having an integral role in customer service perception development (Rust & Oliver, 1994). While Rust and Oliver (1994) did not empirically test their proposed model. However, the existence of the three components in the retail banking industry was empirically confirmed by McDougall and Levesque (1994) for health care industry.

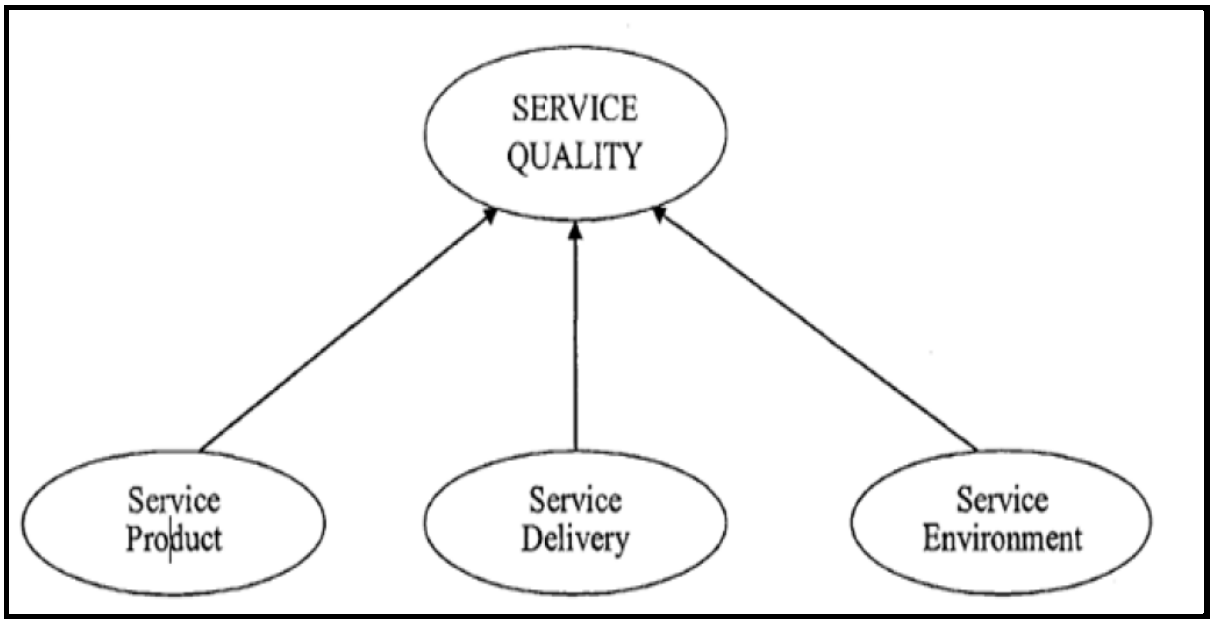

Figure 2.3 The Three-Component model

2.2.4 The Multilevel Model

Several researchers have found that the constructs and dimensions of service quality are complex. Perceived service quality could occur at multiple levels, as well as customers being capable of distinguishing between the quality of interaction with a service provider, the quality of the core service, and the overall quality of the organization. Conceptualising service quality as multidimensional and hierarchical has been broadly accepted among service marketing scholars (Brady & Cronin, 2001; Clemes, Brush, et al., 2011; Dabholkar, Thorpe, & Rentz, 1996).

Dabholkar et al. (1996) developed and validated the multilevel model, or the Hierarchical Retail Service Quality Model, in order to conceptualise service quality for retail store environments. Dabholkar et al. (1996) claim that the dimensionality of service quality for a retail store may differ from other service organization as customers not only evaluate the perceptions of service quality using multiple dimensions, but also use multilevel dimensions. In addition, customers tend to break down those dimensions into sub-dimensions, if they believe that any one of the service quality dimensions is of particular importance to them (Dabholkar et al., 1996).

The Hierarchical Retail Service Quality Model suggests that customers form their perceptions of retail service quality at three ordered hierarchical levels. The highest overall level is the customer's overall perception of retail service quality. Next is the primary dimensional level consisting of five attributes (physical aspects, reliability, personal interaction, problem-solving and policy) that lead to the customer's overall perceptions of retail service quality. The third or sub-dimensional level consists of attributes that contribute to the primary dimensional level. These attributes are appearance, convenience, promise, 'doing it right,' and inspiring confidence and courtesy (Dabholkar et al., 1996) (see Figure 2-4). Dabholkar et al. (1996) also claim that the Hierarchical Retail Service Quality Model best explains the high inter-correlations among items across factors as well as the single factor structures found in previous studies in which SERVQUAL was not supported.

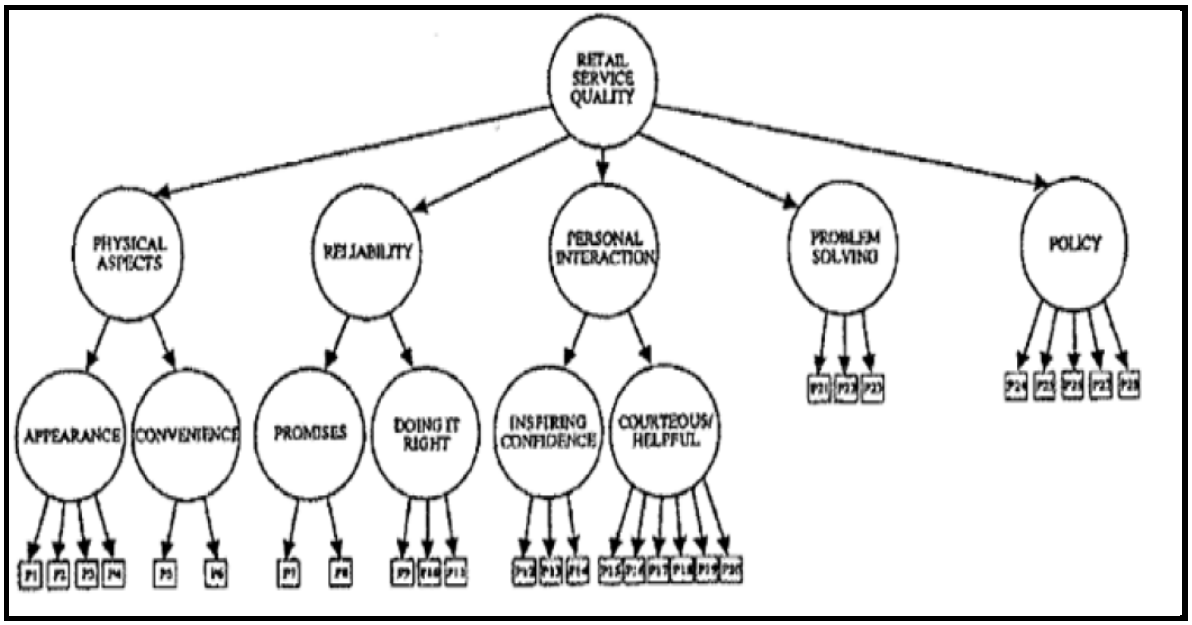

Figure 2.4 The Multilevel Model

2.2.5 The Integrated Hierarchical Model

Brady and Cronin (2001) state that service quality can be defined as any or all of a customer's perceptions regarding (1) an organisation's technical and functional quality, (2) the service product, service delivery, and service environment, and (3) the reliability, responsiveness, empathy, assurances and tangibles associated with a service experience. In an attempt to integrate the different service quality conceptualisations, to unify the abundance of service quality theories, and to reflect the complexity and the hierarchical nature of the service quality, Brady and Cronin (2001) developed and tested the integrated hierarchical model. The Integrated Hierarchical Model incorporates and expands the multilevel model of retail service quality of Dabholkar et al. (1996) (see Section 2.2.4), and Rust and Oliver's (1994) three component model (see Section 2.2.3).

The integrated hierarchical model conceptualises service quality as a third-order construct and suggests that perceived service quality is explained by an aggregate perception of the three primary dimensions: interaction quality, physical environment quality, and outcome quality, with each primary dimension having three relevant sub-dimensions: attitude, behaviour and expertise (for interaction quality), ambience, design and social factors (for physical environment quality) and waiting time, tangible and valence (for outcome quality).

In an attempt to make the integrated hierarchical model more relevant to generic service industries, Brady and Cronin (2001) conducted a survey on four industries: fast food, photograph developing, amusement parks, and dry-cleaning. In addition, the integrated hierarchical model offered an improved understanding of three basic issues: (1) "what defines service quality perceptions ? (2) how are service quality perceptions formed ? and (3) how important is it where the service experience takes place?" (Brady and Cronin, 2001 p.44). Brady and Cronin (2001) claim that only the tangible dimension in the SERVQUAL can be considered as representing service quality, while, the other four dimensions (reliability, responsiveness, assurance and empathy) are repositioned as reflective indicators for the sub-dimensions in the model.

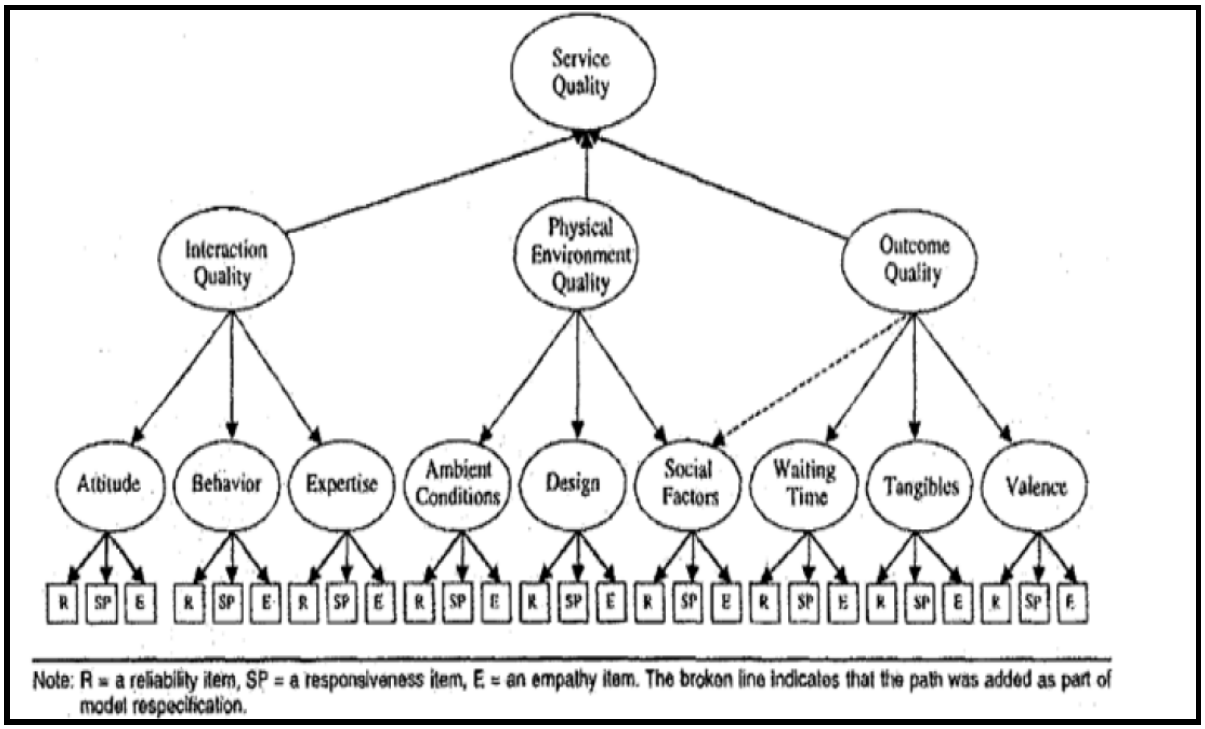

Figure 2.5 The Integrated Hierarchical Model

2.3 Measuring Service Quality

The following sub-sections discuss the service quality instruments used for measuring service quality including SERVQUAL, SERVPERF, and other instruments used in the hotel industry such as LODGQUAL, LODSERV, HOLSERV and the hierarchical modelling approach.

2.3.1 The SERVQUAL Scale

The SERVQUAL scale was developed by Parasuraman et al. (1988) based on the concept of the disconfirmation paradigm. The disconfirmation paradigm was originally used to evaluate the level of customer satisfaction (Churchill & Surprenant, 1982). The core concept is that the level of satisfaction toward a product or a service is dependent on the level of disconfirmation, which ranged from negative disconfirmation, confirmation, and positive confirmation (Churchill & Surprenant, 1982). The negative disconfirmation, which is represented by customer dissatisfaction, occurs when the performance of the product or service is lower than customers' expectations (Churchill & Surprenant, 1982).
The confirmation, which is likely to lead to either customer satisfaction or dissatisfaction, occurs when the performance of the product or service matches customers' expectations (Churchill & Surprenant, 1982). The positive disconfirmation, which represents customer satisfaction, occurs when the performance of the product or service exceeded customers' expectations (Churchill & Surprenant, 1982).

The original SERVQUAL scale consisted of 22 pairs of items, and measured service quality by assessing the difference between quality expectation and service quality perception, along five dimensions: tangibles, reliability, responsiveness, assurance and empathy. The first 22 items were used to assess the level of customers' expectation over service delivery, while the others were used to assess the level of actual service performance perceptions (Parasuraman et al., 1988).

Parasuraman et al. (1988, 1991, 1994) note that the SERVQUAL scale is widely used because it provides a basic structure or framework, which can be adapted or supplemented to fit the characteristics or specific research needs of a particular organization. In addition, the SERVQUAL scale provides a high level of reliability and validity, resulting in a better measurement of service quality which, in turn, will benefit service improvement. However, the SERVQUAL scale is criticised by several scholars from both a theoretical and operational perspective. (Buttle, 1996; Carman, 1990; Cronin Jr & Taylor, 1994; Ladhari, 2009). The following sub-section discusses some criticisms of the SERVQUAL.

2.3.2 Criticism of the SERVQUAL Scale

First of all, using difference scores (gap-score) is a major weakness of the SERVQUAL scale. Ekinci and Riley (1998) indicate that the concept of "subtraction" in the SERVQUAL model has no equivalence in a psychological function. Peter, Churchill, and Brown (1993) note that poor reliability and problems with variance between expectation and performance as other weaknesses of using gap-scores. Peter et al. (1993) explain that the reliability of the gap-scores will decrease when the correlation between its two components increases. In addition, Peter et al. (1993) question whether the gap scores are unlikely to be distinct from their component scores; using the gap scores may affect less construct validity.

Likewise, Cronin and Taylor (1992) claim that perception-only scores are superior to the SERVQUAL score in terms of reliability and convergent validity.

Secondly, the applicability of SERVQUAL as a generic scale for measuring service quality in all settings has been questioned. There are several examples where the five dimensions of the SERVQUAL are not generic, the number of dimensions comprising service quality is contextualised, items do not always load on the factors that one would a priori expect, and there is a high degree of intercorrelation between the five dimensions. For example, Carman (1990) notes that across four service settings (a dental-school patient clinic, a business school placement centre, a tyre store, and an acute care hospital), the SERVQUAL scale is not completely generic. Likewise, a study by Babakus and Boller (1992) also failed to confirm the 5-dimensional constructs of the SERVQUAL instrument across different service settings. They note that the SERVQUAL is inappropriate to use as a standard measurement scale for all services. Therefore, a service quality measurement should be specifically designed for each service industry, or the SERVQUAL instrument should be modified, depending on the nature of the service industry.

Thirdly, several scholars advocate that both service delivery and service outcomes are important in shaping perceived service quality (Brady & Cronin, 2001; Grönroos, 1984; Rust & Oliver, 1994). For instance, Grönroos (1984) maintain that service quality consists of functional quality (service delivery) and technical quality (outcome of the service) (see Section 2.2.1). Swartz and Brown (1989) also categorise service quality into two dimensions "how" (service evaluated during performance) and "what" (service evaluated after performance). However, the SERVQUAL instrument mainly focuses on the service delivery process and fails to pay adequate attention to service outcomes (Ladhari, 2009).

Fourthly, several scholars agree that service quality is not only multidimensional but also hierarchical (Brady & Cronin, 2001; Dabholkar et al., 1996; Prakash & Mohanty, 2013; Wilkins et al., 2007). Customers evaluate service quality by aggregating various sub-dimensions to form their perceptions of service quality on each of the primary dimensions (Brady & Cronin, 2001; Clemes et al., 2014; Clemes et al., 2009; Dabholkar et al., 1996). However, the SERVQUAL model fails to reflect this hierarchical nature of service quality (Ladhari, 2009).

Fifthly, the ambiguity of expectation construct is another weakness of SERVQUAL. Practically, it is quite difficult for customers to define the expectation construct in the SERVQUAL scale, especially if it is their first time visit to a service provider. Thus, customers tend to use service standards instead of expectations to evaluate service quality (Fu & Parks, 2001; Kouthouris & Alexandris, 2005). In addition, some customers have difficulty in differentiating many of the items to be measured in the SERVQUAL instrument and it is sometime impracticable to ask customers about their expectations before consumption, and then again immediately after consumption (Fu & Parks, 2001; Kouthouris & Alexandris, 2005).

2.3.3 Performance-based Measures (SERVPERF)

To overcome the weaknesses of the SERVQUAL scale, Cronin and Taylor (1992) introduced the Performance-based approach (SERVPERF) for measuring service quality. The SERVPERF scale measures the perceptions of service performance only. Cronin and Taylor (1992) empirically conducted research across four industries (banking, pest control, dry-cleaning companies and fast food restaurants)
in order to provide empirical evidence to support the SERVPERF scale.

Based on their empirical analysis, Cronin and Taylor (1992) claim that the SERVPERF has a higher degree of model fit, exhibits good convergent validity, and explains more of the variations in an overall measure of service quality than the SERVQUAL scale. Correspondingly, several studies strongly support use of the performance-based approach to measure service quality over the gap-based approach (Babakus & Boller, 1992; Brown, Churchill, et al., 1993; Carman, 1990). However, Parasuraman, Zeithaml, and Berry (1994) defend the gap methodology, arguing that it provides useful information to identify strengths and weaknesses within each service quality attribute. In addition, the gap scores or the amplitude of the difference between expectation and perception can be utilised as critical indicators or directions to improve quality of service delivered by service organizations (Parasuraman et al., 1994).

Based on empirical evidence, several studies indicate that the performance-based approach outperforms the disconfirmation approach when considering convergent and predictive validity (Akbaba, 2006; Clemes, Brush, et al., 2011). Importantly, Zeithaml, Berry, and Parasuraman (1996) conceded that the perception-only measure is more appropriate if the primary purpose of the research is to explain the variance in dependent constructs. Therefore, this study uses a performance scale to measure service quality.

2.3.4 Service Quality Instruments in the Hotel Industry

SERVQUAL is widely used by both academics and practitioners in the hotel industry (Ladhari, 2008). However, several empirical studies provide evidence of instability in SERVQUAL's dimensions and show variation from two dimensions to nine dimensions (Ekinci & Riley, 1998; Juwaheer, 2004; Nadiri & Hussain, 2005). For example, Nadiri and Hussain (2005) applied the SERVQUAL instrument to study service quality in the hotel industry in Cyprus. Their empirical results indicate that only the tangible dimension is relevant to the SERVQUAL dimensions while the other dimensions such as reliability, assurance, responsiveness and empathy were collapsed into one dimension designated intangible.

A study by Juwaheer (2004) in the Mauritian hospitality industry used four dimensions that were similar to the SERVQUAL dimensions. However, some additional dimensions also emerged, from the analysis, such as room attractiveness and décor, and hotel surroundings and environmental factors. Khan (2003) examined service quality in the ecotourism industry and reported six dimensions: tangibles, ecotangibles, reliability, assurance, responsiveness, empathy.

The applicability of employing a generic scale to measure service quality in different settings has been questioned by several researchers (Akbaba, 2006; Babakus & Boller, 1992; Carman, 1990; Caro & Garcia, 2008; Ladhari, 2008). Several scholars suggest that a simple adaptation of the SERVEQUAL items is insufficient to measure service quality across a diversity of service industries because service quality is a simple unidimensional construct in some contexts, but a complex, multidimensional construct in others. Therefore, several scholars suggest industry-specific measures for service quality may be more appropriate than a single generic scale (Akbaba, 2006; Babakus & Boller, 1992; Carman, 1990; Caro & Garcia, 2008; Clemes, Brush, et al., 2011; Ladhari, 2008; Pollack, 2009).

Knutson et al. (1990) used SERVEQUAL as a foundation to develop LODGSERV as a specific instrument to measure service quality in the hotel industry. The dimensions of LODGSERV are based on the SERVQUAL dimensions. Reliability was found to be the most important dimension for service quality evaluation, followed by assurance, responsiveness, tangibles and empathy. LODGSERV has been translated into Japanese and Chinese and research has been conducted in Japan, Taiwan, and Hong Kong. LODGSERV has also used in Australia and the United Kingdom, where reliability was also found to be the most important dimension (Akbaba, 2006).

Getty and Thompson (1994) developed and tested the LODGQUAL instrument.
LODGQUAL is a derivative instrument of the SERVQUAL scale. However, LODGQUAL instrument assesses service quality based on customers' perception of a service provider's performance, along three dimensions: tangibles, reliability and contact. Contact is a composite dimension derived from collapsing the responsiveness, empathy and assurance dimension of the SERVQUAL instrument into one dimension (Crick & Spencer, 2011; Getty & Thompson, 1994).

Another specific instrument (HOLSERV), was developed for the hotel industry by Mei et al. (1999). The authors used the SERVQUAL as the foundation instrument to develop HOLSERV and tested HOLSERV using three-to-five star hotels in Australia. Mei et al. (1999) conclude that service quality is represented by three dimensions, identified as "employees", "tangible" and "reliability".
Among these three dimensions, the employee dimension is the best predictor of overall service quality for hotel service. Mei et al. (1999) claim that HOLSERV is a specific instrument for measuring service quality in hotels, and is a short and reliable version of the SERVQUAL instrument.

However, Mei et al. (1999) suggest that although HOLSERV is a useful starting point for identifying service quality in a single hotel business, it was not the ultimate solution for understanding and enhancing service quality in the hotel industry. Therefore, additional qualitative research, such as in-depth interviews, is recommended in order to modify the HOLSERV instrument to be suitable for use with different types of hotels. Moreover, Mei et al. (1999) claim that the implementation of HOLSERV will be more useful, if assessment of service quality is based on dimension scores rather than a general overall score in which results are aggregated, because the dimension score provides very useful information related to an aspect of service that can be a specific target for decision-making with reference to hotel service improvement.

However, the specific instruments for the hotel industry such as LODGQUAL, HOLSERV and LODSERV were deemed to be inappropriate for the conceptualisation of service quality for resort hotels in this study. These instruments have disadvantages such as a lack of measuring outcome quality which is an essential component of service quality (Clemes et al., 2009; Pollack, 2009; Yang & Chan, 2010) (see Section 1.4). In addition, resort hotel customers usually expect special and additional experiences during their stay that include not only basic hotel service offerings such as room, food and beverage but also recreation, entertainment, external natural surroundings and outdoor facilities (Brey & Choi, 2011; Costa, Glinia, Goudas, & Antoniou, 2004). Therefore, the SERVQUAL instrument and its replications do not capture the major attributes that of resort hotel customers seek in their stays (Akbaba, 2006; Ladhari, 2008).

2.3.5 Hierarchical Modelling

As previously noted existing instruments such as SERVQUAL, and its variations have come under question regarding their ability to capture the complex nature of service quality (Albacete-Sáez, Mar Fuentes-Fuentes, & Javier Lloréns-Montes, 2007; Nadiri & Hussain, 2005). The notion that service quality is a multidimensional and higher order construct is now widely accepted in the literature (Brady & Cronin, 2001; Clemes et al., 2013; Clemes et al., 2014; Dagger et al., 2007; Howat & Assaker, 2013; Pollack, 2009). Brady and Cronin (2001) introduced hierarchical and multidimensional modelling as an alternative approach to conceptualise the perceptions of service quality.

A hierarchical and multidimensional model conceptualises perceived service quality as a third-order factor model in which service quality perceptions are explained by at least three primary dimensions (interaction quality, physical environmental quality and outcome quality) and each of these dimensions consists corresponding sub-dimensions (Brady & Cronin, 2001; Clemes et al., 2013; Clemes et al., 2014; Dagger et al., 2007; Howat & Assaker, 2013; Pollack, 2009).

Practically, customers are expected to evaluate service quality through multiple sub-dimensions (at a sub-dimensional level), and aggregate their perceptions of each sub-dimension to form their perceptions of three primary dimensions. Lastly, the perceptions of all primary dimensions are combined, to reflect the customer's overall service quality perceptions (Brady & Cronin, 2001; Clemes et al., 2013; Clemes, Gan, et al., 2011; Clemes et al., 2014; Clemes et al., 2009; Dagger et al., 2007; Howat & Assaker, 2013; Pollack, 2009).

Brady and Cronin (2001) claim that the Hierarchical approach overcomes some weaknesses of the traditional service quality instruments (SERVQUAL and its variations) in the conceptualisation of service quality. Licata, Mowen, Harris, and Brown (2003) note that the hierarchical model outperforms single level multi-factor models when investigating complex consumer behaviour. Similarly, Clemes, Brush, et al. (2011) assert that the hierarchical model is a valuable approach for measuring service quality, as this model supports an improvement in understanding of a wide range of complex consumer behaviours in situations involving multiple levels of evaluation. Several scholars note that service quality evaluation is a complex process, as perceived service quality occurs at multiple levels in a service setting. Customers are able to distinguish between the quality of the interaction with the service provider, the core service and the overall quality of the organisation, along with the abstractions which possibly occur at several levels (Bitner & Hubbert, 1994; Carman, 1990). Several researchers indicate that this complexity can be accommodated by a hierarchical model, as the service quality construct in diverse service settings may consist of at least three similar primary dimensions (Clemes, Brush, et al., 2011; Lehtinen & Lehtinen, 1991).

However, these primary dimensions are based on different sub-dimensional structures in dissimilar service contexts. In addition, the hierarchical model incorporates and redefines the technical and functional dimension of the Nordic model (Grönroos, 1984), the service product, service environment, and service delivery dimensions of the three-component model (Rust & Oliver, 1994), and the 5 dimensional SERVQUAL model (Parasuraman et al., 1985) as the primary dimensions of the hierarchical model to capture both service delivery and service outcome (Brady & Cronin, 2001; Clemes et al., 2007; Howat & Assaker, 2013).

These advantages of hierarchical modelling have led to a broad modification and adaptation of the hierarchical and multidimensional approach to conceptualise service quality in various service industries and cultural settings, such as mobile phone service (Clemes et al., 2014; Lu, Zhang, & Wang, 2009), education (Clemes et al., 2013; Clemes et al., 2007), health services (Dagger et al., 2007), hotel stays (Clemes et al., 2009), motel stays (Clemes, Gan, et al., 2011), ski resorts (Kyle et al., 2010); professional sport (Clemes, Brush, et al., 2011), national parks (Chen, Lee, Chen, & Huang, 2011), travel agencies (Caro & Garcia, 2008), outdoor aquatic centres (Howat & Assaker, 2013), recreational sport (Ko & Pastore, 2005), hairdresser/barber service and local phone service subscribers (Pollack, 2009),

transport service (Martínez & Martínez, 2007), life insurance (Mittal, Gera, & Singhvi, 2013), airline travel (Wu & Cheng, 2013), mobile health (Akter, D'Ambra, & Ray, 2010), electronic services (Fassnacht & Koese, 2006), sport tourism (Shonk, Chelladurai, Dwyer, & Fredline, 2008), restaurants (Chow, Lau, Lo, Sha, & Yun, 2007).

2.4 Service Quality Dimensions for Beach Resort Hotel Stays

Several scholars have applied the hierarchical and multidimensional model in various studies and have consistently identified that perceived service quality consists of at least three primary dimensions: interaction quality, physical environment quality, and outcome quality (Brady & Cronin, 2001; Clemes, Gan, et al., 2011; Clemes et al., 2009; Kyle et al., 2010). These three primary dimensions are modelled in this study and the following sections discuss the sub-dimensions of each primary dimensions in detail.

2.4.1 Interaction Quality

Interaction quality is described as the quality of personal interactions between service providers and customers (Brady & Cronin, 2001; Clemes, Gan, et al., 2011; Clemes et al., 2009; Kyle et al., 2010). In other words, the interaction quality dimension is focused on how well the service is delivered to the customer by the front line staff of service organisations (Brady & Cronin, 2001). Brady and Cronin (2001) state that a service is inherently intangible and characterised by inseparability. Therefore, the quality of the employee-customer interface taking place during service delivery is vital for service organizations as the perceptions of service quality are significantly influenced by the service delivery processes of firms. Several empirical studies in various industries identify a significant impact of interaction quality on service quality perceptions (Brady & Cronin, 2001; Chow et al., 2007; Clemes et al., 2013; Clemes et al., 2014). Similarly, several studies in the hotel industry indicate a significant impact of the quality of interactions on customers' assessment of service quality (Clemes, Gan, et al., 2011; Clemes et al., 2009; Wu & Ko, 2013).

Based on the existing literature, several sub-dimensions are proposed to have a positive impact on the interaction quality primary dimension: attitude (Brady & Cronin, 2001; Clemes et al., 2009), behaviour (Clemes et al., 2009; Wu & Cheng, 2013), expertise (Brady & Cronin, 2001; Clemes et al., 2009) and problem-solving skill (Clemes et al., 2009; Wu & Cheng, 2013). Therefore, the following sub-sections describe each sub-dimension in detail.

2.4.1.1 Attitude

Attitude is defined as an intangible, and includes employee's traits such as friendliness, politeness, demeanour, and helpfulness (Czepiel, Solomon, Surprenant, & Gutman, 1985). Several studies confirm that employee attitude is an extremely essential element for service quality evaluation of any service organization.

The attitudes of staff, such as helpfulness, friendliness and politeness, are the antecedent factors for creating a good first impression in customers' minds, and contribute to a satisfied perception (Bitner, Booms, & Tetreault, 1990; Brady & Cronin, 2001; Surprenant & Solomon, 1987). Similarly, Geller (1985) determined that employee attitude is a key success factor of a hotel operation especially a resort hotel, as it is a high involvement service organization in which the interaction between customer and resort hotel staff is close. Therefore the attitude of hotel staff may have a great effect on how the customer perceives service quality (Geller, 1985; Kuo, 2007).

2.4.1.2 Behaviour

Behaviour is a manifest function influencing what customers consider to be interaction quality (Brady & Cronin, 2001; Czepiel et al., 1985). Parasuraman et al. (1988) emphasise that the behaviours of employees of service organizations or the performance of frontline employees when interacting with, and delivering services to customers have a major impact on customers' perceptions of service quality. The process of service-delivery, on most occasions, is the front line employees who interact with customers, and represent the image of the organisation, in terms of service delivery as well as service recovery when a service failure has occurred (Chelladurai & Chang, 2000). Wong Chak Keung (2000) asserts that understanding customer perceptions of hotel frontline staff behaviour provides valuable information for managing a hotel business as this information gives essential input in designing suitable service policies and training, as well as establishing service procedures for their employees.

2.4.1.3 Expertise

Expertise refers to the degree that the interaction is affected by the employee's task-oriented skills (Czepiel et al., 1985). Kim and Cha (2002, p.326) characterise expertise for hotel staff: "(1) a hotel employee is well-educated about service and professional training (2) a hotel employee demonstrates adequate knowledge related to the hotel's products and service; (3) a hotel employee shows interest in self-development to provide better service, and (4) a hotel staff is competent in providing service. Several studies show an impact of expertise on customer's evaluation of service quality".
Therefore, expertise of employees is an important component of interaction quality (Brady & Cronin, 2001; Caro & Garcia, 2008; Clemes et al., 2009; Ko & Pastore, 2005).

2.4.1.4 Problem Solving Skill

Problem-solving skill refers to employees' skill and capability to manage customer complaints or problems during the interaction process (Westbrook, 1981). Several researchers note that customers are quite sensitive to how service providers, especially their frontline staff, address problems, service failures and complaints (Caro & Garcia, 2008; Kim & Jin, 2002; Lu et al., 2009).

Empirical evidence from various service industries demonstrate that the employees' problem-solving skills are an important element of interaction quality (Caro & Garcia, 2008; Clemes et al., 2009; Dabholkar et al., 1996). In a resort hotel setting, frontline staff play an important role for both service delivery and service recovery. If a problem or service failure has occurred, resort hotel frontline staff should be able to manage or solve it properly, otherwise this failure may have an effect on perceived service quality and ultimately on customer satisfaction (Kyle et al., 2010; Nadiri & Hussain, 2005).

2.4.2 Physical Environment Quality

Physical environment quality refers to the quality of the physical features surrounding the service production process (Elliott, Hall, & Stiles, 1993). As services are intangible, they require customers to be present during the service delivery process. Therefore, service quality assessment of customers can easily be influenced by physical tangibles surrounding the service production process (Bitner, 1992). Rys, Fredericks, and Luery (1987) state that customers infer 'quality,' based on the appearance of the personnel, together with their perceptions of the physical facilities. Likewise, Hilliard and Baloglu (2008) note that the physical environment in which the service takes place has a significant impact on perceptions of overall service quality. Several research studies in various industries have found a significant influence of physical environment factors such as décor & ambience, facilities, convenience and location, on the assessment of service quality (Clemes, Gan, et al., 2011; Howat & Assaker, 2013; Lu et al., 2009; Shergill & Sun, 2004). More specifically, the evidence from several studies in the hotel industry confirms a positive relationship between the quality of the physical environment and the perceptions of service quality (Akbaba, 2006; Clemes, Gan, et al., 2011; Shergill & Sun, 2004). Based on the existing literature, several variables such as décor and ambience, room quality, design, location and convenience, together with facilities and activities, are identified as the potential sub-dimensions that may influence the perceptions of physical environment quality among resort hotels' customers (Akbaba, 2006; Clemes, Gan, et al., 2011; Clemes et al., 2009; Shergill & Sun, 2004; Yang & Chan, 2010). The following sub-sections discuss each sub-dimensions in detail.

2.4.2.1 Décor and ambience

Décor and ambience refer to the art of decoration of existing architecture, and conscious design of space to create a certain response in the customer to increase their purchase likelihood (Kotler, 1973). The décor and ambience sub-dimension includes indoor and outdoor decoration, lighting, noise level, temperature, signage and wall colour (Bonn, Joseph-Mathews, Dai, Hayes, & Cave, 2007). Bitner (1992) suggests that the décor and ambience are important for service organizations, particularly in the hotel industry. Décor and ambience have an impact on customers' attitudes and behaviour, and consequently, on customer satisfaction (Heide, Lærdal, & Grønhaug, 2007). Juwaheer's (2004) study on international tourists who stayed in beach hotels in Mauritius found that the décor and ambience of their hotel rooms was a significant factor that influenced perceived service quality.

2.4.2.2 Room Quality

Room quality refers to the quality of resort hotel rooms, including room set-up, temperature control, cleanliness, quietness and room size (Mey, Akbar, & Fie, 2006). Room quality is recognized as an influential factor in determining service quality and customer satisfaction in the hotel industry (Clemes et al., 2009; Mey et al., 2006; Wu & Ko, 2013). The study of Juwaheer (2004) indicates that the quality of a hotel room is a significant dimension for service quality assessment. In Clemes, Gan, et al. (2011) study on service quality of motel stays in New Zealand, the findings indicate room quality as an indicator that motel guests use to evaluate the quality of their motel stays. Clemes et al. (2009) used a hierarchical model to study service quality in the Taiwan hotel industry. They found that room quality is one of the six significant sub-dimensions of physical environment quality.

2.4.2.3 Design

Design refers to the layout or architecture of a service facility that exists at the forefront of customer awareness. This includes both functional (i.e. practical) and aesthetic (i.e. visually pleasing) features in the environs of a resort hotel (Brady & Cronin, 2001; Heide et al., 2007). Bitner (1992) states that design has a potential impact on perceived service quality. Aubert-Gamet (1997) suggests the facility design of accommodation in the hotel industry, is an important visual stimulus factor affecting customers' perceptions of service quality and satisfaction. Several studies have included the design as a sub-dimension of physical environment quality (Brady & Cronin, 2001; Clemes et al., 2009).

2.4.2.4 Location and Convenience

Location and convenience refers to the accessibility and proximity of the resort hotel to required services, including traffic and transportation, public, and other private facilities, and tourist destinations. Pan (2002) indicates that base station suitability, traffic convenience, public facilities and other services are important factors that customers use for selection of accommodation. Likewise, Chou, Hsu, and Chen (2008) note that accessible or convenient transportation use to visit other attractions around the lodging accommodation, are primary factors considered by customers in their selection of accommodation. Several researchers have found that location and convenience have a significant impact on service quality assessment as well as selection of accommodation (Ekinci & Riley, 2001).

2.4.2.5 Facilities and Activity

Facilities and activity refer to a hotel's devices, equipment, entertainment facilities and activities provided to enhance the accommodation experience (Shergill & Sun, 2004; Wu & Cheng, 2013; Yang & Chan, 2010). Several studies indicate that facilities provided by the hotels are an important sub-dimension of service quality for the hotel industry (Akbaba, 2006; Clemes et al., 2009; Shergill & Sun, 2004; Wu & Cheng, 2013; Yang & Chan, 2010).

For example, Shergill and Sun's (2004) study on service quality in the hotel industry in New Zealand considered two categories of customers: vacation traveller and business traveller. Their findings indicate that a hotel's facilities have a significant impact on the assessment of service quality for both types of customers. However, the vacation travellers were more concerned with entertainment facilities than the business travellers (Shergill & Sun, 2004). In addition, Yang and Chan (2010) found that location in a unique vacation spot, and the provision of entertainment facilities and activities are unique characteristics of resort hotel. Their research supported the notion that the significance of facilities and activity affects the perceived service performance of resort hotels (Yang & Chan, 2010).

2.4.3 Outcome Quality

Outcome quality, or technical quality, is what customers receive, or what is delivered by a service provider after the service delivery or buyer-seller interactions is completed (Brady & Cronin, 2001; Grönroos, 1984). Rust and Oliver (1994) suggest that outcome quality represents what customers actually gain after the service transaction process, and whether the customers' needs are fulfilled. There is consensus in the literature that outcome quality has a positive influence on customers' overall perceptions of service quality (Brady & Cronin, 2001; Brady, Voorhees, Cronin Jr, & Bourdeau, 2006; Caro & Garcia, 2008; Clemes et al., 2009; Dagger et al., 2007; Pollack, 2009).

2.4.3.1 Valence

Valence refers to customers' post-consumption assessment of whether the service outcome is acceptable or not (Ko & Pastore, 2005). Brady and Cronin (2001, p.40) note that "valence captures attributes that control whether customers believe the service outcome is good or bad, regardless of their evaluation of any other aspects of the experience". Several studies support valence as a key determinant of outcome quality (Brady & Cronin, 2001; Brady et al., 2006; Caro & Garcia, 2008; Clemes et al., 2009; Dagger et al., 2007; Pollack, 2009). Clemes et al. (2009) indicate that valence is the most significant predictor of outcome-quality primary dimension. Kyle et al. (2010) also examine service quality at a ski resort in northern Greece. The indicators of the valence construct, such as relaxation refreshment and fun, have a significant impact on customer satisfaction and loyalty.

2.4.3.2 Waiting Time

Waiting time refers to the amount of time customers spend waiting for services (Hornik, 1982; Katz & Larson, 1991). Customers usually have an expectation with regard to an acceptable waiting time, which contributes to satisfaction. Therefore, providing a service within an acceptable waiting time is very important and has been accepted as a significant factor for predicting service quality, customer satisfaction, and positive behavioural intentions of service organizations (Taylor, 1994). Houston, Bettencourt, and Wenger (1998) found waiting time is an important antecedent factor of outcome quality, as longer waiting periods lead to negative perception of service quality (Hui & Tse, 1996).

Similarly, Davis (1991) notes that the level of customer satisfaction is also dependent on waiting time. Butcher and Heffernan's (2006) research illustrate that perceived waiting time has an impact on customers' repeat visit intentions and positive word-of-mouth.

2.4.3.3 Sociability

Sociability refers to positive social experiences resulting from social gratification which arises from being with other customers who enjoy the same activity (Milne & Macdonald, 1999). Ko and Pastore (2005) note that sociability is social experience focused on the overall after-consumption outcome instead of the inter-client interaction that occurred during the service delivery. Therefore, family members, friends and other resort hotel customers serve as important social factors for resort hotel customers.

2.5 The Relationships between the Five Higher-Order Constructs

The higher order of the comprehensive hierarchical model developed for this study provides a theoretical framework to examine the interrelationships existing between several higher-order constructs: service quality, customer satisfaction, perceived value, corporate image and customer loyalty. The following sub-sections discuss the relevant literature pertaining to these higher-order constructs and their interrelationships.

