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The effects of historical satisfaction, provided services characteristics and website dimensions on encounter overall satisfaction: a travel industry case study.

ABSTRACT

Purpose - The aim of this paper is to study the real role of historical satisfaction, i.e. satisfaction only deriving from past experiences, excluding the most recent, in B2C service contexts when services are experienced offline, while the actual services are purchased online through the service providers' website.

Design/methodology/approach - The proposed conceptual framework was tested by focusing on a particular travel industry firm which is responsible for providing travel services as well as managing the website where these services are purchased. The study population included customers who had purchased at least two travel tickets during the last 12 months online. In order to reduce possible self-selection bias and to improve the generalizability of the web survey findings post-stratification was applied. The measurement model was evaluated by using confirmatory factor analyses. The direct and indirect effects of historical satisfaction on encounter overall satisfaction were analyzed using structural equation modeling.

Findings - The direct effect of historical satisfaction on encounter overall satisfaction was observed to be higher than its indirect effect through offline service dimensions and website dimensions. It was also observed that offline service dimensions have a direct impact on encounter overall satisfaction, while they do not have an indirect impact since the website dimensions do not have a direct effect on encounter overall satisfaction.

Research implications - Historical satisfaction is really important in building encounter overall satisfaction for services purchased previously online but experienced offline.

Practical implications - The results could provide managers with useful tools for allocating resources and also build an even higher level of encounter overall satisfaction. They also shed light on how historical satisfaction molds offline service perception for services sold online.

Originality/value - To our knowledge, only one empirical paper focused on 'historical satisfaction', while no studies have taken into consideration the fact that service offline dimensions and e-CS could be indirectly linked by website quality dimensions, the issue studied in this paper.

Keywords: Historical Satisfaction; Encounter Overall Satisfaction; Offline Service Dimensions; Website Dimensions; Online B2C Service Context; Structural Equation modeling.

Article classification – Research paper

1. Introduction

Satisfaction is still one of the main factors determining consumer behavior, but over the last ten years the scenario in which firms operate has radically changed and today they are able to operate simultaneously on the 'traditional' (physical) and the electronic marketplace. Therefore, customer satisfaction studies have started exploring the actual antecedents and drivers of online customer satisfaction (e.g., Evanschitzky *et al.,* 2004), due to the many opportunities offered by the interactive marketing (Shankar and Malthouse, 2007) to firms and the increasing importance of 'purely digital journeys' (Banfi *et al.*, 2013). When operating in B2C online contexts, e-customer satisfaction (e-CS) is one of the most important outcomes (e.g., Hsu *et al.*, 2012). Great benefits have been reaped from e-CS such as (Hsu *et al.,* 2012): (i) e-CS drives consumers to continue to shop online (e.g., Bhattacherjee, 2001); (ii) e-CS is an antecedent of loyalty (Anderson and Srinivasan, 2003; Dhiranty *et al*,. 2017); (iii) e-CS is a key factor for maintaining loyal customers in the long run (Evanschitzky *et al.,* 2004); (iv) it enhances positive word-of-mouth (e.g., Bhattacherjee, 2001; Koufteros *et al.,* 2014, Phamand Ahammad, 2017) and repurchase intention (e.g., Kim, 2010; Koufteros *et al.,* 2014; Lee, 2016; Pham and Ahammad, 2017); (v) e-CS is a driver able to support the market share and profitability of firms (Reichheld and Schefter, 2000). There are many empirical contributions on e-CS in B2C contexts which range from qualitative (e.g., Yang *et al.*, 2001) to quantitative studies and from simpler (e.g., Szymanski and Hise, 2000) to more complex recently implemented models (e.g., Audrain-Pontevia *et al.*, 2013). Some of the quantitative papers have analyzed website dimension/variable or e-service effects on e-CS (e.g., Lin, 2007; Ba and Johansson, 2008; Hsu *et al.,* 2012; Ma, 2012; Hung *et al.*, 2014), while others have focused on both online and offline e-CS drivers with the aim of illustrating the 'full picture' concerning products and/or services sold online but experienced offline (e.g., Lin *et al.*, 2011; Ha, 2012; Zhang, 2013). To the authors' knowledge, only one empirical paper

focused on 'historical satisfaction' (HSat) (Koufteros *et al.,* 2014), that is prior experience in an online environment, while no studies have taken into consideration the fact that service offline dimensions and e-CS could be indirectly linked by website quality dimensions. Historical satisfaction, which "captures cumulative or summary satisfaction with the e-tailer, not including the most recent transaction" (Koufteros *et al.,* 2014, p. 9), has been studied in a baseline model with the aim of analyzing the order fulfillment quality service in terms of 'timeliness', 'availability', 'condition' and 'accuracy' effects on encounter satisfaction with a single e-tailer (Koufteros *et al.,* 2014), therefore an online retailer who is not responsible for the offline determinants of customer satisfaction (i.e. product/service quality, price, etc.). However, historical satisfaction has not yet been studied for service providers whose services are experienced offline, while the tickets are purchased online on their websites. Consequently the effects of both offline service dimensions and website dimensions on encounter overall satisfaction have not been investigated in this research context. It is important to note that this study was not carried out in a multi-channel context as finding out how and to what extent they contribute to overall customer satisfaction was not the aim of this study (e.g., Montoya-Weiss *et al.*, 2003; Shankar *et al.*, 2003). Moreover, this study is not focused on customer satisfaction towards an e-tailer (e.g., Harris and Goode, 2004; Koufteros *et al.,* 2014; Nawi and Al Mamun, 2014). Encounters overall satisfaction will be analyzed bearing in mind the offline elements represented by travel service characteristics and the electronic element represented by the website owned by the travel service provider, that is when a single firm is responsible for both the quality of the services it provides offline and its website.

