

Differentiating service quality impact between the online and off-line context: an empirical investigation of a corporate travel agency

Differentiating
service quality

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Abstract

Purpose – Corporate travel represents a significant source of revenue for the tourism industry. Therefore, the quality of service is essential for maintaining and expanding corporate client bases. Despite the importance, the extant literature has yet sufficiently examined corporate travel service quality (SQ) and its impact. To make up for the drawback, this study aims to differentiate the impact of SQ perceptions on customer satisfaction between the online and off-line contexts through an empirical investigation in one of the top five corporate travel agencies in North America.

Design/methodology/approach – The well-established SERVQUAL measurement is applied in differentiating the impact of SQ dimensions between the online and off-line context. To empirically test the proposed corporate travel agency (CTA) SQ conceptual model, a set of survey data of “Welcome Back Survey” from HRG (a top five CTA in North America) was examined.

Findings – The study finds that for online services, assurance, responsiveness and empathy affect perceived SQ, whereas for off-line services, assurance, empathy and tangible are the three dimensions of perceived SQ.

Research limitations/implications – By relying on the existing survey, the off-line context has one less dimension than the online context. Yet as an early effort in differentiating the differences in the impact of SQ between two service contexts, the study offers insightful findings.

Practical implications – The findings will be helpful for business managers of CTAs to identify the factors that influence SQ in both online booking and off-line booking context. In particular, assurance and empathy are two dimensions that exert a significant impact on customer satisfaction.

Originality/value – This paper is the first to compare the differences of the SQ of online and off-line corporate travel.

Keywords Corporate travel agency (CTA), SERVQUAL, Service quality, HRG

Paper type Research paper

Introduction

Service quality (SQ) is of paramount importance in the service industry (Torres, 2014). Improved SQ will satisfy and even delight customers, thus reducing the churn rate and



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securing stable revenues (Ciunova-Shuleska *et al.*, 2013). In the tourism trade sector, corporate travel agency (CTA) plays important roles by providing services to corporate clients to meet their business travel needs, controlling travel expenses and providing travel solutions (Chircu *et al.*, 2001; Morrison *et al.*, 1994; Gustafson, 2012). Though business travel represents a significant market segment in tourism, many studies seem to emphasize SQ of the leisure travel agency sector (Martínez Caro and Martínez García, 2008; Ciunova-Shuleska *et al.*, 2013; Kaynama and Black, 2000; Kim and Lee, 2004; Riel *et al.*, 2004; Ryan and Cliff 1997; Tsang *et al.*, 2010; Van Dyke *et al.*, 1997).

Though online booking has seen its increased adoption versus traditional CTA off-line booking, business travelers still rely on the traditional booking services offered by “live” off-line travel agents (National Business Travel Association (NBTA) (2010)). According to HRG, one of the top five global CTAs (Anonymous, 2014), traditional (offline) bookings stay around 70% and remain an intractable part in the process of making travel arrangements for the travelers. Figure 1 presents the percentage of off-line, online and online-assisted booking data. In spite of the rise of online travel booking services,

As shown in Figure 1, the online and off-line booking proportion trend indicates that the online and off-line contexts in the CTA sector will coexist for a long time to come.

Despite a plethora of studies on SQ, research comparing the impact of SQ in online and off-line contexts is rare. In this study, we will investigate differences of the impact of SQ on the CTA booking services between both online and off-line contexts.

To do so, we adopt the well-established SQ measurement instrument SERVQUAL developed by Parasuraman *et al.* (1988). The construct measurement has been examined in both the online (Ho and Lee, 2007) and off-line contexts (Marinković *et al.*, 2013), and thus considered relevant for the purpose of the study.

The purpose of this study is to explore which SQ dimension affects customer satisfaction in online and off-line travel services.

Literature review

Service quality

The concept of SQ has been widely studied and applied in various service industries, such as banking (Ali and Raza, 2017), healthcare (Al-Neyadi *et al.*, 2018), airport luggage handler (Rezaei *et al.*, 2018), hotels (e.g. Devi Juwaheer, 2004; Stefano *et al.*, 2015) and travel agencies

