

# Service quality and customer satisfaction in thermal tourism

Service quality  
and customer  
satisfaction

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## Abstract

**Purpose** – Satisfaction in the tourism sector is a highly sensitive subject, and customer satisfaction (CS) has a significant impact on the choice of destinations made by tourists and on the decision to recommend them to friends or acquaintances. The purpose of this paper is to give empirical evidence of the dimensions of service quality (technical, functional and company image (CI)) and their connections in the sector of thermal tourism. It also aims at investigating the CI, seeking to understand whether some of the technical and functional service quality variables play a role in determining it.

**Design/methodology/approach** – An empirical survey was conducted by administering a structured research questionnaire in order to collect all necessary data, which was then elaborated to test the hypotheses using factor and multiple regression analyses.

**Findings** – The results of the survey confirm the direct impact of service quality dimensions (technical, functional and CI) on CS also in the thermal sector when considered individually. Moreover, when the CI was analyzed further, relational quality was found to be dependent on thermal employees' capabilities, abilities, trustworthiness, availability, etc. Finally, when considered together, functional service quality and CI have a stronger effect on CS than technical service quality.

**Originality/value** – The originality of the present research relies on the following: a further contribution to the so-called "European perspective" of service quality; the study of service quality dimensions (technical, functional and CI) in the thermal sector; and evidencing the link between thermal employee characteristics and the relational quality factor of the CI, demonstrating that many aspects of this construct need further empirical investigation, in the wellness sector.

**Keywords** Service quality, Customer satisfaction, Company image, Technical and functional service quality dimensions, Thermal tourism

**Paper type** Research paper

Received 23 June 2015  
Revised 14 October 2015  
13 January 2016  
12 April 2016  
Accepted 14 April 2016

## 1. Introduction

"Tourism has a connotation of leisure travel and tends to be synonymous with vacations. This is also reflected in dictionaries, which commonly refer to tourism as travel for pleasure, or business usage. Most of the personnel involved in the sector, interpret tourism in terms of the products they sell and the markets they serve" (Medlik, 2003, p. vii). According to Eraqi (2006), tourism today is a highly competitive sector where companies can no longer only consider focusing on prices and promotions to be competitive. Therefore, they must redirect their attention toward new objectives and adopt quality-oriented policies.

Studies on customer behavior have witnessed a terrific change in recent years, to the point that customer satisfaction (CS) today represents a key issue in the sector of tourism and related services (Wu, 2007). According to Youngdahl and Kellogg (1997), the nature of these services contributes to making them "much more involved in service production, or delivery, than their manufacturing counterparts" (p. 19). This also applies to all tourist activities and, in particular, to thermal tourism, which is considered in the present study. As observed by Chen *et al.* (2013a), recent studies in the tourism sector have clearly demonstrated that what tourists mostly look for are experiences that result in a "healthy balance of body, mind and spirit" (p. 1093). This is the main reason why wellness tourism has turned into such a massive trend in the tourist industry and has become a "fashionable tourist product," in the words of Medina-Muñoz and Medina-Muñoz (2013, p. 416). In addition, Heung and Kucukusta (2013) have observed that the growth of this new trend in tourism, initiating at the turn of the twentieth century, is related to the increasing pressure of everyday life and the consequent need for more "sustainable lifestyles" (p. 148).



Therefore, “the primary objective of wellness tourism is to maintain and promote health when traveling” (Chen *et al.*, 2013a, p. 1093).

Wellness tourism has become extremely relevant in today’s economy, even though it has been around since time immemorial and was called *Salus per aquam*. The benefits deriving from thermal waters have been well documented throughout history, especially by the Romans and the Greeks (Chen *et al.*, 2013a). What we are witnessing then is not a discovery but rather a re-discovery of such benefits. The concept of wellness, in fact, was first analyzed in depth in psychoanalysis by Dunn (1959) and was later reconsidered in other investigations. More recently, Chen *et al.* (2013b) have maintained that “wellness tourism is a holistic traveling style that aims at developing, maintaining and improving the body-mind-spirit” (p. 122), and Mueller and Kaufmann (2001), who seem to share the same view, also suggest that “wellness tourism is the sum of all the relationships and phenomena resulting from a journey and residence by people whose main motive is to preserve or promote their health” (p. 3). So far, however, no common definition of the term exists. Smith and Puczko (2009), for example, find it a complex subject to define, because it refers to elements of lifestyle, physical, mental, and spiritual well-being and the relationship with oneself, others, and the environment in general. Furthermore, in their attempt to explain the term wellness, Mueller and Kaufmann (2001) refer to the model proposed by Ardell (1977) and suggest a more complex idea including a multi-faceted state of health considering harmony between body, mind, and spirit, along with personal responsibility, and physical fitness/beauty care, healthy nutrition and a correct diet, relaxation and meditation, mental activity and education as well as environmental sensitivity and social contacts.

Today, wellness tourism, which is considered a sub-category of health tourism is made up of different activities such as “spa, massage, beauty/body care, consumption of healthy food, and physical exercises” (Huang and Xu, 2014, p. 495). It can be included in the non-medical cluster of disciplines mainly aimed at both supporting wellness activities, deemed to prevent health problems and surgery, and create an alternative to the most commonly accepted medical tourism (Harahsheh, 2002; Mueller and Kaufmann, 2001; Chen *et al.*, 2013b). According to Jallad (2000), the main objective of wellness tourism is to propose the idea of relaxation, leisure, and free time to customers to counterbalance everyday stress and routine, staying in health resort spas. Spa tourism, according to these studies, helps physical and mental healing through the balneological use of thermal waters (Cohen, 2008). By consequence, thermal tourism is therefore recognized today as one of the main forms of wellness tourism (Smith and Puczko, 2009; Chen *et al.*, 2013a).

According to Cohen (2008), the growth of the thermal sector can be understood as the most obvious response to a need for physical rest rooted in human nature, in an ever-changing and an ever more complex global context. This idea is demonstrated by the Tourism Wellness Economy 2014 report, where thermal tourism is considered a fundamental component of wellness tourism and amounts to 41 percent of the total. Moreover, in the report of the Italian *Osservatorio Nazionale del Turismo* (2012), the economic weight of the national thermal sector in 2012 accounts for approximately 3.2 percent of the total tourism industry and constitutes a relevant part of economic, productive tourism and employment as a whole. With its health resorts and thermal cities, Italy is in fact the European nation with the largest number of spas. The Italian thermal sector numbers 350 spas, distributed across 20 regions and 170 municipalities, with 17,000 employees, resulting in a total turnover of 380 million Euros. Furthermore, it must be noted that 200 of these resorts are also connected to the Italian National Health Service. The most popular thermal destinations in Italy are located in Tuscany, Veneto, Trentino Alto-Adige, Emilia-Romagna, and Campania; these latter regions in particular account for more than 80 percent of the total. Lazio, the region we have considered in the present survey, ranks fifth in this particular system with its 17 thermal spas.

The main purpose of the present investigation is to illustrate how, and to what extent, the spa service quality, measured using technical, functional, and company image (CI) dimensions, the so-called “European perspective” on service quality, impacts CS. Indeed, even though the issues of quality and satisfaction have been largely analyzed in literature, most do not use the “European perspective” on service quality, and only a few studies approach this topic in the thermal sector. This has already been highlighted by Mueller and Kaufmann (2001) and Quintela *et al.* (2011) who state that the tools used in quality management in the tourism and thermal wellness sectors are still to be identified. To further contribute to the literature in the thermal sector, the paper also studies more in depth the relationship between technical and functional service quality on the one hand and CI on the other.

The paper starts with a literature review focused on wellness and thermal tourism discussing the concepts of CS and service quality as well as all the service quality dimensions used in the empirical study. Then, after the methodology presentation, empirical research was developed and the results were discussed, highlighting the research implications. The paper ends with conclusions, followed by some limitations of the study and future steps for further research.