The aim of this paper is to determine the effects of historical satisfaction, provided services characteristics and website dimensions considered as a whole, on encounter overall satisfaction following the most recent purchase made online. These issues will be analyzed by

referring to previous studies and by creating a new framework which connects these constructs. To the best of the authors' knowledge this is the first study which jointly considers historical satisfaction and both offline and online determinants of encounter overall satisfaction when services are purchased online by customers of a single firm and delivered offline.

This study contributes to the literature on e-customer satisfaction in various ways. Firstly, findings of this study confirm the results obtained by Koufteros *et al.* (2014) concerning the meaningful role of historical satisfaction on encounter overall satisfaction as well as its effects on some dimensions of offline services, in the e-service context. Secondly, the impact of information, service and system quality on website dimensions are analyzed by adding new insights in this domain, since no previous studies have considered them in combination with historical satisfaction. Studying these issues have important managerial implications, as it is more important to understand customer satisfaction (CS) and its drivers online than offline since e-CS offers more opportunities for personalizing products and/or services offering features and interaction, compared to the latter - CS offline (Wind and Rangaswamy, 2001). The paper is organized as follows. In the conceptual background section the key constructs are defined and existing literature and empirical evidence supporting each relationship contributing to the proposed conceptual framework are examined leading to the development of specific research hypotheses. The following section presents the methodology, including sample information and measurements. The result section presents the model used for testing hypotheses and discusses the findings of the study.. Managerial implications, limitations and future avenues of research conclude the paper.

2. Conceptual background and hypotheses

With the aim of developing the conceptual framework, reported in Figure 1, a review of existing literature concerning both offline and online CS, customer relationship management (CRM) and e-CRM, service management and interactive marketing is carried out.

Figure n. 1. Conceptual model

[Insert Figure 1 about here]

"Customer satisfaction can be defined —as the result of a cognitive and affective evaluation, where some comparison standard is compared to the actually perceived performance. The satisfaction judgment is related to all the experiences made with a certain supplier concerning his products, the sales process, and the after-sale service" (Gandhi and Kang, 2009, p. 130). This definition allows for the distinction of the *transaction-specific* and *cumulative* response of customers regarding their experience with a product and/or service or a firm respectively (Bitner and Hubbert, 1994; Oliver, 1997; Jones and Suh, 2000; Shankar *et al.,* 2003; Lam *et al.,* 2004). *Transaction-specific* satisfaction can be understood as the *cognitive response* of customers in experiencing a single product and/or service (e.g., Oliver, 1997; Lam *et al.,* 2004) which therefore refers to the 'traditional' definition of CS (e.g., Westbrook, 1981; Westbrook and Reilly, 1983; Kim, 2010). *Cumulative* satisfaction (Van Doorn and Verhoef, 2008; Oliver, 2010) mainly refers to an *affective response* deriving from a series of different transaction-specific customer experiences with a single firm over a certain period of time (e.g., Bitner and Hubbert, 1994; Oliver, 1999; Shankar *et al.,* 2003; Lam *et al.,* 2004). Cumulative satisfaction is normally called *overall satisfaction* in literature. This can be defined as the whole consumption experience (Koufteros *et al.,* 2014) and a pleasurable situation deriving from consumption which fulfills the customers' needs, desires, etc. (Oliver, 1999). Therefore, customers' previous satisfaction levels experienced with a single firm are updated and adjusted to a certain extent by recent consumer experiences (Koufteros *et al.,*

2014). At the same time, this cumulative satisfaction and/or dissatisfaction may affect customers' subsequent attitudes and decisions towards a particular firm (e.g., Bitner and Hubbert, 1994; Van Doorn and Verhoef, 2008; Oliver, 2010). With the aim of defining the real nature of overall satisfaction, cumulative satisfaction has been recently studied as historical satisfaction in an online context. Historical satisfaction differs from *overall satisfaction* since it excludes the most recent encounter satisfaction and/or dissatisfaction level experienced during the customers' most recent online journeys (Koufteros *et al.,* 2014), thus capturing the *affective response* of overall satisfaction, while excluding the most recent *cognitive response*. Therefore, the *cognitive response* included in overall satisfaction is captured by *encounter satisfaction* which is the satisfaction level recently experienced by customers with firm products and/or services which are more memorable due to the "recency effect" (Koufteros *et al.,* 2014, p. 10). In fact, recent experiences are more likely to be remembered and therefore have a greater impact than past experiences (Oliver, 2010; Koufteros *et al.,* 2014). Bearing in mind the aim of this paper, encounter overall satisfaction (EOS) is defined as the encounter satisfaction experienced online following the customer's most recent purchase made through a service provider website for services which are then experienced offline using the same service provider.