2.5.1 Customer Satisfaction

Customer satisfaction is "an outcome of purchase and use resulting from the buyer's comparison of the reward and the cost of purchase in relation to the anticipated consequences" (Churchill & Suprenant, 1982, p.493). Rust and Oliver (1994, p.2) define customer satisfaction as "a summary cognitive and affective reaction to service incident" resulting from the comparison between customers' perception of service quality and the expectation of service performance. Wang, Lo, and Yang (2004) state that in the service marketing literature there are two main perspectives of customer satisfaction: a transaction-specific perspective and a cumulative perspective. The transaction-specific perspective defines customer satisfaction as a post-choice evaluative judgment of a specific purchase occasion (Oliver, 1977, 1993). The cumulative perspective defines customer satisfaction as an evaluation which results from the overall purchase and consumption experience with a product or service over time (Anderson, Fornell, & Lehmann, 1994; Fornell, Johnson, Anderson, Cha, & Bryant, 1996).

Customer satisfaction has been recognised as an important construct for both practitioners and academics and the evidence of this interest is a better understanding of the construct (Brady & Cronin, 2001; Hu et al., 2009).

The first reason for the importance of customer satisfaction is that a high level of customer satisfaction is a critical indicator of meeting the needs and wants of customers, which is regarded as the core objective of all marketing activities (Hu et al., 2009). In addition, customer satisfaction has been recognised as one of the important antecedents of future consumer purchase behaviour (Chen & Chen, 2010; Eskildsen, Kristensen, JØrn Juhl, & Østergaard, 2004), profitability (Chand, 2010; Chitty, Ward, & Chua, 2007) and shareholder value (Anderson, Fornell, & Mazvancheryl, 2004). Practically, service organisations must be willing to invest and implement marketing strategies in order to satisfy their customers, as satisfying the customer leads to customer loyalty, a lower level of customer/ price sensitivity, and a reduction in failed marketing cost (Shergill & Sun, 2004). Moreover, a likely result may be new customer creation, reduced operating costs and an improvement in the effectiveness of advertising and business reputation (Fornell, 1992).

2.5.1.1 The Relationship between Customer Satisfaction and Service Quality

Research on the relationship between customer satisfaction and service quality has increased enormously over the years. There have even been opposing views of the causal direction of the relationship between service quality and customer satisfaction (Cronin & Taylor, 1992).
Some researchers indicate that customer satisfaction leads to a high service quality perception (Bitner, 1990; Bolton & Drew, 1991), whilst others contend that a high level of perceived service quality leads to a high level of customer satisfaction (Cronin & Taylor, 1992; Parasuraman et al., 1994). The latter perspective is more broadly accepted, especially within the hotel industry.

There is a large body of research that reports evidence confirming that a high level of perceived service quality has a significant and positive influence on customer satisfaction (Chand, 2010; Clemes, Gan, et al., 2011; Clemes et al., 2009; Ekinci, Dawes, & Massey, 2008; Hu et al., 2009). In one study, Hu et al. (2009) tested the relationship between service quality and customer satisfaction using the perception of hotel guests in Mauritius in three categories of hotels: luxury, mid-scale and economy. The authors suggest that perceived service quality has a positive impact on customer satisfaction. Chand (2010) collected samples from hotels at various prominent tourist destinations in India and also confirmed the positive relationship between service quality and customer satisfaction. Kyle et al. (2010) examined the impact of service quality on customer satisfaction in a Greek ski resort.

Their results confirmed that perceived service quality has a significant and positive impact on customer satisfaction. Clemes, Gan, et al. (2011) also used a hierarchical model to investigate the effects of perceived service quality on customer satisfaction, value and behavioural intention in the motel industry in New Zealand. This study also provides evidence congruent with the previous studies; that a high level of perceived service quality leads to a high level of customer satisfaction. Lastly, Chen et al. (2011) adopted a hierarchical model to assess tourist satisfaction and its links with service quality at Kinmen National Park in Taiwan.

The authors note that service quality had a positive significant relationship with tourist satisfaction. They also suggested that national park managers needed to satisfy tourists by providing superior service quality as service quality may have an influence on long term behavioural intentions as the outcome of a high level of satisfaction.

2.5.2 Customer Perceived Value

Customer-perceived value is fundamental in marketing activities because perceived value drives the consumption process as customers select or purchase one product or service over another because they believe it will provide better value (Wang, Lo, & Yang, 2004). Perceived value is usually conceptualised as the beneficial perceptions and sacrificial perceptions of customers (Bhattacharya & Singh, 2008; Zeithaml, Bitner, & Gremier, 2006). For instance, Zeithaml (1988, p. 14) defines perceived value as "the customer's overall assessment of the utility of product based on perceptions of what is received and what is given". Dodds, Monroe, and Grewal (1991) define customer perceived value as the trade-offs between cost and benefits, and arises from both quality and price. Kwun and Oh (2004, p.38) define perceived value as "value perceptions deriving from the customer comparison of gain (e.g., quality) and loss (e.g. price) when buying product, while compared value is the perceived value of a chosen 'relative' to that of alternative product." Focusing on customer-oriented management, Woodruff (1997, p.142) defines perceived value as "a customer's perceived preference for and evaluation of those product attributes, attribute performance, and evaluation of those product attributes, attribute performances, and consequences arising from use, that facilitate achieving the customer's goal, and purchase in use situations". In addition, the extent of value as perceived by customers is determined by customers' perceptions and not by either assumptions or intentions of suppliers (Bhattacharya & Singh, 2008; Wang, Lo, & Yang, 2004).

The extent of customer-perceived value typically involves a trade-off between what customers receive, such as quality and utilities, and the costs incurred by customers, such as money, effort, and time (Wang, Lo, & Yang, 2004).

Perceived value as a construct gained considerable research interest as a means to predict consumption behaviour (Hu et al., 2009). Most of the empirical studies in the hospitality industry assess customer perceived value in relation to other service marketing constructs, such as service quality (Brodie, Whittome, & Brush, 2009; Clemes, Gan, et al., 2011; Clemes et al., 2009), brand image (Hu et al., 2009; Suhartanto, Clemes, & Dean, 2013), customer satisfaction (Hu et al., 2009; Suhartanto et al., 2013) and brand loyalty (Hu et al., 2009; Suhartanto et al., 2013). The mainstream of these studies suggest that customer perceived value is an important antecedent factor in customer satisfaction and ultimately leads to customer loyalty. The following sub-sections discuss the relationship between customer perceived value and other constructs in detail.

2.5.2.1 The Relationship between Customer Perceived Value and Service Quality

Several scholars indicate that service quality is a vital driver of customer perceived value (Cronin, Brady, & Hult, 2000; Howat & Assaker, 2013; Hu et al., 2009; Suhartanto et al., 2013). There is a convergence of opinion that favourable service quality perceptions lead to improved value attributions, and higher levels of sacrifices lead to reduced value (Cronin et al., 2000). Andreassen and Lindestad (1998) point out that the transaction's specific attributes, as well as the price and the quality of the service, are important factors that customers consider when evaluating service value. The quality-related factors may be assumed to represent most of the positive benefit drivers of customer value. Customers who believe they have received a superior service quality will ultimately lead to expressing a high perceived value (Hu et al., 2009).

2.5.2.2 The Relationship between Customer Perceived Value and Customer Satisfaction

Customer perceived value is recognised as an important antecedent factor of customer behavioural intentions (Chitty et al., 2007; Clemes, Brush, et al., 2011; Hu et al., 2009; Suhartanto et al., 2013). Customers are likely to consider whether they received value for money, convenience, and task fulfilment in order to make a decision to return to the service provider (Bolton & Drew, 1991; Hu et al., 2009). McDougall and Levesque (2000) note that customer-perceived value directly contributes to customer satisfaction which, in turn, leads to customer loyalty. Customers who perceive that they receive value for money are more satisfied than those who perceive that they do not receive value for money (Zeithaml, 1988). Empirical studies in broader contexts have found a direct impact of customer-perceived value on customer satisfaction (Chen, 2008; Chitty et al., 2007).
For example, the study of Hu et al. (2009) tested the relationship between customer perceived value and customer satisfaction among guests of luxury, mid-scale and economy hotels in Mauritius; they reported that customer-perceived value has a positive impact on customer satisfaction.

2.5.3 Corporate Image

Definitions of corporate image are found in both psychological and marketing literature. Hu et al. (2009) define corporate image as subjective knowledge, incorporating the impressions, beliefs and attitudes held in a customer's memory regarding a company. These include physical and behavioural attributes such as an organisation's name, architecture, and variety of products or services (Barich & Kotler, 1991; Nguyen & LeBlanc, 1998). Grönroos (1984) defines corporate image as a filter which influences the perception of the operation of the company. Nguyen and LeBlanc (1998) state that corporate image is the result of customers' overall consumption experiences which is a cumulative construct, updated each time the customer consumes the service. In addition, Kennedy (1977) note that corporate image has both functional and emotional components.

The functional component relates to tangible characteristics that are easily measured, while the emotional component is related to psychological states which are manifested by feelings and attitudes. In addition, from an organisational perspective, corporate image is conceptualised as the way in which an organisation's members believe external stakeholders perceive their organisation, or how managers of organisations would like outsiders to view their company (Dutton, Dukerich, & Harquail, 1994).

Corporate image is of vital importance to service organisations and the construct has received increasing attention in the marketing literature, as corporate image has found to be a factor that influences individuals' subjective perception and consequent behaviour. More specifically a direct positive influence on customer loyalty (Ryu, Han, & Kim, 2008) and repeat patronage (Andreassen & Lindestad, 1998; Hu et al., 2009). In addition, (Kim & Kim, 2005) noted that corporate image is important for a hotel business to survive in the mature and competitive environment, as corporate image has a significant role as an alternative strategy to achieve differentiation. Thus, corporate image is included in the theoretical model in this study. The following sub-sections discussing the interrelationship between corporate image and other service marketing constructs such as service quality, customer perceived value, customer satisfaction and customer loyalty.

2.5.3.1 The Relationship between Corporate Image and Service Quality, Customer Perceived Value, Customer Satisfaction and Customer Loyalty

Hu et al. (2009) state that the overall image of service organisations is influenced by service quality, perceived value and customer satisfaction. Grönroos (1984) noted that the image of service organisations is mainly built on technical quality which is what the customer receives from the service experience, and functional quality which is the manner in which the service is delivered. A favourable image of a hotel is created by improving service quality and customers will form a favourable image of the hotel, if they believe that they receive superior service quality (Kandampully, Juwaheer, & Hu, 2011). The empirical evidence from a number previous studies in the hotel industry indicates that customer-perceived quality has a positive impact on the formation of customers' perceptions of corporate image (Clemes et al., 2009; Hu et al., 2009; Kandampully & Hu, 2007; Kandampully et al., 2011). For example, the findings of Kandampully et al. (2011) on the Mauritius hotel industry revealed that there is a positive causal relationship between service quality and corporate image. Likewise, the research evidence of Clemes et al. (2009) in the Taiwanese hotel industry market empirically demonstrated that perceived quality has a significant and positive impact on corporate image.

2.5.3.2 The Relationship between Corporate Image and Customer Perceived Value

Corporate image is also influenced by customer perceived value. Barich and Kotler (1991) proposed that customer perceived value is an important antecedent factor of corporate image, as a company will have a strong image if customers believe that they are getting high value when they buy from it. Hu et al. (2009) reports that customer perceived value has a significant impact on corporate image.

The authors also suggest that a hotel will have a strong image, if its customers believe they are getting high value from the hotel's services.

2.5.3.3 The Relationship between Corporate Image and Customer Satisfaction

In addition, corporate image is recognised as an essential component of customer satisfaction, which in turn, relates to customer loyalty in the hotel industry (Kandampully & Hu, 2007).
The literature suggests that the relationship between corporate image and customer satisfaction is interchangeable in their direction of causation, but may together create a synergistic effect in their influence on customer loyalty. One direction is that a positive image of the service organisation is influenced by customer satisfaction. Customers will form a favourable image toward firms, if they are satisfied with the services offered by the firms. On the other hand, sometimes corporate image is found to be an antecedent factor influencing customer satisfaction. Practically, customers may feel more satisfied with a hotel's service, if they already have had a positive experience, and hold a favourable image of the company in their memories (Clemes et al., 2013; Kandampully et al., 2011; Ryu et al., 2008).

2.5.4 Customer Loyalty

Customer loyalty is defined as a consumer's deep and consistent commitment to the same service, product or brand (Oliver, 1999). There are two dominant perspectives for the conceptualisation and measurement of customer loyalty: a behavioural approach and an attitudinal approach (Kandampully et al., 2011). The behavioural approach defines customer loyalty as the behaviour of re-purchasing a product or service from the same providers, and engaging in positive word-of-mouth advertising (Suhartanto et al., 2013). Alternatively, the attitude perspective defines customer loyalty as a feeling of attachment to, or affection for, a company's people, products or services, such as the willingness to recommend a service provider to other consumers, or the commitment to re-patronize a preferred service (Back, 2005; Suhartanto et al., 2013). In addition, Oliver (2010) postulates four different stages of customer loyalty which are dependent on the level of commitment that customers develop toward a service provider or product. The first stage is identified as "cognitive loyalty" in which consumers act upon their favourable evaluations of the cost and benefit associated with the product or service.
The second stage is "affective loyalty" which represents consumers' feeling of attachment to the product or service provider, developed through cumulatively satisfying usage occasions.
The third stage is "conative loyalty" in which consumers form behavioural intentions on the basis of repeated episodes of positive effect, and the fourth stage is "action loyalty" in which consumers show habit or routines of re-purchase and positive word-of-mouth behaviour. Later stages represent higher levels of consumers' commitment toward the service provider, which may be demonstrated by decreased brand switching behaviours (Kandampully et al., 2011; Oliver, 1999).

Customer loyalty has been broadly accepted as a key success factor for running any business within a highly competitive environment, including the hotel industry (Suhartanto et al., 2013). Kim and Kim (2005) suggest that customer loyalty is closely related to the continued survival and future growth of all service organizations, as attracting new customers often costs approximately five times more than the cost of retaining current customers. Bowen and Shoemaker (1998) also found that loyal customers would tell a median of 12 people about the hotel to which they feel loyalty, and almost 20 percent of the samples indicated that they were likely to mention their favourite hotel when discussing hospitality with colleagues or friends. Moreover, Reichheld (2001) identifies the advantages of having many loyal customers as leading to continued profit, reductions in marketing costs, increased per-customer revenue growth, decreased operating costs, increased referrals, potential increases in price premiums, and competitive advantage. Other research suggest that customer loyalty is influenced by the four constructs of service quality, image, perceived value, and satisfaction (Clemes et al., 2009; Hu et al., 2009; Suhartanto et al., 2013). The following sub-sections will discuss in detail, the antecedent factors influencing customer loyalty including service quality, corporate image, customer perceived value, and customer satisfaction.

2.5.4.1 The Relationship between Service Quality and Customer Loyalty

Perceived service quality is recognised as a significant antecedent factor of customer loyalty (Kandampully et al., 2011; Suhartanto et al., 2013). Several studies have reported both the direct and indirect impact of service quality on customer loyalty. Dubé and Renaghan (1999) investigated the effect of several functional areas of hotels on customer loyalty and found the quality of the various hotel services was the most important factor impacting loyalty levels, followed by the quality of hotel staff. Tepeci (1999) stated that consistently providing high quality services, with added value features, leads to an increase in the number of brand-loyal customers in the hospitality business. Boulding, Kalra, Staelin, and Zeithaml (1993) also reported a positive correlation between service quality and repurchase intentions and willingness to recommend.

In addition, Bolton and Myers (2003) investigated the impact of service quality on price elasticity. The authors concluded that perceived service quality influences price elasticity. Customers who believe they receive more responsive service are less price sensitive than those who believe they receive less responsive service. (Zeithaml et al., 1996) also asserted that service quality is positively related to willingness to pay more and customers are willing to pay more for a better quality of services.

Additionally, indirect effects of service quality on customer loyalty have been reported (Chitty et al., 2007; Ekinci et al., 2008; Kuo, Chang, Cheng, & Lai, 2012; Suhartanto et al., 2013; Yu & Ramanathan, 2012). Chitty et al. (2007) investigated the interrelationship between service quality (functional and quality constructs) and customer perceived value, customer satisfaction and customer loyalty of backpacker customers in Australia.

They found that service quality has an indirect effect on customer loyalty through customer satisfaction.

Customer satisfaction can also act as a mediator variable on the relationship between service quality and customer loyalty. For example, Caruana (2002) examined the antecedent factor of service loyalty with retail bank customers in Malta, in an attempt to test the mediating role of customer satisfaction on the link between service quality and customer loyalty. He maintained that customer satisfaction performs a mediating role in the relationship between service quality and customer loyalty in the retail banking context. Ekinci et al. (2008) tested the interrelationships between service quality (physical quality and staff behaviour quality), customer satisfaction and the customer loyalty of hotel and restaurant customers in the United Kingdom. They concluded that the relationship between service quality and customer loyalty is fully mediated by customer satisfaction. Similarly, Osman and Sentosa (2013) determined that customer satisfaction mediated the relationship between service quality and customer loyalty in a rural tourism context in Malaysia. The results reveal that customer satisfaction has a significant positive partial mediating influence on the relationship between service quality and customer loyalty.

2.5.4.2 The Relationship between Customer Perceived Value and Customer Loyalty

Service marketing scholars have identified a positive relationship between customer perceived value and customers' intentions to purchase and repurchase. Anderson and Srinivasan (2003) noted that customers tend to switch to a competitor's product or service, if they perceive low value.
Several empirical studies provide evidence that customer loyalty is a consequence of customer perceived value. For example, Brodie et al. (2009) investigated the impact of customer-perceived value on customer loyalty with airline industry via an online survey. The results of their study indicate that customer-perceived value has a significant and direct impact on customer loyalty.

Likewise, Hutchinson, Lai, and Wang (2009) tested the influence of value, quality and satisfaction on behavioural intentions of golf tourists (intention to visit, word-of-mouth and searching for alternatives). The research findings confirm the significant and positive impact of customer-perceived value on customer loyalty. The research also suggested that golf travellers who perceived the payment of a reasonable price, and received a superior net value from their purchase, were more likely to revisit and provide positive word-of-mouth reports. In addition, they would be less likely to search for alternatives.

Another group of studies have found that the relationship between customer-perceived value and customer loyalty is mediated by customer satisfaction (Chitty et al., 2007; Howat & Assaker, 2013). For example, Howat and Assaker (2013) tested a comprehensive model of perceived quality on loyalty in the context of public aquatic centres in Australia. Their findings suggest that overall satisfaction fully mediates the impact of customer perceived value on customer loyalty.

2.5.4.3 The Relationship between Corporate Image and Customer Loyalty

Several empirical studies have reported that corporate image is a critical factor influencing customer satisfaction and subsequent behavioural intentions (Andreassen & Lindestad, 1998; Clemes et al., 2009; Hu et al., 2009; Kandampully & Hu, 2007; Kandampully et al., 2011; Suhartanto et al., 2013). Kandampully and Suhartanto (2000) found that a good hotel image and customer satisfied with a hotel's performance with regard to housekeeping, reception, food, and beverage are positively related to customer loyalty. Eskildsen et al. (2004) reported that corporate image influences customer loyalty in mobile phone companies, banks and supermarkets in Denmark. Back (2005) found a positive and significant effect of corporate image on post-purchase behaviour in the lodging industry he also reported the positive and significant effect of corporate image on post-purchase behaviour. Homer (2008) notes that corporate image influences post-purchase behaviour both directly and indirectly. Kandampully and Hu (2007) found that hotel image and satisfaction are vital constructs in determining a customer's intention to recommend and to revisit a hotel. Likewise Kandampully and Suhartanto (2003) confirmed that hotel image is an important factor that guests of a hotel consider when repurchasing and recommending a hotel.

2.5.4.4 The Relationship between Customer Satisfaction and Customer Loyalty

It is generally accepted that customer satisfaction is a significant predictor of customer loyalty (Clemes, Gan, et al., 2011; Han, Kwortnik, & Wang, 2008; Harris & Ezeh, 2008; Suhartanto et al., 2013). The experience of satisfaction arising from the consumption of a service or product develops and enhances the customer's belief regarding the quality of that service or product. This experience influences a customer's willingness to repurchase (Suhartanto et al., 2013). Bolton and Lemon (1999) stated that satisfied customers tend to have a higher level of product or service consumption, a stronger level of repurchase intention, and a greater willingness to spread positive word-of-mouth, or recommend the products or services to their friends and associates, compared to dissatisfied customers.

In addition, a satisfied customer is "less likely to search for information on alternative products or services, and less likely to yield to competitor overtures than is a dissatisfied customer" (Anderson & Srinivasan, 2003, p 125). A considerable amount of research conducted in various industries indicates the significant and positive impact of customer satisfaction on customer loyalty (Chen, 2008; Chen & Chen, 2010; Clemes et al., 2013; Eskildsen et al., 2004; Lai, Griffin, & Babin, 2009; Osman & Sentosa, 2013). Additional evidence from research conducted in the hotel industry context also confirms the positive relationship between customer satisfaction and customer loyalty (Back, 2005; Clemes, Gan, et al., 2011; Clemes et al., 2009; Ekinci et al., 2008; Suhartanto et al., 2013).

2.6 Applying a Comprehensive Hierarchical Model

The first hierarchical model (multi-level model) that measured first and second order constructs and the relationship between several higher order constructs (service quality, customer satisfaction, customer perceived value, corporate image and customer loyalty) using the responses from a single sample was developed by Clemes et al. (2007). Multiple regression was used to analyse and depict this multi-level model. Studies have now used the multi-level model to conceptualise service quality and test the interrelationships between the higher order constructs in the hotel industry. For example, Clemes et al. (2009) on Taiwan hotels and Clemes, Gan, et al. (2011) on New Zealand motels.

Dagger et al. (2007) introduced a comprehensive hierarchical model for the health care sector using Structural Equation Modelling (SEM). SEM enables researchers to simultaneously test the interrelationships between the sub-dimensions, primary dimension and the higher order constructs (Clemes et al., 2014). Researchers have since used comprehensive hierarchical modelling to conceptualise service quality and test the interrelationships between the higher order constructs in various industries using SEM. For example, Pollack (2009) for phone service and hairdressing services, Kyle et al. (2010) for ski resorts, Akter et al. (2010) for mobile health services, and Clemes, Brush, et al. (2011) for professional sport. However, several important service marketing constructs such as customer perceived value, corporate image and switching costs have not been included in the models of the aforementioned studies. Recently, Clemes et al. (2014) has applied comprehensive hierarchical modelling to conceptualise and test the interrelationship between the higher order constructs for mobile phone service providers. In this study, several important service marketing constructs such as customer perceived value, corporate image, and switching cost have been included in the model in order to more comprehensively investigate the interrelationship between these constructs. Nevertheless, Clemes et al. (2014) did not analyse the moderating and mediating impacts between the constructs.

To date, comprehensive hierarchical modelling has not been applied to a long duration and high involvement service such as resort hotel stays. Therefore, this study aims to fills this research gap by applying a comprehensive hierarchical model to conceptualise service quality and test the interrelationships between the higher order constructs in resort hotel stays. Moreover, this study has included four constructs relating to service quality: customer satisfaction, customer perceived value, corporate image and customer loyalty. This study also tests the mediating impact of customer satisfaction on the relationship between service quality and customer loyalty, and on the relationship between customer perceived value and customer loyalty, in a comprehensive hierarchical modelling framework.

Chapter 3

Conceptual Research Model and Hypotheses Development

3.1 Introduction

This chapter outlines the development of the conceptual research model that is applied in this study. The conceptual research model is a comprehensive hierarchical model of resort hotel stays in Thailand that consists of two main conceptualizations. A third-order service quality measurement model and a causal model that tests the interrelationships among five higher order constructs: service quality, corporate image, customer perceived value, customer satisfaction and customer loyalty. The chapter also includes a discussion of the hypotheses tested in order to satisfy the three research objectives.

3.2 Model Development

The major research objectives are to identify a unique service quality measurement model and determine the interrelationships between the five marketing constructs for a long-duration and high-involvement service organization such as beach resort hotels. Therefore, a comprehensive hierarchical model was developed as the conceptual research model (see Figure 3-1).
The comprehensive hierarchical model in this study was based on the framework developed by Dagger et al. (2007), Clemes, Brush, et al. (2011) and Clemes et al. (2014). In comprehensive hierarchical modelling, both the service quality measurement model and the interrelationships between the higher order constructs in a service setting are simultaneously analysed using the perceptions from a single sample Clemes et al. (2014).

The conceptual research model suggests that beach resort hotel customers evaluate resort hotel service quality at three ordered and hierarchical levels: a sub-dimensional level, a primary dimensional level and an overall level (Brady & Cronin, 2001). The sub-dimensional level consists of multiple sub-dimensions pertaining to each of the service quality primary dimensions, while the primary dimensional level consists of three primary dimensions: interaction quality, physical environment quality and outcome quality (Brady & Cronin, 2001). Resort hotel customers evaluate the service quality offered by a resort hotel through multiple sub-dimensions (at a sub-dimensional level), and then aggregate their perceptions of each sub-dimension to form their perceptions of three primary dimensions and the perceptions of all three primary dimensions are combined to reflect the customers' overall service quality perceptions (Brady & Cronin, 2001; Clemes et al., 2013; Clemes, Gan, et al., 2011; Clemes et al., 2009; Dagger et al., 2007; Mittal et al., 2013; Wu & Cheng, 2013; Wu & Ko, 2013).
The conceptual research model also illustrates the potential interrelationships existing between service quality, customer perceived value, corporate image, customer satisfaction and customer loyalty.

Perceived service quality is expected to have a positive impact on customer perceived value, corporate image, customer satisfaction and customer loyalty. Customer perceived value is expected to have a positive impact on corporate image, customer satisfaction and customer loyalty. Corporate image is expected to have a positive impact on customer satisfaction and customer loyalty. Customer satisfaction is expected to have a positive impact on customer loyalty.

Recently, comprehensive hierarchical modelling has been used in a number of research studies across several service industries to examine the conceptualization and measurement of the dimensions of service quality, service quality and the interrelationships among the higher order constructs (e.g. satisfaction, perceived value, corporate image, perceived switching costs, customer loyalty). For example: education (Clemes et al., 2013; Clemes et al., 2007), health services (Dagger et al., 2007), hotel stays (Clemes et al., 2009), motel stays (Clemes, Gan, et al., 2011), ski resorts (Kyle et al., 2010); professional sport (Clemes, Brush, et al., 2011), and national parks (Chen et al., 2011).

However, a comprehensive hierarchical model has not been tested for resort hotel stays. In particular, no study has been undertaken on resort hotel stays in Thailand. Ko and Pastore (2005) recommend that further studies on service quality in different service industries are still required to validate the multi-level modelling approach. A specific service quality measurement model is also required when applying the hierarchical modelling approach to different types of service organizations and cultural setting as the sub-dimensions and primary dimensions of service quality may vary across industries and culture (Clemes et al., 2013; Clemes et al., 2009; Wu & Cheng, 2013; Wu & Ko, 2013). The interrelationships among the higher order constructs also need to be analysed for specific cultural and industrial setting (Clemes, Gan, et al., 2011; Kandampully & Hu, 2007; Kyle et al., 2010).

3.3 Hypotheses Relating to Research Objective 1

Most service marketing academics agree that service quality is a multidimensional, higher order construct (Brady & Cronin, 2001; Clemes et al., 2013). Several scholars have consistently identified and empirically validated three primary dimensions that influence overall service quality in several cultural settings and for various industries: interaction quality, physical environment quality, and outcome quality (Brady & Cronin, 2001; Caro & Garcia, 2008; Clemes, Brush, et al., 2011; Clemes et al., 2013; Clemes, Gan, et al., 2011; Clemes et al., 2009; Pollack, 2009; Wu & Ko, 2013). Therefore these three primary dimensions are used in this study as key drivers of service quality.

However the sub-dimensional structures of service quality tend to be culturally sensitive and may vary across industries (Brady & Cronin, 2001; Clemes et al., 2007). Therefore, the service quality sub-dimensions need to be determined for each cultural and industry setting (Aigbedo & Parameswaran, 2004; Clemes et al., 2009; Cronin Jr & Taylor, 1994; Dabholkar et al., 1996; Wu & Ko, 2013).

In line with this recommendation, the potential sub-dimensions pertaining to each primary dimension were identified through an extensive literature review and three focus group discussions for resort hotels in Thailand.

3.3.1 Interaction Quality

Interaction quality is described as the quality of personal interactions between customers and service providers (Clemes, Gan, et al., 2011; Clemes et al., 2009; Surprenant & Solomon, 1987; Wu & Cheng, 2013). Interaction quality is a vital factor affecting customers' assessment of service quality (Brady & Cronin, 2001; Caro & Garcia, 2008; Clemes et al., 2013; Clemes, Gan, et al., 2011; Clemes et al., 2009; Wu & Ko, 2013). Based on the existing literature, the information obtained from the focus group discussions and the Exploratory Factor Analysis (EFA); three sub- dimensions are proposed to have a positive impact on the interaction quality primary dimension: attitude (Brady & Cronin, 2001; Caro & Garcia, 2008; Clemes et al., 2009; Lam, Cho, & Qu, 2007), behaviour (Brady & Cronin, 2001; Clemes et al., 2009; Ko & Pastore, 2005) and professionalism (Brady & Cronin, 2001; Caro & Garcia, 2008; Clemes et al., 2009; Dabholkar et al., 1996). Therefore, the following hypothesis is formulated:

H1: There is a significant positive relationship between the sub-dimensions of interaction quality (H1a, H1b, H1c) and the interaction quality primary dimension.

3.3.2 Physical Environment Quality

Bitner (1992) and Hilliard and Baloglu (2008) demonstrates that the surrounding physical environment has a significant impact on the overall service quality perceptions of service encounters as customers evaluate services through tangible physical surrounding such as décor, ambience and location in the hospitality industry. Several studies note that the physical environment is an essential aspect of service quality assessments (Brady & Cronin, 2001; Clemes et al., 2007; Dagger et al., 2007). Based on the existing literature, the information obtained from the focus group discussions and the EFA; five sub-dimensions are proposed to have a positive impact on the physical environment quality: a. décor and ambience (Kim & Moon, 2009; Wu & Weber, 2005), b. room quality (Choi & Chu, 2001; Chu & Choi, 2000), c. design (Bonn et al., 2007; Clemes et al., 2009; Ko & Pastore, 2005; Wu & Ko, 2013), d. location (Chou et al., 2008; Chu & Choi, 2000; Urtasun & Gutiérrez, 2006), e. facility and activity (Clemes et al., 2009; Wu, Lin, & Hsu, 2011; Xiang-xiang, 2005). Therefore, the following hypothesis is formulated:

H2: There is a significant positive relationship between the sub-dimensions of physical environment quality (H2a, H2b, H2c, H2d, H2e) and the physical environment quality primary dimension.

3.3.3 Outcome Quality

Outcome quality, or technical quality, is what customers receive after the service delivery or buyer-seller interactions (Brady & Cronin, 2001; Clemes et al., 2009; Wu & Ko, 2013).

There is consensus in the literature that outcome quality has a positive influence on customers' overall perceptions of service quality. Based on the existing literature, the information obtained from the focus group discussions and the EFA; three sub-dimensions are proposed to have a positive impact on the outcome quality: a. valence (Brady & Cronin, 2001; Brady et al., 2006; Caro & Garcia, 2008; Clemes et al., 2009; Wu & Ko, 2013), b. waiting time (Caro & Garcia, 2008; Clemes et al., 2009; Dagger et al., 2007; Wu & Ko, 2013), c. sociability (Brady & Cronin, 2001; Clemes et al., 2009; Wu & Ko, 2013).
Therefore, the following hypothesis is formulated:

H3: There is a significant positive relationship between the sub-dimensions of outcome quality (H3a, H3b, H3c) and the outcome quality primary dimension.

3.3.4 Overall Perceived Service Quality

Several scholars have consistently identified that perceived service quality consists of at least three primary dimensions: interaction quality, physical environment quality, and outcome quality (Brady & Cronin, 2001; Clemes, Gan, et al., 2011; Clemes et al., 2009; Kyle et al., 2010). It is proposed that resort hotel customers aggregate the perceptions of the interaction, physical environment and outcome quality primary dimensions to form the overall service quality perceptions (Brady & Cronin, 2001; Chen et al., 2011; Clemes et al., 2013; Clemes et al., 2007; Clemes, Gan, et al., 2011; Clemes et al., 2009; Dagger et al., 2007; Ko & Pastore, 2005; Kyle et al., 2010; Pollack, 2009; Wu & Cheng, 2013; Wu & Ko, 2013). Therefore the following hypotheses are formulated to test the positive impact of the interaction, physical environment, and outcome quality on the overall service quality perceptions of guests in a resort hotel stay context.

H4: There is a significant positive relationship between the interaction quality primary dimension and customers' overall perceptions of service quality.

H5: There is a significant positive relationship between the physical environment quality primary dimension and customers' overall perceptions of service quality.

H6: There is a significant positive relationship between the outcome quality primary dimension and customers' overall perceptions of service quality.

3.4 Hypotheses relating to Research Objective 2

Several researchers have studied perceived service quality in the hotel industry (Choi & Chu, 2001; Clemes, Gan, et al., 2011; Clemes et al., 2009; Shi & Su, 2007). However, the comparative importance of the service quality dimensions for resort hotels is still unknown, as the characteristics of resort hotel stay is relatively unique and no previous study has investigated these relationships.

Therefore, the following hypotheses are formulated in order to determine the most and least important dimensions of service quality for resort hotels:

H7a: Customers will vary in their perceptions of the importance of each of the sub-dimensions.
H7b: Customers will vary in their perceptions of the importance of each of the primary dimensions.

3.5 Hypotheses Relating to Research Objective 3

Cronin et al. (2000)'s comprehensive model explains the potential impact of service quality on corporate image, customer satisfaction, customer perceived value and customer loyalty. In addition, several studies on the hotel industry have investigated the interrelationships between service quality and the higher constructs such as customer loyalty (Clemes et al., 2009; Kandampully & Hu, 2007; Kyle et al., 2010; Pollack, 2009; Suhartanto et al., 2013); customer perceived value (Clemes et al., 2013; Clemes, Gan, et al., 2011; Kandampully & Hu, 2007); customer satisfaction (Clemes, Brush, et al., 2011; Clemes et al., 2013; Clemes, Gan, et al., 2011; Clemes et al., 2009; Hu et al., 2009; Kyle et al., 2010; Pollack, 2009; Suhartanto et al., 2013) and corporate image (Clemes et al., 2009; Kandampully & Hu, 2007). However, to date, no published study has investigating these interrelationships for resort hotel remains elusive. Therefore, the following hypotheses are formulated:

H8: Higher perceptions of service quality positively affect customer loyalty.
H9: Higher perceptions of service quality positively affect customer perceived value.
H10: Higher perceptions of service quality positively affect customer satisfaction.
H11: Higher perceptions of service quality positively affect corporate image.

Additionally, there is conflicting evident regarding the relationship between service quality and customer loyalty. Several studies have confirmed a direct impact of service quality on customer loyalty (Clemes et al., 2009). However, several studies indicate an insignificant causal path between service quality and customer loyalty (Cronin et al., 2000; Hu et al., 2009; Kandampully & Hu, 2007; Kim, Jin-Sun, & Kim, 2008). The literature also demonstrates that the relationship between service quality and customer loyalty may be mediated by other variables (Karatepe, 2006; Maxham III, 2001).
Recent studies show that customer satisfaction may function as a mediating variable between service quality and customer loyalty (Chitty et al., 2007; Ekinci et al., 2008; Kuo et al., 2012; Yu & Ramanathan, 2012).

Therefore, the following hypothesis is formulated:
H12: Customer satisfaction mediates the relationship between service quality and customer loyalty.

Customer perceived value is determined by the beneficial perceptions and sacrificial perceptions of customers (Bhattacharya & Singh, 2008; Gale & Wood, 1994; Zeithaml et al., 2006). Zeithaml (1988) suggests that customers who perceive that they receive value for money are more satisfied than those who perceive that they do not receive value for money. Perceived value is also a vital consideration in customers' decisions to repeat patronage at a service provider. In addition, a company' s image will be stronger if customers believe they receive high value from their purchasing (Barich & Kotler, 1991; Bolton & Drew, 1991). Several empirical studies have found a direct impact of customer perceived value on customer satisfaction (Chen, 2008; Chitty et al., 2007; Cronin et al., 2000; Lin, Sher, & Shih, 2005; McDougall & Levesque, 2000), customer loyalty (Brodie et al., 2009; Cronin et al., 2000; Gill, Byslma, & Ouschan, 2007; Hutchinson et al., 2009; Johnson, Herrmann, & Huber, 2006) and corporate image (Barich & Kotler, 1991; Hu et al., 2009). Therefore the following hypotheses are formulated:

H13: Higher customer perceived value positively affects customer satisfaction.
H14: Higher customer perceived value positively affects customer loyalty.
H15: Higher customer perceived value positively affects corporate image.

However, some researchers report an insignificant causal path between customer perceived value and customer loyalty and indicate that customer satisfaction functions as a mediating variable between the customer perceived value and customer loyalty relationship (Bowen & Shoemaker, 2003; Chitty et al., 2007; Wang, Lo, Chi, & Yang, 2004). To investigate this relationship in a resort hotel stay context; the following hypothesis is formulated:

H16: Customer satisfaction mediates the relationship between customer perceived value and customer loyalty.

Corporate image is the impressions, beliefs and attitudes held in a customer's memory regarding a company (Barich & Kotler, 1991). A strong corporate image positively influences customer satisfaction (Andreassen & Lindestad, 1998; Back, 2005; Chang & Tu, 2005; Chitty et al., 2007; Clemes et al., 2007; Faullant, Matzler, & Füller, 2008; Hart & Rosenberger, 2004; Lai et al., 2009) and customer loyalty (Chitty et al., 2007; Faullant et al., 2008; Helgesen & Nesset, 2007; Hung, 2008; Johnson, Gustafsson, Andreassen, Lervik, & Cha, 2001; Kandampully & Hu, 2007; Nguyen & LeBlanc, 2001). Hence, the following hypotheses are formulated:

H17: A higher corporate image positively affects customer satisfaction
H18: A higher corporate image positively affects customer loyalty.

Customer satisfaction is defined as "an outcome of purchase and use resulting from the buyer's comparison of the reward and the cost of purchase in relation to the anticipated consequences" (Churchill & Surprenant, 1982, p. 493).

Recent studies demonstrate that customer satisfaction positively influence customer loyalty (Chitty et al., 2007; Clemes, Brush, et al., 2011; Clemes et al., 2013; Clemes, Gan, et al., 2011; Clemes et al., 2009; Ekinci et al., 2008; Han et al., 2008; Hennig-Thurau, Gwinner, & Gremler, 2002; Lai et al., 2009; Pollack, 2009; Suhartanto et al., 2013). Therefore, the following hypothesis is formulated:

H19: Higher customer satisfaction positively affects customer loyalty.