## 2. Hypotheses development

### 2.1 CS

The issue of CS has been widely investigated in several studies. It results from the comparison between the performances of the purchased product and customer expectations before purchase (confirmation-disconfirmation model) (Oliver, 1980, 1997). Broadly speaking, satisfaction, or dissatisfaction, consists of a particular feeling of delight or disappointment deriving from the comparison between the performances of a product and personal expectations (Kotler and Kevin, 2007). Namely, according to Hansemark and Albinsson (2004) “satisfaction is an overall customer attitude towards a service provider, or an emotional reaction to the difference between what customers anticipate and what they receive, regarding the fulfillment of some needs, goals or desire”(p. 41). In tandem with previous studies, Ling and de Run (2009) have defined it as the customer’s positive perception of the value received, measured on expectations and perceptions. Parasuraman *et al.* (1991) already supported the idea that CS expresses the degree of overlap between perceived quality and expected quality, and all deviations (gaps) expressed levels of non-quality. More recently, Demirci Orel and Kara (2014) have maintained that satisfaction with services is a desired outcome of service encounters, linking consumption with post-purchase occurrences such as attitude change.

Three general components can be identified through the analysis of the satisfaction concept proposed by several authors: first, consumer satisfaction as an emotional-cognitive response, second, the response pertains to a particular aspect (expectation about the product, prior consumption experience), and third, the response occurs at a particular time (after consumption, after choice, based on accumulated experience) (Giese and Cote, 2000).

CS is one of the most debated constructs in customer behavior studies, in both the public and private sectors, and represents the only real objective of a business company. It is at the heart of every mission statement and represents the ultimate goal of any strategy (Zairi, 2000). The need to implement CS has led companies to adopt quality specifically aimed at management policies, given it is quality that generates CS and leads to a better competitive position (Kristianto *et al.*, 2012). The analysis of the relationship between quality service and CS has been abundantly demonstrated in the literature. If on the one hand, Segoro (2013) has proved that the perception of service quality results in a positive direct influence on CS, on the other, Nilsson *et al.* (2001) have investigated how key internal quality practices of product vs service organizations – employee management, process orientation, and customer orientation – influence CS and business performance.

## 2.2 Service quality

Quality comes first, even if the link with CS is so strong that sometimes the terms of service quality and CS have been used as synonyms. However, a profound difference exists between the two terms because they are in a dependence relationship, with CS a direct function of service quality (Hernon and Nitecki, 2001). In Costabile's (2001) words, quality is established prior to CS and leads to a more competitive position. A number of studies have stated that the competitive advantage of a firm depends on the quality and value of products and services that the company is able to provide (Parasuraman *et al.*, 1996; Grönroos, 2001; Hutchinson *et al.*, 2009). Today, quality in services represents the basis of the competitive edge, though the topic has been investigated since the 1980s (Santouridis *et al.*, 2012). Difficulties persist in its definition, due to the absence of an overall consensus on both issues (Wisniewski, 2001). A number of definitions exist as to what service quality actually means (Singh and Khanduja, 2010). For example, Shahin (2006) defines service quality as an activity, or group of activities, of more or less intangible nature which normally, but not necessarily, takes place in interactions between customers and service employees, and/or physical resources or goods and/or systems of the service provider. In the same vein, Santos (2003) defined service quality as a measure of how well the level of the delivered services matches customer experiences. According to Grönroos (2006), service quality is the outcome of an evaluation process where the consumer compares his expectations with the perception of the service provided, while Parasuraman *et al.* (1988) refer to service quality as an overall evaluation of a specific firm's service resulting from the comparison between company performance and general customer expectations of how firms in the sector should perform. Interestingly, Hernon and Nitecki (2001) maintain that service quality has been defined from at least four perspectives: excellence, value, conformance to specification, and meeting and/or exceeding expectations. Of the same mind, Namukasa (2013) observes that "most definitions of service quality depend on the context and therefore focus on meeting the customer's need and requirements and how well the service delivered matches the customers' expectations of it" (p. 522).

Finally, a number of authors have agreed that service quality is determined by three main components, following the so-called "European perspective": technical quality (TQ), functional quality (FQ), and CI (Kotler, 1997; Reichel *et al.*, 2000; Bigné *et al.*, 2001; Kang and James, 2004; Verma, 2004; Grönroos, 2006; Kang, 2006; Martínez and Martínez, 2010; Yarimoglu, 2014).

In particular, Kang and James (2004) state and demonstrate through an empirical investigation carried out in the cell phone service industry that CS depends on service quality perception which in turn depends on TQ; FQ, measured by reliability, assurance, tangibility, empathy, and responsiveness (Parasuraman *et al.*, 1988); and the company's overall image. They also assert that the so-called "European perspective" of service quality (i.e., Grönroos, 1982, 1990) better represents service quality in respect to the American perspective, which only concentrates on FQ.

## 2.3 TQ and FQ

According to Yarimoglu (2014) "technical quality is interested in what was delivered whereas functional quality is interested in how the service was delivered" (p. 81). Kang (2006) maintains that the FQ is focused on "how" and not, as in the case of TQ, "what." This implies that if on the one hand FQ concerns staff behavior (thus relationship ability) with clients and quick response to their needs, TQ only considers the end result of service provision. Therefore, satisfaction is valued in terms of technical and FQ, even though it is FQ which plays a key role in the customers' perception of service quality (Nandan, 2010).

By now it seems clear that TQ is a prerequisite for good quality, because it ensures an acceptable quality level. However, the functional dimension can add substantial value for

customers, creating a favorable competitive edge. In short, it is possible to beat competition providing more and better services to customers and paying more attention to the functional/relational quality of those services (Parasuraman and Berry, 1991; Grönroos 2001; Hutchinson *et al.*, 2009; Ravichandran *et al.*, 2010). Moreover, Santouridis and Trivellas (2010) state that research attention on this topic is linked to the impact that service quality, and quality management, have on business performance, CS, customer loyalty, and profitability.

In short, service quality and CS depend on the following:

- TQ (or outcome) is what is received. It considers issues such as the final result of service provision (Zineldin, 2005; Grönroos, 2006; Kang, 2006); and
- FQ (or process) is how service is received, and considers issues such as the behavior of customer-staff contact and speed of service (Zineldin, 2005; Grönroos, 2006; Kang, 2006).

According to what has just been observed, it is possible to assume the following:

H1. Technical service quality (TQ) has a positive effect on CS.

H2. Functional service quality (FQ) has a positive effect on CS.

#### 2.4 CI

CI is defined in the literature by various authors as an “overall impression” deriving from the customer’s perception of the service offered (Dowling, 1988; Hatch *et al.*, 2003; Bravo *et al.*, 2009; Abd-El-Salam and Shawky, 2013; Hashim *et al.*, 2015). The same authors argued that CI results from the combination of feelings, ideas, behaviors, and recollections of past experience with the company. This overall impression can be positive or negative and represents the image that comes into the customer’s minds when the firm’s name is mentioned. Several authors have tried to define it. The CI may be considered as “a function of the accumulation of purchasing/consumption experience over time” (Andreassen and Lindestad, 1998, p. 84) and has two main components that Barich and Kotler (1991) define as functional (related to tangible attributes) and emotional (related to the psychological dimension). Aaker and Keller (1990) refer to the CI as the perception of the quality associated to the name of the company. According to Keller (1993), the CI reflects the memorized impression of the firm on the part of the consumer. In addition, Qayyum and Khang (2013) have suggested that CI “is an impression held in the minds of the public about a firm; it is a process outcome that starts with ideas, feelings and consumption experiences with a firm that are retrieved from memory and transformed into mental images” (p. 274). Thus, the CI plays a key role on the perception of the quality and, as a consequence, on satisfaction, so that it is considered a critical factor in determining the overall evaluation of any company (Grönroos, 1984; Andreassen and Lindestad, 1998). It is, in fact, starting from their image that companies can acquire a different position on the market, thus obtaining a competitive advantage (Abd-El-Salam and Shawky, 2013).

Likewise, in the tourism sector, image becomes a particularly relevant factor. Crompton (1979) has defined image as “the sum of the beliefs, ideas and impressions that a person has of destination” (p. 18), and Baloglu and McCleary (1999a) have referred to it as “an individual’s mental representation of knowledge (beliefs), feelings and global impressions about a destination” (p. 870). Furthermore, Bigné *et al.* (2001) have suggested that image “consists of the subjective interpretation of reality made by the tourist” (p. 607). Echtner and Ritchie (1993) have shown that CI consists of two main components: one cognitive (perceptual) and the other affective (evaluative). Kim and Perdue (2011), in particular, have considered the effects of the two components in the field of tourism, focusing on the attractiveness of the image of a tourist destination. Finally, Kandampully and Hu (2007) maintain, on the one hand, that the cognitive component is related to

functional and technical aspects that can be more easily measured, and on the other, they observe that as the affective component is based on feelings, beliefs, and emotions, its measurement tends to be more difficult. However, both components are the final result of past experiences with the company on the part of the customer/tourist.