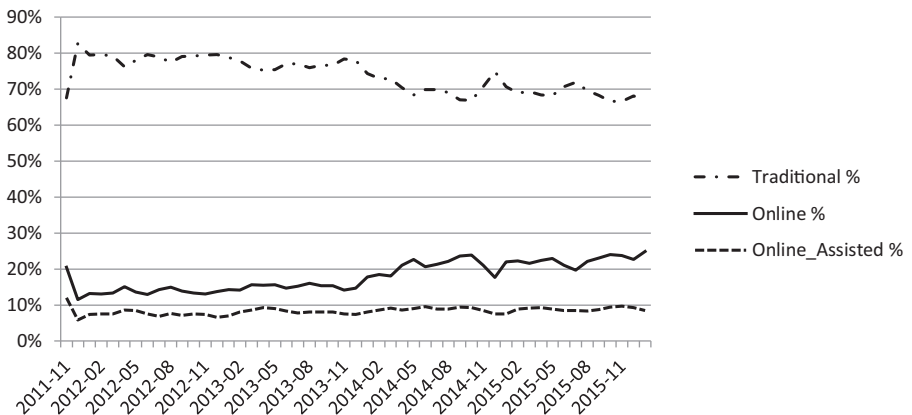


Figure 1. Online, online-assisted and traditional reservation trend, year 2011–2015

Source(s): HRG North America

(Marinković *et al.*, 2013). However, studies are lacking focusing on the CTA industry. SQ is defined as customer evaluation of the overall excellence of the service (Parasuraman *et al.*, 1988) and overall perceived judgment (Grönroos, 1984). It is proposed as an antecedent of consumer satisfaction (Cronin and Taylor, 1992).

“Services” are different from the “Goods” mainly due to the three distinct characteristics: intangibility, heterogeneity and simultaneous production and consumption (inseparability) (Schneider and White, 2004; Xu *et al.*, 2013). The intangibility of service denotes that by comparing with “tangible goods,” services cannot be seen, touched and verified in advance of sales to assure quality (Parasuraman *et al.*, 1985, 1988), because services encompass processes and performance rather than objects (Schneider and White, 2004). Unlike production of goods, services have no physical materialization (Schneider and White, 2004). This intangibility perspective results in the difficulty of understanding customers’ perception and SQ evaluation (Ding and Keh, 2017). Heterogeneity means that different customers might have different expectations and experience, or that different service personnel might service the same customers differently (García-Quevedo *et al.*, 2011). The same demands might be satisfied differently depending on the people involved. The heterogeneity nature of service makes it difficult to control SQ even though the firm has the service standard (Schneider and White, 2004). What services customers received may not be the same as what the firm intends to deliver (Parasuraman *et al.*, 1985). Inseparability indicates that services occur during the service delivery from the service firm personnel to their customers. The production and consumption of services cannot be separated. Service firms cannot fully control over the SQ since the customer participation is intensely intertwined with service providers during service processing. Therefore, customers’ experience is important to evaluate the quality of service performance (Moeller, 2010; Parasuraman *et al.*, 1985).

Service quality measurement

The three distinct characteristics of service products contribute to the difficulty and complexity of measuring SQ. There have been plenty of studies devoted to developing models and scales to measure SQ. Parasuraman *et al.* (1985) in their seminal work on measuring SQ pointed out that “service quality is more difficult for the consumer to evaluate than goods quality. Service quality perceptions result from a comparison of consumer expectations with actual service performance” (p. 2). Fonseca (2009) argued that SQ equals customer satisfaction, which denotes customers’ subjective perception regarding quality of services, and is driven from the customers’ experience and their expectations. Schneider and White (2004) developed a user-based approach of SQ evaluation based on how SQ is subjectively defined on the personal experience of customers.

Grönroos (1984) developed the SQ model from technical and functional quality perspectives. While service technical quality is focused on how customers perceive services, service functional quality represents what service content influences the customers. Parasuraman *et al.* (1988), drawing on the three characteristics of services, intangibility, inseparability and heterogeneity, introduced the conceptual foundation of SQ with the five dimensions measuring instrument, which is termed SERVQUAL, indicating the five distinct dimensions: (p. 23):

- (1) Tangible: Physical facilities, equipment and appearance of personnel
- (2) Reliability: Ability to perform the promised service dependably and accurately
- (3) Responsiveness: Willingness to help customers and provide prompt service
- (4) Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence

(5) Empathy: Caring, individualized attention the firm provides its customers

Parasuraman *et al.* (1988) further verified the reliability of SERVQUAL model with factor analysis, and assessed its validity through using one-way ANOVA (Parasuraman *et al.*, 1988).