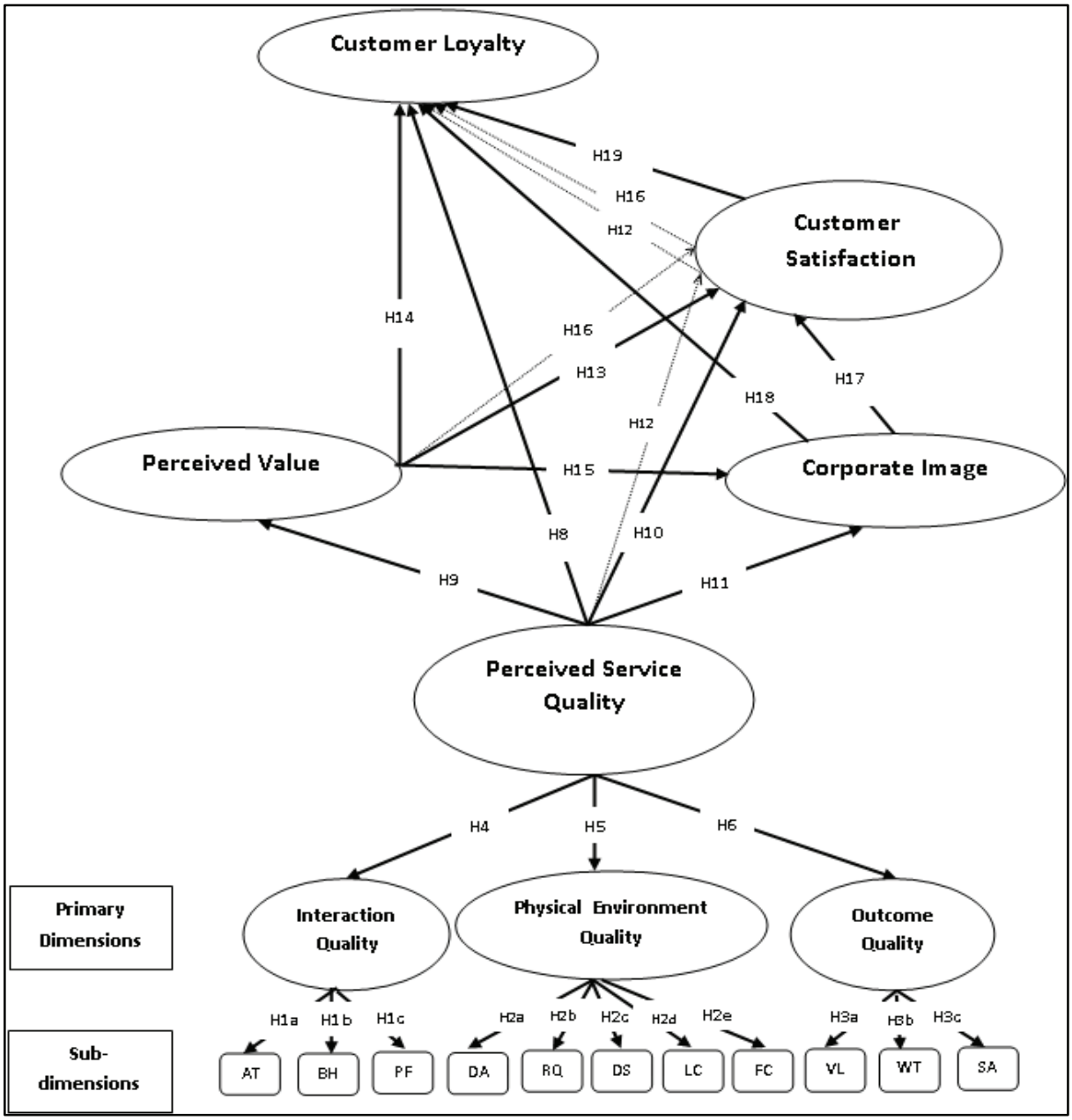

Figure 3.1 Proposed Research Model and Hypotheses for Resort Hotel Stays in Thailand

AT = Attitude, BH = Behaviour, PF = Professionalism, DA = Décor and Ambience, RQ = Room Quality, DS = Design, LC = Location and Convenient, FC = Facility and Activity, VL = Valence, WT = Waiting Time, SA = Sociability. Note: Hypotheses 7a and 7b are not included in the conceptual model.

Chapter 4

Research Methodology

4.1 Introduction

Chapter 4 outlines the research design and methodology used to examine the theoretical research model and test the 19 hypotheses (discussed in Chapter 3) to satisfy the three research objectives stated in Section 1.4. The content of this chapter is divided into 5 main sections. Section 4.1discusses the research design and justification of using a quantitative approach to analyse the data.
Section 4.2 discusses the questionnaire design. Section 4.3 discusses the sample derivation, sample size, sampling procedure and data collection procedures. Section 4.4 discusses the statistical methods used to analyse the data set. The following sections discuss each step in detail.

4.2 Research Design

A research design is a blueprint or operational plan for conducting research and it explains how to collect and analyse the data set, which in turn, will satisfy the research objectives of the study (Frazer & Lawley, 2000). Cooper and Shcindler (2006) state that there are a variety of methods and techniques available to conduct research. Qualitative and quantitative approaches are available for use in marketing research and researchers often employ techniques using both methodologies (Harrison & Reilly, 2011). Quantitative approaches address research objectives through empirical assessment, and answer research questions using numerical measurements and statistical analysis (Zikmund, Babin, Carr, & Griffin, 2012). This capability to establish statistical evidence on the strength of the interrelationship existing between variables, to test hypotheses, and to determine the validity and reliability of variable measurements were the justifications for employing a quantitative approach in this study (Malhotra, 2010; Zikmund et al., 2012). In addition, several recent studies have provided evidence of the suitability of employing a quantitative method in hospitality research settings (Back, 2005; Bowen & Shoemaker, 2003; Chitty et al., 2007; Han et al., 2008).

This study used a survey-based method to collect the data for several reasons.
First, the survey- based method is recognized as an effective method for gathering information related to a respondent's beliefs, attitudes and motives (Zikmund et al., 2012). Secondly, the survey-based method enables a researcher to gather a large sample size quickly and efficiently (Hair, Black, & Barbin, 2010; Sekaran & Bougie, 2010; Zikmund et al., 2012).

The survey-based method has a variety of patterns for collecting data efficiently such as personal interviews, telephone interviews, mail surveys, fax surveys, online surveys and self-administered questionnaires efficiently (Hair et al., 2010; Sekaran & Bougie, 2010; Zikmund et al., 2012).

This current study is subject to time and budget constraints and required data collected from a large sample size for testing hypotheses subject to time and budget constraints. Therefore, a self-administered questionnaire was used in this study as it was deemed more appropriate than the other methods of data correction (Hair et al., 2010; Sekaran & Bougie, 2010; Zikmund et al., 2012).

A self-administered questionnaire assumes that a respondent has the responsibility for reading and responding to a questionnaire (Sekaran & Bougie, 2010; Zikmund et al., 2012). A self-administered questionnaire is an economical and efficient method for data collection. Using a self-administered questionnaire, numerous questionnaires can be simultaneously distributed to many respondents in several places in a similar time period (Sekaran & Bougie, 2010; Zikmund et al., 2012).
A self-administrated questionnaire is also easier to answer, consumes less response time, and does not require the interviewer to have skills in face to face interviews (Sekaran & Bougie, 2010; Zikmund et al., 2012). Furthermore, the self-administered questionnaire method allows respondents to complete the questionnaire at their convenience, at a preferred location, and when they are available (Sekaran & Bougie, 2010; Zikmund et al., 2012).

The issue of interruption of privacy, which is a serious concern when conducting research in the hospitality industry, can be minimised by applying the self-administered questionnaire.
However, the inability to control the accuracy of the responses is a major disadvantage of the self-administered questionnaire method as respondents may misunderstand some of the questions, creating validity problems and ultimately misinterpretation of the findings (Aaker, Kumar, & Leone, 2012). To resolve this issue, face validity, content validity and reliability were examined and satisfied before the questionnaires were distributed to the sample (Hair et al., 2010).

4.3 Survey Instrument Development

The development of the questionnaire is a critically important stage for well-conducted research, as the quality of received information is dependent on the quality of questions asked in the questionnaire (Zikmund et al., 2012). The questionnaire in this study was developed in multiple steps: construct operationalization, questionnaire design, pre-testing the questionnaire to determine face validity, content validity and reliability, and design of the final draft layout (Aaker et al., 2012; Zikmund et al., 2012). The following sections present the questionnaire development process in detail.

4.3.1 Construct Operationalization

Originally, the constructs and the pool of questionnaire items were generated in two steps: an extensive literature review, and focus group discussions. The following sections discuss the process of construct operationalization in detail.

4.3.1.1 Literature Review

Churchill (1979) suggests that an extensive literature review provides information related to item definition, and how potential items have been measured in previous studies. Hair et al. (2010) notes that the constructs covered in the questionnaire can be generated through the literature review process when the literature has provided a sufficient discussion on a certain topic. Zikmund et al. (2012) state that adopting reasonable and reliable measurement items that exist in the literature and support the content validity of the questionnaires. In line with these recommendations, the extant literature reviewed in this study focused on the dimensions of service quality, service quality, corporate image, customer perceived value, customer satisfaction and customer loyalty. As a result, the proposed primary dimensions, sub-dimensions and potential measurement items for service quality and the other four marketing constructs (corporate image, customer perceived value, customer satisfaction and customer loyalty) were established.

4.3.1.2 Focus Group Procedures

A focus group discussion is a "group discussion exploring a specific set of issues" (Edmunds, 1999, p. 4). A focus group is an effective method for defining and developing a reliable measurement scale (Hair, Bush, & Ortinau, 2000; Kandampully, Mok, & Sparks, 2001; Kitzinger & Barbour, 1999).
Focus groups enable researchers to gain an in-depth knowledge of the research topic, narrow the concepts and issues, and generate the correct questions (Churchill, 1979). In addition, focus groups are frequently used in questionnaire design and widely employed in marketing and management research, especially in service quality studies (Clemes et al., 2014; Lu et al., 2009; Parasuraman et al., 1994; Powpaka, 1996; Rust & Oliver, 1994). Therefore, three focus group discussions were conducted to aid in evaluating the items and refining the constructs pertaining to resort hotel stays.

In terms of participants in a focus group discussion, several researchers suggest that eight to ten participants are required for a full focus group (Aaker et al., 2012; Zikmund et al., 2012). However, mini focus groups, which have been recommended as a more effective discussion for gaining in-depth information, require four to six participants (Calder, 1977; Cox, Higginbotham, & Burton, 1976; Greenbaum, 1998; Zikmund et al., 2012). In addition, Hair et al. (2000) recommend that the participants in a focus group should be as homogenous as possible in order to ensure that participants feel comfortable. Therefore, three mini focus groups were conducted in Phuket province Thailand after approval was obtained from the Lincoln University Human Ethics Committee (HEC). Each focus group was composed of five to seven participants who had stayed at a resort hotel in Phuket within the last three months. The focus group sessions were moderated by the researcher who allowed approximately 2 hours for each focus group. During the process, the participants were encouraged to list all of the factors that influenced their perceptions of the interaction, physical environment and outcome quality dimensions for their resort hotel stay in Phuket.

The information obtained from all three focus group discussions was summarized and categorised along with the preliminary constructs and potential items derived from the literature review. As a result, the focus group interviews provided valuable information to help generate the final research model and survey instrument.

For example, the activity-provided sub-dimension was combined with the Facility sub-dimension and renamed the facility and activity sub-dimension. In addition, new items emerged such as “Beach Accessibility” and “Convenient Public Transportation” for the location & convenience sub-dimension. Lastly, the preliminary constructs and the potential items were purified based on the summarized information from the literature review and the focus groups’ discussions.

4.3.1.3 Questionnaire Design

Generally, there are two types of survey questionnaires: open-ended and closed-ended. The open-ended questionnaire enables respondents to create their own answer while in a closed-ended questionnaire the respondent’s responses are limited to simple-dichotomy questions, determinant choice questions, frequency-determination questions, checklist questions, rank-ordered responses or scale questions (Aaker et al., 2012). This study used closed-ended items that were scaled.

This study used Likert scales in the questionnaire. The Likert scale is an instrument commonly used to measure peoples’ attitudes or opinions, it allows respondents to indicate their attitude towards an objective by rating it from strongly agree to strongly disagree (Aaker et al., 2012; Zikmund et al., 2012). In this study, a 7 point Likert scale was adopted as it is commonly used in hospitality studies as it is a very useful instrument for classification of respondents’ attitudes (Back, 2005; Han et al., 2008; Kayaman & Arasli, 2007; Mattila, 2006). In addition, using the 7 point Likert scale allowed researchers to avoid the issue of a continuous scale in multivariate statistical analysis as the Likert scale can be treated as a continuous scale (Byrne, 2010; Hair et al., 2010). Hair et al. (2010) suggest that a scale containing more than four response categories can be treated as an interval scale. Likewise, Byrne (2010) notes that when a scale has large categories, the categorical scale problem can be ignored. Ultimately, the ‘large categories’ scale has a positive impact on improving the discriminant validity of measurement (Zikmund et al., 2012).

The questionnaire used in this study was performance only which has several advantages over two separate measurements (Expectation and Perception) developed by Parasuraman et al. (1988). Disconfirmation measures have theoretical and operational problems (Babakus & Boller, 1992; Bojanic & Rosen, 1994; Brown, Churchill Jr, & Peter, 1993; Carman, 1990; McDougall & Levesque, 1994) and obstacles in gathering expectation and perception data separately (Fu & Parks, 2001; Teas, 1993). In addition, several studies have indicated higher correlations, adjusted R square values, and construct validity and reliability when performance measurements are compared to the disconfirmation paradigm (Cronin Jr & Taylor, 1994; Dabholkar et al., 1996; Zeithaml et al., 1996).

Several scholars have suggested that using single items to measure each construct can lead to measurement error and the inability to capture the richness of a concept (Churchill, 1979; Hair et al., 2010; Kline, 2011; Robert, 2002). Single-item measurements can also cause a model identification problem when analysing using Structural Equation Modelling.

With single items, the model is more likely to be empirically under-identified than those models consisting of at least three items per factor (Byrne, 2010; Kline, 2011; Schumacker & Lomax, 2004). In addition, several scholars recommend that after carrying out the CFA, at least three items should remain; otherwise the researcher may be faced with specification error and non-convergence of iterative estimation problems which can easily occur when a model has only one or two measurement items per construct (Byrne, 2010; Hair et al., 2010; Kline, 2011; Meyers, Gamst, & Guarino, 2013). Multiple items were used to measure the constructs in this study in order to obtain more accurate information and avoid identification problems in the SEM analysis.

However, Hair et al. (2010) note that using fewer than three items to measure constructs is sufficient and acceptable, if the constructs are easy to understand, exhibit lack of nuance and lack of complexity. To reduce the length of time in filling out the questionnaire, the overall perceptions of each primary dimensions (interaction quality, physical environment quality and outcome quality) in this study are measure by two items as the overall perceptions of the service quality primary dimensions are straightforward and can be directly measured as suggested by Hair et al. (2010).

4.3.1.4 Pre-testing Procedure

A pre-test is "administering research measures under special conditions, usually before full-scale administration to participants" (Dane, 1990, p. 127). The objective of conducting the pre-test is to evaluate the face validity, content validity, reliability, the clarity of scale and the length of time to complete the survey (Malhotra, 2010). Gates and McDaniel (2001) note that a questionnaire can have face validity when it appears to measure what it is supposed to measure while content validity refers to "the extent to which an empirical measurement reflects a specific domain of content" (Carmines & Zeller, 1979, p. 20). Ruane (2005) and Saunders, Lewis, and Thornhill (2007) recommend that after a researcher has finished developing a solid survey instrument, a pre-test process should be conducted before the survey instruments is used to collect data. Consistent with these recommendations, a two-step process of pre-testing was employed in this study.

First, the questionnaires were distributed to an expert panel consisting of three service marketing experts and three hotel managers, who were invited to review and freely comment on the questionnaires. The principle behind this process is to obtain the panel's opinion in order to improve the questionnaire's face and content validity, in accordance with suggestions by Carmines and Zeller (1979), Kline (2011) and Malhotra (2010).

Based on the confirmations and suggestions of the service marketing experts, some minor modifications were made to the survey instrument. The improved survey instrument was then presented to resort hotel managers to obtain their opinion as to the suitability of using this survey instrument to collect data from their guests. The three managers confirmed the suitability of the questionnaire to measure guest perceptions.

Second, field survey pre-testing was conducted by randomly distributing an invitation letter, which included both the questionnaire and the questionnaire feedback form, to 30 Australian resort hotel guests who had stayed in a resort hotel in Phuket within the last three months. The aim of this process was to obtain participant's comments and suggestions on any questions they felt were difficult to answer. The 30 questionnaires and feedback forms were returned. Minor modification such as clarifying sentences and using appropriate words, were made after completing pre-testing process. All of the constructs were reliable with the Cronbach's Alpha, being above the recommended threshold of 0.7.

4.3.1.5 Layout of the Final Draft Questionnaire

The final draft of the survey instrument consisted of 74 items and was divided into 9 sections. Sections A to C were the measurement items used to assess service quality for each construct: interaction quality in Section A comprised 16 items, physical environment quality in Section B comprised 25 items, and outcome quality in Section C comprised 13 items. Sections D to H were five service marketing constructs: overall service quality in Section D comprised 3 items, customer satisfaction in Section E comprised 4 items, customer perceived value in Section F comprised 4 items, corporate image in Section G comprised 3 items, and customer loyalty in Section H comprised 6 items. Section I, the Demographic Variable, comprised 10 items. The items from Section A to H used a standard seven-point Likert-type scale ranging from Strongly Disagree (1) to Strongly Agree (7)

Section A

Section A contained 16 items for measuring the four sub-dimensions of interaction quality. There were four items measuring attitudes, four items measuring behaviour, three items measuring expertise, three items measuring problem-solving and two items measuring customers overall perceptions of interaction quality (see Table 4.1).

Table 4.1 Instrument Items and Sub-dimensions for Measuring Interaction Quality

Constructs Items	Items No.	Description
Attitudes (4 Items)	A1	The resort hotel's staff are friendly.
	A2	The resort hotel's staff are welcoming.
	A3	The resort hotel's staff demonstrate their willingness to help me.
	A4	The resort hotel's staff are polite and courteous.
Behaviour (4 Items)	A5	I received individual attention when I had specific needs.
	A6	The resort hotel's staff always provide prompt service.
	A7	The behaviour of the resort hotel's staff allows me to trust their service.
	A8	The resort hotel's staff do whatever is necessary to satisfy my needs.
Expertise (3 Items)	A9	The resort hotel's staff are knowledgeable when answering my questions.
		The resort hotel's staff have good communication skill.
	A10	The resort hotel's staff perform the service dependably and accurately at
	A11	the time promised.
Problem Solving (3 Items)	A12	The resort hotel's staff are authorised to solve my miner complaints directly and immediately
	A13	The resort hotel's staff are competent in handling my problems.
	A14	When I had a problem the resort hotel's staff promptly solved with sincere concern for my interest.
Interaction Quality (2 Items)	A15	The resort hotel's staff deliver superior service.
	A16	Overall, the quality of the interactions between customers and employees of this resort hotel is excellent.

Section B

There were 25 items measuring physical environment quality in Section B consisting of five pertaining sub-dimensions. There were four items measuring décor & ambience, five items measuring room quality, four items measuring design, four items measuring location & convenience, six items measuring facility & activity and two items measuring overall perception of physical environment quality (see Table 4.2).

Table 4.2 Instrument Items and Sub-dimensions for Measuring Physical Environment Quality

Constructs Items	Items No.	Description
Décor & Ambience (4 Items)	B1	The décor of this resort hotel is to my liking.
	B2	The décor of this resort hotel exhibits a great deal of thought and style.
	B3	The décor of this resort hotel is attractive.
	B4	The atmosphere of this resort hotel is excellent.
Room Quality (5 Items)	B5	The rooms and bathroom of this resort hotel are clean.
	B6	The guest room is quiet.
	B7	The room size is adequate.
	B8	The bed/mattress/pillow is comfortable.
	B9	The bedroom of this resort hotel has high quality of in-room temperature control.
Design (4 Items)	B10	The layout of this resort hotel suits my purpose/needs.
	B11	The gardens surrounding this resort hotel are attractive and well-designed.
	B12	The materials and furnishings at this resort are visually appealing.
	B13	The facilities of this resort are appealing.
Location (4 Items)	B14	There are convenient parking spaces available.
	B15	The transportation from this resort hotel to local destinations is convenient.
	B16	This resort hotel is located in an attractive scenic area.
	B17	The beach is easily accessible from this resort hotel.
Facility & Activity (6 Items)	B18	This resort hotel has a variety and high quality of food and beverage facilities.
	B19	This resort hotel has variety of leisure facilities and programs.
	B20	This resort hotel has adequate recreation and entertainment facilities.
	B21	I feel safe with the facilities and equipment of the resort.
	B22	There are a variety of activities in the surroundings of the resort which meet my needs.
	B23	This resort hotel had well organized activities and programmes that I required.
Overall Physical Environment (2 Items)	B24	The physical environment of this resort hotel is excellent.
	B25	I would rate this resort hotel's physical environment very highly.

Section C

Section C contained 13 items for measuring the three sub-dimensions of outcome quality.

As presented in Table 4.3, there were four items measuring Valence, three items measuring waiting time, four items measuring sociability and two items measuring overall perceptions of outcome quality.

Table 4.3 Instrument Items and Sub-dimensions for Measuring Outcome Quality

Constructs Items	Items No.	Description
Valences (4 Items)	C1	When I leave this resort hotel, I feel my expectations have been met.
	C2	I would evaluate the outcome of this resort hotel's service favourably.
	C3	My stay at this resort was leisurely and stress-free.
	C4	This resort hotel made my holiday trip enjoyable.
Waiting Time (3 Items)	C5	The resort hotel's staff respond promptly to my requests.
	C6	The resort hotel's staff try to minimize my waiting time.
	C7	The resort hotel's staff provide punctual service for me.
Sociability (4 Items)	C8	During my leisure time staying in this resort, I was not bothered by other customers.
	C9	The other customers at this resort hotel did not affect the resort hotel's ability to provide me with good service.
	C10	This resort hotel provides me with opportunities for social interaction.
	C11	I have made social contacts at this resort hotel.
Overall Outcome (2 Items)	C12	I generally feel good about my stay in this resort hotel.
	C13	Overall, I have received my desired outcome by staying in this resort hotel.

Section D, E, F, G, H

Section D, E, F, G and H contained 20 items. Three items measuring the overall perception of service quality (D), four items measuring customer satisfaction (E), four items measuring customer perceived value (F), three items measuring corporate image (G) and six items measuring customer loyalty (H) (see Table 4.4).

Table 4.4 Instrument Items for Measuring Service Quality, Customer Satisfaction, Customer Perceived Value, Corporate Image and Customer Loyalty

Constructs Items	Items No.	Description
Service Quality (3 Items)	SQ1	This resort hotel consistently provides superior service quality in every way.
	SQ2	Compared to other resort hotels, this resort hotel's service is superior.
	SQ3	Overall, the service quality of this resort hotel is excellent.
Customer Satisfaction (4 Items)	CS1	I made the right decision by choosing to stay in this resort hotel.
	CS2	I had a pleasurable stay at this resort hotel.
	CS3	This resort hotel satisfied my needs and wants.
	CS4	Overall, I am satisfied with my resort hotel stay.
Customer Perceived Value (4 Items)	PCV1	Compared with what I have paid, the overall service of this resort hotel has satisfied my needs.
	PCV2	The price of this resort hotel is reasonable.
	PCV3	This resort hotel offers good value for money.
	PCV4	Overall, I am satisfied with the value I received for the price that I paid.
Corporate Image (3 Items)	CI1	This resort hotel has a good reputation.
	CI2	I believe that this resort hotel has a better image than its competitors.
	CI3	I have always had a good impression of this resort hotel.
Customer Loyalty (6 Items)	CL1	Compared with other resort hotels, I prefer the service of this resort hotel.
	CL2	I am willing to pay more to be a guest at this resort hotel than at other resort hotels in Phuket
	CL3	I feel better when I stay at this resort hotel.
	CL4	This resort hotel is the one that I appreciate the most in Phuket.
	CL5	If I return to Phuket, I would stay at this resort hotel again.
	CL6	I would recommend this resort hotel to my friends and colleagues.

Section I

Section I contained ten items measuring demographic variables, including gender, age, educational level, occupation, duration of stay, purpose of stay. The other two questions (frequency of dining, and joining activities offered by resort hotel) were included to measure the involvement level between customers and the resort hotel.

4.4 Sampling Method and Data Collection Procedures

A Sample is "a subset, or some part, of a larger population" (Zikmund et al., 2012, p. 387) as it is impossible to collect data from the entire population. Therefore a sampling method is employed to estimate the sample size required to represent a study's population (Ruane, 2005; Sekaran & Bougie, 2010; Zikmund et al., 2012). The following sections examine the process of the sampling method and data collection used in this study in detail.

4.4.1 Sample Derivation

Phuket Province Thailand was selected as the research field. Primary data was collected from resort hotels' guests who stayed at one of any four star resort hotel located in Phuket. The nationality, length of stay and interaction with the resort, along with standard of service of the resort, were criteria for classifying and selecting participants. All of the resort hotels offered a similar service level and service space (based on the information obtained from the Tourism Authority of Thailand). This study focused on resort hotel guests from the United Kingdom, Australia and United States as they represent Thailand's main tourist markets in terms of budget spending and numbers lodging in resort hotels in Thailand (Tourism Authority of Thailand, 2014a). In addition, only customers lodging for at least 5 days, and demonstrating a high interaction with the resort (joining activities and often dining at the resort) were invited to participate in this research as these two criteria were used to qualify long duration and high involvement customers and service provider interaction.

4.4.2 Sample Size

Sample size is the number of subjects chosen to represent a population in a research study (Sekaran & Bougie, 2010). The sample size is one critical factor for precise generalization; therefore, it requires a reliable estimation with a minimal error, as well as closely reflecting important population parameters (Ruane, 2005; Sekaran & Bougie, 2010). Moreover, sample size has an impact on the reliability of factors that emerge from a factor analysis (Hair et al., 2010). While there is no consensus on an acceptable sample size (Hair et al., 2010; Leisa Reinecke & Pearcy, 2001), several authors agree that the number of participants in the sample should be at least greater than the number of variables analysed (Bryman & Cramer, 2004). Krejcie and Morgan (1970) suggest that a sample size of at least 384 is likely to be sufficient, no matter how large the population is represents.

The main objectives of this study were to develop a measurement model for a resort hotel stay, and to determine the interrelationship among the five marketing constructs. Exploratory Factor Analysis (EFA), the Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) were employed to satisfy these objectives. Therefore, the sample size estimation should also consider the requirement of all the employed techniques.

Hinkin (1995) suggests a ratio of items to responses from 1:4 to 1:10 is suitable for EFA and CFA, while at least 200 respondents are required for conducting the SEM (Boomsma, 1983; Kelloway, 1998). However, the SEM method tends to be more sensitive, with almost any difference that is detected making the goodness-of-fit measures indicate a poor fit with a sample size greater than 400 (Tanaka, 1993).

Schumacker and Lomax (2004, p. 108) propose some advice for measurement model analysis namely that, "a researcher could begin model generation by using exploratory factor analysis (EFA) on a sample of data to find the number and type of latent variables in a plausible model. Once a plausible model is identified, another sample of data could be used to confirm or test the model, that is, confirmatory factor analysis (CFA)." Kline (2011) also confirms that the sample used for the EFA and the CFA should be separated as the results of the EFA are subject to capitalization on chance variation, so this problem will be compounded when analysing the CFA to specify the model based on the results of the EFA. In addition, the factor structures identified through the EFA may result in having a poor fit to the same data when evaluated using the CFA.

In line with all the aforementioned advice from scholars, at least five occurrences for an item was the minimum sample size required in this study (Hair et al., 2010; Kline, 2011; Pallant, 2010). Therefore, a sample of at least 480 needed to be obtained as there were 48 items subjected to the EFA and CFA, and the other 26 items were used for SEM. Therefore, at least a sample of 240 was required for the EFA, and another 240 for CFA and SEM.

4.4.3 Sampling Method

There are two main categories of sampling techniques: probability and non-probability. The probability technique is "a sampling technique in which every member of the population has a known, non-zero probability of selection", while the non-probability technique is "a sampling technique in which units of the sample are selected on the basis of personal judgment or convenience, and the probability of any particular member of the population being chosen is unknown" (Zikmund et al., 2012, p. 394).

The probability technique is accepted as a more preferred technique in terms of the generalization of the research findings (Leary, 2004; Yu & Cooper, 1983). However, convenient sampling, which is non-probability sampling, was selected to use for the data collection in this study for several reasons.

Firstly, the fundamental requirement of probability sampling is that all samples must have an equal probability of being selected was not feasible in this study as a target population in the hotel industry was unable to be identified (Back, 2005; Zikmund et al., 2012).

Secondly, non-probability sampling is considered as an acceptable sampling technique if the objectives of the research are to: test the theoretical premises, test the hypotheses regarding how variables are related to behaviour, and provide evidence in supporting or rejecting the theory test, regardless of the nature of the sample (Leary, 2004; Reynolds, Simintiras, & Diamantopoulos, 2003; Suhartanto et al., 2013).

Thirdly, for ethical reason, the questionnaires were distributed only to resort hotel guests who consented to participation in the study. In order to minimize the drawbacks of using convenience sampling, data was gathered from several resort hotels in Phuket Province, and a non-response bias test was conducted.

4.4.4 The Data Collection Procedure

Invitation letters to participate in this study were sent to 15 resort hotels in Phuket. The letters described the aim of the study, the study's significance to the resort hotel industry, the intended use of data, the issues related to confidentiality, and a request for voluntary participation of the organisation. As a result of this process, 10 resort hotels agreed to participate. Following their consent, the data collection process took place from April 1st to August 20th 2012. After receiving acceptance from the resort hotels, the researcher visited all of the participating resort hotels to discuss the data collection process and explain the details of the questionnaire with the managers. The questionnaires were then sent to all participating resorts hotels for distribution to voluntary participants.

Several scholars suggest that a personal approach is a useful method to improve the response rate, as it enables the researcher to reduce surprise and uncertainty of attracting a respondent, it also creates a more cooperative atmosphere among respondents (Cooper & Shcindler, 2006; Malhotra, 2010). Thus, the resort hotel guests were personally approached and invited to participate in the research by the resort hotel front-desk personnel when they checked in. Only the guests who were willing to participate were given the questionnaires with a personalised cover letter, and asked to fill out the questionnaires and return to the reception on their check-out date. The cover letter illustrated the purpose of the study, the approximate length of time to complete a questionnaire, an assurance about the confidentiality of the response, age eligibility (18 years of older), and the channel to contact the researcher or his supervisors. The guests were encouraged to participate by suggesting that their response to the survey would provide valuable information for resort hotel management to understand their customers' perceptions of service quality with the intention, in turn, to improve and provide a superior service. A prepaid non-monetary incentive has been found to be an effective way to increase response rates (Willimack, Schuman, Pennell, & Lepkowski, 1995). In this research, Thai style key-rings were given to the participants as an appreciation for completing the questionnaire.

4.5 Data Analysis Procedure

The data analysis was conducted through the Statistical Package for the Social Sciences version 20 (SPSS) and the Analysis of Moment Structures version 21 (AMOS) software. SPSS software has been widely used for statistical analysis in social science research as it is 'user-friendly, capable of handling complex statistical procedures and also enables the researcher to organize the output through the microsoft office package easily (Janssens, De Pelsmacker, Wijnen, & Van Kenhove, 2008; Pallant, 2010). In addition, SPSS supports an "add on" of the AMOS programme which is a convenient and effective software for conducting SEM (Blunch, 2008).

The data analysis procedure began by screening the raw data, entering the data and checking preliminary data quality through the SPSS software. After purifying the data through this preliminary justification, the data analysis continued with the measurement model specification, by employing the EFA. Then, AMOS software was employed for the CFA to confirm the measurement model and for SEM to perform the first-order analysis, second-order analysis and causal path analysis respectively. The following sessions break down each step of the data analysis in detail.

4.5.1 Preliminary Data Analysis

The preliminary data analysis is to ensure that the data is valid for the data analysis stage as the quality of the statistical analysis is influence by the validity of data set (Aaker et al., 2012). Kline (2011) states the evidence of having disorganised 'messy' data could lead to unsuccessful model estimation in SEM. Likewise, Schumacker and Lomax (2004, p. 240) messy data such as "…missing data, outliers, multicollinearity, and non-normality of data distribution can seriously affect the estimation process often resulting in fatal error messages or failure to reach convergence (unable to compute a set of parameter-estimates)". Therefore, the process was begun with data screening to ensure the data were coded and entered correctly before carrying out the analysis. The procedures of data screening applied in this study are illustrated in the following sections.

4.5.1.1 Missing Data

Missing data is a non-response to a statement in the questionnaire. A missing value occurs when there is no information provided for an item, or several items in a questionnaire due to fatigue, sensitivity, lack of knowledge or other factors (Garson, 2007). Missing data affects the result of the statistical analysis when it appears in a systematic pattern. Lee (1986) indicated that the Structural Equation Modelling (SEM) based on the Maximum Likelihood Method, cannot be carried out when the data has missing values.

The missing value exploration began with investigating the amount of the missing values of each variable, then determining any missing value pattern. Separate Variance t-tests are a method to determine missing value patterns.

There are three patterns of missing values: Missing Completely at Random (MCRA); Missing at Random (MAR) and Not Missing at Random (NMAR). The MCRA refers to "the cases that have missing value to be an accidental or random sampling of all cases", while the MAR refers to "the cases with missing value on a particular variable" (Lawrence, Gamst, & Guarino, 2013). In addition, the mean substitution method was adopted to substitute the missing values in this study as it is recommended to remedy missing values (Hair et al., 2010; Schumacker & Lomax, 2004).

4.5.1.2 Outliers

An Outlier is "an observation that is substantially different from the other observations (has an extreme value) on one or more characteristics (variable)" (Hair et al., 2010, p. 36). Typically an outlier is judged "… to be an usually high or low value on a variable or a unique combination of values across several variables that makes the observation stand out from the others" (Hair et al., 2010, p. 64, p.66). There are three methods for detecting outliers: univariate, bivariate and multivariate.
In this study, only the univariate and the multivariate methods were adopted to detect outliers, following Hair et al's recommendation:

"…researchers should limit the general use of bivariate methods to specific relationships between variables, such as the relationship of the dependent versus independent variables in regression; as the outliers will arise whenever the number of variables increase" (Hair et al., 2010, p. 66).

A univariate outlier refers to an extreme value occurring in a single variable; it can be investigated by the frequency distribution of z scores or standardized residual value (Hair et al., 2010; Kline, 2011). Hair et al. (2010) note that a data value less than -4 or greater than 4 can be identified as an outlier. In line with these recommendations, any cases valued less than -4 and greater than 4 were eliminated from the data set. However, outlier elimination needs to be carefully processed as the deletion often results in the generation of further outlying cases (Pallant, 2010).With reference to multivariate outlier, this was checked by using the graphical methods as the residual scatter plots and the Mahalanobis distance statistical method (Hair et al., 2010; Lawrence et al., 2013).

4.5.1.3 Normality

Normality refers to "the shape of the data distribution for an individual metric variable and its correspondence to the normal distribution" (Hair et al., 2010, p. 71). Generally, skewness and kurtosis are two vital normality-indicators and their values are frequently applied in determining normal distribution of the measured items (Field, 2009). Skewness refers to symmetry of a distribution compared with normal distribution while kurtosis is used to describe whether the peak of a distribution is taller or shorter than a normal distribution value (Morgan & Griego, 1998).

In this study, the absolute value of skewness and kurtosis based on the cut-offs of 3 for skewness and 8 for kurtosis as suggested by Kline (2011) was used as the criteria for normality justification. If the absolute value ranges between -3 and 3 for the former, and from -8 to 8 for the latter, it implies that the observed variables are normally distributed.

4.5.2 The Exploratory Factor Analysis (EFA)

EFA is recognised as an interdependence technique where there is no single variable or group classified as an independent or dependent variable, whereas all variables are simultaneously analysed to investigate a set of latent constructs of variables (Hair et al., 2010; Tabachnick & Fidell, 2007). Lawrence et al. (2013) explain the purpose of the EFA is "to identify a relatively small number of themes, dimensions, components, or factors underlying a relatively large set of variables". In EFA, the common dimensions are identified by distinguishing sets of variables that have more in common with each other than the other variables in the analysis (Lawrence et al., 2013). In EFA output, the rows of the table display the observed variables, while the columns display the factors or latent variables which explain as much of the variance in the indicating variables as possible (Garson, 2007; Kline, 2011; Lawrence et al., 2013; Schumacker & Lomax, 2004). Furthermore, an EFA has often been suggested to be undertaken before conducting the SEM as it provides a data summarisation perspective which enables the researcher to better understand the latent constructs (Hair et al., 2010; Kline, 2011; Pallant, 2010; Schumacker & Lomax, 2004). Therefore, an EFA was adopted to generate the optimal number of factors representing the sub-dimension items of the Interaction Quality, Physical Environment Quality and Outcome Quality Primary Dimension. The following sections present each step in detail.

4.5.2.1 Types of Methods of the Exploratory Factor Analysis (EFA)

Generally, there are two basic methods for EFA: common factor analysis and component factor analysis (Ho, 2006). Common factor analysis is a correlation-focused approach which seeks to reproduce the intercorrelation among the variables and it is preferably used when the objective is to explain the interrelationships among original variables (Garson, 2008). Component factor analysis, on the other hand, is a variance-focused approach which seeks to reproduce both the total variable variance with all components and to reproduce the correlations. Component factor analysis often used to predict or select the components which explain as much of variance in a sample as possible (Hutcheson & Sofroniou, 1999). However, several researchers suggest that there is almost no difference between these two methods, but the component factor analysis is more preferable and commonly used as it is less problematic and complicated than common factor analysis (Guadagnoli & Velicer, 1988; Jolliffe, 2005; Velicer & Jackson, 1990). Therefore, component factor analysis was undertaken in this study.

4.5.2.2 Testing the Data to Determine its Appropriateness for Factor Analysis.

This process is to ensure the data matrix has sufficient correlations to justify the application of factor analysis (Pallant, 2010). More importantly, it is not necessary for the basic assumptions of multivariate statistic such as linearity, normality and homoscedasticity, to be met, if the data matrix has sufficient correlations to justify the application of factor analysis (Hair et al., 2010; Lawrence et al., 2013).
In this study, several approaches were employed to determine the sufficient correlation of factor analysis, namely: (1) examination of the correlation matrix; (2) inspection of the anti-image correlation matrix; (3) the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy; and (4) the Bartlett's Test of Sphericity.

4.5.2.2.1 Examination of the correlation matrix

Examination of the correlation matrix is a simple method to determine the appropriateness of using factor analysis (Hair et al., 2010). The correlation matrix indicates an appropriateness of using factor analysis when there are substantial numbers of correlations greater than 0.30 in data matrix (Hair et al., 2010; Lawrence et al., 2013). This illustrates sharing of common factors of items in the analysis and indicates the data set is suitable for generating factor analysis (Hair et al., 2010; Pallant, 2010). Conversely, if there are low correlations throughout a correlation matrix, the data set is inappropriate for generating factor analysis (Stewart, 1981). Correlations ranging from 0.10 to 0.30 are considered to be weak (Bryman & Hardy, 2004).

4.5.2.2.2 Anti-Image Correlation Matrix

The Anti-Image Correlation Matrix determines the appropriateness of a correlation matrix for factor analysis by using partial correlations. The partial correlation is the part that is unable to be explained by the effects of the other variables (Hair et al., 2010; Lawrence et al., 2013). The off-diagonal elements in the anti-image correlation matrix represent these partial correlations (Field, 2009). For good factoring, the value of diagonal element should be above 0.5, and the value of off-diagonal should be very small (Tabachnick & Fidell, 2007).

4.5.2.2.3 The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is an index quantifying the degree of intercorrelation among the variables (Stewart, 1981). The KMO value rages from 0 to 1. If the KMO value is less than 0.5 indicated 'unacceptable'; 0.50 or above is 'miserable'; 06.0 or above is 'mediocre'; 0.70 of above is 'middling'; 0.80 or above is 'meritorious'; and 0.90 or above is 'marvellous '(Kaiser & Rice, 1974).

4.5.2.2.4 The Bartlett's Test of Sphericity

The Bartlett's Test of Sphericity is a statistical test for examining a correlation matrix as to whether there is significant correlation among variables (Hair et al., 2010; Lawrence et al., 2013).
The correlation among variables in the data matrix are sufficient to proceed with factor analysis when the Bartlett's Test of Sphericity value is statistically significant (sig < 0.05) (Hinton, Brownlow, McMurray, & Cozens, 2004; Pallant, 2010). Otherwise, the data matrix is inappropriate for factor analysis.

4.5.2.3 Factors Extraction

In factor analysis generating, a large set of variables is factored until the smallest number of factors all the variance is explained (Hair et al., 2010; Lawrence et al., 2013). The researcher should identify the number of extracted factors based on the conceptual foundation and empirical evidence and eigenvalues The latent root criterion, the percentage of variance criterion and the scree test criterion are three common criteria used for factor extraction (Hair et al., 2010; Lawrence et al., 2013).

4.5.2.3.1 The eigenvalues or the latent root criterion

The eigenvalues or the latent root criterion was proposed by Kaiser in 1960 is the most widely used method for identifying the number of factors (Lawrence et al., 2013). Practically, the factors or components whose eigenvalue exceeds 1.00 should be considered significant; otherwise the factors should be disregarded (Pallant, 2010; Stewart, 1981). This method is most reliable when the number of variables in the factor analysis is from 20 to 50 (Hair et al., 2010).

4.5.2.3.2 The percentage of variance criterion

The percentage of variance criterion is to ensure practical significance for the derived factors by ensuring that they explain at least a specified amount of total variance (Hair et al., 2010). Commonly, a total variance solution of 60% is acceptable but less than 60% is acceptable in some circumstances (see Hair et al., 2010).

4.5.2.3.3 The scree test criterion

The scree test criterion is derived by plotting the latent roots against the number of factors in their order extraction, and the shape of the resulting curve is used to evaluate the cut-off point where the curve flattens out (Hair et al., 2010; Lawrence et al., 2013; Osborne & Costello, 2005).