In summary, the CI can be defined as follows:

- CI may also influence customers' perception of the service quality and, in turn, the firm's strategic position on the market (Zineldin, 2005; Grönroos, 2006).

All authors agree on the fact that the CI has a positive effect on CS. So, accordingly, the following assumption has been made:

*H3.* CI has a positive effect on CS (Figure 1).

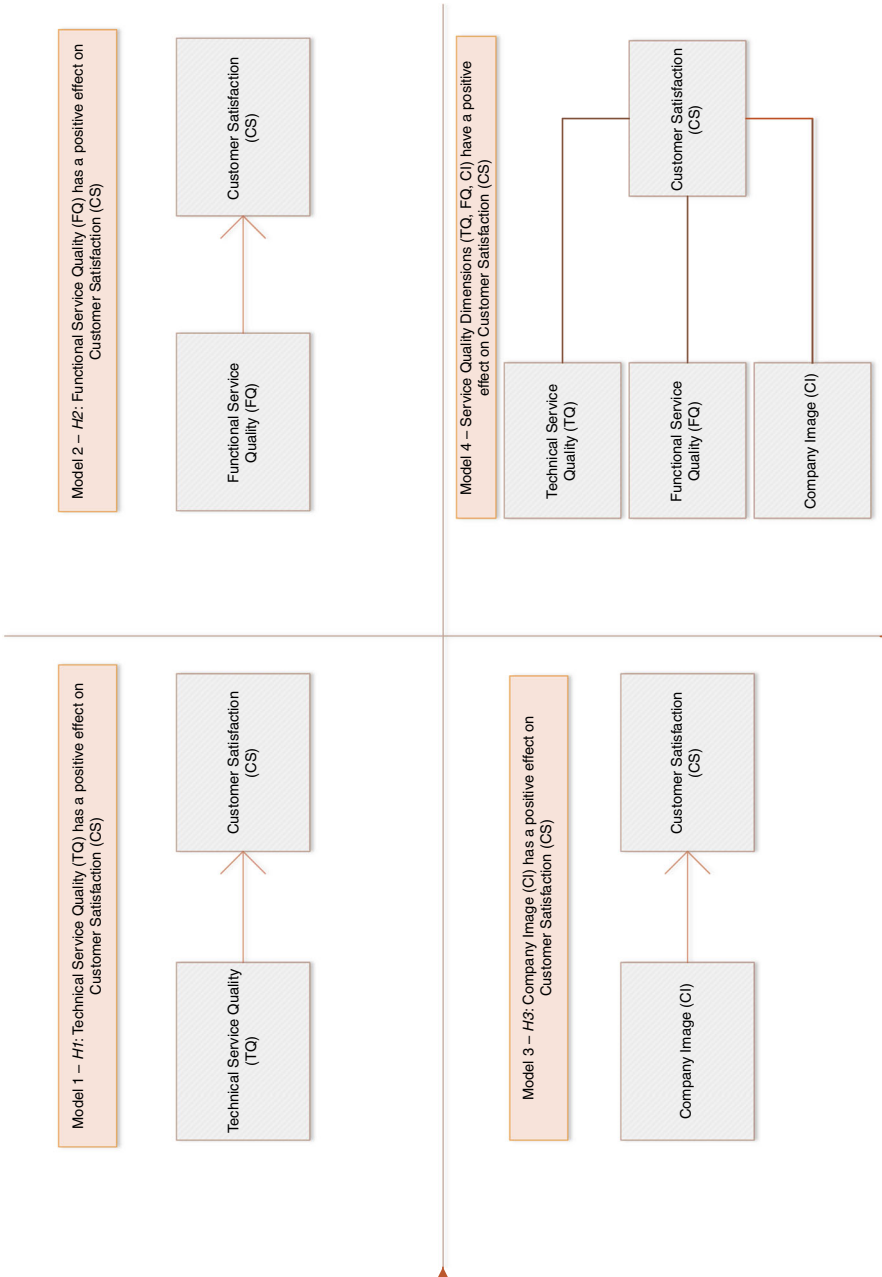
Building on Kang and James (2004) thesis, which tested the "European perspective" in service quality, we considered that a relationship must exist between TQ and FQ on the one hand and some of the cognitive aspects of the CI on the other. Given the above discussion on CI, we expect some TQ factors to have an impact on cognitive factors of CI. In particular, some technical aspects relevant to customer perception of a wellness destination have been already identified, like "bathing environment is clean and hygienic" and "SPA facilities are safe" (Lindqvist and Bjork, 2000; Jang and Wu, 2006; Esichaikul, 2012; Chen *et al.*, 2013a, p. 1109). Therefore, we consider that servicescape resort spa and thermal pool features are expected to play a role in determining the cognitive aspect of the CI in the thermal domain. Indeed, servicescape can be defined as "the built environment (i.e. manmade, physical surrounding rather than natural or social environment) affecting consumers and employees in service organizations" (Bitner, 1992, p. 58). Servicescape significantly affects the quality of the service, which in turn, impacts customers' positive perception of the services and the experience provided (Booms and Bitner, 1982; Bitner, 1992; Zeithaml *et al.*, 2008). Servicescape has been considered a crucial component in marketing strategy and important in "determining whether or not customers are satisfied" (van Heerden *et al.*, 2009). Looking to the FQ, the Kang and James' paper demonstrated that the Parasuraman *et al.* (1988) service quality dimensions concerning the relationship between employees and customers were the most important in determining the CI. According to Nguyen (2006) in particular, the performance of servicescape and service employees can significantly impact the image of the organization and the perception of service quality.

Given the above discussion, we formulated the following hypothesis:

*H4.* Servicescape resort spa and thermal pool (technical service quality dimension) and thermal employee (functional service quality dimension) have a positive effect on the cognitive aspect of the CI (Figure 2).

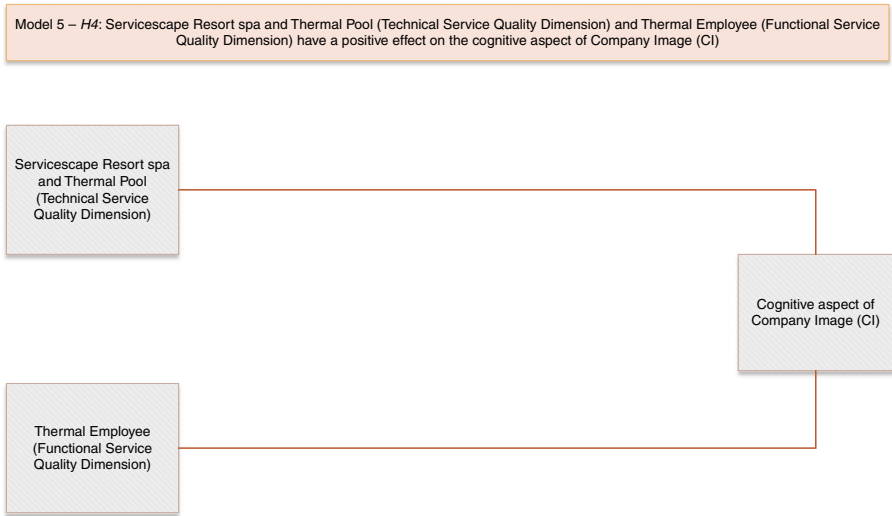
### *2.5 Service quality and CS in wellness tourism*

Service quality and CS are related and interdependent concepts (Costabile, 2001) and play a key role in the success of companies (Hutchinson *et al.*, 2009). In the wellness tourism sector, thermal tourism in particular, these concepts are even more relevant, due to the particular attention customers devote to this form of tourism and the quality of their spare time (Quintela *et al.*, 2011). According to Antunes (2008), companies working in the field must pay particular attention to the interaction between staff and their clients, adopting quality-oriented policies in order to satisfy customer's expectations. For this reason, Bertsch and Ostermann (2011) have observed that "one possibility for achieving differentiation on the market is high service quality and the creation of strong wellness brands" (p. 103). Furthermore, according to Jyothis and Janardhanan (2009) in order to attract more tourists today to this sector, it is essential to give a good impression and build a positive image,



**Figure 1.**  
Impact of Service  
quality dimensions on  
customer satisfaction  
(H1, H2, H3) – here

**Figure 2.**  
Technical quality,  
functional quality,  
and company image  
relationship  
(H4) – here



offering service quality to satisfy the customer's expectations. The results of a study by Chen *et al.* (2015) have shown that the quality expected directly influences CS, and the interaction between staff and tourists represents “the moment of truth” (p. 10576), being the focus of service quality. Finally, Lim *et al.* (2015) have demonstrated that tourists choose a thermal destination according to their level of satisfaction.