2.1 The relationship between historical satisfaction and encounter overall satisfaction

To the authors' knowledge, the only paper on historical satisfaction concerns encounter satisfaction experienced through an e-tailer, that is an e-commerce intermediary who is not responsible for the quality of products and/or services provided by its suppliers (Koufteros *et al.,* 2014). In this study, it was observed that historical satisfaction has a pervasive effect on the model relationships considering timeliness, availability, condition and billing accuracy and it is essential for encounter satisfaction resulting in repurchase intention and word-of-

mouth. It was also observed that historical satisfaction cannot be fully superseded by current encounter satisfaction and/or 'order fulfillment service quality'. In this study, the constructs controlled by the e-tailer, pertaining to customer satisfaction experienced offline with the product bought online in terms of order fulfillment quality, were adopted, using constructs mainly taken from previous studies (e.g., Mentzer *et al.,* 1989). In research contexts when the service provider is responsible for both for the service quality experienced offline and the website through which e-commerce is carried out, it is reasonable to assume a strong effect of historical satisfaction on encounter overall satisfaction since the two aspects of the transaction are managed by the same firm. Therefore, the hypothesis is formulated as follows:

H1: Historical satisfaction has a direct effect on encounter overall satisfaction.

Moreover, when the customers' level of historical satisfaction is high, it positively influences the customers' subsequent attitudes and decisions towards a particular firm (e.g., Bitner and Hubbert, 1994; Van Doorn and Verhoef, 2008; Oliver, 2010), and leads to a less negative evaluation of transaction-specific experiences that were not entirely satisfactory. Therefore, it seems reasonable to consider the following hypothesis:

H2: Historical satisfaction has a direct and pervasive effect on offline service dimensions.

Furthermore, historical satisfaction may have an indirect impact on encounter overall satisfaction through offline service dimensions, considering that historical satisfaction, as an *affective* construct, is able to influence the customers offline service dimension evaluation of the most recent journeys experienced offline, even if some characteristics have been partially modified at the moment the encounter wishing to purchase a new ticket. Therefore, the following hypothesis is put forward:

H3: Historical satisfaction has an indirect effect on encounter overall satisfaction through offline service dimensions.

Since a high level of historical satisfaction could have a direct impact on encounter overall satisfaction as well as an indirect effect on customers' evaluation of the offline service dimensions (see above), the intensity of the two effects will be explored. In this domain, it is reasonable to consider that the direct effect of historical satisfaction on encounter overall satisfaction is greater than its indirect effect through offline service dimensions, which also involves a transaction-specific evaluation deriving from the perceived quality of the offline service dimensions. Therefore the following hypothesis can be specified:

H4: The direct effect of historical satisfaction on encounter overall satisfaction is greater than the indirect effect through offline service dimensions.

2.2 The relationship between offline service dimensions and encounter overall satisfaction

Several studies have been carried out on the effects of offline service dimensions on e-CS in the B2C context (e.g., Lu, 2003; Shankar *et al.,* 2003; Schaupp and Bélanger, 2005; Ba and Johansson, 2008) which have proved to positively influence e-CS. Moreover, encounter satisfaction levels experienced at the most recent offline travel experiences represent the *cognitive response* of customers, which can be remembered more easily due to the "recency effect" (Koufteros *et al.,* 2014, p. 10). Therefore, offline service dimensions are expected to have a direct and positive effect on encounter overall satisfaction. As a consequence, the following hypothesis is proposed:

H5: Offline service dimensions have a direct and positive effect on encounter overall satisfaction.

To the authors' knowledge, previous studies, carried out in an online B2C context when services are sold online but experienced offline, have not analyzed the effect of website dimensions on the relationship between offline service dimensions and encounter overall satisfaction. Nevertheless, website dimensions are essential for determining e-CS together

with offline service dimensions (e.g., Yang *et al.,* 2001; Schaupp and Bélanger, 2005; Ba and Johansson, 2008, Lin *et al.,* 2011; Ha, 2012; Zhang, 2013). Indeed, online channel attributes and tools assist e-service providers in enhancing e-CS (e.g., Szymanski and Hise, 2000; Anderson and Srinivasan, 2003; Roy and Butaney, 2014). Online channel attributes and tools can be easily modified, giving firms more opportunities to tailor their services to customers (Ansari and Mela, 2003; Thirumalai and Sinha, 2011) compared to offline contexts (e.g., Rezabakhsh *et al.,* 2006) thus supporting e-CS. It is important to note in this domain that "customer value for customization strategies in electronic retailing varies systematically across product types" (Thirumalai and Sinha, 2009, p. 25). Considering the importance of the website, as an interface, it is possible that website quality and its three dimensions can play significant roles in perceiving some service attributes which have changed since the customers' most recent offline experience. For example new services which the encounter has not yet experienced (i.e., recently purchased means of transport with enhanced characteristics) and also price and price offerings which can easily and rapidly change and which are communicated to the customer through the website during the purchasing decision-making process. In this case, customers evaluate new service characteristics without having experienced them, while relying on website dimensions (i.e., information, interactivity, perceived degree of trust). Therefore, the following hypothesis is specified:

> *H6: The effect of offline service dimensions on encounter overall satisfaction is indirect through website dimensions.*

2.3 Website dimensions and their effect on encounter overall satisfaction

In this study, website dimensions are expected not to play a significant role both in the relationship between offline service dimensions and encounter overall satisfaction (see above) and *per se* on encounter overall satisfaction. Indeed, website dimensions are only

evaluated at the moment of purchase as online customers are more influenced by the website characteristics and their changes which normally occur rapidly on the websites of both the firm in question and its competitors (Larivière *et al.,* 2011), resulting in a website dimension transaction-specific evaluation at the moment of purchase. Moreover, it is likely that website performance cannot fully supersede the historical satisfaction effect on encounter overall satisfaction which develops over time and has a cumulative nature, even if historical satisfaction can be updated following more recent experiences (Koufteros *et al.,* 2014). Finally, it has been already empirically demonstrated that *overall satisfaction* with a single service provider in a multi-channel context is the result of service quality experienced both offline and online, and therefore does not only derive from online experiences (Montoya-Weiss *et al.*, 2003). Therefore, the following hypothesis is proposed:

H7: Website dimensions do not have a significant effect on encounter overall satisfaction.