The procedure is explained by Stewart (1981, p.58):

> "A straight edge is laid across the bottom portion of the roots to see where they form an approximately straight line. The point where the factors curve above the straight line gives the number of factors, the last factor being the one whose eigenvalue immediately precedes the straight line"

4.5.2.4 Factor Rotation

Tabachnick and Fidell (2007) state that unrotated factor solutions are not sufficient. Therefore, factor rotation to redistribute the variance among factors is required in order to achieve a simpler and more theoretically meaningful factor solution (Hair et al., 2010; Osborne & Costello, 2005). Practically, Orthogonal and Oblique Factor Rotation are two types of factor rotations (Hair et al., 2010; Osborne & Costello, 2005). In factor rotating, the rows and columns of the factor matrix are simplified to obtain a solution which is more readily able to be interpreted (Hair et al., 2010).

For orthogonal rotation the axes are maintained at 90 degrees, factors are mathematically independent and orthogonally rotated; the correlation between any pair of factors are 0, with no factor correlation matrix produced after an orthogonal rotation (Garson, 2010; Hair et al., 2010). VARIMAX, QUARTIMAX and EQUIMAX are three major orthogonal rotations. However, the VARIMAX method, which focuses on simplifying the columns of the factor matrix, is considered as one of the best orthogonal rotations, which is also the most common and widely applied tool applied in marketing research (Bindu, Chandrasekharan, & Sai, 2008; Kim, Lee, & Yoo, 2006; Stewart, 1981; Tabachnick & Fidell, 2007).
In the VARIMAX rotation, each factor may have both large and small factor loading (Hair et al., 2010; Tabachnick & Fidell, 2007). A factor loading close to either +1 or -1 indicates a strong correlation between the variables and the factors, while a factor loading close to 0 indicates a lack of association (Hair et al., 2010; Tabachnick & Fidell, 2007).

An oblique rotation is another type of factor rotation that allows factors to be correlated (Garson, 2010; Hair et al., 2010). The oblique rotation is considered to be more realistic as few theoretically meaningful factors are independent of each other in the real world (Hair et al., 2010; Lawrence et al., 2013). OBLIMIN is the standard oblique rotation (Garson, 2010). However, there are no specific rules or guide-lines for choosing a particular orthogonal or oblique rotation, as both methods often result in similar solutions, but the output of an oblique rotation is more complicated to interpret (Hair et al., 2010; Lawrence et al., 2013; Tabachnick & Fidell, 2007). Hence, the final factorial structure used in this study was based on the result of the VARIMAX rotation.

4.5.2.5 Interpretation of Factors

The correlation between variables and factors are represented by factor-loading (Kim & Mueller, 1978). A larger factor loading indicates a higher degree of correspondence between the variables and factors. Hence, the larger absolute value of the factor loadings, the more important the factor loading in interpreting the factor matrix (Brace, Kemp, & Snelgar, 2006).

Hair et al. (2010, p.117) provide three guidelines for assessing the significance of factor loadings:

1. Factor loadings in the range of ±.30 to ±.40 are considered to meet the minimal level for interpretation of structure.
2. Loading ± .50 or greater are considered to be practically significant.
3. Loading exceeding ±.70 are considered indicative of a well-defined structure and are the goal of any factor analysis.

In addition, the significance of factor loadings is dependent on the sample size (Field, 2009). The larger the sample size, the smaller the loading to be considered statistically meaningful (See Table 4.5)

Table 4.5 Guideline for Identifying Significant Factor Loading Based on Sample Size

Factor Loading	Sample Size Needed for Significance	Factor Loading	Sample Size Needed for Significance
0.30	350	0.55	100
0.35	250	0.60	85
0.40	200	0.65	70
0.45	150	0.70	60
0.50	120	0.75	50

(Hair et al., 2010)

4.5.2.6 Unidimensionality Analysis

A measurement scale is considered as a unidimensionality when there is a single factor underlying the items and all items load on that single factor (Bernard, 2000). Ensuring an adequate unidimensionalliy was obtained in this study as any items that highly loaded on more than one factor were eliminated, following the suggestion of Hair et al. (2010).

4.5.2.7 Reliability and Validity

Reliability refers to the consistency between multiple measurements of variables (Hair et al., 2010; Malhotra, 2010). Internal consistency is a common form of reliability measurement by which reliability is measured based on the correlation among variables consists with the scale (Garson, 2010; Hair et al., 2010). An instrument is reliable when all items in the instrument are highly correlated, meaning that the instrument intends to measure the same construct (Hair et al., 2010; Malhotra, 2010). This study adopted the Cronbach's alpha which is a common method to estimate the internal consistency of the entire instrument. A value of 0.60 is the recommended threshold of Cronbach's alpha value in exploratory research as suggested by Hair et al. (2010).

Validity refers to the degree to which a scale measures what it should measure (Pallant, 2010). Content validity, or face validity, is a form of validity (Garson, 2010). An instrument is classified as a content validity instrument when it measures what it intends to measure, and is able to measure the full domain of a concept (Churchill, 1979; Garson, 2010). In addition, the content validity in this study was determined by the subjective assessment of experts and pre-testing as recommended by Hair et al. (2010).

4.5.3 Structural Equation Modelling (SEM)

SEM was originally developed in the early 1950s by economic researchers with the objective of examining the causal relationships between variables. SEM has been known by several names such as co-variance structure analysis, latent variable analysis, path analysis, confirmatory factor analysis, and sometimes is known by the specialized name of the software package such as LISREL and AMOS (Blunch, 2008; Byrne, 2010; Hair et al., 2010). Due to its mathematical complexity, the application of SEM has been limited until the availability and wide use of statistical software such as LISREL and AMOS (Blunch, 2008; Byrne, 2010; Kline, 2011).

Recently, SEM has become an advanced multivariate statistic technique that combines between factor analysis and multiple regressing techniques; with SEM a series of interrelated dependent relationships between the observed variables and the latent constructs, as well as among latent constructs are simultaneously investigated (Hair et al., 2010; Lawrence et al., 2013; Schumacker & Lomax, 2004).

SEM also offers the ability to examine other assumptions of multivariate analysis such as the unidimensionality, reliability and validity of a construct. In addition, the overall test of model fit and individual parameter estimation can be presented simultaneously (Hair et al., 2010; Lawrence et al., 2013). When the objectives of the study are to investigate a higher-order structure or testing a multidimensional in a complex relationship, SEM outperforms multiple regression analysis as it allows a complete and simultaneous testing of the relationships. Multiple regression analysis can only assess a single relationship between the independent and dependent variables world (Awang, 2012; Hair et al., 2010; Lawrence et al., 2013). In this study, service quality is viewed as hierarchical as are the other higher order constructs; therefore, SEM is the most suitable technique to confirm the service quality measurement model and to test the interrelationship between the higher constructs as proposed in the research model (Lawrence et al., 2013).

Although there are several software packages available for conducting SEM, AMOS software was employed as it has several advantages. Firstly, AMOS is 'user-friendly' because it enables researchers to perform the analysis without writing any computer code as AMOS has a basic programming interface as an alternative to graphics and can directly work from a graphic diagram model. Secondly, AMOS is developed within Microsoft Windows interface so that the output presentation are easily organised.

Thirdly, AMOS is suitable when the measurement model is considered to be a reflective model (Blunch, 2008).

Furthermore, there are two common approaches for conducting SEM, namely the one-stage and the two-stage approach. For the one-stage or single-stage approach, the measurement model and the structural model are simultaneously analysed. (Kline, 2011; Schumacker & Lomax, 2004).

Conversely, the measurement model and structural model are separately analysed in the two-stage approach (Hair et al., 2010; Lawrence et al., 2013). As far as both approaches are concerned, the two-stage approach was adopted in this study because the two-stage approach enables researchers to avoid the unnecessary interaction between constructs during testing of the structural model (Anderson & Gerbing, 1988a). In addition, Jöreskog and Sörbom (1993, p. 113) warn that the measurement model should be trialled and evaluated before testing the causal path model as "the testing of structural models, i.e., the testing of the initially specified theory, may be meaningless unless it is first established that the measurement holds, if the chosen indicators for a construct do not measure that construct, the specified theory must be modified before it can be tested."

4.5.3.1 Measurement Model

The measurement model is the first part of the analysis dealing with the measured items and their latent constructs (Awang, 2012; Hair et al., 2010; Lawrence et al., 2013). The CFA method is normally used for the first stage (Hair et al., 2010; Lawrence et al., 2013). In this study, seventy-two items for measuring19 latent constructs were subjected to CFA in order to verify unidimensionality and convergent validity. The first stage of the CFA procedure is to assess the psychometric properties of the measurement model for the sub-dimensions, primary dimensions and the five higher order constructs. Therefore, five separate measurement models were analysed.

However, Brady and Cronin (2001) recommend that the sub-dimensions and primary dimension should be analysed separately when the model consists of a large number of items. In agreement with Brady and Cronin, the measurement model analysis started confirming the sub-dimensions of the primary dimensions (Interaction, Physical Environment and Outcome) which consist of 12 proposed sub-dimensions. This was followed by confirming the primary dimensions for resort hotel, and the measurement model for the five higher order constructs. The following subsections discuss the CFA procedures undertaken in this study.

4.5.3.1.1 Modelling Assessment Procedures

Modelling in SEM consists of a five-stage process : (1) model specification; (2) model identification; (3) model-fit-indices; (4) model modification, and when the model is satisfied; (5) the reliability and validity of the models are assessed.

4.5.3.1.2 Model Specification

Model specification is developing a theoretical model based on the relevant theories, research and information (Schumacker & Lomax, 2004). All relationships and parameters existing in the measurement models and structural models were specified, based on the relevant empirical studies and the findings of the exploratory factor analysis.

In addition, the models are expected to comply with the recommendation of Byrne (2010):

1. Each measured item was set to 1.0, with all other factor loadings either freely estimated on a specific factor or fixed to zero on other factors;

2. All variance/covariance parameters were correlated and freely estimated in the first-order CFA while covariations among the first-order factor were fully explained by their regression on the higher-order factor in the second-order confirmatory factor analysis.

3. Error terms related to each measured item were uncorrelated.

4.5.3.1.3 Model Identification

Model identification is concerned with whether the model has sufficient information to derive a unique solution for the parameters to be estimated in the model (Diamantopoulos & Siguaw, 2000).
The t-rule is a recognized method for determining model identification (Blunch, 2008; Byrne, 2010). In the t-rule procedure, the number of variances and covariances (p[p+1]/2) (where p is the total number of observed variables) is compared with the total number of estimated parameters in the model. Ideally, the number of variance and covariance (pieces of information) must be at least equal to or greater than the number of estimated parameters. The model should be re-specified before further analysis if not, "the analysis may be fruitless" (Kline, 2011, p. 105).

In addition, the model identification can be classified by the degrees of freedom (df) after all the parameters to be estimated are specified (Hair et al., 2010), and the "more df the more precise the estimation and the more powerful the test" (Blunch, 2008, p.73).

In SEM, there are three levels of model identification status which are; the under-identified model, the just-identified model, and the over-identified model (Blunch, 2008; Byrne, 2010; Hair et al., 2010; Kline, 2011; Schumacker & Lomax, 2004). An under-identified model is a model that has the number of variances and covariances less than the number of estimated parameters, thus, it has a negative df (Byrne, 2010). A 'just-identified' model refers to a model having just enough pieces of information to estimate all parameter in the model (zero df). As the just-identified model has zero df, the data perfectly fits the model and the theory is not tested. Hence, the model is not scientifically interesting for testing the theory (Blunch, 2008; Byrne, 2010; Hair et al., 2010; Kline, 2011; Schumacker & Lomax, 2004).

Byrne (2010) suggests the imposition of constraints on particular parameters as a condition to attain an over-identified model. An over-identified model is a model that has more than just enough information to estimate all of the model (positive df), in other words, the model is classified as an over-identified model when the number of variances and covariances are greater than the estimated parameters in the model (Byrne, 2010; Hair et al., 2010; Kline, 2011).

4.5.3.1.4 Model Fit Indices

A specified model is supported by the sample data when the model indicates a good fit (Schumacker & Lomax, 2004). Although, the fitness of both measurement and structural model can be assessed by numerous model- fit indices existing in the literature, it is unnecessary to report all of the model fit indices because of the redundancy among them (Hair et al., 2010). Hair et al. (2010) suggests only three or four model-fit-indices presentation is adequate for instance the χ^2 value and the associated df, at least one incremental fit index (such as NFI and CFI) and one absolute fit index (such as SRMR, RMSEA and GFI). Based on the recommendation of several authors, the normed chi-square (χ^2/df), goodness-of-fit index (GFI), standardized root mean residual (SRMR), comparative fit index (CFI), normed fit index (NFI), root mean square error of approximation (RMSEA) were used as the model-fit indices in this study (Awang, 2012; Hair et al., 2010; Kline, 2011; Schumacker & Lomax, 2004). The detail and recommended thresholds of each model fit indices are presented in the following subsections.

1. The Normed Chi-Square (χ^2/df) is a ratio of (χ^2) over degree of freedom (df) for a model. χ^2 is a measure that quantifies that the differences between the observed and estimated covariance matrices; while df is the amount of mathematical information available to estimate model parameters. A value of normed chi-square (χ^2/df) less than 3.0 is indicated as an acceptable or good model fit (Awang, 2012; Kline, 2011; Lawrence et al., 2013). The value up to 5.0 is considered as relative fit; nevertheless, a value of more than 5.0 indicated a requirement of model improvement and a value of less than 1.0 is considered as a poor model fit (Schumacker & Lomax, 2004).

2. Goodness-of-Fit Index (GFI) is an absolute fit index representing a weighted proportion of variance in the sample covariance accounted for by the estimated population covariance matrix (Tanaka & Huba, 1989). A value higher than 0.9 is a recommended threshold for the GFI, the higher values indicate a better fit (Awang, 2012; Byrne, 2010; Hair et al., 2010; Kline, 2011).

3. Standardized Root Mean Residual (SRMR) is a measure that quantifies the mean absolute correlation residual derived from the overall difference between the observed and predicted correlation. The favourable value for SRMR is smaller than 0.10 (Kline, 2011).

4. Comparative Fit Index (CFI) is a measure that quantifies the relative improvement in the model fit compared with an independent model (Kline, 2011). Lawrence et al. (2013) suggests that a CFI greater than 0.9 indicates a good model fit.

5. Normed Fit Index (NFI) is a measure that quantifies the differences in the χ^2 value for the fitted model and an independent model divided by the χ^2 value for the independent model (Hair et al., 2010). The threshold for the NFI is larger than 0.90, with higher values indicating a better fit (Awang, 2012; Byrne, 2010; Hair et al., 2010; Kline, 2011).

6. Root Mean Square Error of Approximation (RMSEA) is a "badness-of-fit" index in that a value of zero indicates the best fit and higher values indicate a worse fit. The RMSEA was designed to evaluate the approximate fit of the model of the respondents (Nokelainen, 2009). The RMSEA can be estimated as follows: less than .05 (Close fit), values between .05-.08 (fair fit), values between .08-0.10 (mediocre fit) and greater than 0.10 (poor fit) (Awang, 2012; Nokelainen, 2009).

Table 4.6 Model fit indices and recommended thresholds

Model fit indices	Level of Acceptance	Note	Reference
Absolute Fit Index:			
RMSEA	≤ .10	A lower value RMSEA indicates a better model fit	(Awang, 2012; Nokelainen, 2009)
SRMR	≤ .10	A lower value SRMR indicates a better model fit	(Kline, 2011)
Incremental Fit Index:			(Hair et al., 2010; Byrne, 2010)
GFI	≥ 0.9	The possible rage of GFI values is 0 to 1 with higher values indicating better fit	
CFI	≥ 0.9	The possible rage of CFI values is 0 to 1 with higher values indicating better fit	
NFI	≥ 0.9	The possible rage of NFI values is 0 to 1 with higher values indicating better fit	
Parsimony Fit Index:			
χ^2/df	≤ 5.0	Less than 3.0 is preferred, up to 5.0 is still acceptable	(Schmacker& Lomax, 2004)

4.5.3.1.5 Model Modification

Model modification is improving the overall model fit with the sample data by identifying any misspecification existing in the model (Byrne, 2010). Trimming the model by deleting one path or measured item at a time is a general way to modify a model. However, modifying a model must be consistent with the theoretical insights, statistical sense and researcher's judgement (Lawrence et al., 2013). Hair et al. (2010, p. 73) maintain that "model modification must always be done with theoretical support rather than just empirical justification". Byrne (2010) also maintain that when an initial model fits well, it is probably unwise to modify it to achieve even better fit because modifications may simply be fitting small idiosyncratic characteristics of the sample. Thus, the model modification in this study was conducted only when a model was poorly fit, and the modification was based on the theoretical support.

There are two diagnostic outputs applied to model modification, namely: Modification Indices (MI) and Standardized Residual (Janssens et al., 2008). MI refers to the value of an expected decrease in a model's chi-squared value if a previously fixed parameter is set free in a subsequent run (Byrne, 2010; Lawrence et al., 2013).

Small MI value represents a good model fit; while a large MI value demonstrates the requirement for model improvement to achieve a better fit by freeing a corresponding path (Hair et al., 2010). The utilization of the modification indices is usually associated with an interpretation of the expected parameter change statistics (EPC). An EPC refers to an estimated value of a freed parameter (Schumacker & Lomax, 2004).

In addition, several authors have noted some evidence for applying MI and EPC: 1) a fixed parameter with a large MI and large EPC may be freed, especially when there is sufficient theoretical support by doing that; 2) a fixed parameter with a large MI and a small EPC may remain fixed, as they obtained parameter estimated by freeing the fixed parameter is likely to be trivial; 3) a fixed parameter with a small MI and a large EPC may be due to sampling variability, or to insensitivity of the chi-square test to the fixed parameter, while what to do in this situation is ambiguous; 4) a fixed parameter with a small MI and a small EPC may remain fixed, (Byrne, 2010; Lawrence et al., 2013).

Standardized residuals are residuals divided by their estimated standard errors (Jöreskog & Sörbom, 1993). Byrne (2010) suggests that large residuals associated with particular parameters, illustrate their misspecification in a model, thereby leading to the overall model misfit. The value of 2.58 is the critical value of the standardized residual; in other words, the standardized values which are larger than the critical value of 2.58 suggest a possible misfit in a model (Diamantopoulos & Siguaw, 2000).

4.5.3.1.6 Construct Validity and Reliability

Validity refers to the ability of an instrument to measure what it is supposed to measure, while reliability refers to the consistency and stability of an instrument (Sekaran & Bougie, 2010). Having a valid and reliable measurement model are vital requirements for obtaining robust research. Therefore, construct validity and construct reliability (CR) were also included in the analysis. The construct validity was determined by testing convergent validity and discriminant validity, while reliability was determined by testing composite reliability or construct reliability (CR) (Anderson & Gerbing, 1988b; Byrne, 2010; Hair et al., 2010). Importantly, unidimensionality of the measure is a significant prerequisite before assessing construct validity and reliability (Anderson & Gerbing, 1988b). The unidimensionality can be justified by the CFI value; a CFI value 0.90 or above is the recommended threshold to justify a unidimensional measure (Byrne, 2010).

Although Cronbach's Alpha was applied to test the construct's reliability in this study, it was insufficient to ensure the consistency of the constructs. Thus, construct or composite reliability (CR) was included as an extension of the construct reliability test (Anderson & Gerbing, 1988b; Byrne, 2010; Hair et al., 2010). Conducting CR through the CFA process enables researchers to examine the stability of the factor structure in the scale construction as it provides a better reliability estimation than Cronbach's coefficient alpha (Byrne, 2010; Hair et al., 2010). The CR value was separately and manually calculated for each item measuring a construct in the model by applying the Equation 4.1. A CR value of 0.70 or higher is generally an acceptable value (Awang, 2012; Byrne, 2010; Hair et al., 2010).

Equation 4.1 Composite Reliability

$$\text{Composite Reliability} = \frac{(\sum \text{standardized loadings})^2}{(\sum \text{standardized loadings})^2 + \sum \text{Measurement errors}}$$

Source: Janssens et al. (2008, p.307)

Convergent validity refers to "the items that are indicators of a specific construct should converge or share a high proportion of variance in common" (Hair et al., 2010 p.709). Convergent validity, was assessed by factor loadings and the Average Variance Extracted (AVE). A measurement model achieves convergent validity when standardized factor loading are statistically significant (t-value > 1.96) (Anderson & Gerbing, 1988b) and all factor loadings are above a recommended cut-off point of 0.60 (Bagozzi & Y., 1988). The AVE of all constructs are 0.50 or higher which indicates at least 50 percent of the measurement variance is accounted for each of the constructs (Fornell & Larcker, 1981; Hair et al., 2010). The AVE was manually calculated by applying Equation 4.2.

Equation 4.2 Average Variance Extracted

$$\text{AVE} = \frac{\sum(\text{standardized loadings})^2}{\sum(\text{standardized loadings})^2 + \sum \text{Measurement errors}}$$

Source: Janssens et al. (2008, p.309)

Discriminant validity refers to "the extent to which a construct is truly distinct from other constructs" (Hair et al., 2010 p.710). Discriminant validity was assessed by the correlation coefficient between constructs as recommended by (Kline, 2011). Discriminant validity is supported when the correlation coefficient between different constructs is less than 0.85; otherwise, the issue of multicollinearity is present. Thus, the measured items from one of two constructs should be eliminated (Awang, 2012; Kline, 2011).

4.5.3.2 Structural Model

Once all measurement models had been confirmed, the structural equation model was further analysed to identify the relationships among the latent variables in order to specify which latent variables directly or indirectly caused changes in other latent variables as well as to examine the causal relationships among the higher order constructs (Byrne, 2010). This stage began with testing the relationship of each sub-dimension on the three primary dimensions (first order analysis) followed by testing whether service quality is a multidimensional construct consisting of multiple first-order factors (interaction quality, physical environment quality and outcome quality) and significantly explained by their corresponding measure-items (second order analysis).

The last stage tested are interrelationship between service quality, customer perceived value, corporate image, customer satisfaction and customer loyalty (third order or causal path analysis). However, the model identification, the model modification, the overall model fit and the path estimates for the hypothesized relationships were also assessed in the structural equation model (See Chapter Three).

Chapter 5

Data Analysis and Results

5.1 Introduction

This chapter presents the data analysis and hypotheses tested, and the results based on the procedures presented in Chapter 4. The content of this chapter is divided into three main sections comprising 5.1 Response Rate and Preliminary Data Analysis, 5.2 Demographic Variables, and 5.3 Data Interpretation.

5.2 Response Rate and Preliminary Data Analysis

The data collection process took place at several resort hotels located in the Phuket Province in Thailand over a period of four months, from April 1st to August 20th 2012. Approximately 600 resort hotel guests were approached personally to participate in the survey when they checked out of the resort hotel. 500 resort hotel guests agreed to respond to the questionnaire and 500 questionnaires were distributed. All 500 questionnaires were returned. However, 44 of these were subsequently excluded due to incompletion, omission, and illegibility, making these questionnaires unsuitable for use resulting in an 83% response rate (Tabachnick & Fidell, 2007). This process resulted in a sample-size of 456 useable questionnaires, a number still larger than the minimum sample size required for the data analysis (Hair et al., 2010). The preliminary data was then conducted assessing the missing data, outliers and normality, with the objective of these processes being to assure the quality of the data prior to conducting the statistical analyses and hypotheses testing.

5.2.1 Missing Data

The missing value was screened by the missing value function on SPSS version 20. As a result, there was a small amount of missing data, with no items having a non-response of more than 5%. In addition, no systematic random pattern was evident in the data set. The missing values were substituted by the mean substitution method (Hair et al., 2010; Schumacker & Lomax, 2004; Tabachnick & Fidell, 2007).

5.2.2 Outliers

This study assessed outliers by applying the standardized value (z-scores) method followed Hair et al's (2010)'s criterion. Based on this criterion, any case having standardized value (z-scores) less than -4 or higher than +4 would be eliminated from the data set; as a result only a few cased were eliminated (also see section 4.3.1.2).

5.2.3 Normality

The normality was justified by absolute value of skewness and kurtosis; the cut-offs of 3 applied for skewness while cut-offs of 8 for kurtosis (Kline, 2011) (also see section 4.3.1.3). Based on this criterion the data set in this study was considered as normally distributed.

5.3 Respondents' Demographic Characteristics

Tables 5.1 – 5.6 present the demographic profiles of respondents who participated in this study. The table classifies respondents by gender, age, education, occupation, nationality, purpose of stay, and duration of stay.

Table 5.1 Gender Result

Gender	Frequency	Percent	Cumulative Percent
Male	198	43.42	43.42
Female	258	56.58	100.00
Total	456	100.00	

Table 5.1 indicates that the number of female respondents is greater than the number of male respondents (56.58% female; 43.42% male).

Table 5.2 Age Result

Age	Frequency	Percent	Cumulative Percent
18-27	65	14.25	14.25
28-37	101	22.15	36.40
38-47	127	27.85	64.25
48-57	123	26.97	91.23
Over 57	40	8.77	100.00
Total	456	100.00	

Table 5.2 illustrates that respondents aged from 28 years to 57 years comprise the most numerous proportion of the sample (76.97%). Among this proportion, the 38-47 age-group is the highest, at 27.85%, slightly higher than the 48-57 age-group and the 28-37 age- group by 0.88% and 5.7% respectively. In addition, the number of respondents older than 57 years represents the smallest proportion in this study (8.77%). The majority of respondents in this study are of working age.

Table 5.3 Educational Achievement Result

Education	Frequency	Percent	Cumulative Percent
High School	99	25.71	28.51
Diploma	130	28.51	50.22
Bachelor	177	38.82	89.04
Master	45	9.87	98.90
Ph.D.	5	1.10	100.00
Total	456	100.00	

Table 5.3 shows the educational level of the respondents, and also indicates that a large proportion of the respondents in this study had a higher education qualification, 38.82% of whom held a Bachelor's degree, or a Diploma, 28.51%. Approximately 10% held a post-graduate degree (Master's degree or Ph.D.). In addition, about a quarter of the respondents had graduated from high school.

Table 5.4 Occupation Result

Occupation	Frequency	Percent	Cumulative Percent
Professional	181	39.69	39.69
Student	47	10.31	50.00
Retired	40	8.77	58.77
Housewife	31	6.80	65.57
Business Owner	68	14.91	80.48
Government Officer	32	7.02	87.50
Others	57	12.50	100.00
Total	456	100.00	

Table 5.4 indicates the occupation of the respondents. The data reveals that a significant majority of respondents are professional (36.69%), followed by business owner 14.91% others 12.50%, student 10.31%, retired 8.77%, government officer 7.02%, and housewife 6.80%.

Table 5.5 Nationality Result

Nationality	Frequency	Percent	Cumulative Percent
Australia	389	85.30	85.30
Britain	33	7.24	92.54
USA	34	7.46	100.00
Total	456	100.00	

The data from Table 5.5 illustrates that the number of Australian visitors lodging at a resort hotel participating in the research in Phuket was significantly higher than those of other nationalities (Australian 85.30%, American 7.46%, British 7.24%) respectively.

Table 5.6 Duration of Stay Result

Duration	Frequency	Percent	Cumulative Percent
5 nights	90	19.74	19.74
6-10 nights	305	66.89	86.62
Over 10 nights	61	13.37	100.00
Total	456	100.00	

Table 5.6 shows that slightly more than a half of the respondents stayed at the resort hotel for 6-10 nights (66.89%), while 19.74% stayed for 5 nights and 13.37% stayed for over 10 nights.

Table 5.7 Purpose of Stay Result

Purpose of Stay	Frequency	Percent	Cumulative Percent
Holiday	452	99.12	99.12
Business/Conference	4	.88	100.00
Total	456	100.00	

The statistics from Table 5.7 indicate that an extremely high percentage of guests' purpose was holiday (99.12%), while only a few guests stayed for business or conference purposes.

5.4 Data Analysis Interpretation

After all preliminary analysis results were completed, the whole sample was randomly divided into two sub-groups. The first sub-sample was subjected to Exploratory Factor Analysis (EFA) in order to investigate the pertaining sub-dimensions of the three primary service quality dimensions (interaction, physical environment and outcome). The other sub-group was subjected to Confirmatory Factor Analysis (CFA) and Structure Equation Modelling (SEM). The following sections provide the results of these analyses. Section 5.3.1 presents the results of Exploratory and Confirmatory Factor Analysis to identify the sub-dimensions of the three primary dimensions. Section 5.3.2 presents the results of the First and Second Order Confirmatory Factor Analysis for the primary dimensions of service quality. Section 5.3.3 presents the result of the CFA and SEM for the five higher-orders constructs (service quality, perceived value, corporate image, customer satisfaction and customer loyalty). Section 5.3.4 presents the result of the mediating variable analysis.

5.4.1 The Exploratory Factor Analysis Results for the three Primary Dimensions

The following sections provide the results of the exploratory factor analysis for the sub-dimension pertaining to each primary dimension (interaction quality, physical environmental quality and outcome quality).

5.4.1.1 Exploratory Factor Analysis for Interaction Quality

Initially, 14 items were proposed to measure four sub-dimensions of interaction quality: attitude, behaviour, expertise and problem-solving skills. The analysis began with determining the appropriateness of the data set for exploratory factor analysis by testing the Correlation Matrix, the Anti-Image Correlation Matrix, the Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy. The results of the tests revealed that the data set used in this study was appropriate for EFA as there was ample substantial correlations above 0.30 ($0.30 < r < 0.90$) in the correlation matrix (Hair et al., 2010; Pallant, 2010) and the vast majority of the partial correlations were low (Field, 2009; Tabachnick & Fidell, 2007). In addition, the value of Bartlet' Test was statistically significant (sig < 0.05), (Hinton, Brownlow, & McMurray, 2004; Pallant, 2010) and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy index was 0.876 which exceeded the cut-off level 0.60 (Tabachnick & Fidell, 2007). This value was defined as "meritorious" (0.80+) by Kaiser and Rice (1974).

The result of the latent root criterion illustrated that the 14 measured variables submitted for the exploratory factor analysis should be grouped into 3 sub-dimensions of the interaction quality primary dimension (See Appendix 6). These three sub- dimensions explained approximately 80.58% of the variation in the data-set which was above 60% as suggested by Hair et al. (2010) (See Appendix 6).

In addition, before the curve in the scree plot became a straight line, there had been 3 dimensions extracted, therefore, the extraction of 3 sub-dimensions was appropriate for this analysis (See Figure 5.1).

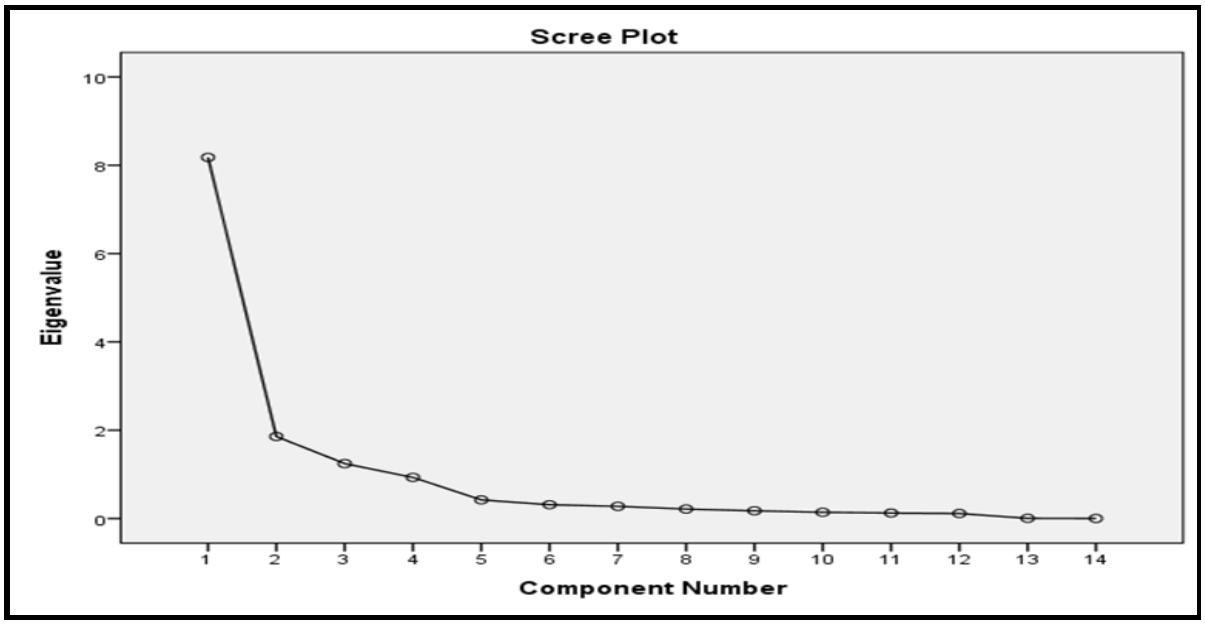

Figure 5.1 Scree Plot (Interaction Quality)

Factor rotations were conducted using the VARIMAX and the OBLIMIN rotation methods. As a result, both rotations presented a similar pattern. However, the final factorial structure was based on the results of the VARIMAX rotation as it provided the best content validity.

The results of the VARIMAX rotation demonstrated that 3 sub-dimensions emerged from the four originally proposed. The problem-solving skill and the expertise dimension in the original model were combined into one dimension; therefore, the combined dimension was relabelled professionalism. Furthermore, all 14 items presented an adequate unidimensionality because none of them highly loaded on more than one factor (Bernard, 2000), and also all of the 14 items had significant loadings above ± 0.4.

To summarise, 3 sub-dimensions were found for interaction quality: attitude (4 items), behaviour (4 items) and professionalism (6 items), with the factor loadings ranging from 0.703 to 0.886. All factors had high Cronbrach's Coefficient alphas (.937, .942 and .944), greater than 0.70 suggested by Churchill (1979) and Nunnally and Bernstein (1994). Lastly, three factors with Eigen value greater than one explained 80.58% of the variance which was considered high (Hair et al., 2010).

Table 5.8 Exploratory Factor Analysis Result for Interaction Quality (VARIMAX Rotation)

Items No.	Attributes	Component		
		1	2	3
A1	The resort hotel staff are friendly.	**.855**		
A3	The resort hotel staff demonstrate their willingness to help me.	**.845**		
A4	The resort hotel staff are polite and courteous.	**.845**		
A2	The resort hotel staff are welcoming.	**.714**		
A5	I received individual attention when I had specific needs.		**.886**	
A6	The resort hotel staff always provide prompt service.		**.876**	
A7	The behaviour of the resort hotel staff allows me to trust their service.		**.813**	
A8	The resort hotel staff do whatever is necessary to satisfy my needs.		**.773**	
A9	The resort hotel staff are knowledgeable when answering my questions.			**.865**
A10	The resort hotel staff has good communication skill.			**.861**
A13	The resort hotel staff are competent in handling my problems.			**.837**
A14	When I had a problem the resort hotel staff promptly solved it, with sincere concern for my interest.			**.753**
A12	The resort hotel staff are authorised to solve my minor complaints directly and immediately			**.750**
A11	The resort hotel staff perform the service dependably and accurately at the time promised.			**.703**
	Eigen Values	**8.178**	**1.859**	**1.244**
	Cronbach' Coefficient Alphas	**.937**	**.944**	**.942**

Factor 1 = Attitude, Factor 2 = Behaviour, Factor 3 = Professionalism

5.4.1.2 Exploratory Factor Analysis for Physical Environment Quality

Initially, 23 items were proposed to measure five sub-dimensions of physical environment quality: décor & ambience (4), room quality (5), design (4), location & convenience (4) and facilities & activity (6).

The result of the appropriateness of data set analyses showed that the data set of this study was appropriate for the EFA as the Correlation Matrix indicated that there was ample substantial correlation above 0.30 ($0.30 < r < 0.90$) (Hair et al., 2010; Pallant, 2010).

Similarly, the Anti-Image Correlation Matrix illustrated that the vast majority of the partial correlations were low (Field, 2009; Tabachnick & Fidell, 2007). In addition, the value of Bartlet' Test was statistically significant ($P < 0.05$) (Hinton, Brownlow, & McMurray, 2004; Pallant, 2010), and also the Kaiser Meyer-Olkin Measure of Sampling Adequacy Index was 0.936 which exceeded the cut-off level 0.60 (Tabachnick & Fidell, 2007). This value was defined as "Marvelous" (90+) by Kaiser and Rice (1974), hence, all appropriateness indicators of the data set for physical environment quality were satisfied.

The result of the latent root criterion illustrated that the 23 measured variables submitted for the exploratory factor analysis should be grouped into 5 sub-dimensions of the physical environment quality primary dimension. These five sub-dimensions explained approximately 73.58% of the variation in the data-set which was above the 60% suggested by Hair et al. (2010).

In addition, before the curve in the scree plot became a straight line, there were 5 dimensions which had been extracted; therefore, the extraction of 5 dimensions was appropriate for this analysis (See Figure 5.2).

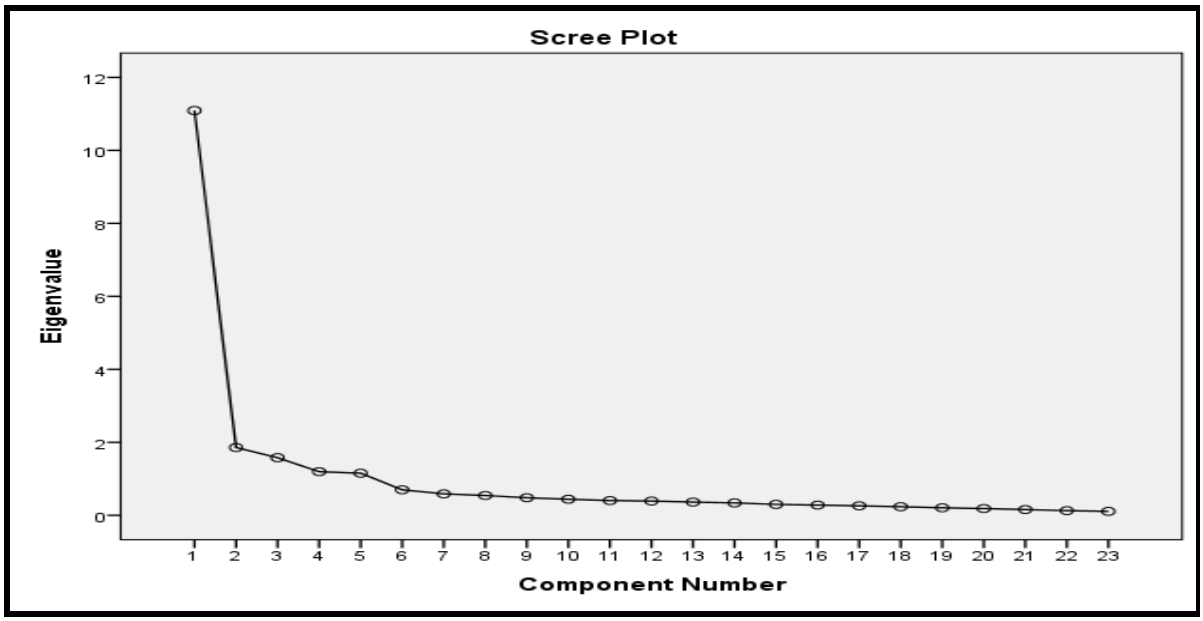

Figure 5.2 Scree Plot (Physical Environment Quality)

Furthermore, both VARIMAX and OBLIMIN factor rotations presented a similar pattern. However, the final factorial structure was based on the results of the VARIMAX rotation as it provided the best content validity. The results of the rotation demonstrated that 5 dimensions similarly emerged as the originally proposed. However, 2 items (B1 décor & ambience, B14 location & convenience) had high factor loading on more than one factor, hence, these two items were eliminated in order to satisfy an adequate unidimensionality (Bernard, 2000).

As a result, 21 items, as reported in the Table 5.9, loaded on five separate factors and they presented an adequate unidimensionality as all of them significantly loaded above ± 0.4 on only one factor (Bernard, 2000).

To summarise, there were 5 sub-dimensions for physical environment quality: décor & ambience (3 items), room quality (5 items) design (4 items), location & convenience (3 items) and facilities & activity (6 items) with the factor loadings ranging from 0.562 to 0.863, and all factors had a high Cronbrach's Coefficient alpha (.948, .902, .865, .928, .927) which were greater than 0.70 suggested by Churchill (1979) and Nunnally and Bernstein (1994). Lastly, three factors with Eigen values greater than one explained 73.38% of the variance which is considered high (Hair et al., 2010).