The assumptions made in the present investigation will be validated in the thermal tourism sector.

### 3. Research methodology

This research, carried out in 2013, was conducted in the thermal sector and specifically in a resort spa (Kelly, 2010) located in the city of Viterbo (Italy). The difficulty of precise identification of customers of the thermal site has led to the adoption of a non-probabilistic sampling frame, in particular to an accidental sampling (Bracalente *et al.*, 2009).

The sample is composed of 350 individuals. The collection of data was done administering questionnaires at the resort spa and their completion was made through direct interview and self-completion by the respondent. The whole phase of the data collection covered one week (from July 8 Monday to July 14 Sunday 2013), to ensure on the one hand the homogeneity of collection conditions (not always guaranteed when the collection refers to a longer period), and on the other, to obtain the best representativeness of the different types of customers. The choice of the best time for the administration of the questionnaire is based on the study by Rapporto Unioncamere (2013), according to which, “the trend of occupation reaches the peak in summer, when accommodating companies register the best results of the last two years (2010-2011): 53 percent July, 67 percent August, and 51 percent September (p. 142, data 2012).

The data collected have been analyzed through the statistical program “STATA 12 Statistics/Data Analysis” (www.stata.com).

To validate the formulated hypotheses, we divide the analyses in two different steps. The first includes four models, one for each of the service quality dimension effects on CS and the fourth considering all together the three service quality dimensions' effect on CS. The first three models were run to understand how different service quality dimensions individually impact CS, as an in-depth study, and then compare these results with the model which includes all together the service quality dimensions' effect on CS.



The second step is only dedicated to validate *H4* concerning the impact of some factors, of both technical and FQ, on the cognitive factor of CI (Model 5).

The empirical analysis was made running first the factor analysis to summarize all the variables considered in homogeneous variables and then using multivariate regression models.

### 3.1 Questionnaire

The survey instrument adopted in this investigation, as explained above, includes questions which were clustered into three main areas of analysis: consumer profile, containing information on socio-demographic and consumer behavior necessary to identify personal characteristics; service quality, containing information of the perception of the quality measured based on eight measures (thermal facilities, lounge bar, thermal pool, lounge bar employees, thermal pool employees, reactivity, thermal employees, and image) – for each measure, the three components TQ, FQ, and CI were later identified; CS section contains information about the service, thermal employees, and general satisfaction.

The answers to the questions concerning the customer's perception of the quality level have been arranged according to a Likert measurement scale, with a score assigned to the respondents between 1 and 6, where 6 represents the maximum positive value (strongly agree) and 1 the negative value (strongly disagree). As to the collection of the data, an even scale was preferred because the objective was to identify strongly satisfied respondents (those with a score 4 to 6), in order to distinguish them from the dissatisfied (those with a score 1 to 3), to avoid a null result (those who are indifferent) in respect to the variables on which they were to express their opinion (Likert, 1932; Bernués *et al.*, 2012).

To determine the values pertaining to the TQ of the spa, some of the most specific aspects of the resort spa were investigated, that is, easy access, accessibility, thermal facilities, lounge bar – a necessary component of a thermal structure – and the thermal pool, representing the most relevant aspect of a resort spa.

In order to define the value of the FQ, research focused on the staff operating in several locations of the spa: structure, reception, bar, and pool. More specifically, the dimensions identified by Parasuraman *et al.* (1988) to measure service quality were used to separate the single items, that is, reliability, responsiveness, reassurance, empathy, and tangibles (see Table II, for each item of FQ, also the reported value identified by Parasuraman *et al.*, 1988).

Finally, we refer to Kang and James (2004), Zineldin (2005), Lopez *et al.* (2011), Kim and Perdue (2011), Namukasa (2013), Tarus and Rabach (2013) to identify CI dimensions.

Indeed, the absence, in the literature, of a widely adopted and standardized scale that can be applied to any sector, represents the main difficulty for the measurement of CI (Lopez *et al.*, 2011; Davies *et al.*, 2001). For this reason, only some items of already existent scales were selected, considering them as the most appropriate for this research, namely, accuracy, prestige, continued commitment to satisfy the customer, prices, relationship between quality/prices, reliability, quality employee, and ability to listen (see Table II).

As to the CS variable, it has been evaluated through three different items concerning service satisfaction, thermal satisfaction, and overall satisfaction.

## 4. Data analysis and results

### 4.1 Sample profile

Table I shows the demographic characteristics of sampled customers attending the resort spa. As illustrated in Table I, 56 percent of the sample is female, and 26 percent of it belongs to the age group 36-45 years, followed by the age groups 45-55 years and 26-35 years. This means that most clients of the resort spa are young people, and the sample is mainly composed of customers with higher education or professionals. Table I also shows the main motive for these customers to attend the resort spa and that most of them have been

Measures	Items	Frequency	%
Sex	Male	154	44.0
	Female	196	56.0
Age	< 18	3	0.9
	18-28	24	6.9
	26-35	64	18.3
	36-45	91	26.0
	46-55	80	22.9
	56-66	54	15.4
	> 65	34	9.7
Education	Primary school	4	1.1
	Secondary school	51	14.6
	High school	153	43.7
	Graduation/PhD	142	40.6
Occupation	Student	17	4.9
	Unemployed	10	2.9
	Workman	17	4.9
	Manager	20	5.7
	Housewife	23	6.6
	Professional	66	18.9
	Entrepreneur	11	3.1
	Craftsman	6	1.7
	Dealer	6	1.7
	Retired	56	16.0
	Teacher	30	8.6
	Employee	75	21.4
	Other	13	3.7
Income	Low Income	13	3.7
	Middle Income	281	80.3
	High Income	56	16.0
Motivation	Health	128	36.6
	Relax	222	63.4
Time	First Time	42	12.0
	Less than 1 year	33	9.4
	12 years old	48	13.7
	3-5 years	89	25.4
	More than 5 but less than 10 years	66	18.9
	Over 10 years	72	20.6

**Table I.**  
Survey respondents'  
demographic  
frequencies

**Source:** Our elaboration

regulars of the resort spa for three to ten years. Overall, 80 percent of the sample declared themselves being in the middle income category.

#### 4.2 Factor analysis and reliability of variable

The eight items of measurement (thermal facilities, lounge bar, thermal pool, lounge bar employees, thermal pool employees, reactivity, thermal employees, and image) were classified according to three service quality dimensions: technical, functional, and CI. Once classified, Cronbach's  $\alpha$  was used to test the internal consistency for all items under respective variables (Namukasa, 2013). Hair *et al.* (2006) suggested that Cronbach's  $\alpha$  coefficient over 0.6 was adequate for basic research; therefore, the reliability of each construct was tested by this indicator, and the results show good internal consistency. Furthermore, the Kaiser-Meyer-Olkin value was used to verify the appropriateness of the sample for performing factor analysis, as it exceeds the 0.5 limit (Kaiser, 1974; Hair *et al.*, 2006; Santouridis and Trivellas, 2010).

Further, reliability tests were used for items referring to CS. Finally, factor analysis was used to synthesize the series of importance evaluations provided on some specific characteristics of the service studied, in order to identify the milestone of customer opinions. Factor analysis was applied to the items related to CS. Table II shows the classification of the items and the value of indicators of reliability.