Website quality perception is generated from the customers' evaluation of how good a website looks and how well it works, especially when compared to other websites (Wu *et al.,* 2012). Much research has been carried out on websites, as firm-customer interfaces; regarding its characteristics as antecedents of e-CS (e.g., Pereira *et al.*, 2017); considering e-tailing websites (e.g., Lin, 2007; Roy and Butaney, 2014); firm owned e-commerce websites (e.g., Kim and Stoel, 2004; Hsu *et al.,* 2012; Ma, 2012; Tandon *et al.*, 2016) or both of them (e.g., Casaló *et al.,* 2008). In the B2C online context, several papers have already considered offline and online determinants combined and studied their effect on e-CS (e.g., Lin *et al.,* 2011; Ha, 2012; Zhang, 2013) or overall customer satisfaction (e.g., Shankar *et al.,* 2003). Website quality has been already considered a multi-dimensional concept encompassing information, service and system quality (e.g., McKinney *et al.*, 2002; Lin, 2007) and in consideration of these studies the Information System (IS) Success Model is used. This model

was used to investigate information and system quality separately and added the service quality to the updated model as the third dimension of website quality to measure IS effectiveness while studying e-CS (DeLone and McLean, 2003).

"Information quality is a measure of value perceived by a customer of the output produced by a website" (Lin, 2007, p. 367); it is important because customers do not always easily find correct and complete information, which makes them leave the website and probably visit another (e.g., Szymanski and Hise, 2000; Lin, 2007; Liao *et al.,* 2011) although other factors (attitudinal, behavioral and demographic) are also responsible for changes in online service preferences (Keaveney and Parthasarathy, 2001).

System quality pertains to "perceived user friendliness in shopping at an online store" (Lin, 2007, p. 366), in that intuitive, straightforward and safe procedures assist customers in their online purchasing journeys, thus resulting in simpler transactions (Liang and Chen, 2009).

Service quality is represented by judgments and evaluations concerning how services are delivered online (Santos, 2003; Lin, 2007) considering that virtual environments are the marketplaces in which encounter contact service is provided through technology (Ma, 2012).

Information, system and service quality are all deemed to have positive but different effects on e-CS (Chen and Cheng, 2012; Hsu *et al.,* 2012). Therefore, the following hypothesis is formulated:

> *H8: Service quality has a more important effect on website dimensions than system quality, which in turn has a stronger effect on website dimensions than information quality.*

3. Research methodology

3.1 The travel industry

The travel industry was selected for various reasons. Firstly travel firms are suitable for analyzing the association between offline service elements (offline service dimensions) and online elements deriving from the purchase procedure of these services (website dimensions), while also bearing in mind historical satisfaction in order to identify their joint effects on encounter overall satisfaction. Indeed, the selected travel firm is responsible for providing travel services as well as managing the website where these services are purchased. Secondly, the "travel and tourism industry is rated among the top three product or service categories wherein purchases are made via the Internet" (Ha, 2012, p. 327; Shankar *et al.,* 2003). Thirdly, the history of the online travel industry dates back to many years ago and was among the first product/service categories sold online, thus making most online customers feel at ease when purchasing tickets online (Shankar *et al.,* 2003).

3.2 Measurement Item Description

The questionnaire was specifically developed for this study and the measurement items were adapted from previous literature (see Appendix A in the supplemental material). By focusing on a particular travel firm it is possible to customize items in the questionnaire in order to suit the characteristics of the firm in question and elicit more accurate responses. Therefore, improvements were made concerning the specific characteristics of the travel firm and the research context of this study. A pre-test was carried out in order to verify the instruments An 11-point scale, anchored at 0 (=fully dissatisfied) and 10 (=fully satisfied) was used to measure all constructs in the conceptual model. This scale was chosen since it has several advantages over other approaches. Leung (2011) suggested using an 11-point scale as it increases sensitivity and can be considered an interval-level scale. Moreover, since the 11-point scale reduces skewness and kurtosis, it is closer to normality than other scales. In addition, this scale can help to avoid categorization effects thus providing a larger range of

variance and improving the quality of data analysis (Scherpenzeel, 2002). Another advantage is that the 11-point scale is easily understood since many people are familiar with the "0 to 10" rating system (Dawes, 2008; Thirumalai and Sinha, 2011). Three different offline service dimensions for this study are selected which are connected to quality and price and have been already used in previous literature (e.g., Shankar *et al.,* 2003). In particular, for service quality "tangibles" (e.g., "physical facilities, equipment" etc.) and "responsiveness" ("the willingness or readiness of employees and/or professionals to provide services") together with "knowledge" ("the knowledge and competence of service providers, possession of the necessary skills etc.") are considered since they had been already previously used in the offline service context (Schmenner, 1986; Olorunniwo *et al.*, 2006, p. 61). The fourth dimension "recovery" (Schmenner, 1986; Olorunniwo *et al.,* 2006) is excluded since the aim of the paper is to study satisfaction following the customers' most recent purchase online. "Tangibles" are represented by means of transport while "responsiveness" and "knowledge" are included in the characteristics concerning travel services.