Table 5.9 Exploratory Factor Analysis Result for Physical Environment Quality (VARIMAX Rotation)

Items No.	Attributes	Component				
		1	2	3	4	5
B2	The décor of this resort hotel exhibits a great deal of thought and style.	**.841**				
B4	The atmosphere of this resort hotel is excellent.	**.829**				
B3	The décor of this resort hotel is attractive.	**.819**				
B6	The guest room is quiet.		**.787**			
B9	The bedroom of this resort hotel has high quality of in-room temperature control.		**.785**			
B8	The bed/mattress/pillow is comfortable.		**.684**			
B5	The rooms and bathroom of this resort hotel are clean.		**.667**			
B7	The room size is adequate.		**.561**			
B13	The facilities of this resort are appealing.			**.863**		
B11	The gardens surrounding this resort hotel are attractive and well-designed.			**.819**		
B10	The layout of this resort hotel suits my purpose/needs.			**.724**		
B12	The materials and furnishings at this resort are visually appealing.			**.684**		
B17	The beach is easily accessible from this resort hotel.				**.781**	
B15	The transportation from this resort hotel to local destinations is convenient.				**.761**	
B16	This resort hotel is located in an attractive scenic area.				**.708**	
B22	There are a variety of activities in the surroundings of the resort which meet my needs**.**					**.819**
B20	This resort hotel has adequate recreation and entertainment facilities.					**.813**
B21	I feel safe with the facilities and equipment of the resort.					**.798**
B23	This resort hotel had well organized activities and programmes that I required.					**.764**
B18	This resort hotel has a variety and high quality of food and beverage facilities.					**.586**
B19	This resort hotel has variety of leisure facilities and programs.					**.562**
	Eigen Values	**11.091**	**1.858**	**1.579**	**1.197**	**1.154**
	Cronbach' Coefficient Alphas	**.948**	**.902**	**.865**	**.928**	**.927**

1= Décor and Ambience, 2= Room Quality, 3= Design, 4= Location and Convenient,
5= Facility and Activity

5.4.1.3 Exploratory Factor Analysis for Outcome Quality

Initially, 11 items were proposed to measure three sub-dimensions of outcome quality: valence (4), waiting time (3) and sociability (4). The result of the appropriateness of data set analyses showed the data set of this study was appropriate for the EFA as the Correlation Matrix indicated that there was ample substantial correlations above 0.30 ($0.30 < r < 0.90$) in the correlation matrix (Hair et al., 2010; Pallant, 2010). Similarly, the Anti-Image Correlation Matrix illustrated the vast majority of the partial correlations were low (Field, 2009; Tabachnick & Fidell, 2007). In addition, the value of the Bartlet Test was statistically significant ($P < 0.05$) (Hinton, Brownlow, & McMurray, 2004; Pallant, 2010), and also the Kaiser Meyer Olkin Measure of Sampling Adequacy Index was 0.851 which exceeded the cut-off level 0.60 (Tabachnick & Fidell, 2007). This value was defined as "Meritorious" (0.80+) by Kaiser and Rice (1974); hence, all appropriateness indicators of the data-set for outcome quality were satisfied.

The result of the latent root criterion illustrated that the 11 measured variables submitted for the exploratory factor analysis should be grouped into 3 sub-dimensions of the outcome quality primary dimension. These three sub- dimensions explained approximately 81.72% of the variation in the data-set which was above 60% target suggested by (Hair et al., 2010).

In addition, before the curve in the scree plot became a straight line, there were 3 dimensions which had been extracted; therefore, the extraction of 5 dimensions was appropriate for this analysis (See Figure 5.3).

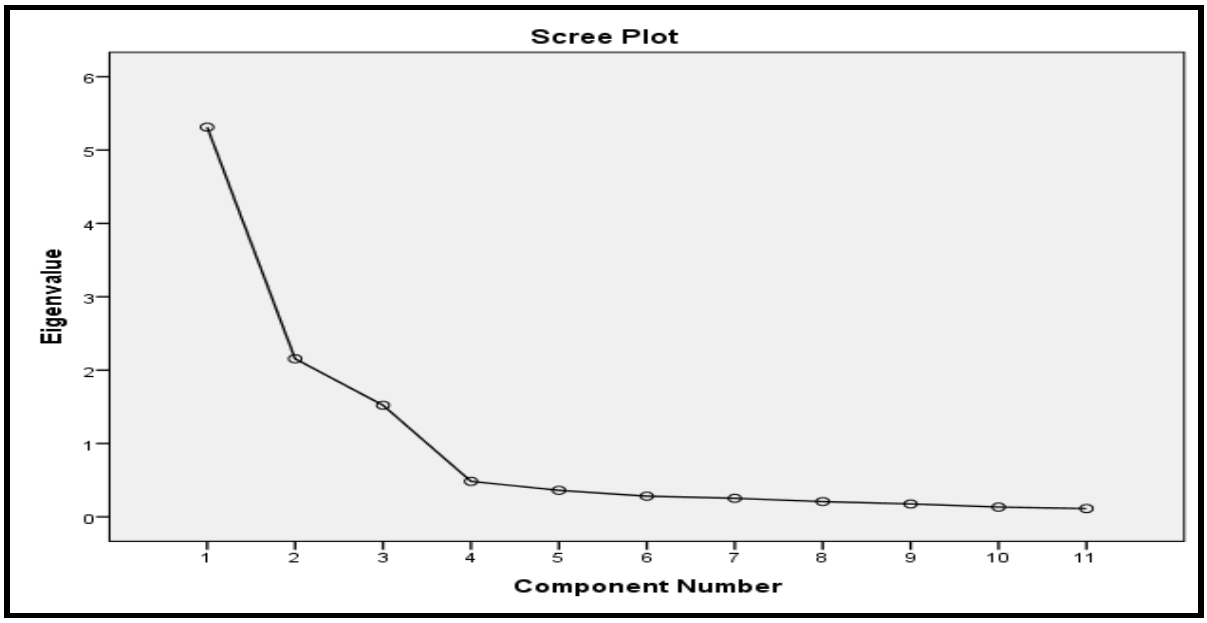

Figure 5.3 Scree Plot (Outcome Quality)

Both the VARIMAX and the OBLIMIN rotation displayed a similar pattern. The results of the VARIMAX rotation demonstrated that 3 dimensions emerged similar to those originally proposed.

Furthermore, all 11 items presented an adequate unidimensionality because none of them highly loaded on more than one factor (Bernard, 2000), and also all 11 items had significant loading above ± 0.4.

To summarize, there are 3 sub-dimensions for outcome quality: valence (4 items), waiting time (3 items) and sociability (4 items), with the factor loadings ranging from 0.772 to 0.919, and all factors have a high Cronbrach's Coefficient alpha (.951, .925, .888) which are greater than 0.70 as suggested by Churchill (1979) and Nunnally and Bernstein (1994). Ultimately, three factors with Eigen value greater than one explained 81.72% of the variance which is considered high (Hair et al., 2010).

Table 5.10 Exploratory Factor Analysis Result for Outcome Quality (VARIMAX Rotation)

Items No.	Attributes	Component		
		1	2	3
C1	When I leave this resort hotel, I feel my expectations have been met.	**.891**		
C2	I would evaluate the outcome of this resort hotel's service favourably.	**.887**		
C4	This resort hotel made my holiday trip enjoyable.	**.877**		
C3	My stay at this resort was leisurely and stress-free.	**.859**		
C7	The resort hotel's staff provide punctual service for me.		**.919**	
C5	The resort hotel's staff respond promptly to my requests.		**.899**	
C6	The resort hotel's staff try to minimize my waiting time.		**.883**	
C10	This resort hotel provides me with opportunities for social interaction.			**.866**
C9	The other customers at this resort hotel did not affect the resort hotel's ability to provide me with good service.			**.861**
C8	During my leisure time staying in this resort, I was not bothered by other customers.			**.852**
C11	I have made social contacts at this resort hotel.			**.772**
	Eigen Values	**5.313**	**2.155**	**1.521**
	Cronbach' Coefficient Alphas	**.951**	**.925**	**.888**

1= Valence, 2= Waiting time, 3= Sociability

5.4.2 Confirmatory Factor Analysis

The Confirmatory Factor Analysis was applied to examine the relationship between the sub-dimensions of the three primary dimensions (interaction, physical environment and outcome) and their measurement items. This process is to confirm the classification of the sub-dimensions found in the EFA. The CFA encompasses two steps: First-Order Confirmatory Factor Analysis and Second-Order Confirmatory Factory Analysis. The following sections present the result of the First-Order and the Second-Order CFA for interaction, physical environment and outcome quality primary dimension.

5.4.2.1 First-Order Confirmatory Factor Analysis for Interaction Quality

Based on the result of the EFA, there were three sub-dimensions and 14 items for measuring interaction quality: attitude (4 items), behaviour (4 items) and professionalism (6 items) (See Figure 5.4). The First-Order Confirmatory Factor Analysis model for interaction quality presented 14 observed variable. The number of observed variances and co-variances (14[14+1]/2) was 105, and the number of estimated parameters in the model was 31 (11 regression weights, 3 covariances and 17 variances).

The t-rule indicated the first-order confirmatory model for interaction quality was over-identified (the number of observed variances and covariances were greater than the number of estimated parameters), and tested with 74 degree of freedom (105 - 31).

The result of the preliminary first-order model for interaction quality indicated that almost all items had a factor loading above the recommended threshold of 0.60 and were statistically significant at the 0.001% level. However, the factor loading of item A14 was just 0.36 which was below the recommended threshold of 0.5 (Bagozzi & Y., 1988; Hair et al., 2010; Janssens et al., 2008).

In addition, some of the model fit indices for the preliminary first-order model for interaction quality; the Goodness-of-Fit Indices (GFI), the Standardized Root Mean Residual (SRMR) and the (Root Mean Square Error of Approximation (RMSEA) were below the recommended thresholds (See Table 5.11). Therefore, some modifications were required in order to improve the model fit.

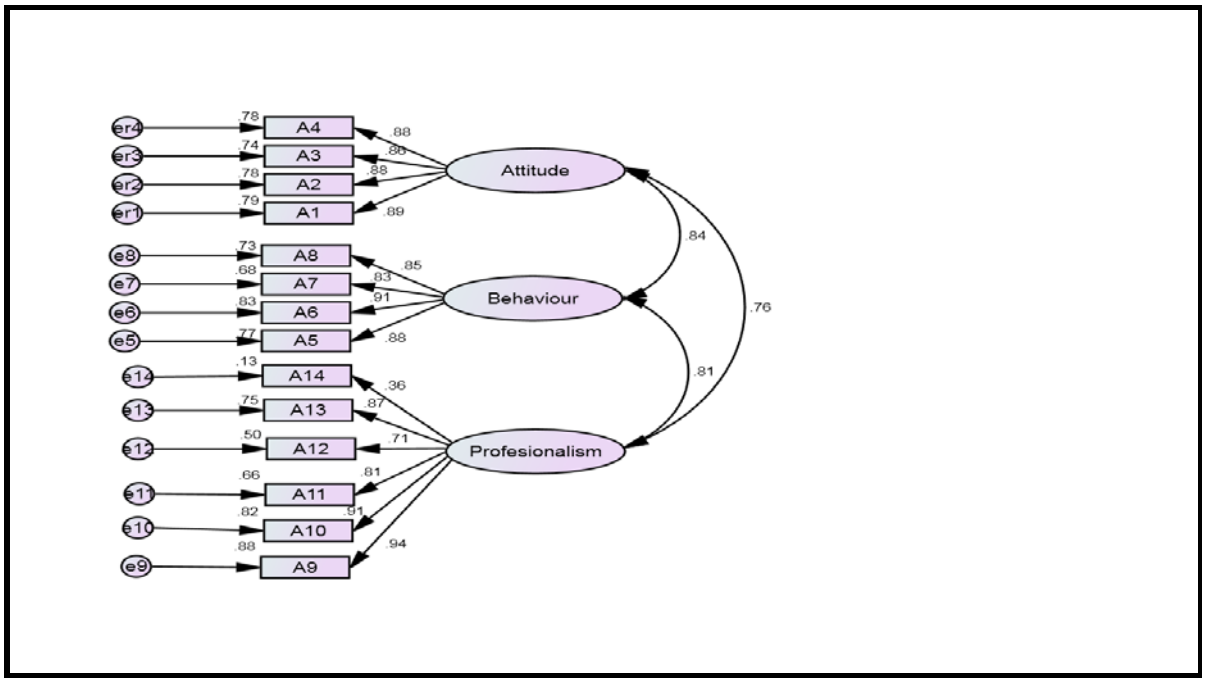

Figure 5.4 The Preliminary First-Order Measurement Model for Interaction Quality

Table 5.11 Goodness-of-Fit Results of the Preliminary First-Order Measurement Model for Interaction Quality

Goodness-of-Fit Indices	**Values**
Chi-Square (χ2)	233.784
Degree of Freedom (df)	74
Normed Chi-square (χ2/df)	3.159
Goodness-of-Fit Indices (GFI)	.870
Standardized Root Mean Residual (SRMR)	.1163
Comparative Fit Index (CFI)	.942
Normed Fit Index (NFI)	.917
Root Mean Square Error of Approximation (RMSEA)	.095

The Modification index (MI) revealed that the pairs of items A14 and A12, and A14 and A8 were considered higher than the recommended threshold of 15 which indicated that these two items were redundant items in the measurement model for interaction quality (Awang, 2012; Lawrence et al., 2013). As far as the factor loadings and the MI value report were concerned, the model was first re-specified by deleting A14 as it had an unacceptable factor loading and a high MI value (Awang, 2012; Bagozzi & Y., 1988; Hair et al., 2010; Lawrence et al., 2013) (See Table 5.12).

Table 5.12 Suggestion for Improving Model-Fit-Indices from MI

Items	**Suggestions from Modification Index**	**Modification Index**	**Expected Par Change**
Pairing with other Items			
A14	A12	62.233	.388
A14	A8	14.466	.143

After eliminating item 14, there were 13 measurement items for interaction quality consisting of 4 items for attitude sub-dimension, 4 items for behaviour sub-dimension and 5 items for professionalism sub-dimension (See Figure 5.5). The modified first-order measurement model for interaction quality presented 13 observed variable. The number of observed variances and co-variances (13[13+1]/2) was 91, and the number of estimated parameters in the model was 29 (10 regression weights, 3 covariances and 16 variances). The t-rule indicated the modified first-order confirmatory model for interaction quality was over-identified (the number of observed variances and covariances were greater than the number of estimated parameters), and tested with 62 degree of freedom (91 - 29).

After the re-specification process, the modified first-order confirmatory factor analysis model for interaction quality had a good model fit to the sample data. Initially, all factor loadings for the measurement items in the model were above the recommended threshold value of 0.50 (Bagozzi & Y., 1988; Hair et al., 2010; Janssens et al., 2008) and statistically significant at the 0.001% level (See Figure 5.5).

Subsequently, the improvement in the model fit was examined by subtracting the overall $\chi 2$ statistic for the modified model from the preliminary. Comparing the preliminary model ($\chi 2_{[74]} = 233.784$) with the modified model ($\chi 2_{[62]} = 137.692$) yielded a difference in the $\Delta \chi 2$ value of 96.092 ($\Delta \chi 2_{[12]} = 96.092$). Since $\Delta \chi 2_{[12]} = 96.092 > \chi 2_{16.916\ \alpha\ .05}$, the modified first-order model was statistically significant and indicated an improvement in the model-fit- indices.

After the re-specification process all of the model fit indices were improved and sufficiently satisfied their relevant recommended thresholds, especially the indices which had been unacceptable in the preliminary model such as the GFI, SRMR and RMSEA. These indices suggest a good model fit to the sample data in the modified model (See Table 5.13).

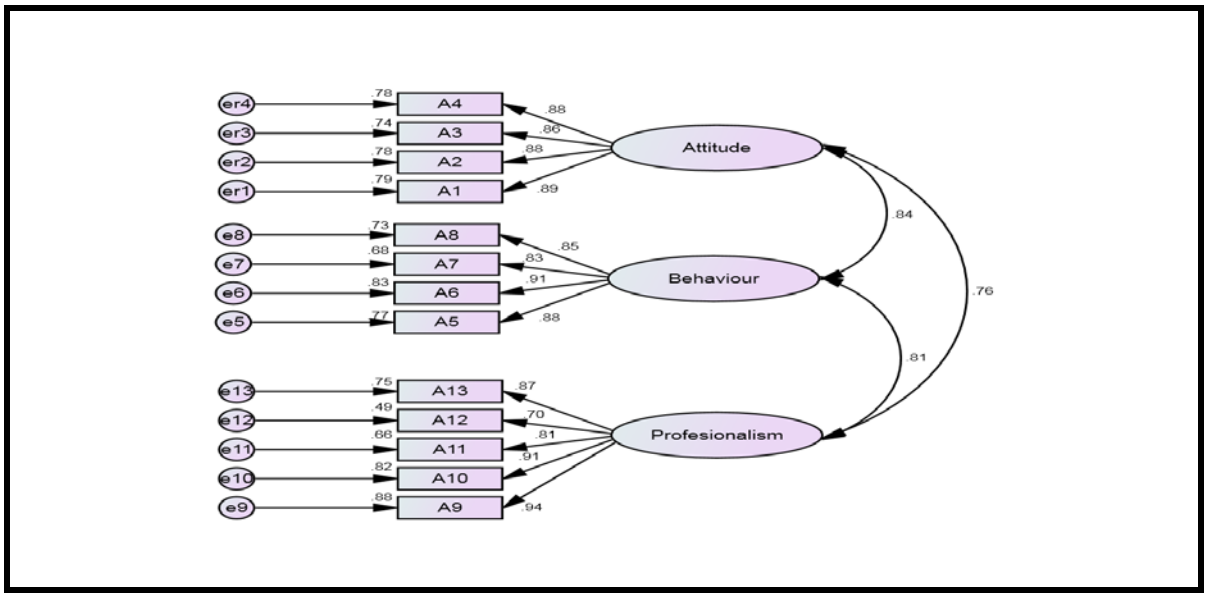

Figure 5.5 The Modified First-Order Measurement Model for Interaction Quality

Table 5.13 Goodness-of-Fit Results of the Modified First-Order Measurement Model for Interaction Quality

Goodness-of-Fit Indices	Values
Chi-Square ($\chi 2$)	137.692
Degree of Freedom (df)	62
Normed Chi-square ($\chi 2$/df)	2.220
Goodness-of-Fit Indices (GFI)	.917
Standardized Root Mean Residual (SRMR)	.0429
Comparative Fit Index (CFI)	.972
Normed Fit Index (NFI)	.949
Root Mean Square Error of Approximation (RMSEA)	.070

Furthermore, the literature suggests that verifying construct validity and reliability are required for a measurement model (Byrne, 2010; Hair et al., 2010; Janssens et al., 2008; Kline, 2011; Schumacker & Lomax, 2004).

The construct validity in this study was verified by examining the unidimensionality, recommended as a prerequisite indicator of construct validity and reliability (Byrne, 2010) and then reconfirmed by examining convergent validity and discriminant validity, while reliability was verified by examining composite reliability. As far as all criteria were concerned, the measurement model for interaction quality exhibits adequate construct validity and reliability.

Firstly, the CFI value was 0.972 which was above the recommended threshold of 0.90 (Byrne, 2010) and also the standardized factor loadings of all measurement items were statistically significant (t value > 1.96) and ranged from 0.697 to 0.909 which were above the recommended threshold value of 0.60 (Bagozzi & Y., 1988). Therefore, the measurement model for interaction quality demonstrated adequate unidimensionality (See Table 5.13 and 5.14).

Secondly, the AVEs ranged from 0.753 to 0.772 which is above the recommended threshold 0.50 (Fornell & Larcker, 1981), hence the model also exhibits adequate construct validity (See Table 5.15). Thirdly, the correlation coefficients of the three sub-dimensions of this model ranged from 0.76 to 0.84, which were below the recommended threshold of 0.85 (Kline, 2011), therefore the model exhibits adequate discriminant validity (See Table 5.14 or Figure 5.5).

Eventually, the composite reliability of the three sub-dimensions ranged from 0.921 to 0.937, which were above the recommended threshold of 0.7 (Kline, 2011), thus this model exhibited adequate reliability (See table 5.15).

Table 5.14 Standardized Solution and Correlations of First-Order Confirmatory Factor Analysis Model for Interaction Quality

Variable Label	Factor Loading	Correlation
A 1	.889***	Att<-->Bh .836
A 2	.885(22.212)***	Bh<-->Prf .808
A 3	.858(20.413)***	Att<-->Prf .759
A 4	.882(22.021)***	
A 5	.880***	
A 6	.909(24.220)***	
A 7	.827(18.715)***	
A 8	.853(20.173)***	
A 9	.941***	
A 10	.908(25.849)***	
A 11	.814(18.727)***	
A12	.697(13.625)***	
A 13	.867***	

( ) t Value
*** Statistically significant at the 0.001 level (t>3.291)
** Statistically significant at the 0.01 level (t>2.576)
* Statistically significant at the 0.1 level (t>1.645)

Table 5.15 Average Variance Extracted and Construct Reliability Result of the First-Order Confirmatory Factor Analysis Model for Interaction Quality

Variable Label	Construct Reliability	Average Variance Extracted
Attitude	.931	.771
Behaviour	.924	.753
Professionalism	.927	.772

5.4.2.2 Second-Order Confirmatory Factor Analysis Model for Interaction Quality

The Second-Order Confirmatory Factor Analysis for interaction quality was designed to test the hypothesis that the interaction quality primary dimension is a multidimensional construct consisting of three sub-dimensions (attitude, behaviour and professionalism). Specifically, it tests the relationship between three sub-dimensions of interaction quality. The model presented 13 observed variables. The number of observed variances and co-variance (13[13+1]/2) was 91, and the number of estimated parameters in the model was 29 (13 regression weights, and 16 variances).

The t-rule indicated the second-order confirmatory model for interaction quality was over-identified (with the number of observed variances and covariance were greater than the number of estimated parameters), and tested with 62 degrees of freedom (91- 29).

However, for the hierarchical or second-order, Byrne (2010, p.130) suggested that it is necessary "to check the identification status of the higher order portion of the model". In this case this second-order confirmatory factor analysis was just-identified as there were only 6 pieces of information (3[3+1]/2) = 6 estimated parameters (3 regression weights and 3 residuals) with zero degree of freedom (Byrne, 2010).

To rectify the just-identified problem, the Equality Constraints Method (ECM), as suggested by Byrne (2010) was applied. The ECM constrains two equal residual variances of two first-order factors to be equal. These two equal residual variances were identified by using the critical ratio difference method (CRDIFF) which compared the critical ratio difference (CRDIFF) with the critical value (1.96).
The two residual variances were identified as approximately equal when the CRDIFF between these two residual variances was less than 1.96. From the CRDIFF list, the residual variances of the attitude and professionalism sub-dimensions were constrained as their residual variance was less than the critical value of 1.96. Therefore, both of them were constrained by placing the same value (var_a). As a result, the identification status of the higher-order portion was over-identified with 1 df [6 pieces of information (3[3+1]/2) > 5 estimated parameter (three factor loading and two residuals).

The model-fit result for the second-order confirmatory factor analysis model for interaction quality illustrated a good model fit to the sample data. All model fit indices were sufficiently satisfied with their relative recommended thresholds.

Therefore, the model modification was not required and the goodness-of-fit indexes of the second-order confirmatory factor analysis model for interaction quality are presented in Table 5.16.

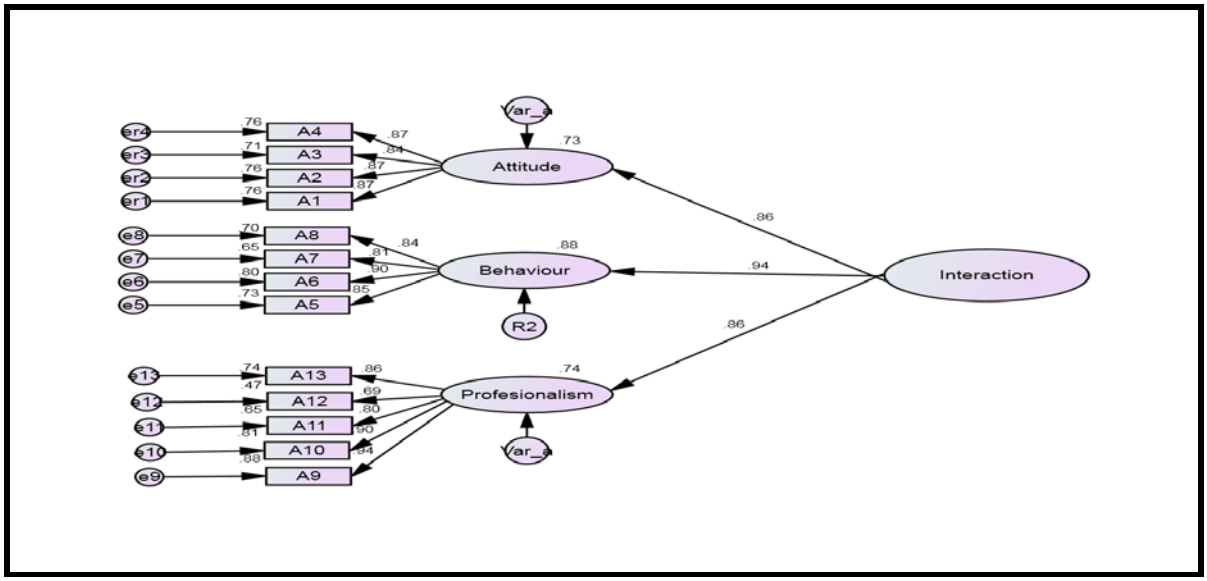

Figure 5.6 Second-Order Confirmatory Factor Analysis Model for Interaction Quality

Table 5.16 Goodness-of-Fit Results of Second-Order Confirmatory Factor Analysis Model for Interaction Quality

Goodness-of-Fit Indices	Values
Chi-Square (χ2)	133.706
Degree of Freedom (df)	62
Normed Chi-square (χ2/df)	2.156
Goodness-of-Fit Indices (GFI)	.919
Standardized Root Mean Residual (SRMR)	.043
Comparative Fit Index (CFI)	.973
Normed Fit Index (NFI)	.950
Root Mean Square Error of Approximation (RMSEA)	.070

In addition, the standardized solution and the correlation of the second-order confirmatory factor analysis model for interaction quality were reasonable and all factor loadings were statistically significant at the 0.001% level. These results supported the reliability and validity of the measures associated with the second-order confirmatory factor analysis model for interaction quality.

Specifically, the factor loading values associated with the three first order factors indicated that behaviour is the most reliable and strongest indicator of interaction quality (β = 0.936, t-value = 13.888, P < 0.001), followed by professionalism (β = 0.856, t-value = 13.529, P < 0.001) and attitude. (β = 0.856, t-value = 12.999, P < 0.001).

These results supported Hypotheses H1 and H7a as stated in Chapter 3. Moreover, the second-order latent variable, represented by interaction quality, explained 83% of variance for behaviour, 80% of variance for professionalism, and 79% of variance for attitude.

Table 5.17 Standardized Solutions and Correlations of the First-Order Confirmatory Factor Analysis Model for Interaction Quality

Variable Label	Factor Loading (β)	R^2
Attitude	.856(12.999)***	.791
Behaviour	.936(13.888)***	.831
Professionalism	.856(13.529)***	.795
A 1	.874***	
A 2	.871(18.263)***	
A 3	.843(17.137)***	
A 4	.870(18.190)***	
A 5	.852***	
A 6	.897(17.850)***	
A 7	.809(15.012)***	
A 8	.836(15.857)***	
A 9	.938***	
A 10	.900(23.675)***	
A 11	.804(16.614)***	
A12	.685(12.574)***	
A 13	.860(19.135)***	

( ) t Value : *** Statistically significant at the 0.001 level (t>3.291); ** at the 0.01 level (t>2.576); * at the 0.1 level (t>1.645)

5.4.2.3 First-Order Confirmatory Factor Analysis for Physical Environment Quality

Based on the result of the EFA, there were five sub-dimensions and 21 items for measuring physical environment quality: décor & ambience (3 items), design (4 items), location & convenience (3 items), room quality (5 items) and facility & activities (6 items) (See Figure 5.7).

The model presented 21 observed variables. The number of variance and co-variance (21[21+1]/2) was 231 and the number of estimated parameters in the model was 52 (16 regression weights, 10 covariances and 26 variances). The t-rule indicated the first-order confirmatory model for physical environment quality was over-identified (the number of observed variances and covariances were greater than the number of estimated parameters), and tested with 179 degrees of freedom (231 – 52).

The model-fit result for the first-order confirmatory factor analysis model for physical environment quality in Table 5.18 indicated a good model fit to the sample data. All model fit indices were sufficiently satisfied with their relative recommended thresholds (See Table 5.18). Therefore, the model modification was not required.

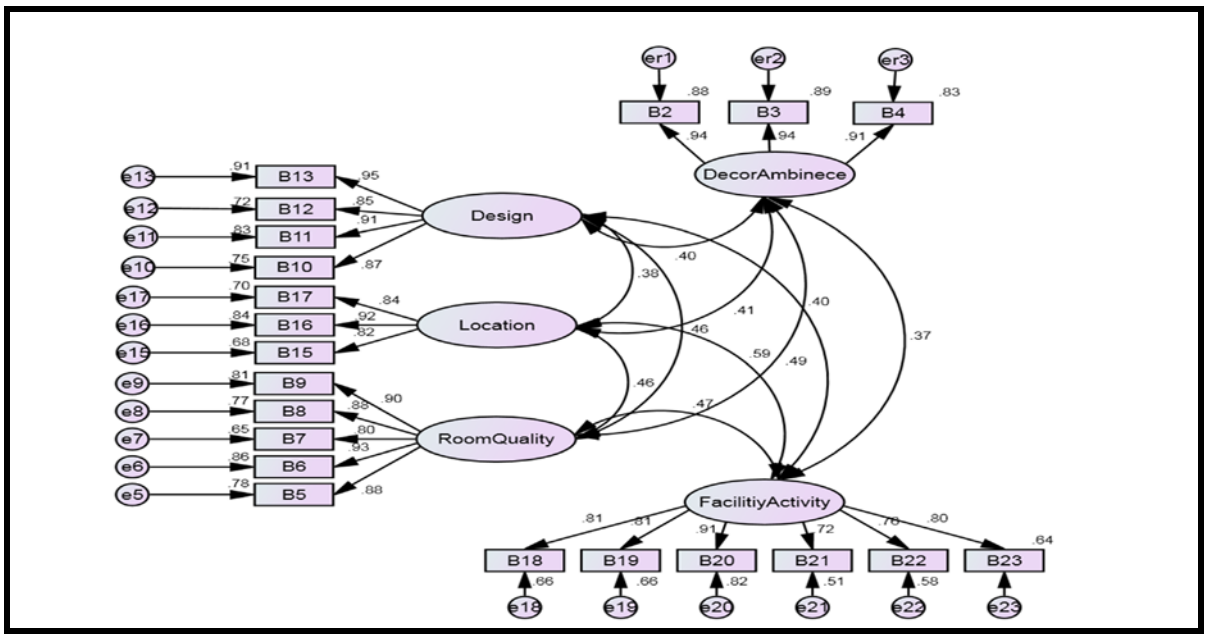

Figure 5.7 First-Order Confirmatory Factor Analysis Model for Physical Environment Quality

Table 5.18 Goodness-of-Fit Results of First order Confirmatory Factor Analysis Model for Physical Environment Quality

Goodness-of-Fit Indices	Values
Chi-Square (χ2)	292.287
Degree of Freedom (df)	179
Normed Chi-square (χ2/df)	1.632
Goodness-of-Fit Indices (GFI)	.893
Standardized Root Mean Residual (SRMR)	.045
Comparative Fit Index (CFI)	.975
Normed Fit Index (NFI)	.936
Root Mean Square Error of Approximation (RMSEA)	.051

Furthermore, the measurement model for physical environment quality exhibits adequate construct validity and reliability. Firstly, the CFI value was 0.975 which was above the recommended threshold value of 0.90 (Byrne, 2010) and also the standardized factor loadings of all measurement items were statistically significant (t value > 1.96) and ranged from 0.716 to 0.951 which were above the recommended threshold value of 0.60 (Bagozzi & Y., 1988). Therefore, the measurement model demonstrates adequate in unidimensionality (See Table 5.19 or Figure 5.7).

Secondly, the AVEs ranged from 0.646 to 0.862, were above the recommended threshold value of 0.50 (Fornell & Larcker, 1981), hence, the model also exhibits adequate construct validity (See Table 5.20).

Thirdly, the correlation coefficients of the five sub-dimensions of the model ranged from 0.368 to 0.589, which were below the recommended threshold value of 0.85 (Kline, 2011), thus the model exhibits adequate discriminant validity (See Table 5.18 or Figure 5.7). Eventually, the composite reliability of the five sub-dimensions ranged from 0.894 to 0.949, which were above the recommended threshold value of 0.7 (Kline, 2011). The model exhibited adequate reliability (See table 5.20).

Table 5.19 Standardized Solution and Correlations of First-Order Confirmatory Factor Analysis Model for Physical Environment Quality

Variable Label	Factor Loading	Correlation
B2	.937***	DS <--> DA .397
B3	.941(26.618)***	LC <--> DA .411
B4	941(25.374)***	RQ <--> DA .492
B5	.883***	FA <--> DA .368
B6	.925(24.747)***	DS <--> LC .380
B7	.804(17.231)***	DS <--> RQ .456
B8	.875(21.073)***	DS <--> FA .400
B9	.901(22.847)***	FA <--> RQ .465
B10	.867***	LC <--> RQ .458
B11	.913(23.241)***	LC <--> FA .589
B12	.851(19.301)***	
B13	.951(26.250)***	
B15	.824***	
B16	.916(20.474)***	
B17	.836(17.315)***	
B18	.814(16.574)***	
B19	.815(16.612)***	
B20	.906(20.881)***	
B21	.716(13.237)***	
B22	.763(14.727)***	
B23	.799***	

DA = Décor & Ambience, **RQ =** Room Quality, **DS=** Design,
LC= Location & Convenience, **FA =** Facility & Activity

Table 5.20 Average Variance Extracted and Construct Reliability-Result of the First-Order Confirmatory Factor Analysis Model for Physical Environment Quality

Variable Label	Construct Reliability	Average Variance Extracted
Décor & Ambience	.949	.862
Room Quality	.944	.771
Design	.942	.803
Location & Convenience	.894	.738
Facilities & Activity	.916	.646

5.4.2.4 Second-Order Confirmatory Factor Analysis Model for Physical Environment Quality

The Second-Order Confirmatory Factor Analysis for Physical Environment Quality was designed to test the hypothesis that the physical environment quality primary dimension is a multidimensional construct consisting of five sub-dimensions (décor & ambience, design, room quality, location & convenience, facility & activity). Specifically, it was testing the relationship between five sub-dimensions and one primary dimension of physical environment quality.

The model presented 21 observed variables. The number of observed variances and co-variance (21[21+1]/2) was 231, and the number of estimated parameters in the model was 47 (21 regression weights, and 26 variances). The t-rule indicated the second-order confirmatory model for physical environment quality was over- identified (the number of observed variances and covariances were greater than the number of estimated parameters), and tested with 184 degrees of freedom (231 - 47).

However, for the hierarchical or second-order, Byrne (200, p.130) suggested that it is necessary "to check the identification status of the higher order portion of the model". In this case, this second-order confirmatory factor analysis model for physical environment quality with five first-order factors were over-identified [15 pieces of information (5[5+1]/2) > 10 estimated parameters (5 regression weights and 5 residuals) with 5 degrees of freedom.

The model - fit result for the second-order confirmatory factor analysis model for physical environment quality illustrated a good model fit to the sample data. All model fit indices were sufficiently satisfied with their relative recommended thresholds. Therefore, model modification was not required and the goodness-of-fit indexes of the second-order confirmatory factor analysis mode for physical environment quality are presented in Table 5.21.

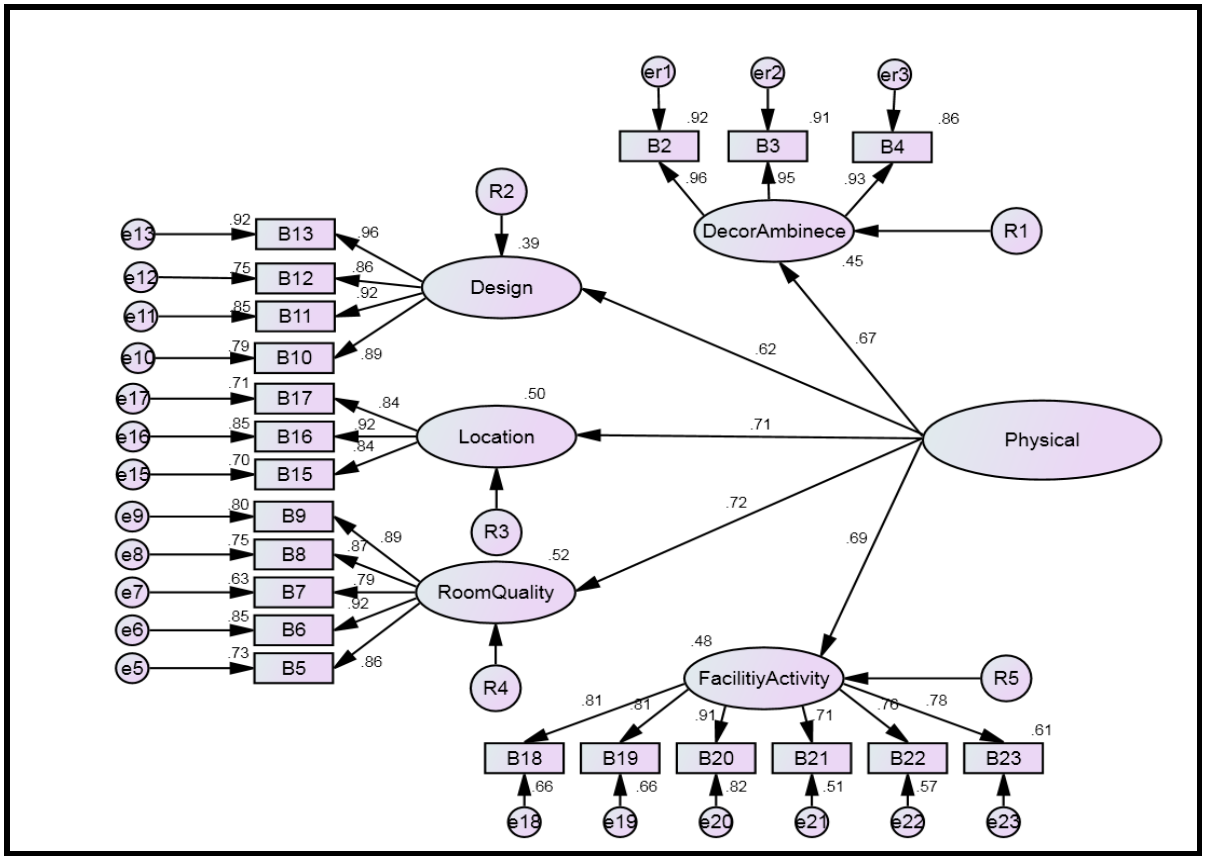

Figure 5.8 Second-Order Confirmatory Factor Analysis Model for Physical Environment Quality

Table 5.21 Goodness-of-Fit Results of Second-Order Confirmatory Factor Analysis Model for Physical Environment Quality

Goodness-of-Fit Indices	Values
Chi-Square ($\chi 2$)	282.817
Degree of Freedom (df)	184
Normed Chi-square ($\chi 2$/df)	1.537
Goodness-of-Fit Indices (GFI)	.896
Standardized Root Mean Residual (SRMR)	.048
Comparative Fit Index (CFI)	.977
Normed Fit Index (NFI)	.938
Root Mean Square Error of Approximation (RMSEA)	.049

In addition, the standardized solution and the correlation of the second-order confirmatory factor analysis model for physical environment quality were reasonable and all factor loadings were statistically significant at the 0.001% level.

These results supported the reliability and validity of the measures associated with the second-order confirmatory factor analysis model for physical environment quality. Specifically, the factor loading values associated with the five first order factors indicated that room quality is the most reliable and strongest indicator of physical environment quality ($\beta = 0.724$, t-value = 10.007, $P < 0.001$), followed by location & convenience ($\beta = 0.710$, t-value = 9.493, $P < 0.001$), facilities & activity ($\beta = 0.694$, t-value = 8.954, $P < 0.001$), décor & ambience ($\beta = 0.668$, t-value = 8.832, $P < 0.001$) and design ($\beta = 0.625$, t-value = 8.744, $P < 0.001$).

These results supported Hypotheses H2 and H7a as stated in Chapter 3. Moreover, the second-order latent variable, represented by physical environment quality, explained 52% of variance for room quality, 50% of variance for location & convenience, 48% of variance for facilities & activity, 45% of variance for décor & ambience and 39% of variance for design.