Since SERVQUAL was developed and introduced by Parasuraman *et al.* (1988, 1991), it has been successfully applied by many researchers in various industries (see Table 1 for the summary of the prior research by applying SERVQUAL). Referring to Parasuraman *et al.*'s measurements between expectations and perceptions, LeBlanc (1992) stated that customer's expectations would influence their perceptions of quality. His exploratory study in travel agencies was based on the data collected from customer's databases provided by two travel agencies. The questionnaire was designed in terms of the perception-expectation difference, which integrated Parasuraman *et al.*'s (1988) two sets of perception measurement and expectation measurement into one, focusing on the difference of perception-expectation. Kang *et al.* (2002) applied SERVQUAL to internal SQ and confirmed that it was an appropriate SQ measurement tool. Their confirmatory factor analysis revealed that the five dimensions of the SERVQUAL model – reliability, assurance, tangible, empathy and responsiveness – were distinct and conceptually clear. Marinković *et al.* (2013) explored travelers' satisfaction in the travel agency services. They tested each of the five dimensions of the SERVQUAL model on customer satisfaction and concluded that all dimensions (i.e. reliability, responsiveness, empathy and tangibility) except assurance had a significant influence on customer satisfaction. Xu *et al.* (2013) investigated the role of SQ in the e-service context and found that in the traditional off-line context format, SQ is a fundamental criterion of success for online companies (online activities). They further indicated that the five dimensions of the widely applied SQ model, SERVQUAL, were also supportive to measure SQ for the relatively new domain of online business (Xu *et al.*, 2013). Online SERVQUAL was empirically tested by Kim and Lee (2004) and Kaynama and Black (2000). Van Dyke *et al.* (1997) indicated that the development of industry-specific measures of SQ should be taken into account when applying SERVQUAL model (Van Dyke *et al.*, 1997).

Service quality in corporate travel agency industry

The management of corporate travel is fundamental in supporting businesses in any business field where a company needs to reach its clients and coworkers (Senkane, 2018). CTAs provide services to corporations whose business model is "Business to Business" (B2B). Since the services are usually contract-based, the relationship between CTAs and their clients is relatively stable (Gustafson, 2012). But the services are orientated in "Business to Customer" (B2C) because the services are provided between CTA counselors and corporate customers. The five dimensions of the SERVQUAL model can be an appropriate instrument to assess the quality of CTAs services.

The Global Business Travel Association (GBTA) explained that the CTA functions are to provide services for business travel needs in order to meet corporate goals and financial controls, facilitate adherence to corporate travel policies, realize savings through negotiated discounts, serve as a valuable information center and ensure travel efficiency (GBTA Foundation, 2014). For the contract-based business, high-level of SQ is the fundamental requirement. For instance, there is a distinct item "Service Level Agreement" (SLA) when HRG (one of the top global CTAs) signs a contract with a corporate client. The SLA also includes a survey to the clients to assess the SQ rendered by the CTA. The higher the SQ the travel agencies provide, the more competitive they are in the market. The travel agency industry is centered on the communication among agents, customers, technological service vendors and travel service vendors. The Internet has become the most important communication medium for CTAs to provide online services. By booking online, clients can access the collected information and implement travel policy directly. National Business

Study reference	Main topic	Research method	Findings and SQ measurement dimensions
Grönroos (1984)	SQ Model and its marketing implications	Survey	SQ defined as expected service and perceived service Dimensions: technical quality, functional quality
Parasuraman <i>et al.</i> (1985), Grobelna and Marciszewska (2013)	A conceptual model of service quality and its implications for future research	Focus group interview	Confirmed SQ is the comparison between expectations and performance Dimensions: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding, tangibles
Parasuraman <i>et al.</i> (1988), Torres (2014)	SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality	Survey	Based on the prior PZB 1985 research of SQ 10 facets, generated <i>SERVQUAL</i> and verified the reliabilities and assessed the validity Dimensions: tangible, reliability, responsiveness, assurance and empathy
Parasuraman <i>et al.</i> (1991)	Refinement and reassessment of the SERVQUAL scale	Survey	Comparative discussing with other <i>SERVQUAL</i> replication studies, refined and reexamined its reliability and validity; most valuable when it is used periodically to track SQ trends Dimensions: tangible, reliability, responsiveness, assurance and empathy
LeBlanc (1992)	Evaluation of SQ in travel management companies	Personal interview and survey	Referring to PZB both measurements between expectations and perceptions, LeBlanc (1992) stated perceptions of quality are influenced by expectations. His exploratory study in travel agencies is based on that data collected directly in terms of the perception-expectation difference on a Likert-type scale Dimensions: tangible, reliability, responsiveness, assurance and empathy
Pitt <i>et al.</i> (1995)	SQ effectiveness measurement		Demonstrated that <i>SERVQUAL</i> is applicable in the information systems arena Dimensions: tangible, reliability, responsiveness, assurance and empathy