3.3 Data collection

The data for the study were collected by carrying out a web-based survey. In this way it is possible to contact respondents more easily than with other self-administered survey techniques while maintaining respondents' anonymity and overcoming time and place constraints. As the online website for purchasing journeys is owned by the same company that provides travel services offline, empirical analyses are focused on online customers who purchase journeys through the website. Therefore, the study population included customers who had purchased at least two travel tickets during the last 12 months online (8,907 customers), thus enabling us to effectively analyze the influence of offline service dimensions together with historical satisfaction and website dimensions on encounter overall satisfaction.

The survey was carried out over a two-month period and with the aim of encouraging participation, the customers were guaranteed confidentiality and were given a three-euro voucher to be used for future journeys (Shankar *et al.,* 2003). As a control measure, the voucher was only granted if the questionnaire was fully and correctly filled in. In this way, no missing data or incomplete responses were found in the sample. At the end of the survey 698 questionnaires had been collected (equal to 30.2% response rate) which is well beyond the minimum sample size required (Bethlehem and Biffignandi, 2012). There was no coverage error since the web survey was only intended for visitors to the site. However, a self-selection bias may be present as the online questionnaire, which could easily be found on the firm's website, was available to every customer with on-line access while the completion of the questionnaire depended on the customer's will. In particular, it was expected that frequent travelers were more likely to fill in the questionnaire as they visit the website more frequently. In order to reduce self-selection bias and to improve the generalizability of research findings post-stratification was applied, which is a well-known and commonly used weighting technique (Little, 1993; Bethlehem and Biffignandi, 2012).

3.4 Post-stratification and sample characteristics

In order to carry out post-stratification and reduce the bias of estimators, one or more auxiliary variables are required which must satisfy three conditions: i) they must be measured in the survey; ii) their population distribution must be known; iii) they must produce diverse strata compared to the response probabilities.

The number of journeys purchased by each customer may be a suitable variable for post-stratification as it fulfills the three conditions mentioned above and is also an important aspect when considering both the travel industry and the online environment. Indeed, frequent or infrequent website visitors are deemed to differ significantly from one another in

evaluating website quality (Hsu *et al.,* 2012). Due to the research context in which this study was carried out, frequency of journeys and the number of online ticket purchases coincide for the travel firm analyzed, even if travel tickets are purchased prior to the time of departure. In order to make collected data comparable we decided to consider the moment of purchase rather than the time of departure. Therefore we collected information regarding the number of tickets purchased during the last year both for the population and the respondents which were used for post-stratification. In particular, after having classified the auxiliary variable "number of tickets" in L categories so that the participation propensity is similar within the strata, it was possible to divide the population U into strata which are denoted by the subsets U_1, U_2, ..., U_L. The number of population elements in stratum U_h is denoted by N_h, for $h = 1, 2, ..., L$, while the population size is equal to $N = N_1 + N_2 + ... + N_L$. Assuming that a self-selection sample is selected from the population, if n_h denotes the number of respondents in stratum h, then $n = n_1 + n_2 + ... + n_L$. The values of the n_h are the result of a Poisson sampling process, and they are therefore random variables. Post-stratification assigns identical adjustment weights to all elements in the same stratum given by:

$$c_{ih} = \frac{N_h/N}{n_h/n} \quad . \qquad (1)$$

In this study six strata are defined taking into account the frequency of visiting the website to purchase a ticket since the categories of the auxiliary variable "number of tickets" bought during the last year are: 2 tickets, 3-5 tickets, 6-11 tickets, 12-17 tickets, 18-23 tickets, and over 24 tickets. Considering the socio-demographic characteristics of the sample, it is important to note that of the respondents were 56.59% male and 43.41% female. The respondents aged between 18 and 29 (46.09%) accounted for the largest portion of the sample. More than 53.1% of the respondents were educated at graduate level or above. Regarding employment, 47.85 % were currently employed (white or blue collar), 13.18% were self-employed, 29.37% were students and 9.6% were retired or unemployed.

4. Results

The two-step procedure suggested by Anderson and Gerbing (1988) was performed by first carrying out confirmatory factor analyses (CFAs) which explore the measurement model by evaluating unidimensionality, reliability and validity. Then the hypotheses in the conceptual framework were tested using structural equation modeling (SEM), which examines the relationships among latent constructs. For both steps, the pseudo-maximum likelihood was used as estimation method (StataCorp., 2013), due to the need to account for sampling weights. Indeed, various studies have shown that disregarding oversampling by failing to apply survey weights to analyses can lead to biased and inconsistent parameter estimates (Hahs-Vaughn and Lomax, 2006; Bollen *et al.*, 2013). Therefore this issue was addressed by using complex survey adjustments for carrying out analyses in order to ensure correct model specification and accurate parameter estimates.