Table 5.22 Standardized Solutions of Second-Order Confirmatory Factor Analysis Model for Physical Environment Quality

Variable Label	Factor Loading	R^2
Décor & Ambience	.668(8.832)***	.447
Room Quality	.724(10.007)***	.523
Design	.625(8.744)***	.390
Location & Convenience	.710(9.493)***	.505
Facilities and Activity	.694(8.954)***	.482
B2	.960***	
B3	.952(32.352)***	
B4	.928(28.987)***	
B5	.857***	
B6	.920(19.442)***	
B7	..791(14.831)***	
B8	.866(17.388)***	
B9	..895(18.437)***	
B10	.888***	
B11	.921(21.776)***	
B12	.865(18.805)***	
B13	.957(23.881)***	
B15	.839***	
B16	.921(16.930)***	
B17	.840(15.285)***	
B18	.809(13.221)***	
B19	.811(13.248)***	
B20	.905(15.180)***	
B21	.714 (11.342)***	
B22	.756(12.146)***	
B23	.779***	

5.4.2.5 First-Order Confirmatory Factor Analysis for Outcome Quality

Based on the result of the EFA, there were three sub-dimensions and 11 items for measuring outcome quality: valence (4 items), waiting time (3 items) and sociability (4 items) (See Figure 5.9).
The model presented 11 observed variables. The number of variance and co-variance (11[11+1]/2) was 66 and the number of estimated parameters in the model was 25 (8 regression weights, 3 covariances and 14 variances).

The t-rule indicated the first-order confirmatory model for outcome quality was over-identified (the number of observed variances and covariances were greater than the number of estimated parameters), and tested with 41 degrees of freedom (66 – 25).

The model - fit result for the first-order confirmatory factor analysis model for outcome quality in Table 5.23 indicated a good model fit to the sample data. All model fit indices were sufficiently satisfied with their relative recommended thresholds (See Table 5.23). Therefore, modification of the model was not required.

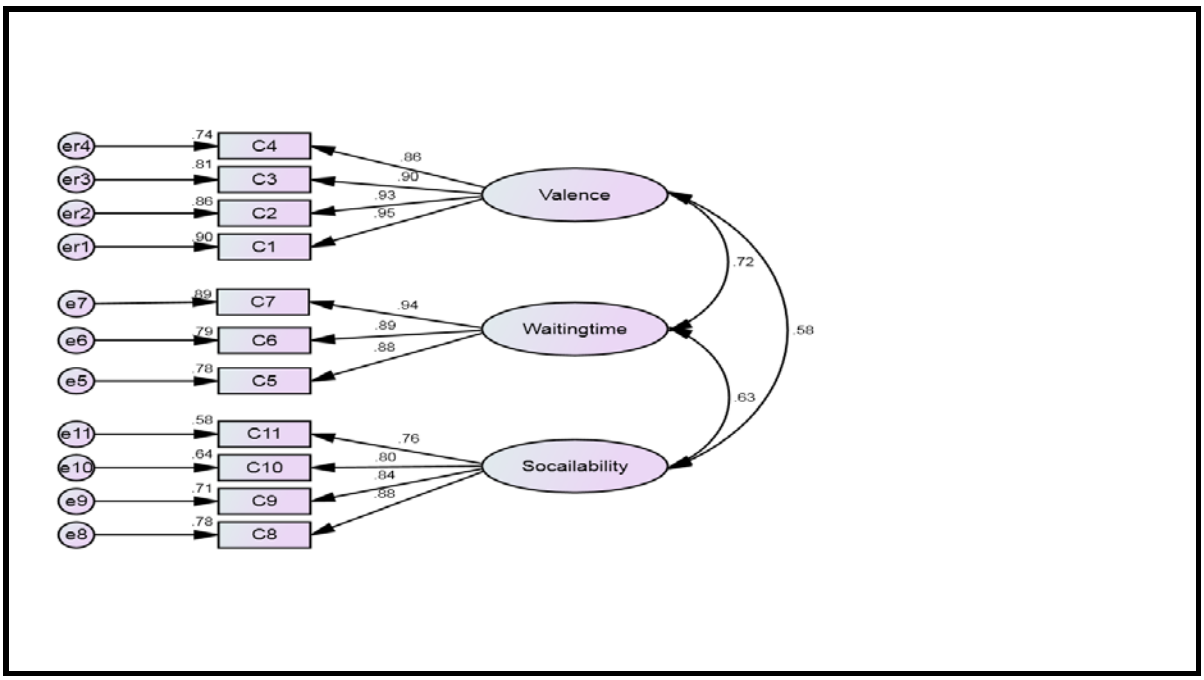

Figure 5.9 First-Order Confirmatory Factor Analysis Model for Outcome Quality

Table 5.23 Goodness-of-Fit Results of First-Order Confirmatory Factor Analysis Model for Outcome Quality

Goodness-of-Fit Indices	Values
Chi-Square (χ2)	72.306
Degree of Freedom (df)	41
Normed Chi-square (χ2/df)	1.763
Goodness-of-Fit Indices (GFI)	.947
Standardized Root Mean Residual (SRMR)	.030
Comparative Fit Index (CFI)	.987
Normed Fit Index (NFI)	.968
Root Mean Square Error of Approximation (RMSEA)	.053

Moreover, the measurement model for outcome quality exhibits adequate construct validity and reliability. Firstly, the CFI value was 0.987 which was above the recommended threshold of 0.90 (Byrne, 2010) and also the standardized factor loadings of all measurement items were statistically significant (t value > 1.96) and ranged from 0.762 to 0.949 which were above the recommended threshold value of 0.60 (Bagozzi & Y., 1988). Therefore, the measurement model demonstrates adequate unidimensionality (See Table 5.24 or Figure 5.9).

Secondly, the AVEs ranged from 0.671 to 0.829 which were above the recommended threshold value of 0.50 (Fornell & Larcker, 1981), therefore the model also exhibits adequate construct validity (See Table 5.24).

Thirdly, the correlation coefficients of the three sub-dimensions of this model ranged from 0.627 to 0.781, which were below the recommended threshold of 0.85 (Kline, 2011), hence the model exhibits adequate discriminant validity (See Table 5.24 or Figure 5.9).

Eventually, the composite reliability of the five sub-dimensions ranged from 0.892 to 0.950, which were above the recommended threshold of 0.7 (Kline, 2011), hence adequate reliability is exhibited in this model. (See table 5.25).

Table 5.24 Standardized Solution and Correlations of First-Order Confirmatory Factor Analysis Model for Outcome Quality

Variable Label	Factor Loading	Correlation
C1	.949***	VL <--> WT .718
C2	.928(28.714)***	VL <--> SA .579
C3	.900(25.547)***	SA <--> WT .627
C4	.861(22.063)***	
C5	.881***	
C6	.888(21.978)***	
C7	.942(25.879)***	
C8	.881***	
C9	.844(18.113)***	
C10	.799(16.221)***	
C11	.762(14.866)***	

VL = Valence, WT = Waiting Time, SA= Sociability

Table 5.25 Average Variance Extracted and Construct Reliability Result of the First-Order Confirmatory Factor Analysis Model for Outcome Quality

Variable Label	Construct Reliability	Average Variance Extracted
Valence	.950	.829
Waiting Time	.930	.816
Sociability	.892	.671

5.4.2.6 Second-Order Confirmatory Factor Analysis Model for Outcome Quality

The Second-Order Confirmatory Factor Analysis for outcome quality was designed to test the hypothesis that the outcome quality primary dimension is a multidimensional construct, which consists of three sub-dimensions (Valence, Waiting Time, and Sociability). Specifically, it tests the relationship between three sub-dimensions and one primary dimension of Outcome Quality.

The model presented 11 observed variables. The number of observed variances and co-variance (11[11+1]/2) was 66, and the number of estimated parameters in the model was 25 (11 regression weights, and 14 variances). The t-rule indicated the second-order confirmatory model for Outcome Quality was over-identified (with the number of observed variances and covariances were greater than the number of estimated parameters), and tested with 41 degrees of freedom (66 – 25).

However, for the hierarchical or second-order, Byrne (200, p.130) suggested that it is necessary “to check the identification status of the higher order portion of the model”.

In this case this second-order confirmatory factor analysis was just-identified as there were only 6 pieces of information (3[3+1]/2) = 6 estimated parameters (3 regression weights and 3 residuals) with zero degree of freedom.

To rectify the just-identified problem, the ECM and the (CRDIFF) was also applied, as suggested by Byrne (2009). From the CRDIFF list, the residual variances of waiting time and sociability sub-dimensions were constrained as their residual variance was less than the critical value of 1.96. Therefore, both of them were constrained by placing the same value (var_a).
As a result, the identification status of the higher-order portion was over-identified with 1 df [6 pieces of information (3[3+1]/2) > 5 estimated parameter (three factor loading and two residuals).

The model - fit result for the second-order confirmatory factor analysis model for Outcome Quality illustrated a good model fit to the sample data. All model - fit indices were sufficiently satisfied with their relative recommended thresholds. Therefore, the model modification was not required and the goodness-of-fit indexes of the second-order confirmatory factor analysis mode for Outcome Quality are presented in Table 5.24.

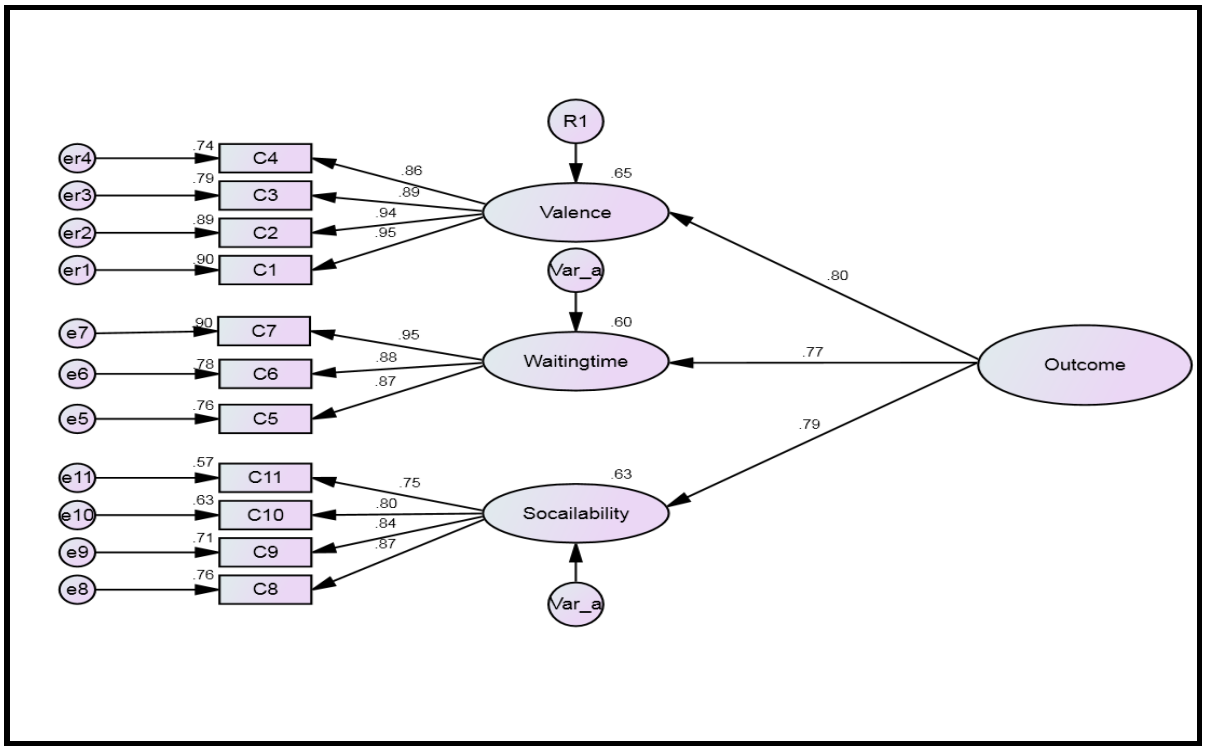

Figure 5.10 Second – Order Confirmatory Factor Analysis Model for Outcome Quality

Table 5.26 Goodness-of-Fit Results of Second-Order Confirmatory Factor Analysis Model for Outcome Quality

Goodness-of-Fit Indices	Values
Chi-Square (χ2)	78.386
Degree of Freedom (df)	41
Normed Chi-square (χ2/df)	1.911
Goodness-of-Fit Indices (GFI)	.943
Standardized Root Mean Residual (SRMR)	.044
Comparative Fit Index (CFI)	.984
Normed Fit Index (NFI)	.966
Root Mean Square Error of Approximation (RMSEA)	.062

The standardized solution and the correlation of the second-order confirmatory factor analysis model for outcome quality were reasonable and statistically significant at the 0.001% level.
This result supported the reliability and validity of the measures associated with the second-order confirmatory factor analysis model for outcome quality.

Specifically, the factor loading values associated with the three first order factors indicated that valence is the most reliable and strongest indicator of outcome quality (β = 0.804, t-value = 11.939, P < 0.001), followed by sociability (β = 0.792, t-value = 11.044, P < 0.001) and waiting time (β = 0.773, t value = 10.884, P < 0.001. These results supported Hypotheses H3 and H7a as stated in Chapter 3. Moreover, the second-order latent variable, represented by outcome quality, explained 64% of variance for Valence, 62% of the variance for sociability, 60% of the variance for waiting time.

Table 5.27 Standardized Solutions of Second-Order Confirmatory Factor Analysis Model for Outcome Quality

Variable Label	Factor Loading	R^2
Valence	.804(11.939)***	.646
Waiting Time	.773(10.884)***	.598
Sociability	.792(11.044)***	.627
C1	.947***	
C2	.943(28.913)***	
C3	.891(23.669)***	
C4	.863(21.447)***	
C5	.872***	
C6	.881(18.888)***	
C7	.949(21.453)***	
C8	.872***	
C9	.842(16.130)***	
C10	.796(14.754)***	
C11	.754(13.549)***	

5.4.3 Confirmatory Factor Analysis for Service Quality

The CFA for service quality also encompassed two steps: First-Order and Second-Order CFA.

The following sections present the result of the First-Order and the Second-Order CFA for service quality.

5.4.3.1 First-Order Confirmatory Factor Analysis Model for Service Quality

The first-order confirmatory factor analysis model for service quality was designed to test the relationship between the three primary dimensions (interaction, physical environment and outcome) and their measurement items (See Figure 5.11).

The model presented 6 observed variables. The number of observed variances and co-variance (6[6+1]/2) was 21, and the number of estimated parameters in the model was 15 (3 regression weights, 3 covariances and 9 variances).

The t-rule indicated the first-order confirmatory model for service quality was over- identified (the number of observed variances and covariances were greater than the number of estimated parameters), and tested with 6 degrees of freedom (21 – 15).

The model-fit result for the first-order confirmatory factor analysis model for service quality in Table 5.26 indicated a good model-fit to the sample data. All model-fit indices were sufficiently satisfied with their relative recommended thresholds (See Table 5.28). Therefore, the model modification was not required.

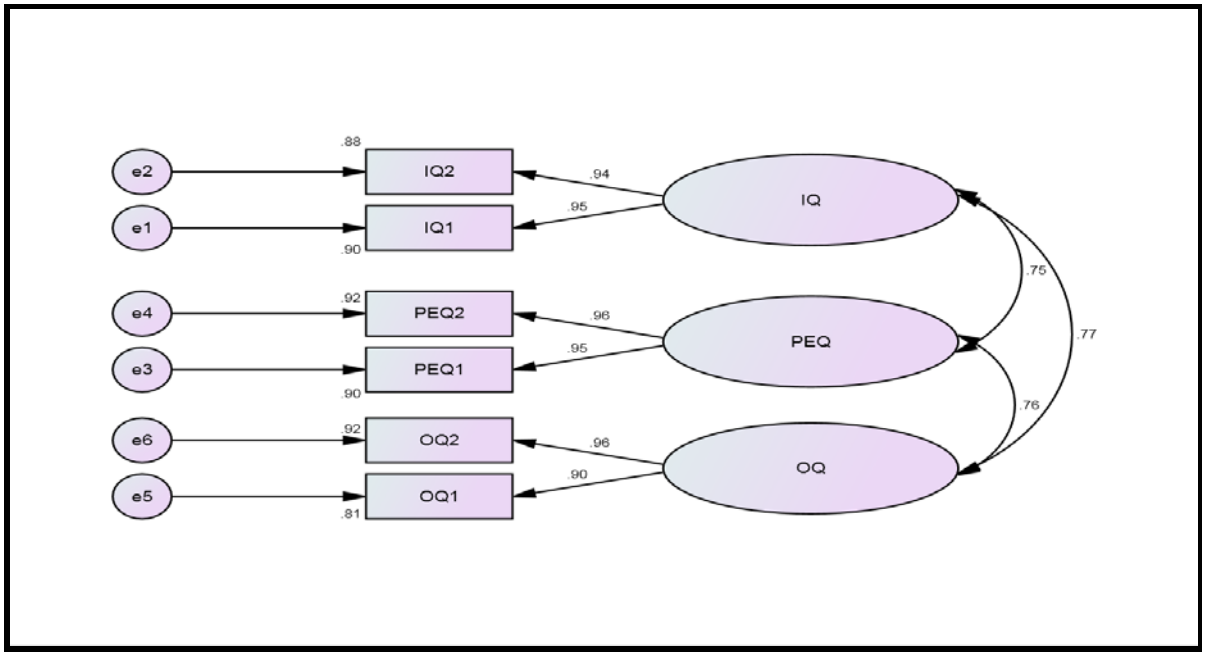

Figure 5.11 First-Order Confirmatory Factor Analysis Model for Service Quality

Table 5.28 Goodness-of-Fit Results of First-Order Confirmatory Factor Analysis Model for Service Quality

Goodness-of-Fit Indices	Values
Chi-Square (χ2)	15.004
Degree of Freedom (df)	6
Normed Chi-square (χ2/df)	2.50
Goodness-of-Fit Indices (GFI)	.978
Standardized Root Mean Residual (SRMR)	.016
Comparative Fit Index (CFI)	.996
Normed Fit Index (NFI)	.989
Root Mean Square Error of Approximation (RMSEA)	.054

Moreover, the measurement model for service quality exhibits adequate construct validity and reliability. Firstly, the CFI value was 0.996 which was above the recommended threshold value of 0.90 (Byrne, 2009) and the standardized factor loadings of all measurement items were statistically significant (t value > 1.96) and ranged from 0.898 to 0.961, which were above the recommended value of 0.60 (Bagozzi & Y., 1988). Therefore, the measurement model demonstrates adequate unidimensionality (See Table 5.29 or Figure 5.11).

Secondly, the AVEs ranged from 0.893 to 0.928 which are above the recommended threshold 0.50 (Fornell & Larcker, 1981), so the model exhibits adequate construct validity (See Table 5.30).

Thirdly, the correlation coefficients of the three primary-dimensions of this model ranged from 0.748 to 0.768, which were below the recommended threshold of 0.85 (Kline, 2011), hence the model exhibits adequate discriminant validity (See Table 5.29 or Figure 5.11).

Eventually, the composite reliability of the five sub-dimensions ranged from 0.865 to 0.954, which were above the recommended threshold of 0.7 (Kline, 2011), exhibiting adequate reliability in this model. (See table 5.30).

Table 5.29 Standardized Solution and Correlations of First-Order Confirmatory Factor Analysis Model for Service Quality

Variable Label	Factor Loading	Correlation
IQ1	.950***	IQ <-->PEQ .748
IQ2	.936(26.422)***	PEQ<-->OQ .760
PEQ1	.949(25.547)***	IQ <--> OQ .768
PEQ2	.961(30.048)***	
OQ1	.898***	
OQ2	.960(24.467)***	

IQ = Interaction Quality, PEQ = Physical Environment Quality, OQ = Outcome Quality

Table 5.30 Average Variance Extracted and Construct Reliability Result of the First-Order Confirmatory Factor Analysis Model for Service Quality

Variable Label	Construct Reliability	Average Variance Extracted
Interaction	.943	.893
Physical Environment	.954	.912
Outcome	.865	.928

5.4.3.2 Second-Order Confirmatory Factor Analysis Model for Service Quality

The Second-Order Confirmatory Factor Analysis Model for service quality in this study was designed to test the hypothesis that service quality for a resort hotel stay is a multidimensional construct, consisting of three primary dimensions (interaction quality, physical environment quality and outcome quality). This model tested the relationship between the dependent first-order dimensions (interaction quality, physical environment quality and outcome quality) and one independent second-order dimension (service quality) (See Figure 5.12).

The model presented 6 observed variables. The number of observed variances and co-variance (6[6+1]/2) was 21, and the number of estimated parameters in the model was 15 (3 regression weights, 3 covariances and 9 variances). The t-rule indicated the first-order confirmatory model for service quality was over-identified (the number of observed variances and covariances were greater than the number of estimated parameters), and tested with 6 degrees of freedom (21 – 15).

However, for the hierarchical or second-order, Byre (200, p.130) suggested that it is necessary "to check the identification status of the higher order portion of the model". In this case this second-order confirmatory factor analysis was just-identified as there were only 6 pieces of information (3[3+1]/2) = 6 estimated parameters (3 regression weights and 3 residuals) with a zero degree of freedom. To rectify the just-identified problem, the ECM and the (CRDIFF) was also applied as suggested by Byrne (2009). From the CRDIFF list, the residual variances of Interaction Quality and Physical Environment Quality dimensions were constrained as their residual variance was less than the critical value of 1.96.

Therefore, both of them were constrained by placing the same value (var_a). As a result, the identification status of the higher-order portion was over-identified with 1 df [6 pieces of information (3[3+1]/2) > 5 estimated parameter (three factor loading and two residuals).

The model-fit result for the second-order confirmatory factor analysis model for service quality illustrated a good model-fit to the sample data. All model-fit indices were sufficiently satisfied with their relative recommended thresholds, and model modification was not required. The goodness-of-fit indices of the second-order confirmatory factor analysis model for service quality are presented in Table 5.31.

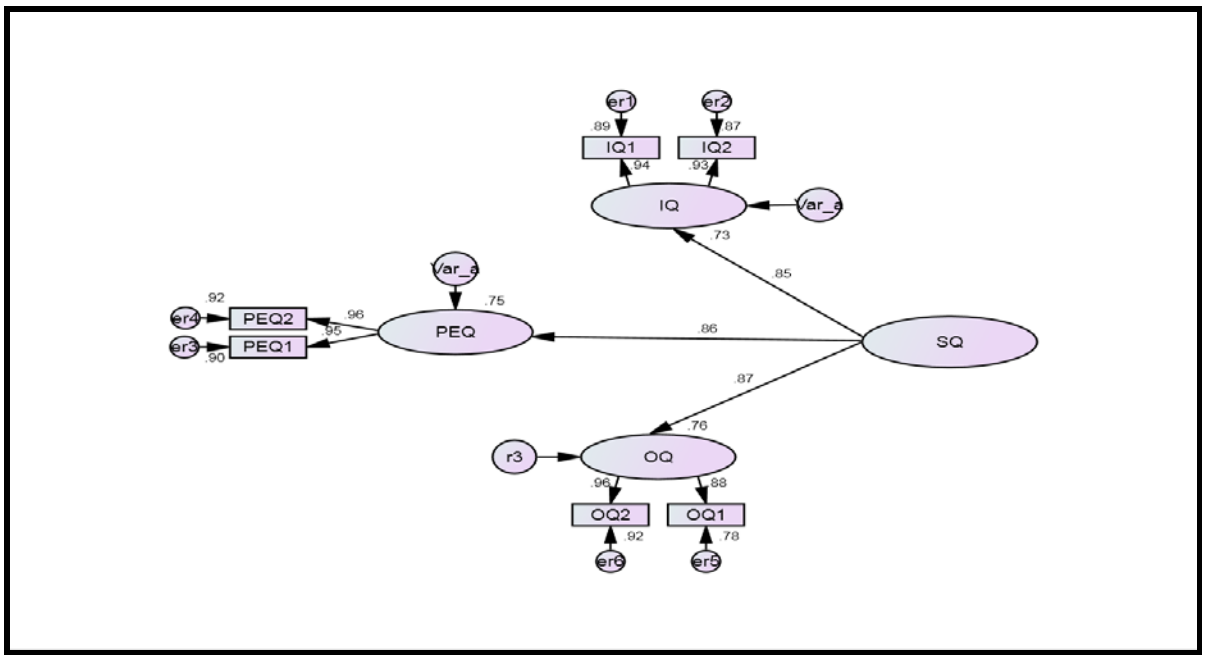

Figure 5.12 Second-Order Factor Analysis Model for Service Quality

Table 5.31 Goodness-of-Fit Results of Second-Order Confirmatory Factor Analysis Model for Service Quality

Goodness-of-Fit Indices	Values
Chi-Square ($\chi 2$)	13.675
Degree of Freedom (df)	7
Normed Chi-square ($\chi 2$/df)	1.954
Goodness-of-Fit Indices (GFI)	.981
Standardized Root Mean Residual (SRMR)	.010
Comparative Fit Index (CFI)	.995
Normed Fit Index (NFI)	.990
Root Mean Square Error of Approximation (RMSEA)	.065

The results of the standardized solution and correlation of the second-order confirmatory factor analysis model for service quality were reasonable and statistically significant at the 0.001% level. These results supported the reliability and validity of the measures associated with the second-order confirmatory factor analysis model for service quality.

Specifically, the factor loading values associated with the three first order factors indicated that outcome quality is the most reliable and strongest indicator for service quality ($\beta = 0.874$, t-value = 14.392, $P < 0.001$), followed by physical environment quality ($\beta = 0.864$, t-value = 14.027, $P < 0.001$) and interaction quality ($\beta = 0.853$, t-value = 12.874, $P < 0.001$.

These results supported Hypotheses H4, H5, H6 and H7b as stated in Chapter 3.

Moreover, the second-order latent variable, represented by Service Quality, explained 76% of variance for outcome quality, 75% of variance for physical environment quality and 73% of variance for interaction quality.

Table 5.32 Standardized Solution of Second-Order Confirmatory Factor Analysis Model for Service Quality

Variable Label	Factor Loading	R^2
Interaction	.853(12.847)***	.727
Physical Environment	.864(14.027)***	.747
Outcome	.874(14.392)***	.764
IQ1	.944***	
IQ2	.934(22.8120)***	
PEQ1	.950***	
PEQ2	.959(26.813)***	
OQ1	.885***	
OQ2	.960(19.732)***	

IQ = Interaction Quality, PEQ = Physical Environment Quality, OQ = Outcome Quality

5.4.4 Confirmatory Factor Analysis Model for the Higher Order Constructs

The CFA for the five higher order marketing constructs consist of the First-Order CFA to confirm the measurement model of the five higher order marketing constructs (service quality, customer satisfaction, customer perceived value, corporate image and customer loyalty) and the causal path model to investigate the interrelationship between these five constructs.

5.4.4.1 First-Order Confirmatory Factor Analysis Model for the Five Higher- Order Constructs

The First-Order Confirmatory Factor Analysis Model for the Five Higher Order Constructs was designed to test the relationship existing between the five higher constructs, (service quality, customer satisfaction, customer perceived value, corporate image and customer loyalty) and their measurement items.

The model presented 20 observed variables. The number of observed variances and covariances (20[20+1]/2) was 210 data points, and the number of estimated parameters in the model was 45 (15 regression weights, 10 covariances and 20 variances). The t-value indicate the first-order confirmatory model for the higher order constructs was over-identified (the number of observed variances and covariance were greater than the number of estimated parameters), and tested with 165 degrees of freedom (210 – 45).

The result of the preliminary first-order model for the Five Higher Constructs indicated that all items have a factor loading above the acceptable value of 0.60 (Bagozzi & Y., 1988; Hair et al., 2010; Janssens et al., 2008). The model-fit indicated that the preliminary first-order model for the five higher constructs was statistically significant at the 0.001% level, nevertheless, some of the model fit indices such as the GFI, the SRMR and the RMSEA were below the recommended thresholds (See Table 5.33). Therefore, some modifications were required in order to improve the model fit (Awang, 2012).

Table 5.33 Goodness-of-Fit Results of the Preliminary First-Order Confirmatory Factor Analysis Model for the Five Higher Order Constructs

Goodness-of-Fit Indices	Values
Chi-Square (χ2)	343.719
Degree of Freedom (df)	165
Normed Chi-square (χ2/df)	2.083
Goodness-of-Fit Indices (GFI)	.873
Standardized Root Mean Residual (SRMR)	.082
Comparative Fit Index (CFI)	.973
Normed Fit Index (NFI)	.949
Root Mean Square Error of Approximation (RMSEA)	.069

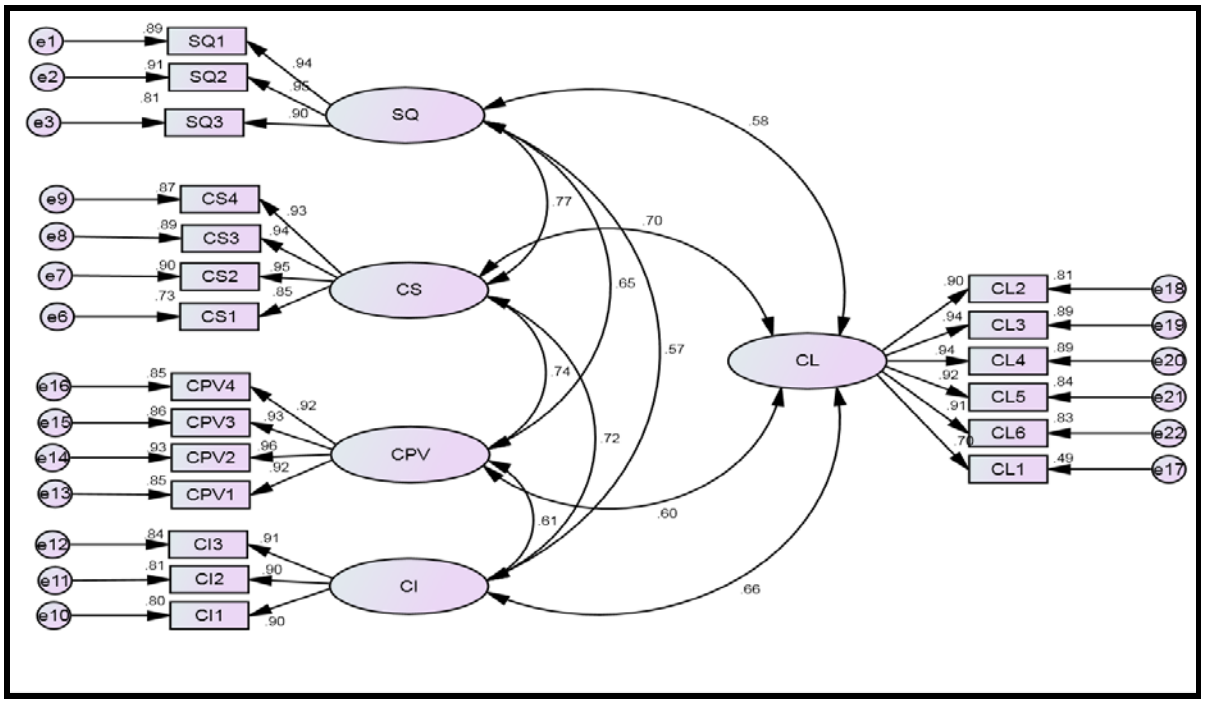

Figure 5.13 The Preliminary First-Order Confirmatory Factor Model for the Five Higher Order Constructs

The MI reveal that the items CL1 and CS1 were considered higher than the recommended threshold of 15 which indicated that these two items were redundant items in the Five Higher Order Construct Measurement Model (Awang, 2012; Lawrence et al., 2013) (See Table 5.34).

Therefore, items CL1 and CS1 were deleted and re-specified in the measurement model (Awang, 2012; Bagozzi & Y., 1988; Hair et al., 2010; Lawrence et al., 2013). After eliminating the items CL1and CS1 there were five items to measure customer loyalty and three items to measure customer satisfaction.

Table 5.34 The Modification Indices Present the Co-variance between each Pair of Items for the Preliminary First-Order Confirmatory Factor Analysis Model for the Five Higher Order Constructs.

			M.I.	Par Change
CL1	**<---**	**CL**	**27.985**	**-.369**
CL1	**<---**	**CI**	**23.142**	**-.342**
CL1	**<---**	**CS**	**25.781**	**-.355**
CL1	**<---**	**CL6**	**19.020**	**-.212**
CL1	**<---**	**CL5**	**16.646**	**-.189**
CL1	**<---**	**CL4**	**30.425**	**-.225**
CL1	**<---**	**CL3**	**32.489**	**-.247**
CL1	**<---**	**CL2**	**17.641**	**-.208**
CL1	**<---**	**CI3**	**19.614**	**-.253**
CL1	**<---**	**CI1**	**19.921**	**-.275**
CL1	**<---**	**CS4**	**30.594**	**-.293**
CL1	**<---**	**CS3**	**21.057**	**-.249**
CL1	**<---**	**CS2**	**21.716**	**-.272**
CS1	**<---**	**CI**	**14.187**	**.165**
CS1	**<---**	**CI2**	**17.048**	**.148**
CS1	**<---**	**CS2**	**13.800**	**.134**

The modified first-order measurement model for the five higher order constructs presented 18 observed variables. The number of observed variances and covariances (18[18+1]/2) was 171 data points, and the number of estimated parameters in the model was 41 (13 regression weights, 10 covariances and 18 variances).

The t-value indicate the first-order confirmatory model for the modified higher order constructs was over-identified (the number of observed variances and covariance were greater than the number of estimated parameters), and tested with 130 degrees of freedom (171- 41).

After the re-specification process all factor-loading for the measurement items in the model were above the recommended threshold value of 0.50 (Awang, 2012; Bagozzi & Y., 1988; Hair et al., 2010; Lawrence et al., 2013) and statistically significant at the 0.001% level (See Table 5.34 and Figure 5.14).

In addition, all of the model fit indices were improved, and sufficiently satisfied their relevant recommended thresholds, especially the indices which were slightly lower than the acceptable values in the preliminary model as the GFI, the SRMR and the RMSEA, which then rose above the recommended threshold, and also indicated a good model fit to the sample data in the modified model (See Table 5.35).

Moreover, the improvement in the model fit was examined by subtracting the overall $\chi 2$ statistic for the modified model from the preliminary. Comparing the preliminary model ($\chi 2_{[165]} = 343.719$) with the modified model ($\chi 2_{[130]} = 229.579$) yielded a difference in the $\Delta \chi 2$ value of 114.14 ($\Delta \chi 2_{[35]} = 114.14$). Since $\Delta \chi 2_{[35]} = 114.14 > \chi 2\ 49.798_{\alpha .05}$, the modified first-order model was statistically significant and indicated an improvement in the model-fit-indices (See Table 5.35).

Table 5.35 Goodness-of-Fit Results of the Modified First-Order Confirmatory Factor Analysis Model for Five Higher Order Constructs

Goodness-of-Fit Indices	Values
Chi-Square ($\chi 2$)	229.579
Degree of Freedom (df)	130
Normed Chi-square ($\chi 2$/df)	1.766
Goodness-of-Fit Indices (GFI)	.903
Standardized Root Mean Residual (SRMR)	.080
Comparative Fit Index (CFI)	.983
Normed Fit Index (NFI)	.962
Root Mean Square Error of Approximation (RMSEA)	.058

Furthermore, the measurement model for the five higher constructs exhibits adequate construct validity and reliability. Firstly, the CFI value was 0.983 (See Table 5.35) which was above the recommended threshold value of 0.90 (Byrne, 2010) and also the standardized factor loadings of all measurement items was statistically significant (t value >1.96) and ranged from 0.858 to 0.962 which were above the recommended value of 0.60 (Bagozzi & Y., 1988). Therefore, the measurement model for the five higher order constructs exhibit adequate unidimensionality (See Table 5.36 or Figure 5.14).

Secondly, the AVEs ranged from 0.796 to 0.870 which were above the recommended threshold value of 0.50 (Fornell and Larcker (1981), so this model exhibits adequate construct validity (See Table 5.37).

Thirdly, the correlation coefficients of the three primary-dimensions of this model ranged from 0.550 to 0.763, all below the recommended threshold value of 0.85 (Kline, 2010), thus this model exhibits adequate discriminant validity (See Table 5.36. or Figure 5.14).

Eventually, the composite reliability of the five sub-dimensions ranged from 0.928 to 0.974, which were above the recommended threshold value of 0.7 (Kline, 2010), hence adequate reliability is exhibited in this model. (See table 5.37).

Table 5.36 Standardized Solution and Correlations of First-Order Confirmatory Factor Analysis Model for Five Higher Order Constructs

Variable Label	Factor Loading	Correlation
SQ1	.943***	SQ<-->CS.763
SQ2	.952(38.935)***	SQ<-->CI .550
SQ3	.898(31.064)***	SQ<-->CPV.640
CS2	.887***	CS<-->CPV.710
CS3	.939(34.601)***	CS<-->CI .697
CS4	.944(35.004)	CI<-->CPV.590
CI1	.900***	SQ<-->CL.580
CI2	.894(26.838)***	CS<-->CL.683
CI3	.911(28.816)***	CI<-->CL.620
CPV1	.923***	CPV<-->CL.585
CPV2	.962(37.051)***	
CPV3	.928(31.284)***	
CPV4	.923(30.661)***	
CL2	.894***	
CL3	.930(29.396)***	
CL4	.920(28.517)***	
CL5	.883(25.454)***	
CL6	.878(25.072)***	

Table 5.37 Average Variance Extracted and Construct Reliability Result of the First-Order Confirmatory Factor Analysis Model for the Five Higher Constructs

Variable Label	Construct Reliability	Average Variance Extracted
Service Quality	.951	.865
Customer Satisfaction	.949	.853
Corporate Image	.928	.810
Customer Perceived Value	.974	.870
Customer Loyalty	.951	.796

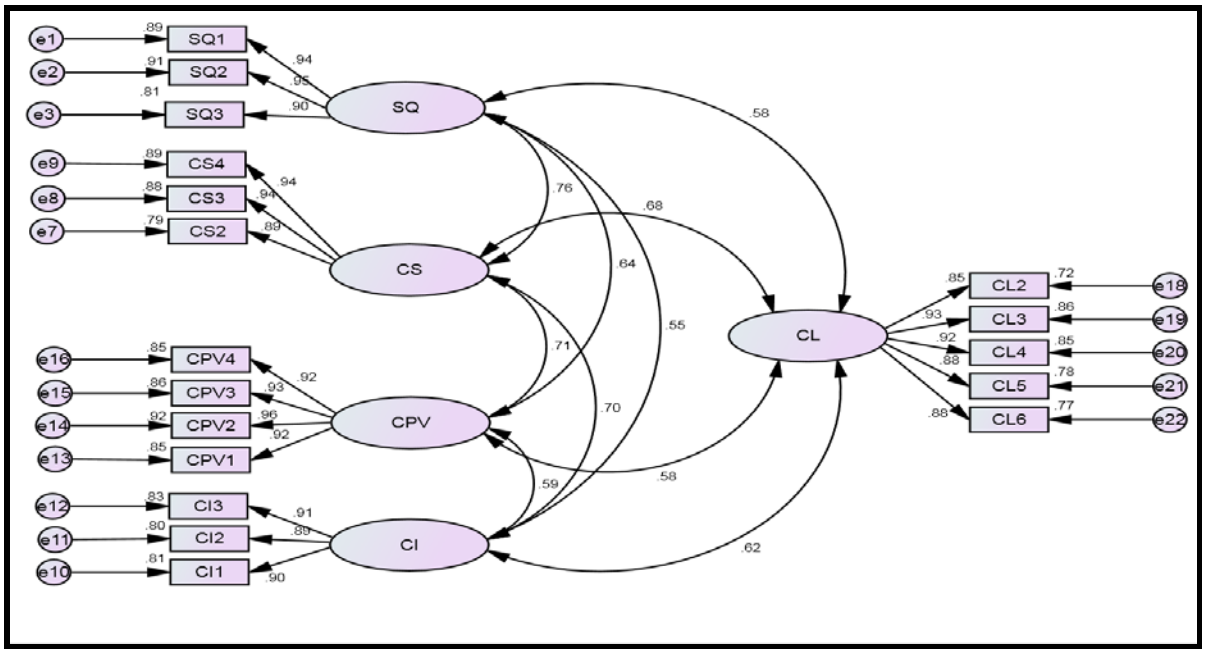

Figure 5.14 The Modified First-Order Confirmatory Factor Model for the Five Higher Order Constructs

5.4.4.2 The Structural Equation Modelling (SEM) Result

The SEM was designed to determine the relationships between the five higher order constructs (service quality, customer satisfaction, customer perceived value, corporate image and customer loyalty). The SEM used in this study was composed with one exogenous variable (service quality) and four endogenous variables (customer satisfaction, customer perceived value, corporate image and customer loyalty) (See Figure 5.15).