(continued)

Table 1.
Prior research on service quality

Study reference	Main topic	Research method	Findings and SQ measurement dimensions
Kang <i>et al.</i> (2002)	Measurement of internal SQ	Survey	Confirmed SERVQUAL is a useful tool for the measurement of SQ, with the majority of the research to date Dimensions: tangible, reliability, responsiveness, assurance and empathy
Ho and Lee (2007)	e-travel service quality scale		Developed a five-factor scale for evaluating online travel service quality on the basis of SERVQUAL SERVQUAL dimensions are important antecedents that trigger satisfaction Dimensions: tangible, reliability, responsiveness, assurance and empathy
Marinkovic <i>et al.</i> 2011	Impact of SERVQUAL in travel management companies	Survey	Discussed 25 SERVQUAL utilizations and indicated that SERVQUAL is also widely support to measure SQ for the online business Dimensions: tangible, reliability, responsiveness, assurance and empathy
Xu <i>et al.</i> , (2013)	Integrating SQ with system and information quality	Survey	

Table 1.

Travel Association (NBTA) (2010) reports showed 93% of US domestic or simple routing flights were booked online. For most international flights and complex trips, business travelers still rely on travel agents services. Therefore, the coexistence of online and off-line services provided by CTAs warrants the examination of the impact of each service on customer satisfaction.

Modeling and measuring service quality and customer satisfaction

Measuring customer satisfaction

Prior studies demonstrated that a high SQ level resulted from a high level of customer satisfaction (Cronin *et al.*, 2000; Brady and Robertson, 2001; Yang *et al.*, 2009). Zeithaml *et al.* (1996) also showed evidences that customers' perception of SQ triggers their satisfaction. Based on a study in the travel industry, Marinković *et al.* (2013) suggested setting a relationship between each individual SERVQUAL component and customer satisfaction. Applying these researchers' suggestions into the research model, this study will build the linkages among the variables shown in Figure 2 and investigate how important each variable contributes to the satisfaction.

Parasuraman *et al.* (1985, 1988) developed SERVQUAL – the five dimensions model determining SQ, in which perceived tangible, reliability, responsiveness, assurance and empathy measure customer satisfactions. The hypotheses can be made that SQ is positively and reciprocally related to customer satisfaction (Riel *et al.*, 2004). Based on the SQ SERVQUAL studies discussed above, a research model for measuring SQ of a CTA is derived and shown in Figure 2. There are six latent variables: tangibility, reliability, responsiveness, assurance, empathy and satisfaction. Satisfaction as a dependent variable was added by Parasuraman *et al.* (1985, 1988) to SERVQUAL model in order to test the empirical relations among the five latent variables. Taking into consideration the functions of a CTA, this model will be applied in both the online context and off-line context in this study.

Hypotheses

This study will apply Parasuraman *et al.*'s (1988) five dimensions of the SERVQUAL model in the CTA SQ measurement with an added dependent variable, satisfaction, as shown in Figure 3.

Online context

Reliability (OnREL). In online booking context, reliability is the IT system's ability to find the most applicable information. Corporates control travel expenses through corporate travel policies in order to "maximize travel safety and efficiency through the 'best' fare" (Guizzardi *et al.*, 2017, p. 129). A CTA serves as a valuable information center by providing information about fares at a negotiated discount on different types of flights, hotels and car rentals that could meet customer preferences. It can, therefore, be expected that:

H1. _OnREL: In the online services model, the reliability of a CTA services to find the most applicable fare is positively related to overall quality perceptions.