4.1 Measurement Model

Unidimensionality, reliability and validity of the measures used were investigated by performing eight first order CFAs and two second-order CFAs with STATA 13 (Brown, 2006; Bagozzi and Yi, 2012; Acock, 2013). Unidimensionality was established by assessing the overall fit of CFA models. The measures of model fit used in this study include the standardized root mean squared residual (SRMR). This is a measure of the accuracy of the reproduction of each correlation on average (the recommended value is less than 0.08) and the Goodness of Fit (GFI) which can be interpreted as R^2. It is worth noting that other goodness of fit measures cannot reasonably be used in this study due to the estimation method adopted (Thompson, 1997). Table 1 shows that all the measurement models have acceptable fit indices and this consequently verifies the unidimensionality of the constructs. In order to evaluate the convergent validity of the measurements, three measures proposed by

Fornell and Larcker (1981) were used, including the item reliability of each measure, the composite reliability of each construct and the average variance extracted (AVE). For each construct AVE was used for measuring the amount of variance that is captured by the construct in relation to the amount of variance due to measurement error. The results reported in Table 1 show that composite reliability is proved as all constructs are between 0.878 and 0.967. In addition, all item reliabilities are well above the suggested minimum value of 0.50. Convergent validity was also supported given that the average variance extracted from each construct exceeded 0.5, therefore the variance of each construct was better explained by its measures than by error (Fornell and Larcker, 1981).

The convergent validity test indicates that the proposed constructs of the conceptual model are adequate.

Table n. 1. Reliability assessment

[Insert Table 1 about here]

Source: *Elaboration from our dataset*

In order to establish discriminant validity, which is the extent to which measures of different concepts are distinct, we referred to the Fornell and Larcker (1981) criterion which requires the AVE of each construct to exceed the squared correlation shared between the latent constructs (see Appendix B in the supplemental material for details). Moreover, since in the case of a second order factor structure it is reasonable that the constructs in question are theoretically related to a hierarchically higher order construct and share common variance, discriminant validity in a weak sense was also assessed using the confidence interval test (Anderson and Gerbing, 1988). The results show that the shared variance among the variables

do not exceed the square root of the average variance explained. Finally, the confidence interval tests support the discriminant validity of the constructs analyzed in this study.

With the aim of achieving strong validity and reliability, two second-order CFAs were performed. The indices indicated a good fit for both website dimensions (SRMR=0.04; GFI=0.95) and offline dimensions (SRMR=0.032; GFI=0.93). A significant and positive relationship was observed between all website dimensions and second-order constructs. These results provide additional evidence to support hypothesis H8, that the dominant dimensions of website quality include service, system and information quality. Service quality has a greater effect on website dimensions than system quality, which in turn has a stronger effect on website dimensions than information quality. Similarly, all of the offline service dimensions show positive and significant relationships with the second-order constructs. Since the higher-order solutions did not decrease model fit significantly, it can be stated that the two second-order CFA models provided a good fit for correlations among the first-order factors both in the website dimensions and the offline service dimensions.

4.2 Structural Equation Modeling and hypothesis testing

SEM is used to test all the hypothesized relationships in the proposed theoretical framework (Figure 1) using STATA 13. The estimation results are shown in Figure 2. A comparison of residual-based fit indices (SRMSR and GFI) with their corresponding recommended values (Bagozzi and Yi, 2012) indicated a good model fit. Each hypothesis was tested by examining path significance.

Figure n. 2. SEM Model - Standardized coefficient

[Insert Figure 2 about here]

Source: Elaboration from our dataset

As shown in Figure 2, the analytical results indicate that encounter overall satisfaction is significant and positively influenced by historical satisfaction (β = 0.17, p < 0.10) thus supporting H1. The estimation results show that historical satisfaction has a strong direct effect on offline service dimensions, thus confirming H2. Furthermore, the significance of the hypothesized relationships of historical satisfaction was tested by estimating the indirect effects together with the standard errors obtained using the delta method (Sobel, 1987). Figure 2 shows that historical satisfaction has a significant indirect effect on encounter overall satisfaction through offline service dimensions (β=.0363, Std.Err=0.0083, p<0.01) thus supporting H3. However the direct effect of historical satisfaction on encounter overall satisfaction is greater than the indirect effect (β=0.17 vs β=0.0363) which confirms H4. Offline service dimensions proved to have a weak positive direct effect on encounter overall satisfaction, thus supporting H5. However, the indirect effects of offline service dimensions on encounter overall satisfaction is non-significant (β=.071, Std.Err=0.073 p=0.33) thus rejecting H6. Regarding the role of website dimensions, it is worth noting that their effect on encounter overall satisfaction is not significant (β = 0.09, Std.Err=0.08 p>0.10). Therefore the indirect effect of historical satisfaction on encounter overall satisfaction, through offline service dimensions and website dimensions, is not statistically significant (β=0.067 Std.Err=0.069 p>0.10) thus confirming H7. Moreover, the proposed model explains approximately 67.0% of the website dimension variance thus providing evidence that the three dimensions of website quality are of great relevance. In this respect, it is essential to verify if these standardized coefficients (which are significantly different from 0.00) are significantly different from one another. We therefore tested the equality of coefficients by running an adjusted Wald test of the difference. The results confirm that information quality is significantly different (lower) than service quality at a 10% significance level ($F_{1,697}$ =2.91 p = 0.088) while the difference between information quality and system quality is not

statistically significant ($F_{1,697}$ =1.53 p= 0.21). The difference between service quality and system quality is obviously not statistically significant ($F_{1,697}$ =0.28 p= 0.58) thus partially confirming H8.