Dimensions	Measures	Items	Items code	Items tot	Number of cases	Cronbach's $\alpha$	RMO
TQ	(1) Thermal facilities	Appearance	TF1	13	350	0.9119	0.8182
		Cleaning	TF2				
		Comfort	TF3				
		Capacity	TF4				
		Orientation	TF5				
		Reachability	TF6				
	(2) Lounge bar	Quality food and drinks	LB1	12	350	0.8885	0.8565
		Assortment	LB2				
	(3) Thermal pool	Cleaning	TP1	8	350	0.8817	0.8882
		Cleaning environments	TP2				
		Adequacy	TP3				
		Facilities	TP4				
	FQ	(4) Lounge bar employees	Courtesy (Reassurance)	LBE3	12	350	0.8885
Efficiency (Reliability)			LBE4				
(5) Thermal pool employees		Assistance (Reassurance)	TPE5	8	350	0.8817	0.8882
		Waiting for information (Reliability)	R1				
(6) Reactivity		Waiting times to receive services (Reliability)	R2	8	350	0.8817	0.8882
		Trained staff (Reassurance)	TE1				
(7) Thermal employees		Professional/Staff appearance (Tangibles)	TE2	8	350	0.8817	0.8882
		Capable (Reliability)	TE3				
		Quick to respond (Responsiveness)	TE4				
		Able to express themselves (Responsiveness)	TE5				
		Able to inspire confidence (Empathy) (Reassurance)	TE6				
		Available (Reliability)	TE7				
		Prices	I1				
Q/P	I2						
Accuracy	I3						
Reliability	I4						
Prestige	I5						
Quality employee	I6						
Ability to listen	I7						
Continued commitment to satisfy the customer	I8						
CS	Customer satisfaction	Service satisfaction	S1	3	350	0.626	0.7661
		Thermal satisfaction	S2				
		Overall satisfaction	S2				

**Note:** A relative dimension has been considered for each item of functional quality, for measuring the quality of service, identified by Parasuraman *et al.* (1988)

**Source:** Our elaboration

**Table II.**  
Classifications of  
items and  
reliability analysis

Tables III-X show the results of factor analyses[1] concerning all the four analyzed variables, namely, technical service quality (TQ), functional service quality (FQ), CI, and CS.

In Table III, the first four components of technical service quality have eigenvalue greater than 1 and contain 73.58 percent of the information included in the original data set. However, in this case, the use of the above criterion, in order to identify the new variables, is inadequate because the four factors extracted did not include a sufficient number of original variables. This also occurs with the first three extracted factors derived from the same methodology. For this reason, it was decided to consider only the first two factors containing 56.33 percent of the information contained in the original data set. This approach is also validated by the application of the scree plots criterion (Cattell, 1966) that suggested a natural break between the two considered factors.

In Table IV, a so-called saturation matrix (Barbaranelli, 2006) for technical service quality is presented. Owing to the factor analysis, starting from the original investigated components of technical service quality, two new factors have been identified and then used

**Table III.**  
Main components matrix (eigenvalues) – technical service quality dimension

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	5.67029	4.01831	0.4362	0.4362
Comp2	1.65198	0.463358	0.1271	0.5633
Comp3	1.18862	0.134267	0.0914	0.6547
Comp4	1.05435	0.375083	0.0811	0.7358
Comp5	0.67927	0.0434516	0.0523	0.788
Comp6	0.635818	0.180331	0.0489	0.8369
Comp7	0.455487	0.0461804	0.035	0.872
Comp8	0.409307	0.0433226	0.0315	0.9035
Comp9	0.365984	0.076638	0.0282	0.9316
Comp10	0.289346	0.0295612	0.0223	0.9539
Comp11	0.259785	0.0349197	0.02	0.9739
Comp12	0.224865	0.109968	0.0173	0.9912
Comp13	0.114898	–	0.0088	1

**Note:** The first two components represent the 56.33 percent of the variability of the whole sample

**Source:** Our elaboration

**Table IV.**  
Factor loadings (pattern matrix) and unique variances-technical service quality dimension

Measures	Items	Items Code	Factor1	Factor2	Uniqueness
(1) Thermal facilities	Appearance	TF1	<i>0.6892</i>	-0.0823	0.5183
	Cleaning	TF2	<i>0.6526</i>	-0.1973	0.5352
	Comfort	TF3	<i>0.8315</i>	-0.0986	0.2989
	Capacity	TF4	<i>0.6485</i>	-0.0735	0.574
	Orientation	TF5	<i>0.4214</i>	0.259	0.7553
	Reachability	TF6	<i>0.4306</i>	<i>0.7438</i>	0.2613
(2) Lounge bar	Quality of food and drinks	LB1	0.5046	<i>0.7380</i>	0.2008
	Assortment	LB2	-0.1046	<i>0.6855</i>	0.5192
(3) Thermal pool	Cleaning	TP1	<i>0.7363</i>	-0.2082	0.4146
	Cleaning environments	TP2	<i>0.7224</i>	-0.1733	0.4482
	Adequacy	TP3	<i>0.7051</i>	-0.0895	0.4948
	Facilities	TP4	<i>0.6837</i>	-0.124	0.5171
	Appearance	TP4	<i>0.3697</i>	0.0309	0.8624

**Notes:** The table shows the correlation of each variable observed with the two new variables obtained through the factor analysis and derived from the factors through the factor loadings. Each extracted factor was named accordingly. Values in Italic point out the highest factor loading results for each variable

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	5.80864	3.92835	0.4841	0.4841
Comp2	1.88029	0.37874	0.1567	0.6407
Comp3	1.50155	0.672627	0.1251	0.7659
Comp4	0.828925	0.338659	0.0691	0.835
Comp5	0.490265	0.0280641	0.0409	0.8758
Comp6	0.462201	0.156848	0.0385	0.9143
Comp7	0.305354	0.103499	0.0254	0.9398
Comp8	0.201855	0.0403025	0.0168	0.9566
Comp9	0.161553	0.0133655	0.0135	0.9701
Comp10	0.148187	0.0308219	0.0123	0.9824
Comp11	0.117365	0.0235562	0.0098	0.9922
Comp12	0.093809	–	0.0078	1

**Note:** The first three components represent the 76.59 percent of the variability of the whole sample

**Source:** Our elaboration

**Table V.**  
Main components  
matrix (eigenvalues) –  
functional service  
quality dimension

Measures	Items	Items code	Factor1	Factor2	Factor3	Uniqueness
(4) Lounge bar employee	Courtesy	LBE3	0.022	<i>0.951</i>	–0.033	0.094
	Efficiency	LBE4	–0.060	<i>0.950</i>	–0.047	0.093
(5) Thermal pool employee	Assistance	TPE5	<i>0.509</i>	0.111	–0.106	0.717
	Waiting for information	R1	–0.170	–0.069	<i>0.862</i>	0.224
(6) Reactivity	Waiting times to receive services	R2	–0.214	0.185	<i>0.828</i>	0.234
	Trained staff	TE1	<i>0.899</i>	0.051	0.033	0.188
(7) Thermal employee	Professional	TE2	<i>0.891</i>	0.010	0.203	0.165
	Capable	TE3	<i>0.854</i>	–0.065	0.105	0.255
	Quick to respond	TE4	<i>0.942</i>	0.019	0.035	0.111
	Able to express themselves	TE5	<i>0.928</i>	0.093	–0.008	0.129
	Able to inspire confidence	TE6	<i>0.918</i>	–0.063	0.001	0.154
	Available	TE7	<i>0.740</i>	–0.053	0.065	0.446

**Note:** Values in Italic point out the highest factor loading results for each variable

**Source:** Our elaboration

**Table VI.**  
Factor loadings  
(pattern matrix) and  
unique variances –  
functional service  
quality dimension

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	4.94703	3.91525	0.6184	0.6184
Comp2	1.03177	0.307007	0.129	0.7474
Comp3	0.724767	0.189032	0.0906	0.8379
Comp4	0.535735	0.262909	0.067	0.9049
Comp5	0.272826	0.0414958	0.0341	0.939
Comp6	0.23133	0.0873527	0.0289	0.9679
Comp7	0.143978	0.0314137	0.018	0.9859
Comp8	0.112564	.	0.0141	1

**Note:** The first two components represent the 75.74 percent of the variability of the whole sample

**Source:** Our elaboration

**Table VII.**  
Main components  
matrix (eigenvalues) –  
company image

**Table VIII.**  
Factor loadings  
(pattern matrix) and  
unique variances –  
company image

Measure	Items	Items code	Factor1	Factor2	Uniqueness
(8) Image	Prices	I1	-0.195	<i>0.934</i>	0.089
	Q/P	I2	<i>0.564</i>	-0.242	0.623
	Accuracy	I3	<i>0.893</i>	<i>0.097</i>	0.194
	Reliability	I4	<i>0.907</i>	0.115	0.165
	Prestige	I5	0.253	<i>0.831</i>	0.245
	Quality employee	I6	<i>0.897</i>	0.051	0.194
	Ability to listen	I7	<i>0.87</i>	-0.063	0.24
	Continued commitment to satisfy the customer	I8	<i>0.849</i>	-0.086	0.271