Tangible (OnTANG). In the online context, the dimension of tangible is reflected as "accessibility," "navigation" and "design and presentation" (Ho and Lee, 2007; Kaynama and Black, 2000). A CTA needs to ensure its services adhere to corporate travel policies and meet corporate financial goals. As corporate travel clients' profiles are usually executed by IT

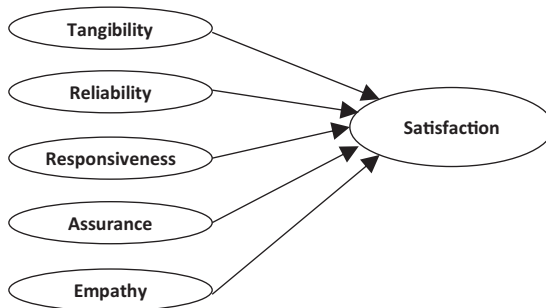


Figure 2.
CTA service quality measurement model

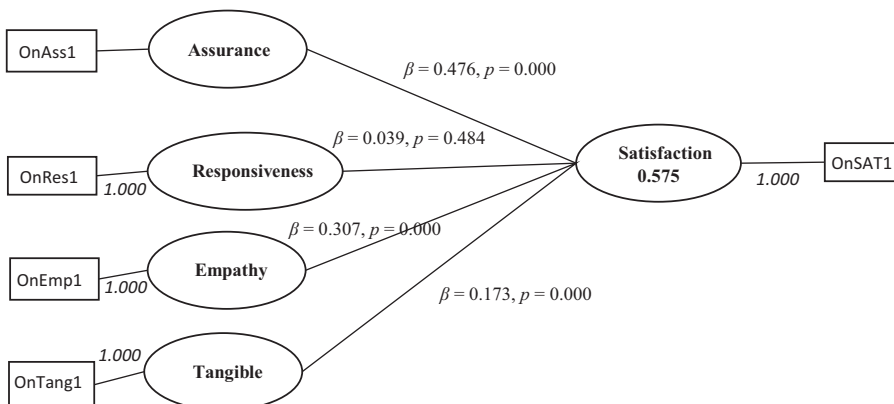


Figure 3.
PLS off-line structural model and hypotheses test

systems, the ease of accessing and updating client profiles is a crucial element for clients to evaluate services. Therefore, this leads to the following hypothesis:

H2. _OnTANG: In the online services format, the tangibility of CTA services is positively related to overall quality perceptions.

Empathy (OnEMP). The CTA functions require the services to serve as a valuable information source. For instance, it is necessary for customers to be able to access the help channel to get the assistance services. It can, therefore, be posited that:

H3. _OnEMP: In the online services model, the empathy of CTA services is positively related to overall quality perceptions.

Responsiveness (OnRES). Responsiveness reflects the timeliness of ticket and itinerary delivery. In many CTAs, the service such the itinerary delivery is associated with the service fee charge level. The faster and more accurately a provider responds to requests, the better the service will be evaluated. Therefore, it is hypothesized that:

H4. _OnRES: In the online services model, perceived responsiveness of CTA services is positively related to the customers' satisfaction.

Assurance (OnASSU) The assurance is the aspect of services to provide sufficient information to inspire trust and confidence for customers. The CTA functions require the services to serve as a valuable information center and facilitate adherence to corporate travel policies. In the corporate services sector, security and privacy are usually guaranteed by a secure log-in process (e.g. HTTPS web site, VeriSign). Therefore, it is hypothesized that:

H5. _OnASSU: In the online services model, perceived assurance of CTA services is positively related to overall customer satisfaction.

Off-line context

Tangible (OffTANG). "Tangibles are the 'visible' aspects of the service that are employed by businesses to improve external customer satisfaction" (Panda and Das, 2014, p. 53). In off-line context, the CTA functions require travel agents to provide excellent personal services to facilitate corporate travel booking adherence to corporate travel policies and to meet corporate goals. It is therefore hypothesized that:

H6. _OffTANG: In the off-line services model, service providers need to meet the company's travel policies and choose the preferred supplier and fares for the customers; therefore the tangibility of a CTA provided is positively related to overall quality perceptions.

Empathy (OffEMP). The CTA functions require the services to serve as a valuable information source. For instance, it is necessary for customers to be able to access the help channel to get the assistance services. That service agent counselors care and pay individualized attention to customers definitely impacts customer's perceived satisfaction. The following hypothesis is thus proposed:

H7. _OffEMP: In the off-line services model, empathy of a CTA providing the accessibility to counselors has positive influence on overall quality perceptions.

Responsiveness (OffRES). In the off-line booking context, responsiveness denotes the time that a CTA takes to respond to clients' inquiries and requests related to tickets and itinerary delivery. The CTA functions require the services to ensure travel efficiency and meet corporate goals. Therefore, it is expected that:

H8. *_OffRES*: In the off-line services model, the timeliness of delivery of the services is positively related to overall quality perceptions.

Assurance (OffASSU). The CTA functions require the services to serve as an accurate information center and facilitate adherence to corporate travel policies. Therefore, it is expected that:

H9. *_OffASSU*: In the off-line services model, providing accuracy services positively lead to overall quality perceptions.