5. Discussion

This purposely-designed study showed that historical satisfaction has a direct effect on encounter overall satisfaction. This result is explained by the particular research context and design. Indeed, encounter overall satisfaction was measured following the most recent purchase online which includes the expectation that the service which had been already paid for but had not yet been taken advantage of, would be equally as satisfying as past services. This expectation is mainly based on historical satisfaction which motivated the customer to purchase the firm-specific travel services again online. Historical satisfaction plays a pervasive role in encounter evaluation of offline service dimensions, also in the B2C service research context. This result is not surprising considering that historical satisfaction is an *affective response* and a *cumulative construct* able to "immunize against current service failures" (Koufteros *et al.,* 2014, p. 35). Moreover, historical satisfaction gives significance to the direct impact of offline service dimensions on encounter overall satisfaction at the moment the customer makes his latest online purchase. Among offline service dimensions, price is less important than means of transport and travel services for explaining this construct; firms can easily change prices and current offerings in various ways through online websites. Therefore, in the online context, it is clear that customers compare prices and price offerings at the moment of purchase. When evaluating value for price and general satisfaction with price at the most recent purchase, they particularly rely on other offline service dimension qualities which are more stable in the medium-long run (e.g., means of transport and travel services). However, the direct and indirect effects of historical satisfaction on

encounter overall satisfaction through offline service dimensions seems to drastically reduce the effect of website dimensions on encounter overall satisfaction in this research context. This finding does not confirm the results of previous studies in other contexts (e.g., Lin, 2007), even if a reduced effect of website design has been recently observed in two studies carried out in Malaysia concerning young adults in an online shopping context (Ludin and Cheng, 2014) and e-tailers (Alam *et al.*, 2008). This result can be explained by the common characteristics of online customers. Internet and e-commerce are globally wide-spread, yet not everyone has access to the internet and even if they do, there are still some obstacles for purchasing online such as transaction security (e.g., Peterson *et al.,* 1997). Therefore, it is reasonable to assume that people who purchase online and/or have decided to do so, have had prior experience or are used to purchasing online. In this way customers can update their experiences and skills over time and evaluate service provider website quality at the moment of purchase, independently of the last purchase made through that specific online service provider. This is in line with the samples selected for carrying out studies in this domain which frequently consider university or under-graduate students (e.g., Kim et al., 2012; Roy and Butaney, 2014) who are deemed to have good computer skills and to frequently purchase through the internet (e.g., Oliver, 2010; Lin *et al.,* 2011; Audrain-Pontevia *et al.,* 2013; Zhang, 2013; Koufteros *et al.,* 2014). However, it seems clear that the transaction-specific evaluation associated with the website dimensions, also influenced by ongoing changes in competitors' websites, cannot supersede offline service dimensions which remain quite stable over time (i.e. travel services or means of transport), and above all the effect of historical satisfaction which reflects the customers' entire experience with that particular service provider. Concerning website dimensions, it was observed that information, system and service quality are important for explaining website quality, thus supporting previous literature on the multi-dimensional nature of website quality (e.g., DeLone and McLean,

2003; Lin, 2007). However, it is only possible to partially confirm previous findings since it was observed that service quality is more important than information quality for explaining website quality, while the differences between information and system quality and between system and service quality do not appear to be statistically significant, unlike previous findings (Hsu *et al.,* 2012; Chen and Cheng, 2013).

The managerial implications deriving from this study appear to be extremely challenging. Firstly, service providers who sell their services online through their own website, but deliver them offline, should focus on building even stronger historical satisfaction since this can only be achieved when customers are always satisfied with the same service provider. In order to achieve this, service providers could also consider carrying out effective recovery actions that are able to "appease unsatisfied customers" (Kuo and Wu, 2012, p. 127). In this way service providers will also generate "post-recovery satisfaction" which refers to the secondary service (Kuo and Wu, 2012, p. 129) which in turn is able to contribute to historical satisfaction, although further research is required in this field. Secondly, managers should also consider that historical satisfaction plays a pervasive role and is able to positively influence, without necessarily determining it, the entire evaluation of the encounter's most recent online purchase with the service provider also through offline service dimensions. Therefore, it is essential to manage each of the offline service dimensions effectively which in turn may influence the website dimensions. Indeed, it is essential to deliver satisfactory offline services and improve website dimensions continuously in order to support the perception of offline service dimensions through the service provider's own website, even if it does not appear to affect encounter overall satisfaction alone. Finally, managers should consider that there may be new customers with no historical satisfaction with the single service provider which could enhance website dimensions in order to create a lasting relationship with 'fresh' customers. In this way the service provider would be able to build

historical satisfaction with 'fresh' customers in the future, although further research is required in this domain.

6. Conclusions

This study contributes to e-CS literature in various ways: (i) it studies a different B2C online context with data collected from customers of a single firm; (ii) it confirms the effect of historical satisfaction on encounter overall satisfaction in a different research context; (iii) it corroborates the relevance of the offline service dimensions investigated, namely tangibles, responsiveness and knowledge (Schmenner, 1986; Olorunniwo *et al.,* 2006); (iv) it highlights the strong influence of offline service dimensions on website dimensions; (v) it highlights a different and insignificant effect of website dimensions on encounter overall satisfaction when historical satisfaction is considered.

There are some limitations in this study. One of the most important it is that it does not take loyalty into account as one of the main consequences of customer satisfaction Moreover, the effect of historical satisfaction on repurchase intention and/or word-of-mouth, directly or through encounter overall satisfaction, has not been analyzed in this study. Finally, the non-recursive relationship between encounter overall satisfaction and historical satisfaction was not been considered due to technical problems with non-recursive models (Kline, 2011; Acock, 2013) which represents another limitation of this study.