**Notes:** The table shows the relationships of each variable observed with the new variables introduced. Each extracted factor was named accordingly. Values in *Italic* point out the highest factor loading results for each variable

**Source:** Our elaboration

**Table IX.**  
Main components  
matrix (eigenvalues) –  
customer satisfaction

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	2.1415	1.50625	0.7138	0.7138
Comp2	0.63525	0.41201	0.2118	0.9256
Comp3	0.22324	.	0.0744	1

**Note:** The first component represents the 71.38 percent of the variability of the whole sample

**Source:** Our elaboration

**Table X.**  
Factor loadings  
(pattern matrix) and  
unique variances –  
customer satisfaction

Measure	Items	Items code	Factor1	Uniqueness
Customer satisfaction	Service satisfaction	S1	0.9053	0.1805
	Thermal satisfaction	S2	0.8959	0.1973
	Overall satisfaction	S3	0.7206	0.4807

**Notes:** The table shows the relationship of each variable observed with the extracted factor. Each extracted factor was named accordingly

**Source:** Our elaboration

to run the multivariate regression model. From Table IV, it can be stated that factor 1 explains the variables related to servicescape resort spa and thermal pool (TQ1), while factor 2 concerns the variable related to accessibility lounge bar (TQ2). Factor 1 (TQ1) has also been used to validate *H4*.

Coming to functional service quality, Table V takes into account only the components with eigenvalues greater than 1; the first three components contain 76.59 percent of the original data set.

Table VI presents the factor loadings matrix for functional service quality. It can be observed that factor 1 contains information related to thermal employee (FQ1), factor 2 instead refers to efficiency lounge bar (FQ2), and factor 3 concerns the variable related to reactivity (FQ3). Factor 1 (FQ1) has been also used to validate *H4*.

Analyzing CI, Table VII shows that the first two components have eigenvalues greater than 1 and contain 74.74 percent of the information contained in the original data set.

Looking at Table VIII, it is clear that factor 1 contains more information related to the thermal center's ability to listen to customer needs and to satisfy their expectations, and for this reason, it has been named relational quality (CI1). Factor 2 instead refers to the relationship between price and prestige (CI2). Only factor 1 (CI1) has been considered to also validate *H4*.

For CS, on the basis of the eigenvalues, only component 1 has eigenvalue greater than 1; for this reason, it has been chosen for detecting the new factor, named CS as shown in Table X. Component 1 contains 71.38 percent of the information contained in the original data set (see Table IX).

Through factor analyses, eight factors were identified, and these represent the variables we will then use to run the regression models. In fact, these variables are the most relevant to represent the phenomenon observed, since they are able to explain most of the variance of the original data set.

Table XI shows the correspondence between service quality dimensions, variables identified for each of them, and the relative code to be used to run the models. The same information is available for the CS variable.

Once the new variables were identified, the validity of assumptions was ascertained so as to proceed to the analysis of the relationship between CS and the dimensions of the service quality. Tables XII-XIV show the three regression models, each of the service quality dimensions investigated was used to validate *H1* to *H3*, while Table XV shows the results of the regression model, which includes all the service quality dimensions and their effects on CS (Model 4).

The adjusted  $R^2$  index provides information on the goodness of the model as a whole and expresses the proportion of the total variability of the dependent variable that can be attributed to the linear relationship with the considered independent variables. Having a considerable interpretative effectiveness, it can also be used to summarize the results of a regression model (Bracalente *et al.*, 2009). The value of “adj  $R^2$  index,” in Table XII, shows that 31.15 percent of the variability of CS is explained by technical service quality variables. A more in-depth analysis of the values of the *p-value* shows that very sound evidence against the null hypothesis in favor of the alternative exists only for the TQ1 variable.

In Table XIII, the 46.80 percent of the variability of CS is explained by functional service quality variables where FQ1 is significantly related to CS.

Measures	New variables code	New variables
Technical service quality	TQ1	Servicescape resort spa and thermal pool
	TQ2	Accessibility lounge bar
	FQ1	Thermal employee
Functional service quality	FQ2	Efficiency lounge bar
	FQ3	Reactivity
	CI1	Relational quality
Company image	CI2	Price and prestige
	CS	Customer satisfaction

Source: Our elaboration

Table XI. New variables

Variable dependent customer satisfaction (CS)					
New variables of technical service quality	New variables code	Coef.	SE	Sig.	<i>p</i> > <i>t</i>
Servicescape resort spa and thermal pool	TQ1	0.551775	0.070826	***	0.000
Accessibility lounge bar	TQ2	0.095593	0.075690	*	0.209
	_cons	-0.016970	0.068787	*	0.805
Adjusted $R^2$ value = 0.3115				Number of observaions = 350	

Notes: Model 1 – *H1*: technical service quality (TQ) has a positive effect on customer satisfaction (CS).  
\*, \*\*, \*\*\*Significant at 90, 95, 99 percent levels, respectively

Table XII. Regression model1 – *H1* – customer satisfaction (dependent variable), new variables of technical service quality (independent variable)

Moreover, in Table XIV, the value of “adjusted  $R^2$  index” ( $R^2 = 0.6470$ ) shows the existence of a regression link with the CI1 variable significantly related to CS.

Finally, in Table XV, the value of “adjusted  $R^2$  index” ( $R^2 = 0.4171$ ) shows how running the full model some of the variable effects on CS change.

In particular, looking at technical service quality dimensions, TQ1 (servicescape resort spa and thermal pool) lose some significance, while TQ2, which was not significant in the singular model (see Table XII) becomes significant. Coming to the functional service quality dimension, FQ1 (thermal employee) maintains its significance, FQ2 (efficiency lounge bar) becomes significant, and FQ3 (reactivity) becomes slightly significant. Finally, in the CI variables domain, CI1 (relational quality) maintains its significance while CI2 (price and prestige) which was not significant in the singular model (see Table XIV) becomes significant.

Figure 3 shows the four regression model run to validate *H1* to *H3*.

**Table XIII.**

Regression model2 – *H2* – customer satisfaction (dependent variable), new variables of functional service quality (independent variable)

Variable dependent customer satisfaction (CS)						
New variables functional service quality	New variables code	Coef.	SE	Sig.	$p > t$	
Thermal employee	FQ1	0.38343	0.12599	***	0.003	
Efficiency lounge bar	FQ2	-0.05292	0.12200	*	0.666	
Reactivity	FQ3	-0.07201	0.12291	*	0.560	
	_cons	0.0705	0.12263	*	0.568	
Adj $R^2$ value = 0.4680			Number of observations = 350			

**Notes:** Model 2 – *H2*: – functional service quality (FQ) has a positive effect on customer satisfaction (CS).  
\*, \*\*, \*\*\*Significant at 90, 95, 99 percent levels, respectively

**Table XIV.**

Regression model3 – *H3* – customer satisfaction (dependent variable), new variables of company image (independent variable)

Variable dependent customer satisfaction (CS)						
New variables of image company	New variables code	Coef.	SE	Sig.	$p > t$	
Relational quality	CI1	0.821263	0.044443	***	0.000	
Price and prestige	CI2	0.014333	0.044334	*	0.747	
	_cons	0.152120	0.044103	***	0.001	
Adj $R^2$ value = 0.6470			Number of observations = 350			

**Notes:** Model 3 – *H3*: company image (CI) has a positive effect on customer satisfaction (CS).  
\*, \*\*, \*\*\*Significant at 90, 95, 99 percent levels, respectively