Methodology

To test the proposed CTA SQ conceptual model, the data from the “Welcome Back Survey” conducted by HRG (one of the top five corporate travel agencies in North America) were used. The “Welcome Back Survey” is a required component of the company’s travel services contract completed by each client when making travel reservations through travel agents either online or off-line. The data from two mega clients ABC1 and ABC2 over two years 2014 and 2015 were used for the model testing. Table 2 shows the indicators used in the questionnaire design for online and off-line survey.

A total of 25,592 survey questionnaires were sent, and 1,315 were responded (see Table 3), resulting in 5% of the response rate. Among the returned responses, 858 were off-line with 843 being valid, 457 were online with 437 being valid. The online and off-line surveys contained eight and five questions, respectively. Both surveys had a customer satisfaction question in which clients were asked to indicate the level of agreement with statements about their personal perceptions of SQ on the 10-point Likert scale, where 0 = strongly unsatisfied to 10 = strongly satisfy.

To test the conceptual model, we employed partial least square (PLS), a component-based structural equation modeling for reasons. First, it offers a simultaneous analysis of the measurement model as well as the structural model (for construct relationships), which provides accurate estimates of the paths among constructs (Barclay *et al.*, 1995; Chin 1998a,

	Indicator	Statement
<i>Online</i>		
Tangible	OnTang1	Ease in completing and updating your personal profile
	OnTang2	The system’s ability to display information about your company policy and preferred suppliers
Reliability	OnRel1	The system’s ability to find the most applicable fare
Responsiveness	OnRes1	The timeliness of your ticket and itinerary delivery
Assurance	OnAss1	The display and choice of flights
	OnAss2	The search, display and selection of hotel properties
Empathy	OnEmp1	The service provided by our central fulfilment service if you have had occasion to request assistance on booking or technical issues
Satisfaction	OnSat1	Your overall experience with HRG
<i>Off-line</i>		
Tangible	OffTang1	Your counselor’s effort to provide you with the lowest logical airfare in keeping with your company policy
Responsiveness	OffRes1	The timeliness of your ticket and itinerary delivery
Assurance	OffAss1	The accuracy of your reservation
Empathy	OffEmp1	The accessibility of your counselor team

Source(s): HRG 2014 and 2015

Table 2.
Indicators in the questionnaires

1998b). Second, it is a particularly valuable statistical method for exploratory studies (Hair *et al.*, 2014). An application of SmartPLS 3.0 is adopted for this statistical analysis.

Data analysis

Off-line measurement model

The measurement model was assessed by checking construct validity (including convergent validity and discriminant validity) as well as reliability. The convergent validity was assessed by (1) checking whether factors of corresponding constructs exhibited loadings above 0.70 (Chen, 2010), and (2) verifying whether average variance extracted (AVE) score for each construct was above 0.50 (Fornell and Larcker 1981; Chen 2010).

In off-line measurement, the factor loading for each construct was 1, as only one indicator was used for each construct.

Discriminant validity was evaluated by checking whether each factor loading was higher under its corresponding construct than under any other construct, and whether the square root of AVE for each construct was larger than its correlation with other constructs (Chen 2010; Chin, 1998b). A close examination of factor cross-loadings (see Table 4), construct correlations and AVEs revealed strong discriminant validity. We assessed reliability based on composite reliability, which uses actual item loadings to calculate the internal consistency reliability (Werts *et al.*, 1974). All constructs had the composite reliability above 0.80, demonstrating strong reliability.

The complete model for the off-line context explained 57.5% of variance of satisfaction (see Figure 3) and 53.9% for the online context (see Figure 4). Hypotheses test results were shown in Table 4.

As shown in Figure 3, assurance significantly influenced customer satisfaction ($\beta = 0.476$, $p < 0.001$). Similarly, both empathy ($\beta = 0.307$, $p = 0.000$) and tangibility ($\beta = 0.0173$, $p = 0.000$) significantly affect perceived satisfaction. The off-line model explained 57.5% of the variance in satisfaction. However, responsiveness was not a significant antecedent of customer satisfaction ($\beta = 0.039$, $p = 0.484$).