The SEM for the five higher order constructs presented 18 observed variables. The number of observed variances and covariances (18[18+1]/2) was 171 data points, and the number of estimated parameters in the model was 46 (23 regression weights and 23 variances). The t-value indicated the SEM model for the five higher order constructs was over-identified (the number of observed variances and covariance were greater than the number of estimated parameters), and tested with 125 degrees of freedom (171- 46).

The model-fit results for the structural equation model illustrated a good model fit to the sample data. All model-fit indices were sufficiently satisfied with their relative recommended thresholds; therefore, the model modification was not required. The goodness-of-fit indices of the second-order confirmatory factor analysis for service quality are presented in Table 5.38.

Table 5.38 Goodness-of-Fit Results of the Structural Equation Model

Goodness-of-Fit Indices	Values
Chi-Square ($\chi 2$)	183.760
Degree of Freedom (df)	125
Normed Chi-square ($\chi 2/df$)	1.470
Goodness-of-Fit Indices (GFI)	.923
Standardized Root Mean Residual (SRMR)	.022
Comparative Fit Index (CFI)	.990
Normed Fit Index (NFI)	.970
Root Mean Square Error of Approximation (RMSEA)	.046

The standardized solutions for the SEM presented in Table 5.37 indicated that all estimates in the model were reasonable and statistically significant at the 0.001% level.

These results supported the reliability and validity of the measures associated with the structural equation model. In addition, almost all causal effects were statistically significance except for the casual effect from service quality and customer perceived value to customer loyalty. The following paragraphs discuss the effect of the exogenous variable on each endogenous variable.

Firstly, the exogenous variables, service quality, customer perceived value and corporate image explain 81% of the variance of the endogenous variable (customer satisfaction). Service Quality was the most important determinant of customer satisfaction which had a significant total causal effect of 0.441, followed by Corporate Image with a total causal effect of 0.341, and perceived value with a total causal effect of 0.250 (See Table 5.40).

The exogenous variables, customer satisfaction, corporate image, service quality and customer perceived value explain 64% of the variance of the endogenous variable (customer loyalty). Customer Satisfaction was the most important determinant of customer loyalty which had a significant total causal effect of 0.377 followed by corporate image with a total causal effect of 0.251, while the total causal effect of perceived value and service quality on customer loyalty was not statistically significant.

The exogenous variables, Image. Customer Perceived Value was the most important determinant of corporate image which service quality and customer perceived value explain 53% of the variance of corporate had a significant total causal effect of 0.451 while service quality had a total causal effect of 0.329 on corporate image. The exogenous variable, service quality explains 54% of the variance of the endogenous variable (customer perceived value) with a total causal effect of 0.737.

Table 5.39 Standardized Solution of the Structural Equation Model

Variable Label	Factor Loading
SQ1	.932**
SQ2	.935(37.903)***
SQ3	.864(30.553)***
CS2	.875***
CS3	.922(30.770)***
CS4	.927(30.993)***
CI1	.870***
CI2	.848(24.825)***
CI3	.872(25.855)***
CPV1	.872***
CPV2	.939(32.025)***
CPV3	.885(33.087)***
CPV4	.878(32.330)***
CL2	.806***
CL3	.901(30.770)***
CL4	.885(24.251)***
CL5	.836(22.316)***
CL6	.834(22.228)***

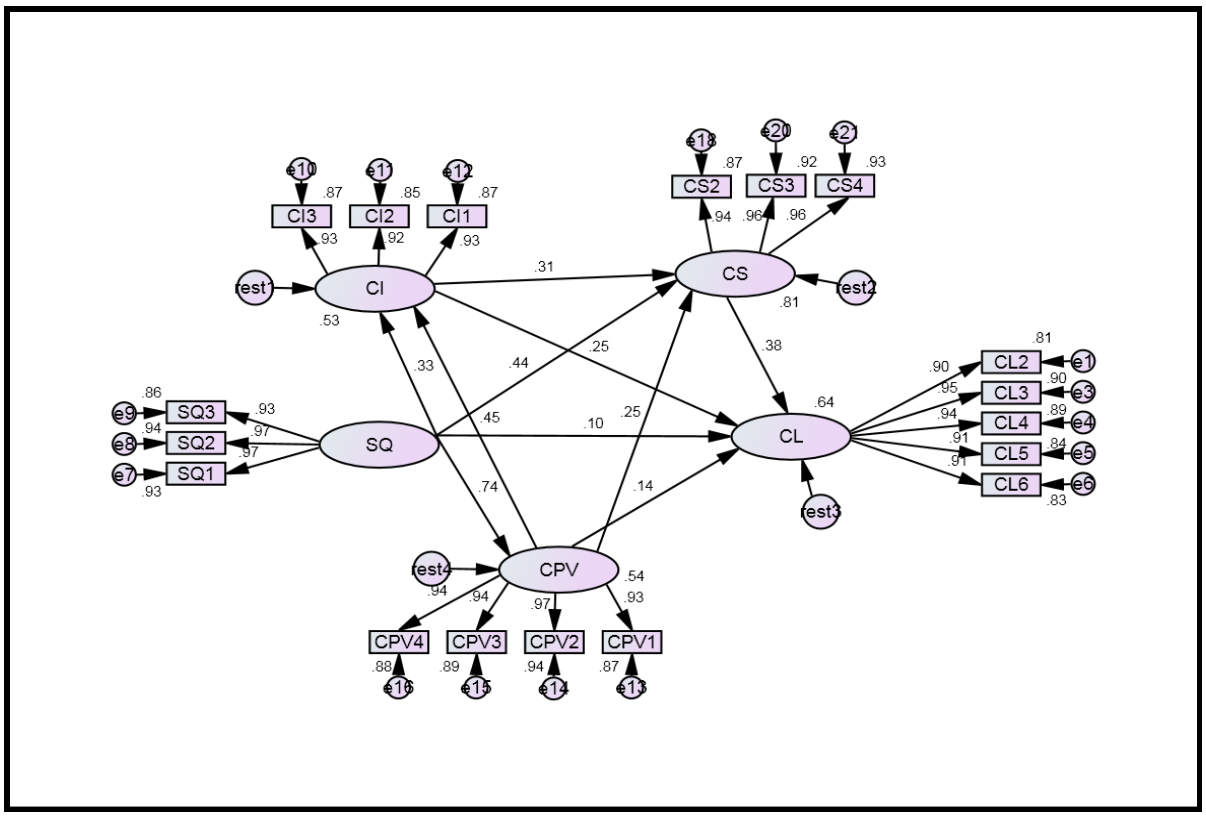

Figure 5.15 Structural Equations Model for the Five Higher Constructs (Service Quality, Customer Satisfaction, Customer Perceived Value, Corporate Image and Customer Loyalty)

Table 5.40 Standardized Causal Effect of the Structural Equation Model and Hypotheses Assessment

Outcome	Determinant	Causal Effects		Hypotheses	Assessment
		Direct Causal Path	Critical Ratio		
Customer Satisfaction (R^2 = .810)	Service Quality	.441	8.168***	H:10	Supported
	Perceived Value	.250	4.501***	H:12	Supported
	Corporate Image	.341	6.168***	H:16	Supported
Customer Loyalty (R^2 = .641)	Customer Satisfaction	.377	3.479***	H:17	Supported
	Corporate Image	.251	3.138***	H:15	Supported
	Perceived Value	**.142**	**.063**	**H:13**	**Not Supported**
	Service Quality	**.104**	**.216**	**H:8**	**Not Supported**
Corporate Image (R^2 = .533)	Service Quality	.329	4.368***	H:11	Supported
	Perceived Value	.451	5.897***	H:14	Supported
Perceived Valued (R^2 = .543)	Service Quality	.737	14.759***	H:9	Supported

5.4.5 Mediating Variable Analysis Result

Several studies suggested that customer satisfaction is a mediator variable on the relationship of service quality, customer perceived value and customer loyalty (Howat & Assaker, 2013; Kuo et al., 2012; Yu & Ramanathan, 2012). Therefore, the Mediating Variable Analysis was designed to test the effect of the mediating variable (customer satisfaction) on the relationship between the exogenous variables (service quality and customer perceived value) and the endogenous variable (customer loyalty).

A Mediating Variable Analysis starts by testing the direct (and statistically significant) effect of the exogenous variables (eg. service quality and customer perceived Value) on the endogenous variable (customer loyalty). Then, with the mediating variable included in the model, if the direct effect of the exogenous variable on the endogenous variable is reduced and no longer significant, Complete Mediation is present. Alternatively, if the effect is reduced but still significant, Partial Mediation has occurred (Awang, 2012; Meyers et al., 2013). The following sections present the result of this analysis.

5.4.5.1 The Mediating Effect of Customer Satisfaction on the Relationship between Service Quality and Customer Loyalty

Initially, testing the statistically significant direct effect between the exogenous and endogenous variable found that service quality had a significant direct effect on customer loyalty as the regression weight value was 0.615 which was statistically significant at the 0.001% level (See Table 5.41 or Figure 5.16).

Table 5.41 Standardized Causal Effect of Direct Effect of Service Quality on Customer Loyalty

Outcome	Determinant	Causal Effects		Result
		Direct Causal Path	Critical Ratio	
Customer Loyalty	Service Quality	.615	12.224***	Significant

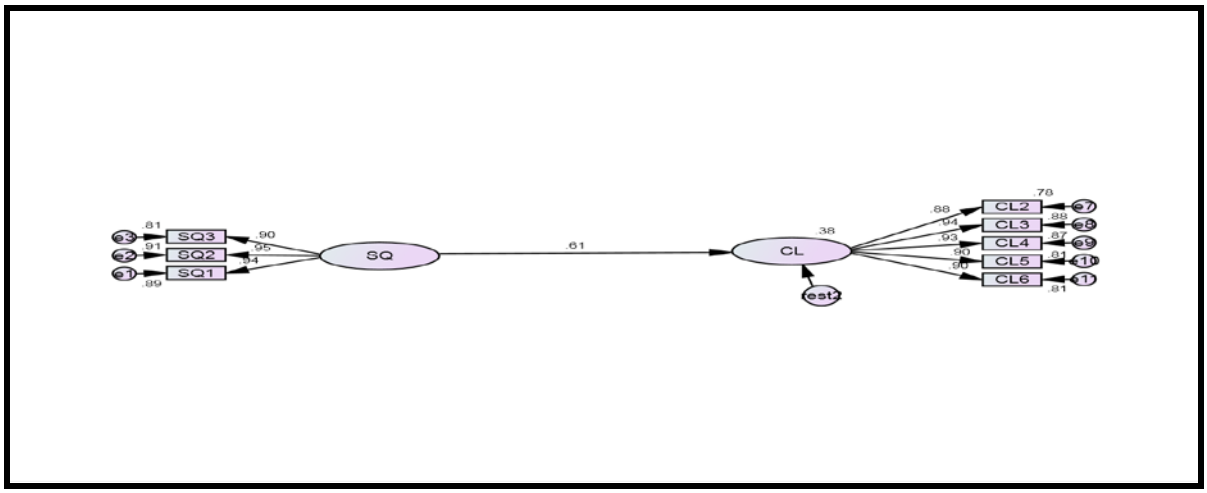

Figure 5.16 The Direct Effect of Service Quality on Customer Loyalty

Then, the mediator variable customer satisfaction was included the model. The direct effect between service quality and customer loyalty was significantly reduced as the regression weight was reduced from 0.615 to 0.13 and no longer statistically significant. Therefore, customer satisfaction is a complete meditator on the relationship between service quality and customer loyalty (See Table 5.42 or Figure 5.17).

Table 5.42 Standardized Mediating Effect of Customer Satisfaction on the Relationship between Service Quality and Customer Loyalty

Outcome	Determinant	Causal Effects		Result
		Direct Causal Path	Critical Ratio	
Customer Satisfaction	Service Quality	.778	17.921***	Significant
Customer Loyalty	Service Quality	**.13**	**1.724**	**No Significant**
Customer Loyalty	Customer Satisfaction	.619	7.179***	Significant

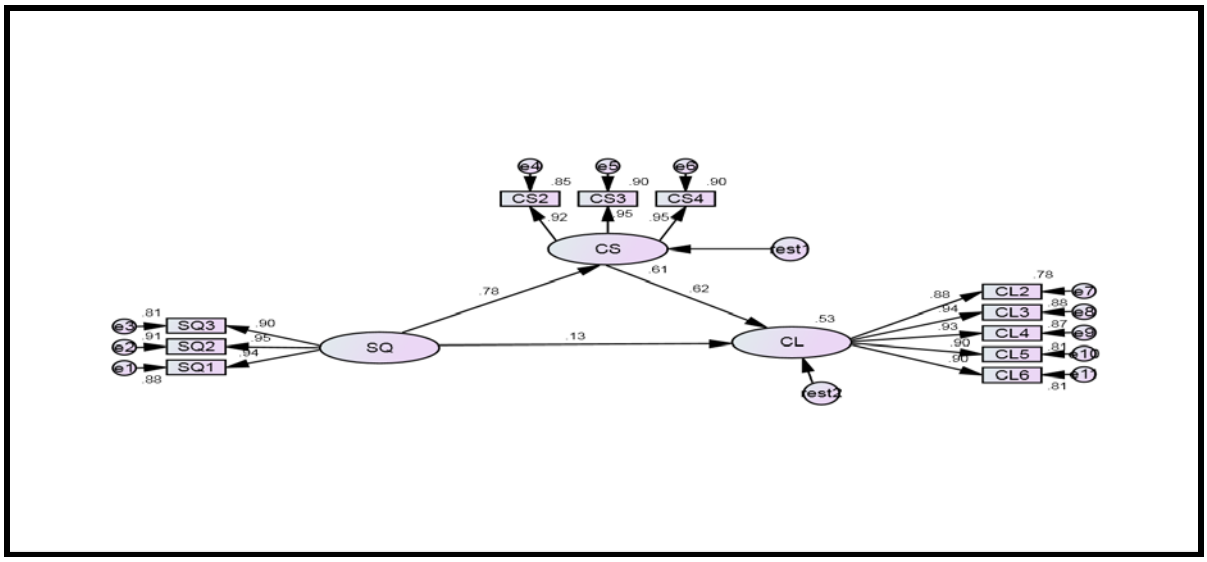

Figure 5.17 The Mediating Effect of Customer Satisfaction on the Relationship between Service Quality and Customer Loyalty

5.4.5.2 The Mediating Effect of Customer Satisfaction on the Relationship between Customer Perceived Value and Customer Loyalty

Testing the statistically significant direct effect between the exogenous and endogenous variable, customer perceived value had a significant direct effect on customer loyalty as the regression weight value was 0.529 which was statistically significant at the 0.001% level (See Table 5.43 or Figure 5.18).

Table 5.43 Standardized Causal Effect of Direct Effect of Customer Perceived Value on Customer Loyalty

Outcome	Determinant	Causal Effects		Result
		Direct Causal Path	Critical Ratio	
Customer Loyalty	Perceived Value	.529	9.254***	Significant

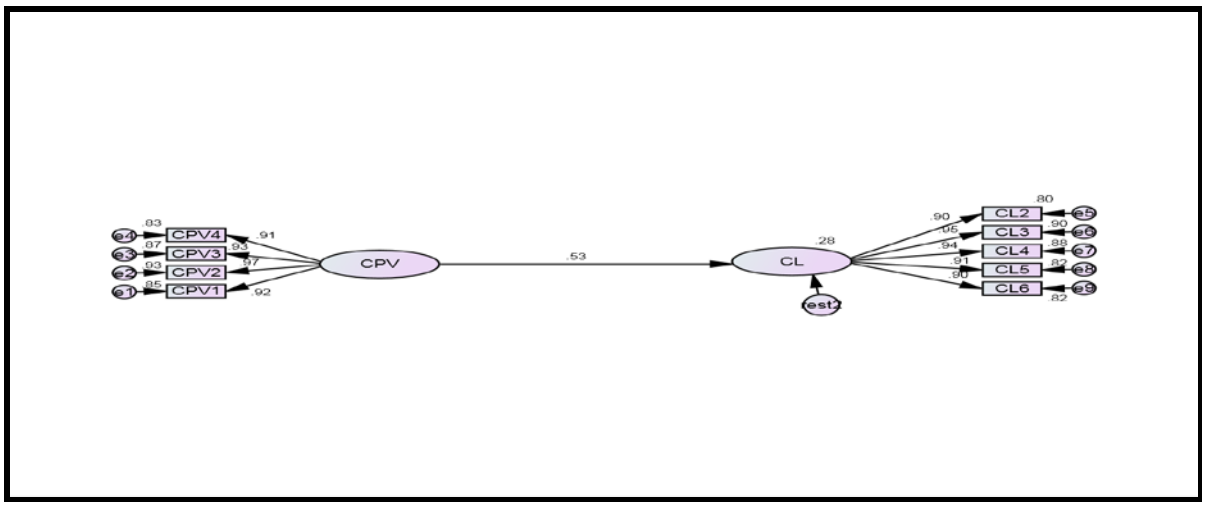

Figure 5.18 The Direct Effect of Customer Perceived Value on Customer Loyalty

With the mediator variable, customer satisfaction, included the model, the direct effect between customer perceived value and customer loyalty was reduced as the regression weight reduced from 0.529 to 0.107 and was no longer statistically significant. Therefore, customer satisfaction is a complete mediator on the relationship between customer perceived value and customer loyalty (See Table 5.44 or Figure 5.19).

Table 5.44 Standardized Mediating Effect of Customer Satisfaction on the Relationship between Customer Perceived Value and Customer Loyalty

Outcome	Determinant	Causal Effects		Result
		Direct Causal Path	Critical Ratio	
Customer Satisfaction	Perceived Value	.611	11.318***	Significant
Customer Loyalty	Perceived Value	**.107**	**.059**	**No Significant**
Customer Loyalty	Customer Satisfaction	.692	10.623	Significant

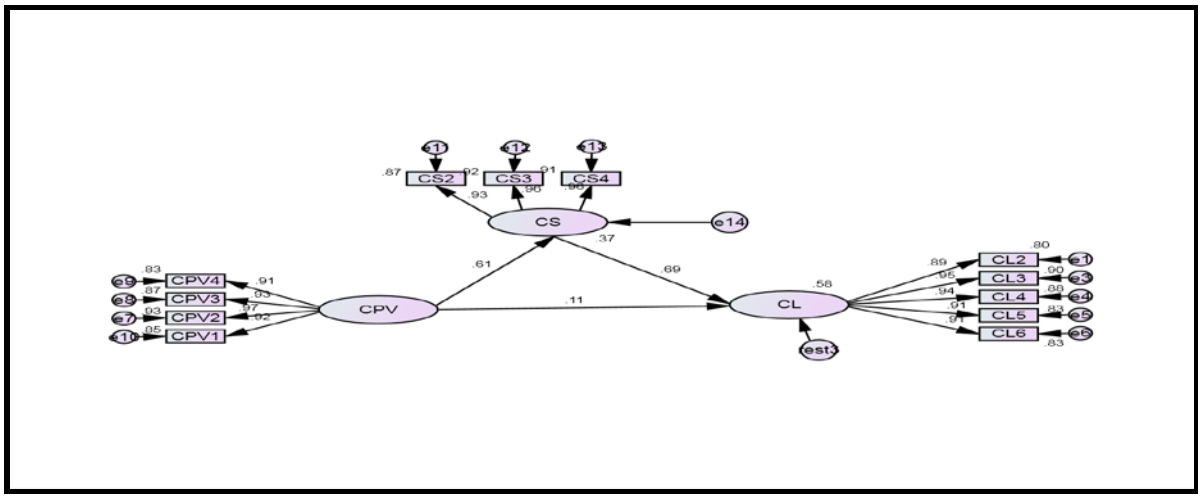

Figure 5.19 The Mediating Effect of Customer Satisfaction on the Relationship between Customer Perceived Value and Customer Loyalty

Summary

This chapter presented the result of the statistical analysis in order to satisfy all three research objectives. First, the EFA and CFA were applied to identify the dimensions of service quality and the order of importance of the service quality dimensions, as perceived by resort hotel customers in Thailand to satisfy the Research Objective One and Two. The result of the EFA (using PCA and VARIMAX rotation) and CFA had reduced the 48 measurable items with 12 dimensions originally proposed to 45 measurable items with 11 dimensions namely: attitude, behaviour, professionalism, décor & Ambience, room quality, design, location & convenience, facility & activity, valence, waiting time and sociability. In addition, the relationships between service quality, perceived value, customer satisfaction, corporate image and customer loyalty were tested using SEM to satisfy Research Objective Three. From the SEM analysis all of hypotheses were confirmed except H: 8 (SQ→CL) and H: 13 (CPV→CL), nevertheless the Mediation Variable Analysis found that customer satisfaction was a complete mediator on the relationship between service quality and customer loyalty and of customer perceived value and customer loyalty. The summary of the hypotheses test was presented in Table 5.45.

Table 5.45 Summary of Hypotheses Testing

Hypotheses	Result
H1: There is a significant positive relationship between the sub-dimensions of interaction quality (H1a, H1b, H1c) and the interaction quality primary dimension	**Supported,** interaction quality is comprised of three sub-dimension (attitude, behaviour, professionalism)
H2: There is a significant positive relationship between the sub-dimensions of physical environment quality (H2a, H2b, H2c, H2d, H2e) and the physical environment quality primary dimension.	**Supported,** physical environment quality is comprised of five sub-dimension (décor & ambience, room quality, design, location & convenience, facility & activity)
H3: There is a significant positive relationship between the sub-dimensions of outcome quality (H3a, H3b, H3c) and the outcome quality primary dimension.	**Supported,** outcome quality is comprised of three sub-dimension (valence, waiting time, sociability)
H4: There is a significant positive relationship between the interaction quality primary dimension and customers' overall perceptions of service quality.	**Supported,** interaction quality has a significant impact on overall service quality, second-order model.
H5: There is a significant positive relationship between the physical environment quality primary dimension and customers' overall perceptions of service quality.	**Supported**, physical environment quality has a significant impact on overall service quality perceptions, second-order model.
H6: There is a significant positive relationship between the outcome quality primary dimension and customers' overall perceptions of service quality.	**Supported**, outcome quality has a significant impact on overall service quality perceptions, second-order model.
H:7a Customers will vary in their perceptions of the importance of each of the sub-dimensions.	**Supported**, behaviour, room quality and valence are significant and the most important sub-dimension of interaction quality, physical environment quality and outcome quality respectively.
H:7b Customers will vary in their perceptions of the importance of each of the primary dimensions.	**Supported**, outcome quality is the most importance of the primary dimensions follows by physical environment quality and interaction quality.
H:8 Higher perceptions of service quality positively affect customer loyalty.	**Not Supported**, service quality does not have a significant and direct impact on customer loyalty, but it has indirect effect through customer satisfaction.
H:9 Higher perceptions of service quality positively affect customer perceived value.	**Supported**, service quality has a significant and direct impact on customer perceived value.
H:10 Higher perceptions of service quality positively affect customer satisfaction.	**Supported**, service quality has a significant and direct impact on customer satisfaction.
H:11 Higher perceptions of service quality positively affect corporate image.	**Supported**, service quality has a significant and direct impact on corporate image.
H:12 Customer satisfaction mediates the relationship between service quality and customer loyalty	**Supported,** customer satisfaction fully mediate the relationship between service quality and customer loyalty.
H13: Higher customer perceived value positively affects customer satisfaction.	**Supported**, customer perceived value has a significant and direct impact on customer satisfaction.
H14: Higher customer perceived value positively affects customer loyalty.	**Not Supported,** customer perceived value does not have a significant and direct impact on customer loyalty, but it has indirect impact on customer loyalty through customer satisfaction.
H15: Higher customer perceived value positively affects corporate image.	**Supported**, customer perceived value has a significant and direct impact on corporate image.
H16: Customer satisfaction mediates the relationship between customer perceived value and customer loyalty.	**Supported,** customer satisfaction fully mediate the relationship between customer perceived value and customer loyalty.
H:17 A higher corporate image positively affects customer satisfaction	**Supported**, corporate image has a significant and direct impact on customer satisfaction.
H:18 A higher corporate image positively affects customer loyalty.	**Supported**, corporate image has a significant and direct impact on customer loyalty.
H:19 Higher customer satisfaction positively affects customer loyalty.	**Supported**, customer satisfaction has a significant and direct impact on customer loyalty.

Chapter 6

Discussion and Conclusion

The previous chapters have outlined the research project and include the literature review, the research methodology, and the analysis of the results. This chapter evaluates the research results and then discusses the contributions the study makes through testing the theoretical aspects of comprehensive hierarchical modelling. Further, the managerial implications of the findings are also identified and discussed.

A comprehensive hierarchical model is used to analyse the interrelationships between the sub-dimensions and the primary dimensions of service quality, and also to test the interrelationships and possible mediating effects between the higher order constructs (service quality, customer satisfaction, customer perceived value, corporate image and customer loyalty), for a long-duration and high customer involvement service represented by beach resort hotel stays. Therefore, the three research objectives stated for this study are:

1. Identify the sub-dimensions and primary dimensions of service quality, as perceived by beach resort hotel customers in Thailand.
2. Identify the order of importance of the service quality primary dimensions and sub-dimensions as perceived by beach resort hotel customers in Thailand.
3. Analyse the interrelationships between the higher order marketing constructs (service quality, perceived value, customer satisfaction, corporate image and customer loyalty) as perceived by beach resort hotel customer in Thailand using a comprehensive hierarchical model.

The three research objectives are addressed through testing of 19 hypotheses, presented in Chapter 3.

- Hypotheses 1 to 6 address Research Objective 1
- Hypotheses 7a and 7b address Research Objective 2
- Hypotheses 8 to 19 address Research Objective 3 (see Table 5.45).

The results of the testing of each hypothesis are presented in the following six sections: Section 6.1 discusses the results relating to Research Objective 1: Section 6.2 discusses the results relating to Research Objective 2; Section 6.3 discusses the results relating to Research Objective 3. Section 6.4 discusses the theoretical and managerial implications; Section 6.5 discusses the limitations of this study and Section 6.6 discusses directions for future research.

6.1 Conceptualisation of Service Quality for Beach Resort Hotel Stays (Research Objective 1)

Several scholars conceptualise service quality as a multidimensional and hierarchical construct consisting of sub and primary dimensions (Brady & Cronin, 2001; Clemes et al., 2014; Dagger et al., 2007; Pollack, 2009; Prakash & Mohanty, 2013). The sub and primary dimensions of perceived service quality are also influenced by the duration of the service and the extent of customer involvement in the service process (Clemes et al., 2000; Soteriou & Chase, 1998). Therefore, multidimensional and hierarchical modelling is used in this current study in order to conceptualise service quality in a long duration and high customer involvement service, such as beach resort hotels.

Further, researchers argue that the number and type of sub-dimensions and their impact on the primary dimensions of the service quality construct vary, depending on the type of service and on variations within the service industry (Brady & Cronin, 2001; Clemes et al., 2014; Dagger et al., 2007; Pollack, 2009; Prakash & Mohanty, 2013). The extant hospitality literature supports this view and suggests that the service quality dimensions of beach resort hotels should consist of a unique set of sub-dimensions, and possibly primary dimensions that may differ in number and kind from other accommodation types (Clemes, Gan, et al., 2011).

The empirical results of this current study support the use of multidimensional and hierarchical modelling to conceptualise the service quality construct for a long duration and high customer involvement service, such as beach resort hotels.

The results of the statistical analysis show significant and positive relationships between the corresponding sub-dimensions of each of the three primary dimensions: interaction quality, physical environment quality and outcome quality (supporting Hypotheses 1 to 3), and significant and positive relationships between the three primary dimensions and customers' overall perceptions of service quality (supporting Hypotheses 4 to 6). The results also illustrate that the service quality measurement model for beach resort hotels in Thailand, consists of eleven first-order sub-dimensions, three second-order primary dimensions and one third-order overall service quality construct. The eleven sub-dimensions in the first-order model are comprised of three sub-dimensions measuring interaction quality (attitude, expertise and professionalism), five sub-dimensions measuring physical environment quality (décor and ambience, design, room quality, location and convenience, facility and activities) and three sub-dimensions measuring outcome quality (valence, waiting time and sociability).

The results confirm that the type and number of sub-dimensions differ from other types of services (Dagger et al., 2007) and for other types of accommodation and these results are supported by empirical studies on Hotels (Clemes et al., 2009), Motels (Clemes, Gan, et al., 2011) and ski resorts (Kyle et al., 2010).

The result shows that beach resort hotel customers form their perceptions of service quality by evaluating service quality aspects through multiple sub-dimensions (at a sub-dimensional level), and then aggregating their perceptions of each sub-dimension to form their perceptions of the three primary dimensions. The perceptions of the primary dimensions are then combined together to reflect customers' overall service quality perceptions.

Three primary dimensions (interaction, physical environment and outcome quality) were confirmed in this study to conceptualize service quality. This result is consistent with previous studies that have confirmed these three dimensions for: motel in New Zealand (Clemes, Gan, et al., 2011); ski resorts in northern Greece (Kyle et al., 2010); four-star and five-star hotels in Taiwan (Clemes et al., 2009). The duration and level of customer involvement varies for the selected hotels/motels, however none have as long as duration and the degree of customer involvement when compared to beach resort hotel stays.

In addition, numerous studies conducted on other industries and in different cultural settings with varying degrees of duration/involvement have also confirmed the three primary dimensions and significant and positive relationships between them and customers' overall perceptions of service quality. For example: Chow et al. (2007) full-service restaurants in China; Pollack's (2009) phone and hairdresser services in the U.S.A; Brady and Cronin's (2001) fast food, photograph developing, amusement parks and dry cleaning services in the U.S.A; Clemes, Brush, et al. (2011) professional sport (rugby union) in New Zealand; Martínez Caro and Martínez García (2008) travel agencies in Spain; Clemes et al.'s (2014) mobile phone service in China.

However, the numbers of primary dimensions confirmed in this study are inconsistent with Dagger et al.'s (2007) findings on health care, a long-duration and high customer involvement service. Dagger et al. (2007) confirmed four primary dimensions (inter-personal quality, technical quality, environment quality and administrative quality) that patients considered important in their assessment of health care service quality. The variation in the number of service quality primary dimensions may depend on if the service has primarily hedonic aspects, such as fun and entertainment (beach resort hotels stays), or some combination of utilitarian and hedonic aspects such as physical well-being and peace-of -mind (health care). Patients may perceive the administration of complex and divergent health care services as a vital part of health care, as patients normally regard hospitalisation as extremely important for their continued well-being.

Alternatively, beach resort hotel stays (a long stay duration, high customer involvement service) tend to have a more straightforward service process (the administrative aspects) with less divergence when compared to a hospital stay. In addition, the overall service experience of a beach resort hotel stay is normally not viewed as critical to a customer's health and well-being when compared to a stay in a hospital.

6.1.1 Interaction Quality

A service encounter refers to the period when the customer interacts with the service provider. A service encounter is essential as this touching-point experience has a marked influence on a customer's perceives the level of service quality for a particular service (Lovelock & Wirtz, 2011). The measurement model results for interaction quality have confirmed the significant and positive relationships between the three sub-dimensions (staff attitude, behaviour and professionalism) and the interaction quality primary dimension (supporting Hypothesis 1). This finding shows that beach resort hotel customers assess the attitude, behaviour and professionalism sub-dimensions in order to form their perceptions of interaction quality.

The significant and positive relationship between the behaviour sub-dimension and the interaction quality primary dimension is supported by the results of the focus group discussions and by previous studies that applied a multidimensional and hierarchical modelling approach on hotel industry such as Clemes et al. (2009); Clemes, Gan, et al. (2011); Wu and Ko (2013) and on other service industries by Caro and Garcia (2008) and Clemes et al. (2014) at the retail level.

The significant and positive association between the behaviour sub-dimension and the interaction quality primary dimension has confirmed the notion that the behaviour of service providers that takes place during service delivery is very important for service organizations. Winsted (2000) maintains that employee behaviour is an essential criterion that customers consider when assessing the service quality of a service provider. The focus group discussions conducted in this study also indicated that the role played by front-line staff in the service delivery and service recovery process is extremely important, in particular with high involvement services, as customers interact with frontline staff numerous times during their stay. In addition, the level of service provided by frontline staff in their interaction with the customer has a significant influence on customers' perceptions of service quality as described by Brady and Cronin (2001) and Caro and Garcia (2008). The empirical results in this current study demonstrate that the behaviour sub-dimension (the behaviour of beach resort hotel staff) is the most important descriptor that beach resort hotel customers consider when evaluating the interaction quality of beach resort hotels.

The professionalism sub-dimension is the next most important indicator of the interaction quality primary dimension. The significant and positive relationship between the professionalism sub-dimension and the interaction quality primary dimension coincides with studies conducted on other service industries that are of shorter duration but still have a high customer involvement by Clemes, Gan, et al. (2011); Clemes et al. (2009), Brady and Cronin (2001). This finding illustrates the significant and positive association between the professionalism sub-dimension and the interaction quality primary dimension.

The professionalism sub-dimension is important for evaluating interaction quality, especially for beach resort hotels. The members of the focus groups stated that the performance of beach resort hotel staff play an important role in delivering service quality and service recovery, when required. Therefore, expertise in the principal hospitality skills, as well as the problem-solving skills of beach resort hotel staff, are important criteria for enabling customers to perceive and evaluate service quality and this result is supported by Grönroos and Ravald (2011). In addition, Van Vaerenbergh, Larivière, and Vermeir (2012) discuss the importance of customer sensitivity on how competently and quickly service providers manage customer complaints for services in general.

The attitude sub-dimension is also a significant indicator of the interaction quality primary dimension in this study. This result confirms the significant and positive relationship between the attitude sub-dimension and the interaction quality primary dimension. This result is supported by the results of the focus group discussions and other empirical studies conducted on various services industries. For example, Brady and Robertson (2001) and Clemes et al. (2009) report a significant and positive association between the attitude sub-dimension and the interaction quality primary dimension. This finding is also supported Czepiel et al. (1985) early research on services in general, that demonstrated how the attitudes of employees such as friendliness, politeness, courtesy and patience have a significant impact on perceived service quality. Further, Grönroos (1998) discusses the importance of employee attitudes and maintains that customers of service organisations carefully consider employees' attitudes when forming their service quality perceptions.

6.1.2 Physical Environment Quality

The physical environment surrounding the service delivery is another important factor influencing the service quality experience of a customer (Bonnin, 2006; Brady & Robertson, 2001; Clemes, Gan, et al., 2011; Clemes et al., 2009). A beach resort hotel is a service that requires customers to be involved in its facility for the service delivery to proceed (Clemes et al., 2000). Therefore, the customer's perceptions of service quality are influenced by the exterior and interior facilities of the beach resort hotel as is the case for other types of hotels (Bonnin, 2006; Brady & Robertson, 2001; Clemes, Gan, et al., 2011; Clemes et al., 2009).

The results confirm the significant and positive relationship between the five sub-dimensions (décor & ambience, design, room quality, location & convenience, facility & activities) and the physical environment quality primary. This result demonstrates that beach resort hotel customers assess the five sub-dimensions to form their perceptions of the physical environment quality primary dimension (supporting Hypothesis 2). The location & convenience and facility & activity sub-dimensions differ from those for other types of accommodation reflecting the uniqueness and importance of the physical environment quality for beach resort hotels.

The location & convenience sub-dimension is a significant descriptor of physical environment quality in this study. The significant and positive relationship between the location & convenience sub-dimension and the physical environment quality primary dimension is supported by the results of the focus group discussions, and with studies conducted by Chou et al. (2008), and Ekinci and Riley (2001) noting a significant and positive association between location & convenience sub-dimension and service quality perceptions in the hotel industry. Similar conclusions were also reached by (Clemes, Gan, et al., 2011) and Clemes et al. (2009) whose studies illustrate a significant and positive association between the location & convenience sub-dimension and the physical environment quality primary dimension.

However, the location & convenience sub-dimension in this study differs from other on other types of hotels: four star and five star hotels by Clemes et al. (2009) and motels by Clemes, Gan, et al. (2011). The location & convenience sub-dimension in this study mainly relies on the location being at an attractive and scenic location with convenient access to a beach and other well-known and desirable places in the vicinity. However, in Clemes et al. (2009) and Clemes, Gan, et al. (2011) studies, the location and convenience attributes focused more on parking and convenience to supermarkets and dining-out facilities. The finding in this study is supported by the Centre for Resort and Hospitality Business (2009) that report that locating a resort hotel at an attractive and scenic location, with easy access to famous destinations is an essential attribute that resort hotel customers consider when selecting accommodation and evaluating service quality.

The facility & activity sub-dimension is a new sub-dimension identified in this study that has a significant and positive relationship with physical environment quality. The facility & activity sub-dimension is the third most important indicator of the physical environment quality.
The significant and positive relationship between the facility & activity sub-dimension and the physical environment quality primary dimension is supported by the results of the focus group discussions. Ramsaran-Fowdar (2007) shows a significant and positive association between facility (used as an indicator of Tangibility dimension) and overall service quality. Akbaba (2006), Chu and Choi (2000), Shergill and Sun (2004), also report a significant and positive association between facilities, activities and service quality perceptions.

The facility & activity sub-dimension factored and confirmed in this study is based primarily on entertainment, recreation and amenities. This finding highlights the importance of beach resort hotels providing high quality facilities and activities for their customers. Further, location in a unique vacation spot and the provision of entertainment facilities and activities are also important consideration tourists when select a particular resort hotel for their holiday experience (Centre for Resort and Hospitality Business, 2009; Ramsaran-Fowdar, 2007; Shergill & Sun, 2004).

There is a significant and positive relationship between the room quality sub-dimension and the physical environment quality primary dimension and this result is supported by the focus group discussions. Further the results of studies conducted by Clemes et al. (2009) and Clemes, Gan, et al. (2011) support this significant and positive relationship. Juwaheer (2004); (Mey et al., 2006; Ramsaran-Fowdar, 2007; Shergill & Sun, 2004) demonstrate a significant and positive association between the room quality and overall service quality for hotels in general. This finding confirms that the perceptions of room quality strongly influence the perceptions of service quality when guests evaluate their accommodation stay. This particular finding has been supported by several hotels studies (Clemes, Gan, et al., 2011; Clemes et al., 2009; Ramsaran-Fowdar, 2007; Shergill & Sun, 2004; Tsang & Qu, 2000).

The décor and ambience sub-dimension is also significant and positively related to the physical environment quality primary dimension. The significant and positive relationship between the décor and ambience sub-dimension and the physical environment quality primary dimension is supported by the result of the focus group discussions and by Heide et al. (2007), and Juwaheer (2004) studies that illustrate the importance of décor and ambience on the overall level of service quality. Clemes et al. (2009) and Wu and Ko (2013) also confirm a significant and positive association between the décor and ambience sub-dimensions and the physical environment quality primary dimension. These finding support the notion that the décor and ambience of a hotel and are very important as they affect customers' perceptions of overall service quality and also influence customers' behavioural intentions (Bitner, 1992; Heide et al., 2007).

The design sub-dimension is also significantly and positively related to the physical environment quality primary dimension. The significant and positive relationship between the design sub-dimension and the physical environment quality primary dimension is supported by the results of the focus group discussions and studies by Clemes et al. (2009) and Wu and Ko (2013). This finding highlights the importance of the overall design of a beach resort hotel as it is an important visual stimulus, and can promote a feeling of rest and relaxation.

6.1.3 Outcome Quality

It is generally accepted in the service marketing literature that outcome quality has a significant influence on the customers' perceptions of service quality (Brady & Cronin, 2001; Grönroos, 1984; Pollack, 2009; Rust & Oliver, 1994). Therefore, Hypothesis 3 is stated and tested in order to identify significant descriptors of outcome quality for beach resort hotels. The results confirm the significant and positive relationships between the three sub-dimensions (valence, waiting time and sociability) and their overall importance to the outcome quality primary dimension. The result shows that the customers of beach resort hotels assess the three sub-dimensions to form their perceptions of the outcome quality primary dimension (supporting Hypothesis 3).

In this study, the valence sub-dimension is the most significant and important sub-dimension of outcome quality. This relationship is supported by the results of the focus group discussions and by studies on various service industries by Clemes et al. (2009), and studies on other industries by Brady and Cronin (2001), Ko and Pastore (2005), Martínez and Martínez (2007) and Pollack (2009).

This finding confirms the contention that valence is a key determinant of outcome quality in many service industries. Valence, or the customer' s feelings regarding the quality of the service outcome that they received, directly impacts on the customers perceptions of outcome quality which ultimately impacts on their overall service quality experiences (Brady & Cronin, 2001; Chen & Dubinsky, 2003). Grönroos (1998) describes valence as a "prerequisite" to good service, which means that if an outcome of a service experience is perceived as adequate, then the evaluative emphasis is placed on other process dimensions such as functional quality and environmental quality.