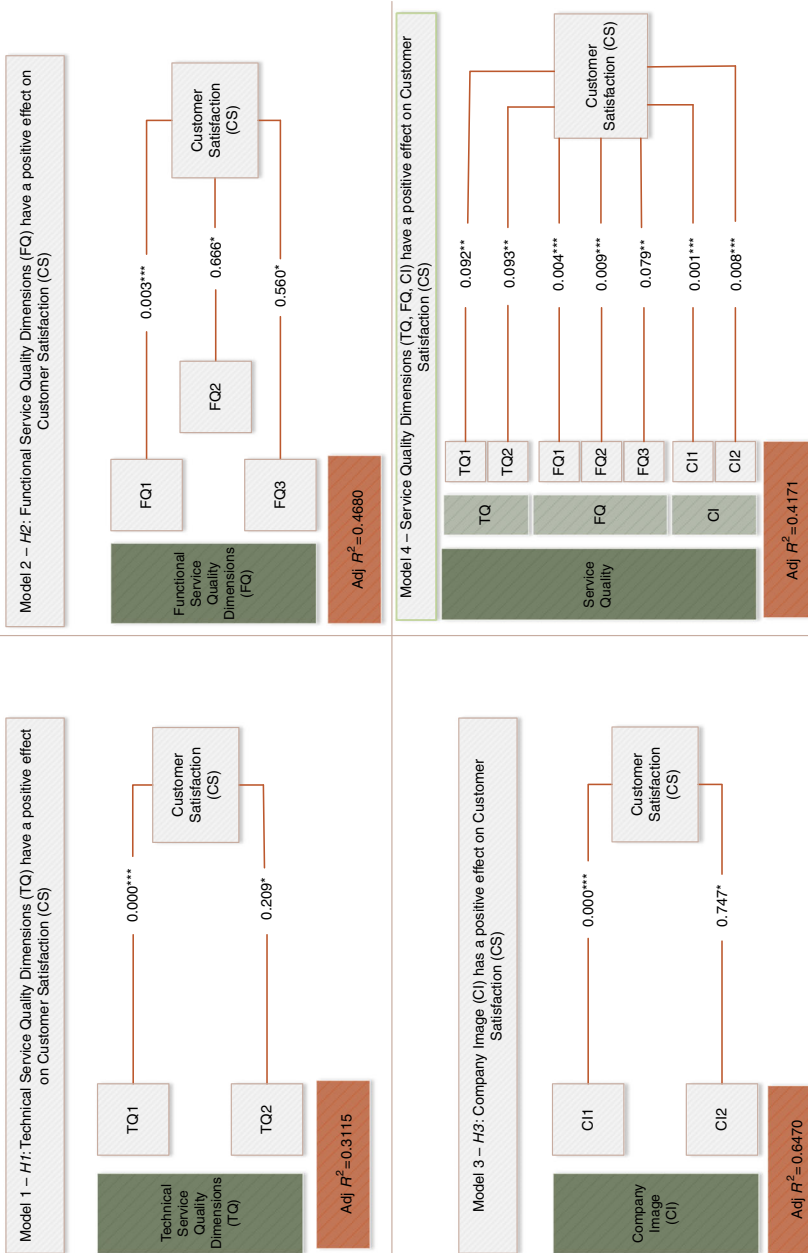
**Table XV.**

Regression model4 – customer satisfaction (CS) (dependent variable), technical service quality, functional service quality and company image (independent variables)

Variable dependent customer satisfaction (CS)						
New variables	New variables code	Coef.	SE	Sig.	$p > t$	
Servicescape resort spa and thermal pool	TQ1	0.27272	0.15794	**	0.092	
Accessibility lounge bar	TQ2	0.24355	0.14149	**	0.093	
Thermal employee	FQ1	-2.63056	0.84482	***	0.004	
Efficiency lounge bar	FQ2	1.36145	0.49366	***	0.009	
Reactivity	FQ3	-0.23883	0.13253	**	0.079	
Relational quality	CI1	3.60252	0.99838	***	0.001	
Price and prestige	CI2	0.42654	0.15142	***	0.008	
	_cons	0.07738	0.11095	*	0.490	
Adj $R^2$ value = 0.4171			Number of observations = 350			

**Note:** \*, \*\*, \*\*\*Significant at 90, 95, 99 percent levels, respectively





Notes: \*\*\*, \*\*, \* Significant at 90, 95, 99 percent levels, respectively

Figure 3. Validation of hypotheses H1-H3 – here

To validate *H4*, a second step of the research was done, concerning the effect of TQ1 (servicescape resort spa and thermal Pool) and FQ1 (thermal employee) on CII (relational quality).

Table XVI shows the regression model results used to validate the *H4*.

Table XVI shows that 44.53 percent of the variability of relational quality (CII) is explained by the model. Analyzing in detail the values of the *p*-value, it can also be observed that only FQ1 is significant.

The results clearly demonstrate that relational quality (CII), which represents the cognitive aspect of the CI, is affected by the relationship between employees and customers (FQ1) which was already recognized as the most important factor of the functional service quality dimensions able to impact CS (Parasuraman *et al.* (1988). However, the TQ variable, servicescape resort spa and thermal pool (TQ1) loses significance in this model which is explained mostly by FQ1. *H4* is then only partially validated.

The regression model results used to validate *H4* are shown in Figure 4.

### 5. Discussion

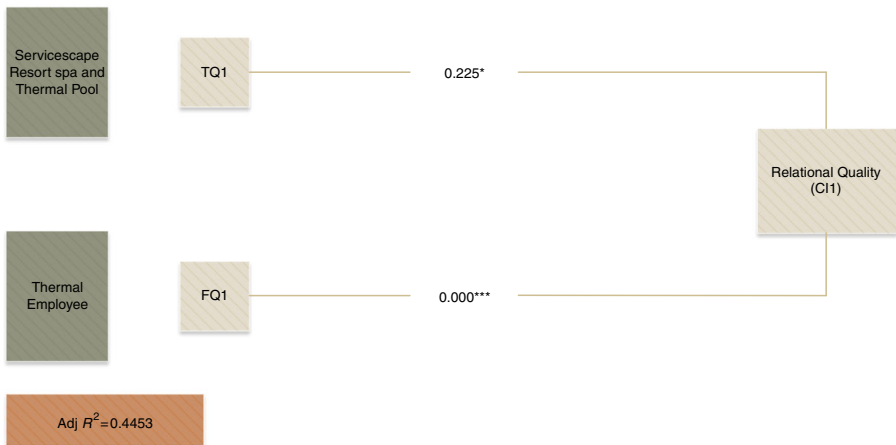
The aim of the present paper is to analyze and verify the existence of a dependence relation between the various dimensions of service quality, following the “European perspective,” and CS.

**Table XVI.**  
Regression model 5 – hypothesis *H4* – relational quality (CII) (dependent variable), servicescape resort spa and thermal pool (TQ1) and thermal employee (FQ1) (independent variables)

New variables	Variable dependent relational quality (CII)				
	New variables code	Coef.	SE	Sig.	<i>p</i> > <i>t</i>
Servicescape resort spa and thermal pool	TQ1	0.108532	0.088182	*	0.225
Thermal employee	FQ1	0.671441	0.087516	***	0.000
	_cons	0.048030	0.064955	*	0.464
Adj <i>R</i> <sup>2</sup> value = 0.4453		Number of observations = 350			

**Notes:** Model 4 – *H4*: servicescape resort spa and thermal pool (technical service quality dimension) and thermal employee (functional service quality dimension) have a positive effect on the cognitive aspect of the company image (CI). \*, \*\*, \*\*\*Significant at 90, 95, 99 percent levels, respectively

Model 5 – *H4*: Servicescape Resort spa and Thermal Pool (Technical Service Quality Dimension) and Thermal Employee (functional Service Quality Dimension) have a positive effect on the cognitive aspect of the Company Image (CI)



**Figure 4.**  
Validation of *H4* – here

**Notes:** \*, \*\*, \*\*\*Significant at 90, 95, 99 percent levels, respectively

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Moreover, this study is aimed at understanding whether some of the technical and functional variables impact CI and especially on its cognitive aspect.

As illustrated above, the administered questionnaire presents eight measures (thermal facilities, lounge bar, and thermal pool for TQ; lounge bar employees, thermal pool employees, reactivity, and thermal employees for FQ; and image for CI; see Table II) which help to assess all quality dimensions. The analysis of the data collected reveals that only some variables used in the analysis significantly influence CS.