Table 3.
Survey response

Client	Year	Survey sent	Online type response	Off-line type response	Total responses
ABC1	2014	7,384	26	285	311
	2015	5,471	252	245	497
	2014	629	3	23	26
ABC2	2015	12,108	176	305	481
		Total	Online 457	Off-line 858	

Table 4.
Online discriminant validity

	Assurance	Empathy	Reliability	Responsiveness	Satisfaction	Tangible
OnAss1	0.901	0.320	0.597	0.386	0.671	0.450
OnAss2	0.810	0.341	0.624	0.358	0.497	0.61
OnEmp1	0.382	1.000	0.398	0.469	0.430	0.462
OnRel1	0.706	0.398	1.000	0.473	0.541	0.642
OnRes1	0.434	0.469	0.473	1.000	0.507	0.513
OnSAT1	0.693	0.430	0.541	0.507	1.000	0.524
OnTang1	0.522	0.384	0.531	0.436	0.450	0.913
OnTang2	0.586	0.464	0.649	0.507	0.514	0.934

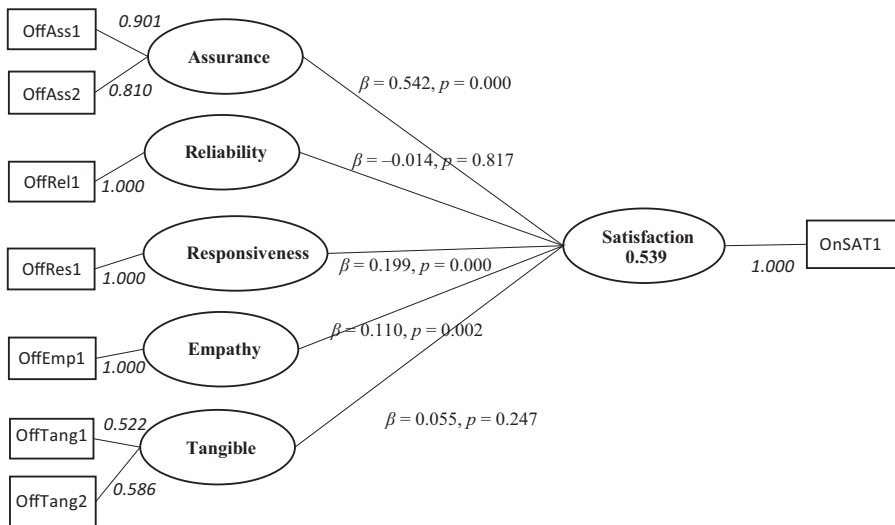


Figure 4. PLS online structural model and hypotheses test

Online measurement model

As assurance and tangibility contained two measurement items, validity and reliability of these two constructs were evaluated. The SmartPLS analysis indicated that AVEs for both constructs were higher than 0.5 and construct loadings higher than 0.7, which indicated acceptable convergent and discriminant validity (Chen, 2010). The online model explained 53.9% of the variance (see Table 5).

The beta value confirmed that assurance was the best predictor of customer satisfaction ($\beta = 0.542, p = 0.000$), followed by responsiveness ($\beta = 0.199, p = 0.000$) and empathy ($\beta = 0.110, p = 0.002$). However, tangible ($\beta = 0.055, p = 0.247$) and reliability ($\beta = 0.014, p = 0.817$) appeared not to be statistically significant in influencing customers' satisfaction (Tsang *et al.*, 2010).

The summary of the hypotheses testing is reported in Table 6.

Discussions

The results of the PLS analysis indicate that relative contributions of the SERVQUAL dimensions to customer satisfaction differ between the online context and the off-line context. In particular, this study has identified assurance, empathy and tangible as three SQ dimensions that bear a significant influence on customer satisfaction in the off-line context, which is in line with Marinković *et al.*'s finding on the dimensions of SERVQUAL on

	Original sample (O)	Sample mean (M)	Standard error (STRERR)	T statistics (O/STERR)	p values
Assurance > Satisfaction	0.542	0.543	0.070	7.767	0.000
Empathy > Satisfaction	0.110	0.112	0.036	3.045	0.002
Reliability > Satisfaction	-0.014	-0.016	0.061	0.231	0.817
Responsiveness > Satisfaction	0.199	0.194	0.043	4.589	0.000
Tangible > Satisfaction	0.055	0.056	0.047	1.160	0.247

Table 5. Online path coefficients

traditional travel agency (2011). For online services, three significant SQ dimensions are assurance, responsiveness and empathy.