The waiting time sub-dimension is the next most important indicator in measuring customer perceptions of outcome quality. The significant and positive relationship between the waiting time sub-dimension and the outcome quality primary dimension is supported by the results of the focus group discussions and by Brady and Cronin (2001), Butcher and Heffernan (2006), Clemes et al. (2009), and Pollack (2009). Several studies demonstrate the length of waiting time significantly influences the level of perceived service quality (Butcher & Heffernan, 2006; Houston et al., 1998; Hui & Tse, 1996). Houston et al. (1998) found that waiting time is strongly associated with negative effects such as anger and uncertainty, which in turn has a negative impact on the perceptions of service quality.

The sociability sub-dimension is also significantly and positively related to outcome quality in this study. This finding is supported by Ko and Pastore (2005) and Wu and Ko (2013) whose studies report a significant and positive relationship between the sociability sub-dimension and outcome quality. However, this finding differs from Brady and Cronin (2001) and Clemes, Brush, et al. (2011) results that show a significant and positive association between the sociability sub-dimension and the physical environment quality primary dimension instead of the outcome quality primary dimension.

The differences in these results may be attributed to a long duration and high customer involvement service such as beach resort hotel stays, where customers often have a high degree of interaction with other customers (e.g. games, social activities, dining) over a prolong period compared to shorter duration/ low to moderate customer interaction services. The results of these types of social longer term interactions influence customers when they evaluate the outcome quality of their resort stays.

6.1.4 Summary of the Conceptualisation of Service Quality for Beach Resort Hotels

The empirical results of this study provide support for the capability and reliability of multidimensional and comprehensive hierarchical modelling to conceptualize service quality, in particular for the accommodation industry.

While the current study has confirmed three primary dimensions of service quality, the number and type of service quality primary dimensions and their pertaining sub-dimensions may vary depending on the service under investigation. Several scholars suggest that the primary dimensions and sub-dimensions of overall service quality should be confirmed for different industry and cultural settings using the appropriate qualitative and quantitative analysis, as they may vary across industries and cultures (Brady & Cronin, 2001; Clemes et al., 2013; Clemes et al., 2014; Dagger et al., 2007; Pollack, 2009). The following section discusses the relative importance of each primary dimension and sub-dimension.

6.2 The Relative Importance of the Primary Dimensions and Sub-Dimensions of Service Quality for Beach Resort Hotels (Research Objective 2)

Identifying the most and least service quality dimensions is valuable information managers of service organisations can use in their strategic planning. For example, beach resort hotel management can proportionally allocate their resources to the most important service quality dimensions once that have been empirically identified and ranked (Clemes et al., 2014; Furrer, Liu, & Sudharshan, 2000). Further, if management have limited resources they may choose not to increase resources for the dimensions that are lower in importance. Therefore, Research Objective 2 is stated and satisfied through testing Hypotheses 7a and 7b by identifying the relative importance of the primary dimensions and sub-dimensions of service quality as perceived by beach resort hotel customers in Thailand.

6.2.1 The Most Important Primary Dimension

The empirical results indicate that outcome quality is the most important indicator for measuring customers' overall perceptions of service quality, for a long duration and high customer involvement service typified by a beach resort hotel, followed by physical environment quality and interaction quality (supporting Hypothesis 7b).

This finding is consistent with previous studies on the accommodation industry (Clemes, Gan, et al., 2011) and Clemes et al. (2009) and with (Clemes et al., 2013) study on univeristy education, a long-duration and high involvement service. Studies on services that are typified by a shorter customer duration also support the outcome quality primary dimension as the strongest predictor of service quality when compared to the interaction and physical environment quality (Caro & Garcia, 2008; Clemes, Brush, et al., 2011). These finding support the contention that the outcome quality dimension is an essential aspect in evaluating customers' perceptions of service quality (Brady & Cronin, 2001; Caro & Garcia, 2008; Pollack, 2009; Powpaka, 1996).

However, the most and least important primary dimensions of service quality can vary across service industries. For example, the finding of Clemes et al. (2014) and Clemes et al. (2007) show that interaction quality is more important than physical environment quality and outcome quality.

Likewise, the study by Akter et al. (2010) on mobile health services indicate that interaction quality is the most important indicator of service quality followed by outcome quality and platform quality. The variation in the importance rankings of the primary dimensions suggests that researchers need to determine the relative importance of the primary dimensions for the service under investigation as they cannot assume that outcome quality will consistently have the most significant impact on service quality.

6.2.2 The Most Important Sub-Dimensions

The Valence sub-dimension has the largest impact on customers' perceptions of outcome quality, followed by waiting time and sociability (supporting Hypothesis 7a). Many services are intangibly dominant and only a customer's evaluation of their experience can be used to assess if the outcome of the service was good or bad. In addition, beach resort hotel customers normally expect to have a fun and an enjoyable time at the resort and it is critical that these hedonic feelings are satisfied if a good outcome is going to be achieved.

The room quality sub-dimension has the largest impact on customers' perceptions of physical environment quality followed by the location and convenience, facility and activity, décor and ambience, and design sub-dimensions. Room quality's importance not surprising as the quality of room is a basic standard for many types of accommodation, including beach resort hotels. However, beach resort hotel customers have a longer length of stay compared to many other types of hotels. A superior room quality normally results in a more relaxing atmosphere and restful sleep and these are important benefits for longer stays, especially in an active environment typically encountered in beach resort hotels.

The behaviour sub-dimension is the most important indicator for measuring customers' perceptions of interaction quality, followed by the professionalism and attitude sub-dimensions. This result implies that the behaviour of resort hotel staff is the most important factor customers use when they evaluate interaction quality. Beach resort hotel customers place great importance on how beach resort hotel staffs behave when interacting with customers. Practically, a beach resort hotel is a high involvement service where customers have a high level of service customisations (active contact). Therefore, how well beach resort hotel staffs provide prompt service and response to customers' individual needs positively relates to the level of interaction quality.

The variation in the relative importance of the sub-dimensions also supports the argument the sub-dimensions of service quality will differ in importance, depending on the service under investigation. This result supports the recommendation of several scholars that the sub-dimension of service quality must be determined for the specific service industry (Brady & Cronin, 2001; Clemes et al., 2014; Pollack, 2009).

6.3 The Interrelationships between the Higher Order Constructs (Research Objective 3)

The third objective of this research is to examine the interrelationships between the higher-order constructs (service quality, customer satisfaction, customer-perceived value, corporate image and customer loyalty) in the comprehensive hierarchical model. Empirically investigating the complex interrelationships between these constructs will provide a valuable insight into customer loyalty for beach resort hotel stays. Hypotheses 8 to 19 were formulated and tested using SEM to satisfy Research Objective 3. Hypotheses 8 to 11 were tested to determine the impact of service quality on customer loyalty, customer satisfaction, customer perceived value and corporate image. Hypotheses 13 to 15 were tested to determine the impact of customer perceived value on customer satisfaction, customer loyalty and corporate image. Hypotheses 17 and 18 were tested to determine impact of corporate image on customer satisfaction and customer loyalty. Hypothesis 19 was tested to determine the impact of customer satisfaction on customer loyalty. Hypotheses 12 and 16 were tested to determine the mediating impact of customer satisfaction on the relationship between service quality, customer perceived value and customer loyalty. The following sections provide the results for each construct.

6.3.1 Customer Loyalty

The results pertaining to H8, H14, H18 and H19 indicate that sixty four percent of the customer loyalty construct variance is explained by service quality, customer perceived value, corporate image and customer satisfaction. However, only the causal paths from corporate image and customer satisfaction show a significant and positive direct impact on customer loyalty.

Customer satisfaction and corporate image are two significant determinants of customer loyalty in this current study. However, customer satisfaction has the most significant impact on customer loyalty.

The results of this study indicate a significant and positive impact of customer satisfaction on customer loyalty with the standardized coefficient path of $\beta = 0.377$. This significant and positive impact suggests that any changes in customer satisfaction will influence customer loyalty proportionately (supporting Hypothesis 19). The positive direct impact of customer satisfaction on customer loyalty is not unexpected as the result is consistent with the findings of other studies conducted on the hotel industry by Back (2005), Chen et al. (2011), Clemes et al. (2009), Ekinci et al. (2008), Hu et al. (2009) and Suhartanto et al. (2013), and on other service industries (Clemes et al., 2013; Dagger et al., 2007; Howat & Assaker, 2013; Osman & Sentosa, 2013).

In addition, Pollack (2009) notes that customer satisfaction is also positively related to the duration of a customer and service provider relationship. In a long-duration and high customer involvement service like beach resort hotels, customers normally interact with service providers numerous times compared to other types of accommodation (e.g. motels).

A close and positive relationship between customers and resort staff may strongly influence their satisfaction with their beach resort hotel stay and increase their perceptions of satisfaction creating a positive impact on customer loyalty.

In this study, corporate image is another significant and positive predictor of customer loyalty. The standardized coefficient path between corporate image and customer loyalty is $\beta = 0.251$, indicating that corporate image has a significant and positive impact on customer loyalty (supporting Hypothesis 18). This significant and positive impact of corporate image on customer loyalty is congruent with previous studies on the hotel industry (Hu et al., 2009; Kandampully & Hu, 2007; Kandampully et al., 2011; Kandampully & Suhartanto, 2003). However, the findings of this study for corporate image are inconsistent with Suhartanto et al. (2013) who demonstrate an insignificant path between brand image and attitudinal loyalty toward a hotel.

The results for corporate image in this current study differ from Suhartanto et al.'s (2013) results as the beach resort hotels participating in this current study were not internationally branded hotels. Most of the customers who participated in this study did not have a strong brand image of the resort in their minds before staying at the resort. Therefore, the corporate images of the beach resort hotels participating in this study were primarily formed by customers' perceptions during the period of their stay and may not have been influenced by external stimuli such as international promotions, advertising campaigns or internet promotions.

The standardized coefficient path between service quality and customer loyalty was β = 0.251, indicating that service quality has an insignificant impact on customer loyalty (no support for Hypothesis 8). The insignificant impact of service quality on customer loyalty is present in other studies conducted on the hotel industry (Hu et al., 2009; Kandampully & Hu, 2007; Kim et al., 2008; Osman & Sentosa, 2013). However, the insignificant path is inconsistent with the results of previous hotel studies that indicate a significant path between service quality and customer loyalty (Kim & Cha, 2002; Malik, Yaqoob, & Aslam, 2012).

The results of testing the mediating impact of customer satisfaction on the relationship between service quality and customer loyalty explains the insignificant path between service quality and customer loyalty. This result demonstrates that satisfaction has a full mediating effect on the relationship between service quality and customer loyalty (supporting Hypothesis 12). This finding concurs with the studies of Caruana (2002) for banking services, Chen and Chen (2010) for heritage tourism, Ekinci et al. (2008) for the hospitality industry (hotels and restaurants), Howat and Assaker (2013) for outdoor aquatic centres, Osman and Sentosa (2013) for rural tourism, and Yu and Ramanathan (2012) for supermarkets. These previous studies also report a full mediating effect of customer satisfaction on the relationship between service quality and customer loyalty.
Thus, customers who perceive that the beach resort hotel has delivered a superior level of service quality during their stay, will be highly satisfied with their experience and this will result in strong customer loyalty. This result also enforces the importance of service quality as a direct driver of satisfaction, and indirectly, on a driver of customer loyalty.

Customer perceived value has no significant direct impact on customer loyalty. The standardized coefficient path between customer-perceived value and customer loyalty is β = 0.063 (no support for Hypothesis 14). The insignificant impact of customer perceived value on customer loyalty is consistent with studies conducted on the hotel industry by Hu et al. (2009), and on the mobile communication industry by Clemes et al. (2014). The authors also report an insignificant relationship between customer-perceived value and customer loyalty however, the authors of both studies did not test for a mediating effect between customer perceived value and customer loyalty.

In this current study, customer perceived value is an important determinant of customer loyalty as it has a positive and indirect effect on customer loyalty through customer satisfaction and corporate image. This result illustrates that customers of beach resort hotels must perceive that they received good value for money spent if they are expected to make positive comments about the beach resort hotel and return to the resort in the future.

The result of testing the mediating impact of customer satisfaction on the relationship between customer perceived value and customer loyalty shows that customer satisfaction has as a full mediating effect on the relationship between customer perceived value and customer loyalty (supporting Hypothesis 16). This finding is supported by Chitty et al. (2007) for back packer hostels and Howat and Assaker (2013) for outdoor aquatic centres, who also report the full mediating role of customer satisfaction on the relationship between customer-perceived value and customer loyalty. This result indicates that customer perceived value influences customer satisfaction, which subsequently impacts on customer loyalty. Customers must be satisfied with all the aspects of their stay (e.g., price, physical goods purchased, quality of all services) or they will not remain loyal to the beach resort hotel.

6.3.2 Customer Satisfaction

The results pertaining to H10, H12 and H16 demonstrate the significant, positive and direct impact of service quality, customer-perceived value, and corporate image on satisfaction. Eighty one percent of the customer satisfaction construct variance was explained by service quality, customer-perceived value and corporate image. Therefore, service quality, customer-perceived value and corporate image are significant determinants of customer satisfaction for beach resort hotel stays in Thailand. However, the degrees of importance and the nature of the interrelationships between service quality, customer-perceived value, corporate image and customer satisfaction are variable. Service quality is the most important determinant of customer satisfaction, followed by corporate image and customer-perceived value.

The standardized coefficient path between service quality and customer satisfaction is $\beta = 0.441$ indicating that service quality has a significant and positive impact on customer satisfaction (supporting Hypothesis 10). The significant and positive impact of service quality on customer satisfaction was expected as this relationship is empirically confirmed (Hu et al., 2009; Suhartanto et al., 2013) and supported by studies conducted on various service industries. Examples of this are studies by Clemes, Gan, et al. (2011), Clemes et al. (2009), Hu et al. (2009) and Suhartanto et al. (2013) on the hotel industry, and on other service industries by Akter et al. (2010), Chen et al. (2011), Clemes et al. (2014), Clemes et al. (2013), Dagger et al. (2007), Howat and Assaker (2013), Kyle et al. (2010). The finding in this study confirms the dominant role of service quality as an important predictor of customer satisfaction. Delivering superior service quality is particularly important in long-duration and high customer involvement services such as beach resort hotels as customers are in the service process for a long period and experience numerous service products during their stay.

The causal model indicates a direct impact of perceived service quality on customer satisfaction and an indirect impact on customer satisfaction through corporate image and customer perceived value. This implies that beach resort hotel customers who believe they received a superior service quality will have a high level of satisfaction with their beach resort hotel.

Moreover, the level of satisfaction can be strengthened by the relationship between the customer and the resort hotel staff in a long-duration and high customer involvement service such as a resort stay where there is a longer length of contact between customers and beach resort hotel staff.

The standardized coefficient path between corporate image and customer satisfaction is β = 0.341, indicating that corporate image has a significant and positive impact on customer satisfaction (supporting Hypothesis 16). This implies that favourable corporate image is a significant determinant of customer satisfaction in a beach resort hotel context. The significant and positive impact of corporate image on customer satisfaction is congruent with previous studies conducted on several service industries such as the hotel industry context by Back (2005), Faullant et al. (2008) and on other industries by Clemes et al. (2013), Clemes et al. (2007), Hart and Rosenberger (2004) (department stores), Lai et al. (2009) (mobile services).

The standardized coefficient path between customer perceived value and customer satisfaction is β = 0.250, indicating that customer-perceived value has a significant and direct impact on customer satisfaction (supporting Hypothesis 12). This significant and direct impact of customer perceived value on customer satisfaction is consistent with studies conducted on various service industries (Chen, 2008; Chen & Chen, 2010; Chitty et al., 2007; Clemes, Brush, et al., 2011; Clemes et al., 2014; Howat & Assaker, 2013; Ryu et al., 2008).

6.3.3 Corporate Image

The results pertaining to Hypotheses 11 and 14 indicate a significant and positive direct impact of service quality and customer perceived value on corporate image. This study found that fifty three percent of the corporate image construct variance was explained by service quality and customer perceived value. Therefore, service quality and customer perceived-value are two significant determinants of corporate image in this current study. However, the degree of importance, and the nature of the relationships between service quality, customer perceived value and corporate image vary. In this current study, customer perceived value impacts more on corporate image than on service quality.

The standardized coefficient path between customer-perceived value and corporate image is β = 0.451, indicating that customer perceived value has a significant and positive impact on corporate image (supporting Hypothesis 14). The significant and positive impact of customer perceived value on corporate image is consistent Hu et al.'s (2009) results. This result implies that beach resort hotels will have a favourable image if their perceptions of value are high.

The standardized coefficient path between service quality and corporate image is β = 0.329, indicating that service quality has a significant and positive impact on corporate image (supporting Hypothesis 11).

This significant and positive impact of service quality on corporate image is supported by the studies conducted on hotel industries by Clemes et al. (2009), Hu et al. (2009), Kandampully et al. (2011), Kandampully and Hu (2007), and on other service industries by Clemes et al. (2014) and Clemes et al. (2013).

6.3.4 Customer Percieved Value

The result pertaining to H9 demonstrates a significant and positive direct impact of service quality on customer-perceived value. Fifty four percent of the customer perceived value construct variance was explained by service quality. The standardized coefficient path between service quality and customer-perceived value is $\beta = 0.737$, indicating that service quality has a significant and positive impact on customer-perceived value (supporting hypothesis 9). This implies that perceived service quality is the significant determinant of customer-perceived value in beach resort hotel stays in Thailand. Customers who believed they received superior service during service delivery have a high perception of value. This significant and positive impact of service quality on customer perceived value is consistent with the studies conducted on several service industries including the hotel industry by Hu et al. (2009), Suhartanto et al. (2013) and other industry services by Clemes et al. (2014) and Howat and Assaker (2013).

6.3.5 Summary Findings of the Causal Model

The results of the causal model indicate that customer satisfaction and corporate image are two constructs that directly influence customer loyalty, whereas, customer satisfaction has a stronger influence on customer loyalty than corporate image. Among the antecedent factors of customer satisfaction, service quality has the strongest impact on customer satisfaction followed by corporate image, and customer perceived value. Customers who perceive superior service quality are more satisfied with the beach resort hotel and in turn become loyal customers. Importantly, this study also identifies the significant impact of service quality on both perceived value and corporate image. This finding implies that customers who believe they receive superior service quality are more willing to pay a higher price for their accommodation and will form favourable images of the beach resort hotel.

Although service quality has no direct impact on customer loyalty in this study, service quality does impact on customer loyalty via customer satisfaction. The analysis also indicates the direct impact of corporate image on customer loyalty and customer satisfaction. Customers who have a favourable impression of their stays are more satisfied and tend to revisit the beach resort hotel.

In addition, maintaining positive perceived value is important and cannot be neglected by beach resort hotel management as the results indicate that customer perceived value has a significant impact on customer satisfaction and corporate image.

These findings imply that customers who believe they receive value for money are more satisfied and will have a favourable impression of the beach resort hotel.

Although the causal path from customer perceived value to customer loyalty is insignificant, the mediating analysis confirms that customer perceived value impacts on customer loyalty via customer satisfaction. This finding implies that if customers receive value for money they will be more satisfied and may become more loyal customers. Moreover, the high impact of perceived service quality on customer satisfaction and customer perceived value that appeared in this study confirm that the level of customer satisfaction and perceived value can be strengthened by the relationship between the customer and the service provider.

The previous sections have discussed how beach resort hotel customers conceptualise service quality and the interrelationships between the five higher order marketing constructs. The following sections discuss the theoretical and practical implications derived from the results of the empirical analysis.

6.4 Theoretical Contributions

Comprehensive hierarchical modelling was tested and used as the theoretical framework in this study. A comprehensive hierarchical model enables researchers to identify and assess the relationship between the primary dimensions and sub-dimensions underlying customers' perceptions of service quality (the measurement model) and the interrelationships between several higher order marketing constructs (the causal path model) within a single model. Further, the inclusion of several constructs may change the significant and non-significant paths that have been identified in models testing the paths between fewer constructs. This section discusses the three theoretical contributions this study makes to the services marketing literature.

The first theoretical contribution of this study is it tested the suitability of a comprehensive hierarchical model for beach resort hotels (classified as a long-duration and high customer involvement service). The empirical results support the use of comprehensive hierarchical modelling to enable a fine grained analysis of how each higher order marketing construct (service quality, customer perceived value, corporate image and customer satisfaction) interrelates with each other, and how each construct impacts on customer loyalty. In the context of beach resort hotel stays, the empirical results demonstrate that customer satisfaction and corporate image are two constructs that significantly and directly impact on customer loyalty.

Customer satisfaction has a stronger influence on customer loyalty than corporate image. Furthermore, service quality has a strongest impact on customer satisfaction followed by corporate image, and customer perceived value. This empirical evidence suggest that customer satisfaction in beach resort hotels is more quality-driven than value or price driven. Customers who perceive superior service quality are more satisfied with the resort hotel, and in turn, may become more loyal customers.

The level of corporate image (a significant determinant of customer loyalty) is formed by perceived service quality and perceived value. In addition, the results of this study illustrate the indirect effects that service quality and customer perceived value have on customer loyalty as they are mediated by customer satisfaction. These relationships have not been tested in a comprehensive hierarchical model in previous studies.

The second contribution is that the empirical results in this study confirm that perceived service quality is multidimensional and hierarchical in the context of beach resort hotel stays. The measurement model for the service quality construct provides a multi-level framework to evaluate perceived service quality and its dimensions for beach resort hotel stays. Beach resort hotel customers' form their overall service quality perceptions based on the aggregate perceptions of three primary dimensions (interaction quality, physical environment quality and outcome quality). The perceptions of the three primary dimensions are driven by the perceptions of their pertaining sub-dimensions. The empirical results of study also confirm the validation of using three primary dimensions to conceptualise service quality in accommodation industry. This confirmation is consistent with other studies on accommodation industry (Clemes, Gan, et al., 2011; Clemes et al., 2009; Kyle et al., 2010). These three primary dimension (interaction, physical environment and outcome quality) are fundamental skeleton to conceptualise service quality for different types of services. However, adopting appropriate qualitative and quantitative analyses to confirm primary dimensions of service quality construct for different industry and cultural are required as the number, types and relative importance of service quality primary dimensions may not be generic and vary depending on the types of service investigation.

The third theoretical contribution is identifying the relative important of primary dimension and sub-dimension of service quality construct for beach resort hotel. In this study outcome quality is the most important primary dimension of overall service quality construct as assess by beach resort hotel customers followed by physical environment and interaction quality. This finding provides empirical evidence for the inclusion of outcome quality and empirical support for the notion that outcome quality is important across various service industries. However, the relative importance of the primary dimensions also varies depending on the level of customer contact with service provider in service delivery processes. For example, the mobile health service is a service that requires high interaction between service providers (employees and systems) to fulfil customers' needs (health treatment information); therefore, the customer perceived service quality of this service mostly relies on the quality of interaction between the customer and the service provider, such as caring behaviour and the professionalism of the employee.

Although, beach resort hotels classified as a long-duration and high customer involvement service, beach resort hotels' customers actually require less interaction with service employees, as most of customers tend to show more individualism and prefer less interaction with resort staff. In addition, enjoyment and relaxation are major needs of beach resort hotels customers.
Therefore, service outcome which exhibits the overall experience of their stay is the most important primary dimension contribute to overall service quality in this context.

The fourth theoretical contribution is identifying is identifying a specific and unique set of sub-dimensions in measuring quality of each primary dimensions for beach resort hotels. This current study identified 11 sub-dimensions pertaining to the three service quality primary dimensions of service quality in beach resort hotel. The sub-dimensions in this study consist of several generic indicators in measuring service quality across accommodation industries such as room quality, resort hotels' design, staff behaviour. This study also indicates some unique indicators that reflect the uniqueness of beach resort hotel stay such as location & convenience and facility & activity. This imply that the sub-dimensions also vary across industries and cultural setting.

6.5 Practical Implications

Establishing and implementing effective marketing strategies that drive customer loyalty is very important for beach resort hotel management as they are operating in a very competitive environment in Thailand's accommodation industry. The empirical results from testing the comprehensive hierarchical modelling in this current study provide valuable information that will enable beach resort hotel management to establish and implement effective marketing strategies.

First, customer satisfaction and corporate image are two significant driver of customer loyalty. Satisfying customers is crucial for beach resort hotels to survive in an intensely competitive environment. Beach resort hotel managers who intend to increase the level of customer satisfaction, need to focus on how to deliver a superior level of service quality and understand how to manage situations when service failures occur. Service quality is also an antecedent factor of corporate image, perceived value, and has an indirect effect on customer loyalty through satisfaction.
Therefore, managers must focus on maintaining customer acceptable levels of service quality and they need to increase the level of service quality as long as it cost effective.

The empirical results of this study provide practitioners with insights into how beach resort hotel customers conceptualize service quality. The hierarchical framework in this study enables beach resort hotel entrepreneurs to identify and assess the dimensions driving customers' perceptions of service quality. Beach resort hotel management are able to measure the perceptions of service quality at a global level, at the primary dimensional level, at the sub-dimension level, or at all three levels according to their strategic requirements.

For example, beach resort hotel managers interested in the general attitudes of customers towards the hotel's services, can use the three global indicators to investigate the overall perceptions of service quality. Alternatively, beach resort hotel managers can investigate the indicators at the sub-dimension level to evaluate core competencies and to identify any service deficiencies. The finding of the direct effect of perceived value on satisfaction and corporate image also means that hotel management must ensure that customers receive a high value for money spent. A high level of service quality helps achieve a higher level of perceived value, as service quality is an important component of the assessment of perceived value.

Second, the empirical results of this study identify the most and the least important dimensions underlying customers' perceptions of service quality. The comparative importance of the dimensions is valuable information for management in developing and implementing their strategic marketing. Knowing the relative importance of the dimensions provides managers with information that will enable them to allocate resources to the important dimensions and resource those dimensions that are not as important appropriately. This information enables a beach resort hotel to strategic manage the drivers of service quality in a cost effective manner. For example, the results of this study indicate that outcome quality is the most important primary dimension of overall perceived service quality. Among the three pertaining sub-dimensions (valence, waiting time, sociability) of the outcome quality primary dimension, valence is the most important indicator of outcome quality. Valence's impact on outcome quality can be enhanced by correctly managing and delivering on all of the interactions between the customer and the sub and primary dimensions of service quality. Beach resort hotel management teams may adopt some indicators of the valence sub-dimension, such as 'stress-free, holiday enjoyment', as their hotel's slogan or to reinforce their brand in their promotional campaigns. The indicators may also be applied at an organisational level to encourage the staff of a beach resort hotel to perform their duties to a high standard to help achieve the hotels strategic objectives.

Third, facility & activity is a new sub-dimension identified in this study that reflects the uniqueness of a beach resort hotel stay when compared to several other types of accommodation. Beach resort hotel management may use some unique activity to help segment and target a market, and position their particular hotel. For example, some beach resort hotels may segment the market by focusing on medical tourists who are seeking an alternative healthy treatment and/or knowledge.
A beach resort hotels may position as a unique Thai-style health resort by offering unique services and activities such as providing Thai-style massage and spa, Eastern-style health and healing, Eastern-style exercise (Thai Hermit exercise, Thai boxing) and healthy Thai-style cooking classes. In addition, room quality is an important driver of the physical environment quality primary dimensions.

The management of beach resort hotels must ensure that the resort has rooms that are aesthetically appealing, comfortable (bed and amenities), well sound proofed, and fitted with air condition units to control room temperatures as these factors contribute to a restful night. In particular, a restful night is important in a long duration stay when guests are involved in a high level of physical activity.

6.6 Limitations

The sample in this study was collected at one time (cross sectional) from seven beach resort hotels in Phuket province in Thailand, from May to August 2012. Australian tourists comprise the vast majority of visitors and represent eighty percent of the sample. This restricted sample leads to the limitation of applying an advance analysis technique such as a model invariance analysis. In addition, the sample selection used in this study was a nonprobability sampling (convenience sampling) and therefore may not represent the population of the beach resort hotel guests in Thailand. Although the convenience sampling approach is a suitable method for research for testing theory (Leary, 2004; Reynolds et al., 2003) as in the case of this research, caution must be used when generalising the results of the research from a convenience sample.

The second limitation relates to the marketing constructs contained within this current research model. There are a number of possible variables proposed in this study that could have interrelationships with the five constructs (service quality, customer perceived value, corporate image, customer satisfaction and customer loyalty). The research model, for example, did not include trust, commitment, customer engagement, service fairness and service recovery which are also considered as the determinants of customer loyalty, and these constructs may have a moderating or mediating impact between service quality and customer loyalty, and also customer satisfaction and customer loyalty.

The third limitation relates to the ability to generalise the 11 sub-dimensions of service quality identified in this study. The 11 sub-dimensions of service quality were developed and based on beach resort hotels in Phuket province in Thailand. Therefore, the 11 sub-dimensions may not be generic for other types of resorts such as a forest resort or a mountain resort, as well as other types of hotels.

6.7 Directions for Future Research

The comprehensive hierarchical model in this study was analysed from a single sample. Future studies may extend the analysis by applying a model invariance method to test the comprehensive hierarchical model in two or more different groups of samples, such as gender or ethnic origin. The analysis also enables researchers to validate the applicability of a comprehensive hierarchical model.

Future studies may extensively develop the comprehensive hierarchical model by including additional service-marketing constructs and further testing the moderating and mediating impact of other variables.

These may include several additional service marketing constructs which may possibly have a direct impact on customer loyalty such as customer engagement, perceived service recovery, commitment, trust and involvement. Analysing these constructs may provide a better understanding of key drivers of customer loyalty. Moreover, additional moderating and mediating variables that may impact on the relationships between service quality and customer loyalty, and on customer satisfaction and customer loyalty such as perceived service recovery, customer engagement and commitment, may be included in a future study.

Future studies may use the hierarchical and multidimensional service quality measurement model of this current study as a framework to conceptualise and measure the perceptions of service quality of beach resort hotels in other countries and in different cultural settings in order to examine the applicability of the hierarchical and multidimensional approach. However, researchers need to be aware that the service quality dimensions may vary and identify their own specific service quality dimension by using an acceptable qualitative and quantitative approach.

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Appendix

Lincoln University
Te Whare Wānanga o Aoraki
CHRISTCHURCH • NEW ZEALAND

Commerce Division
Po Box 84, Lincoln University,
Canterbury 7647, New Zealand
Telephone 64 3 325-2811
Facsimile 64 3 325-3847

www.lincoln.ac.nz

Dear Respondents,

I am a PhD candidate in the Faculty of Commerce at Lincoln University in Christchurch, New Zealand. The attached questionnaire is part of my thesis research project, designed to study customer loyalty in the hospitality sector. You are invited to participate in this survey. The finding of this study will contribute to the service marketing literature and assist resort hotel management in their marketing activities.

Your participation in this survey is voluntary. If you choose to complete the survey, it will be understood that you have consented to participate in the research project and to any resulting publication. In order to participate in this research, you must be 18 years or older. The questionnaire is anonymous, you are not asked to provide any personal details and you may decline to answer any question. The results of this study will be published as part of my PhD thesis and also will be made available to the resort hotel industry. However, no respondents will be identified in any resulting publication.

Completing the questionnaire should not require more than 15 minutes of your time. Please hand it back to the receptionist when you have completed it. If you have any questions or concerns, please do not hesitate to contact me at 0850589919 or email me at Rachata.Channoi@lincolnuni.ac.nz. Otherwise, you may contact my research supervisors, Mr. Michael D. Clemes at Mike.Clemes@lincoln.ac.nz. or Dr. David Dean at David.Deand@lincoln.ac.nz.

Your assistance will contribute greatly to the success of my research. Each and every response is important and I appreciate your willingness to help. Thank you for your cooperation and assistance.

Best Regards,

Rachata Channoi
PhD Candidate
Commerce Division
Lincoln University

Research Supervisor:
Michael D. Clemes
Senior Lecturer
Commerce Division
Lincoln University

Dr. David Dean
Senior Lecturer
Commerce Division
Lincoln University

No:_____

The following statements have been designed to obtain your opinion on several aspects of the resort hotel in Phuket. This questionnaire contains 9 sections (A-I). Section A- H contains a series of statement related to your overall experience at a resort hotel. Please indicate the extent to which you agree or disagree with the statement by ticking (⁄) an appropriate number on the 7 point scale provided. If you strongly agree with the statement, tick 7; if you strongly disagree with the statement, tick 1.

	Section A	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	The resort hotel's staff are friendly.	1	2	3	4	5	6	7
2	The resort hotel's staff are welcoming.	1	2	3	4	5	6	7
3	The resort hotel's staff demonstrate their willingness to help me.	1	2	3	4	5	6	7
4	The resort hotel's staff are polite and courteous.	1	2	3	4	5	6	7
5	I received individual attention when I had specific needs.	1	2	3	4	5	6	7
6	The resort hotel's staff always provide prompt service.	1	2	3	4	5	6	7
7	The behaviour of the resort hotel's staff allows me to trust their service.	1	2	3	4	5	6	7
8	The resort hotel's staff do whatever is necessary to satisfy my needs.	1	2	3	4	5	6	7
9	The resort hotel's staff are knowledgeable when answering my questions.	1	2	3	4	5	6	7
10	The resort hotel's staff have good communication skill.	1	2	3	4	5	6	7
11	The resort hotel's staff perform the service dependably and accurately at the time promised.	1	2	3	4	5	6	7
12	The resort hotel's staff are authorised to solve my miner complaints directly and immediately	1	2	3	4	5	6	7
13	The resort hotel's staff are competent in handling my problems.	1	2	3	4	5	6	7
14	When I had a problem the resort hotel's staff promptly solved with sincere concern for my interest.	1	2	3	4	5	6	7
15	The resort hotel's staff deliver superior service.	1	2	3	4	5	6	7
16	Overall, the quality of the interactions between customers and employees of this resort hotel is excellent.	1	2	3	4	5	6	7

Please turn to the next page

	Section B	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	The décor of this resort hotel is to my liking.	1	2	3	4	5	6	7
2	The décor of this resort hotel exhibits a great deal of thought and style.	1	2	3	4	5	6	7
3	The décor of this resort hotel is attractive.	1	2	3	4	5	6	7
4	The atmosphere of this resort hotel is excellent.	1	2	3	4	5	6	7
5	The rooms and bathroom of this resort hotel are clean.	1	2	3	4	5	6	7
6	The guest room is quiet.	1	2	3	4	5	6	7
7	The room size is adequate.	1	2	3	4	5	6	7
8	The bed/mattress/pillow is comfortable.	1	2	3	4	5	6	7
9	The bedroom of this resort hotel is high quality of in room temperature control.	1	2	3	4	5	6	7
10	The layout of this resort hotel suits my purpose/needs.	1	2	3	4	5	6	7
11	The gardens surrounding this resort hotel are attractive and well-designed.	1	2	3	4	5	6	7
12	The materials and furnishings at this resort are visually appealing.	1	2	3	4	5	6	7
13	The facilities of this resort are appealing.	1	2	3	4	5	6	7
14	There are convenient parking spaces available.	1	2	3	4	5	6	7
15	The transportation from this resort hotel to local destinations is convenient.	1	2	3	4	5	6	7
16	This resort hotel is located in an attractive scenic area.	1	2	3	4	5	6	7
17	The beach is easily accessible from this resort hotel.	1	2	3	4	5	6	7
18	This resort hotel has a variety and high quality of food and beverage facilities.	1	2	3	4	5	6	7
19	This resort hotel has variety of leisure facilities and programs.	1	2	3	4	5	6	7
20	This resort hotel has adequate recreation and entertainment facilities.	1	2	3	4	5	6	7
21	I feel safe with the facilities and equipment of the resort.	1	2	3	4	5	6	7
22	There are a variety of activities in the surroundings of the resort which meet my needs.	1	2	3	4	5	6	7
23	This resort hotel had well organized activities and programmes that I required.	1	2	3	4	5	6	7
24	The physical environment of this resort hotel is excellent.	1	2	3	4	5	6	7
25	I would rate this resort hotel's physical environment very highly.	1	2	3	4	5	6	7

Please turn to the next page

Section C		Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	When I leave this resort hotel, I feel my expectation have been met.	1	2	3	4	5	6	7
2	I would evaluate the outcome of this resort hotel's service favourably.	1	2	3	4	5	6	7
3	My stay at this resort was leisurely and stress-free.	1	2	3	4	5	6	7
4	This resort hotel made my holiday trip enjoyable.	1	2	3	4	5	6	7
5	The resort hotel's staff respond promptly to my requests.	1	2	3	4	5	6	7
6	The resort hotel's staff try to minimize my waiting time.	1	2	3	4	5	6	7
7	The resort hotel's staff provide punctual service for me.	1	2	3	4	5	6	7
8	During my leisure time staying in this resort, I was not bothered by other customers.	1	2	3	4	5	6	7
9	The other customers at this resort hotel did not affect the resort hotel's ability to provide me with good service.	1	2	3	4	5	6	7
10	This resort hotel provides me with opportunities for social interaction.	1	2	3	4	5	6	7
11	I have made social contacts at this resort hotel.	1	2	3	4	5	6	7
12	I generally feel good about my stay in this resort hotel.	1	2	3	4	5	6	7
13	Overall, I have received my desired outcome by staying in this resort hotel.	1	2	3	4	5	6	7

Section D		Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	This resort hotel consistently provides superior service quality in every way.	1	2	3	4	5	6	7
2	Compared to other resort hotels, this resort hotel's service is superior.	1	2	3	4	5	6	7
3	Overall, the service quality of this resort hotel is excellent.	1	2	3	4	5	6	7

Section E		Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	I made the right decision by choosing to stay in this resort hotel.	1	2	3	4	5	6	7
2	I had a pleasurable stay at this resort hotel.	1	2	3	4	5	6	7
3	This resort hotel satisfied my needs and wants.	1	2	3	4	5	6	7
4	Overall, I am satisfied with my resort hotel stay.	1	2	3	4	5	6	7

Please turn to the next page

Section F		Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	Compared with what I have paid, the overall service of this resort hotel has satisfied my needs.	1	2	3	4	5	6	7
2	The price of this resort hotel is reasonable.	1	2	3	4	5	6	7
3	This resort hotel offers good value for money.	1	2	3	4	5	6	7
4	Overall, I am satisfied with the value I received for the price that I paid.	1	2	3	4	5	6	7

Section G		Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	This resort hotel has a good reputation.	1	2	3	4	5	6	7
2	I believe that this resort hotel has a better image than its competitors.	1	2	3	4	5	6	7
3	I have always had a good impression of this resort hotel.	1	2	3	4	5	6	7

Section H		Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	Compared with other resort hotels, I prefer the service of this resort hotel.	1	2	3	4	5	6	7
2	I am willing to pay more to be a guest at this resort hotel than at other resort hotels in Phuket	1	2	3	4	5	6	7
3	I feel better when I stay at this resort hotel.	1	2	3	4	5	6	7
4	This resort hotel is the one that I appreciate the most in Phuket.	1	2	3	4	5	6	7
5	If I return to Phuket, I would stay at this resort hotel again.	1	2	3	4	5	6	7
6	I would recommend this resort hotel to my friends and colleagues.	1	2	3	4	5	6	7

Please turn to the next page

Section I – Demographic Profile

All your response in this section will be kept strictly confidential. Pleas answer **All Questions**. Please choose **One answer** only, by ticking (⁄) where appropriate, or fill-in the information required.

1. Your gender	:	☐ Male	☐ Female
2. Your age group	:	☐ 18- 24 ☐ 36- 45 ☐ Over 55	☐ 25- 35 ☐ 46- 55
3. Your highest education level	:	☐ High School ☐ Bachelor Degree ☐ PhD Degree	☐ Diploma Degree ☐ Master's Degree ☐ Other……
4. Your occupation	:	☐ Professional ☐ Retired ☐ Business Owner ☐ Others……	☐ Student ☐ Housewife ☐ Government Officer
5. Your nationality	:	☐ Australia ☐ USA	☐ British ☐ Other……
6. How many times have you been to Phuket?		☐ First time ☐ More than 2 times	☐ Second time
7. How long is your current stay at the resort?		☐ 5 nights ☐ More than 10 nights	☐ 6- 10 nights
8. What is the main purpose of your stay?		☐ Pleasure ☐ Conference	☐ Business ☐ Other…….
9. How often do you dine at the resort's restaurant?		☐ None ☐ 2- 4	☐ Once ☐ More than 4
10. How often do you join the activities offered by the resort hotel?		☐ None ☐ 2- 4	☐ Once ☐ More than 4

Thank you very much for your time. Please return the survey to the distributor immediately.
Wishing you a very good day!