As to the technical aspects of quality, the variable on which CS depends is servicescape resort spa and thermal pool, such as comfort, appearance, cleaning, and safety of the thermal pool. Spa customers are usually identified with people loving comfort and relaxation. The appearance of the resort, the cleanliness of common areas, and the cleanliness of the pool itself help form a personal idea of pleasure. In point of fact, the pool is the most used area of the resort spa, and its appearance and safety strongly condition the perception of the resort spa as a whole. Less relevant factors in CS investigation such as the one proposed in this study is the so-called accessibility lounge bar variable, which includes the following items: accessibility, food and drink quality, and assortment of the bar. These factors were not found decisive in this CS survey. This finding is in line with previous literature on wellness which has demonstrated that internal and external environments are one of the most crucial service factors in determining the motivation to travel and the choice of destination (Jang and Wu, 2006; Lindqvist and Bjork, 2000; Esichaikul, 2012; Chen *et al.*, 2013b). If this emerges in running the singular model studying the effect of technical service quality dimensions on CS, when running the overall model, both technical service quality dimensions become insignificant. This can be explained because, also in the wellness industry, and not only in the service sector as a whole (i.e. Kang and James, 2004), functional service quality has been found more relevant compared to technical service quality dimensions in explaining CS (Chen *et al.*, 2015). This study seems to confirm this finding in the thermal sector. Not running the singular model would have impeded the observation of different effects of the technical service quality dimensions on CS when studied alone in the wellness industry.

Among the functional variables, when considered singularly in their effect on CS in this research, the only factor significantly affecting CS is the staff, whether employees are able to understand and meet the needs of their customers. On the other hand, the role of bartenders and the waiting time to use services appear less relevant. The results of this study illustrate and seem to demonstrate the central role of resort spa staff in CS, also within the thermal sector. Indeed, in tourism and hospitality services, according to Nguyen (2006), the performance of contact employees is crucial to the customers' perception of the service offered, because they play a significant role in creating and maintaining CS. Also Tsaur and Lin (2004) have empirically analyzed the relationship between human resource management (HRM) practices, service behavior, and service quality in tourist hotels, highlighting that HRM policies can create a positive work environment, enhancing service quality and thus CS. Therefore, problems in HRM should, if arising, cause significant loss in terms of CS. Medina-Muñoz and Medina-Muñoz (2014) have analyzed the attractiveness of wellness destinations in the thermal tourism sector, showing that the attention of the staff in thermal structures is the most relevant factor affecting the choice of this type of destination. These same results can also be found in Chen *et al.* (2015). According to Quintela *et al.* (2011), "the ability of the employee to perform accurately and dependably," "the employee's willingness to help the customer and provide prompt service" as well as employees' "capacity to provide individualized attention" are those that give more satisfaction to the users of the units under study" (p. 6). Finally, also Chen *et al.* (2013b) include personnel services in the eight crucial factors of customer service in the thermal sector. Looking at the singular model in which only functional service quality dimensions affect CS, only thermal employees seem to play a role in CS. However, when the overall model containing the three

service quality dimensions is run, also the role of lounge bar employees emerges (efficiency lounge bar). This can be explained because thermal employee services are much more important for wellness tourists than the characteristics of lounge bar employees, as witnessed in the general service sector where the courtesy of staff can significantly affect CS (Mc Cleary and Weaver, 1982; Bitner *et al.* 1990; Hartline and Ferrell, 1996; Hartline and Jones, 1996; Parasuraman *et al.*, 1996; Kelley and Hoffman, 1997). When technical service quality as well as CI dimensions are considered, the primary role of employees working in the resort spa emerges. Indeed, also in the thermal sector, this study confirms that FQ is more important than technical service quality in explaining CS, above all owing to the role of the employee (Chen *et al.*, 2015).

Looking at CI, the most significant variable is represented by relational quality, which is seriousness, reliability, quality, ability to listen, and the commitment of the whole resort spa to satisfy its customers' needs. The second variable of the CI (price and prestige), however, does not affect CS when running the singular model to validate *H3*. Instead when running the overall model also, this second variable plays a role in determining CS. These insights could be explained because when the singular model is run, the relation quality, which encompasses employee quality, ability to listen, etc., plays a major role in explaining CS, while price and prestige are a variable used to choose the wellness destination (Medina-Muñoz and Medina-Muñoz, 2014; Chen *et al.*, 2015) and so is less relevant than the relational quality experienced in explaining CS. Moreover, wellness resort spa stays or weekends could also have been a gift; therefore, the price was not paid by the tourist, and the destination was chosen by the donor. When running the overall model, relational quality maintains its significance while price and prestige also become significant. Indeed, most spa regulars expect to pay the price they have already paid and know the services precisely, as well as the prestige of the spa resort in which they continue to go, through satisfaction. New customers considering the wellness resort spa already know the price they will pay and could be happy to pay a higher price for a more prestigious resort spa than the one in which they are staying, which also becomes relevant in determining CS.

*H4* developed in this study suggests that servicescape resort spa and thermal pool (TQ1) and thermal employee (FQ1) have an effect on relational quality (CII). The results show that only the effects of thermal employee (FQ1) on relational quality (CII) is significant. This result obtained in the thermal sector is in line with what had already been observed in other services (Kang and James, 2004) and witnesses that also in this particular industry the quality of staff, a part of functional service quality, has a greater effect on CI than technical service quality.

## 6. Conclusion and implications

This work has therefore demonstrated that for each of the service quality dimensions, only some factors are really relevant when singularly observed. It also confirms that FQ and CI are more relevant in explaining CS than technical service quality when the overall model including all service quality dimensions is run. Finally, the relational quality variable of the CI is affected only by thermal employee, a functional service quality variable.

In the light of such results, and in accordance with literature, it is possible to highlight the contributions of this paper. First of all, the paper presents three different models, one for each of the service quality dimensions encompassed in the "European perspective" which shed light on the relative importance of the variables considered, which is a novelty in the wellness sector using this methodology. It also studies all these service quality dimensions all together and, in this way, provides an in-depth discussion of the impact of service quality dimensions on CS in the thermal industry. Finally, it analyses the impact of one technical service quality dimension and one functional service quality dimension on the cognitive aspect of CI, partially confirming results already obtained in other sectors and calling for future research in this area.

From a managerial point of view, it is therefore extremely important for those managers working in wellness tourism, and in particular in the thermal segment, to invest in staff training (i.e. Dhar, 2015) and motivation and on CI, since such factors positively impact on CS. Managers of resort spas should also adopt a more oriented quality approach so as to constantly improve their ability to understand the needs and expectations of their customers, in order to implement their satisfaction and loyalty whilst motivating employees.

The promotion of the quality of tourism products should be a priority for companies working in the wellness sector, because it increases the number of tourists returning to the resort spa. Moreover, it would in time result in a better performance for the company. The data presented in this research also show the validity of such a statement: 88 percent of the respondents are, in fact, habitual visitors (only 12 percent are occasional). Quality is therefore a key element in making wellness firms more competitive.

## 7. Limitations and future research

This study, though, shows some limitations especially concerning the affective component of CI which has not been considered for the in-depth study which only considers the cognitive component (see *H4*). For this reason, further investigation is more than necessary to also consider the affective component of CI and hedonistic variables. The latter, in fact, can play a key role in the tourism sector especially in the perception of service quality and CS.

A first step toward a more comprehensive picture has been made after the in-depth study of each service quality dimension. However, using a different methodology, namely, the structural equation modeling, the study concerning *H4* could be included in the overall model studying the mediation/mediator role of CI and therefore the relationships among the three service quality dimensions investigated as relevant in determining CS.

Other limitations refer to the fact that the research was conducted in a thermal structure in the city of Viterbo (thus the results are limited to a specific geographical area). Furthermore, the sample is of an accidental kind. In order, therefore, to validate the data collected, it would be advisable to interview a larger number of clients in a larger number of structures in Italy and use a more representative sample of the population.

## Note

1. Factor analysis was used in order to eliminate problems of multicollinearity, and the criterion adopted for the identification of new factors was eigenvalues  $< 1$ . For an easier interpretation, the so-called “rotation” of the initial factor solution was applied. Because the following step of the research involves the use of regression analysis, an orthogonal rotation of factors (the rotated factors remain uncorrelated) was applied using the varimax method (Kaiser, 1958).

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Service quality  
and customer  
satisfaction

**Further reading**

Global Wellness Institute (2014), *Tourism Wellness Economy*, Global Wellness Institute, Empowering Wellness Worldwide, New York, NY, available at: [www.gsws.org](http://www.gsws.org)

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