Assurance is the aspect of services to provide sufficient information to inspire trust and confidence in customers by travel agents in the off-line traditional service format. This dimension is found to be the most important aspect of SQ in the off-line format and online format, which is consistent with Tsang and colleagues' study (2010), who reported that website functionality, information content and quality are the most important dimensions of e-service quality in travel agencies. The finding implies that in both the off-line and online context, knowledge and expertise of corporate travel counselors are crucial in contributing to customer satisfaction (Martínez Caro and Martínez García, 2008).

Responsiveness in the online context refers to effective handling of the timeliness of clients' fares and itinerary delivery via the Internet. In the online context, CTA's prompt service to customers via the Internet can make customers feel more satisfied with the purchasing, and thus to continue purchasing (Li *et al.*, 2009).

Empathy in both the online and off-line context is found to positively impact customer satisfaction. Empathy was measured by the customers' response to the accessibility of counselors. This significant impact of empathy is also found in other studies (Riel *et al.*, 2004; Marinković *et al.* (2013); Kang *et al.*, 2002) and is in line with the understanding that empathy is fundamental to customer satisfaction (Marinković *et al.*, 2013). Caring and individualized attention affect customers satisfaction in CTAs in online and off-line contexts (Holma *et al.*, 2015). By comparing online and off-line booking, this study explains that a CTA's SQ should focus on assurance and empathy in both contexts. The results confirm that the SERVQUAL measurements are applicable in both online and off-line service contexts.

Tangible is one of the important contributing factors to customer satisfaction in the off-line context. In the off-line context, the CTA should focus around the modern equipment, attractiveness of the interior design of the office and well-trained professional business counselors (Marinković *et al.*, 2013).

SERVQUAL is a tested useful instrument for measuring the quality of service in various service industries, although there is some criticism of its shortcomings (e.g. Cronin and Taylor, 1994). SERVQUAL is illustrated in this research as a valid tool for evaluating both online and off-line CTA SQ.

Recommendations and managerial implications

Today, business managers as well as academics recognize the importance of SQ in driving consumers' satisfaction and future purchase decisions (Chircu *et al.*, 2001; Torres, 2014). The results of this study will be useful for the business managers of CTAs to identify the factors that influence SQ regardless of the context under which services are offered. Our data analysis indicates that both assurance and empathy are significant predictors of customer satisfaction in both the online and off-line contexts. This finding highlights the importance of caring, individualized attention, protection of individual privacy and securing business

Table 6.
Hypotheses – impact
on customer
satisfaction

	Hypotheses – impact on customer satisfaction		
	Online	This study in CTA Off-line	Prior research in the leisure services sector Marinković <i>et al.</i> (2013)
Assurance	Supported	Supported	Not supported
Reliability	Not supported	Not tested	Supported
Responsiveness	Supported	Not supported	Supported
Empathy	Supported	Supported	Supported
Tangible	Not supported	Supported	Supported

transactions in maintaining and improving customer satisfaction. The CTA industry managers are, therefore, advised to continue cultivating a strong culture promoting client-centered services and dedicating resources to ensure service counselors to be equipped with necessary knowledge and skills to provide quality services.

Limitations and future research

There have been very few studies that investigate SQ in both contexts in one industry sector. This empirical study was driven from the needs of real business world by pulling data from a CTA's industry service operations and processes. The data of the survey of customers responding to the questionnaire designed to measure the SQ of a CTA over two years' span make this study unique. The two distinct service process models of online booking and off-line booking within one service organization shed light for other CTAs to improve their SQ. However, as data of this study were from a secondary data source, the pre-design questionnaire limits number of indicators that could be used to measure each dimension of SERVQUAL.

For future research, first-hand data collection is needed to overcome the limits of this explorative study in measuring each dimension of SERVQUAL subject to using a secondary data source. In addition, the dimensions of the SERVQUAL for measuring online and off-line CTA services should be modified in order to better reflect the nature of the two different business formats of CTAs.

Conclusions

The quality of service is essential for maintaining and expanding corporate cliental bases. The research findings reveal that in the off-line context, assurance, empathy and tangible are significant antecedents to customer satisfaction. This finding highlights the importance of caring and individualized attention, protection of individual privacy and securing business transactions in increasing customer satisfaction, cultivating a strong culture of promoting client-centered services and dedicating resources to ensure service counselors are equipped with necessary knowledge and skills to provide quality services.

In the online context, the research findings reveal that assurance, responsiveness and empathy significantly contribute to customer satisfaction. Therefore, business managers in CTAs should focus on effective handling of the timeliness of clients' fares, itinerary deliver and company's prompt service to customers via the Internet and designing a robust technical online system to increase competitive advantages.

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