In future research studies it may be interesting to include loyalty as well as other expected consequences of customer satisfaction such as word-of-mouth in the model.

Another interesting future topic could be to analyse the effect of historical satisfaction on repurchase intention and/or word-of-mouth, directly or through encounter overall satisfaction. This may enable scholars to better understand the role of historical satisfaction in order to prevent customers from switching to a competitor as well as negative word-of-mouth.

References

Acock, A.C. (2013), *Discovering Structural Equation Modeling Using Stata*, Stata Press, Revised edition, College Station, TX.

Alam, S.S., Bakar, Z., Ismail, H.B. and Ahsan, M. (2008), "Young customers online shopping: An empirical study", *Journal of Internet Business,* Vol. 5 No. 1, pp. 81–98.

Anderson, J.C. and Gerbing, D.W. (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach", *Psychological Bulletin*, Vol. 103 No. 3, pp. 411–23. doi:10.1037/0033-2909.103.3.411

Anderson, R.E. and Srinivasan, S.S. (2003), "E-Satisfaction and E-Loyalty: A Contingency Framework", *Psychology and Marketing*, Vol. 20 No. 2, pp. 123–38. doi:10.1002/mar.10063

Ansari, A. and Mela, C.F. (2003), "E-customization", *Journal of Marketing Research,* Vol. 40 No. 2, pp. 131–45.

Audrain-Pontevia, A.F., N'Goala, G. and Poncin, I. (2013), "A Good Deal Online: The Impacts of Acquisition and Transaction Value on E-Satisfaction and E-Loyalty", *Journal of Retailing and Consumer Services*, Vol. 20 No. 5, pp. 445–52. doi:10.1016/j.jretconser.2013.04.002

Ba, S. and Johansson, W.C. (2008), "An Exploratory Study of the Impact of E-Service Process on Online Customer Satisfaction", *Production and Operations Management*, Vol. 17 No. 1, 107–19. doi:10.3401/poms.1070.0006

Bagozzi, R.P. and Yi, Y. (2012), "Specification, Evaluation, and Interpretation of Structural Equation Models", *Journal of the Academy of Marketing Science*, Vol. 40 No. 1, pp. 8–34. doi:10.1007/s11747-011-0278-x

Banfi, F., Gbahoué, B. and Schneider, J. (2013), "Higher Satisfaction at Lower Costs : Digitizing Customer Care", *Recall*, Vol. 22, pp. 10–15.

Bethlehem, J. and Biffignandi, S. (2012), *Handbook of web survey*, John Wiley & Sons, New Jersey.

Bhattacherjee, A. (2001), "An Empirical Analysis of the Antecedents of Electronic Commerce Service Continuance", *Decision Support Systems, Vol.* 32 No. 2, 201-14.

Bitner, M.J. and Hubbert, A.R. (1994), "Encounter satisfaction versus overall satisfaction versus quality", in Rust, R.T. and Oliver, R.L. (Eds.), *Service quality: new directions in theory and practice*, Sage Publications, Thousand Oaks, CA, pp. 72–94.

Bollen, K., Tueller, S. and Oberski, D.L. (2013), "Issues in the Structural Equation Modeling of Complex Survey Data", in *Proceedings of the 59th World Statistics Congress 2013*, International Statistical Institute, Hong Kong.

Brown, T.A. (2006), *Confirmatory factor analysis for applied research*, The Guilford Press, New York, NY.

Casaló, L.V., Flavián, C., and Guinalíu, M. (2008), "The Role of Satisfaction and Website Usability in Developing Customer Loyalty and Positive Word-of-Mouth in the e-Banking Services", *The International Journal of Banking Marketing*, Vol. 26 No. 6, pp. 399–417.

Chen, C.W. and Cheng, C.Y (2012), "How Online and Offline Behavior Processes Affect Each Other: Customer Behavior in a Cyber-Enhanced Bookstore", *Quality & Quantity*, Vol. 47 No. 5, pp. 2539–55. doi:10.1007/s11135-012-9670-y

Dawes, J.G. (2008), "Do data characteristics change according to the number of scale points used? An experiment using 5-point, 7-point and 10-point scales", *International Journal of Market Research*, Vol. 50 No. 1, pp. 61-77.

Delone, W.H. and McLean, E.R. (2003), "The DeLone and McLean model of information systems success: A ten-year update", *Journal of Management Information Systems*, Vol. 19 No. 4, pp. 9–30. http://www.asiaa.sinica.edu.tw/~ccchiang/GILIS/LIS/p9-Delone.pdf

Dhiranty, A., Suharjo, B. and Suprayitno, G. (2017), "An analysis on customer satisfaction , trust and loyalty toward online shop (A case study of Tokopedia.com)", *Indonesian Journal of Business and Entrepreneurship*, Vol. 3 No. 2, pp.101–10.

Evanschitzky, H., Iyer, G.R., Hesse, J. and Ahlert, D. (2004), "E-Satisfaction: A Re-Examination", *Journal of Retailing*, Vol. 80 No. 3, pp. 239–47. doi:10.1016/j.jretai.2004.08.002

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39–50.

Gandhi, S. and Kang D.L.S. (2009), "Customer Satisfaction, Its Antecedents and Linkage Between Employee Satisfaction and Customer Satisfaction: A Study", *Asian Journal of Business and Management Sciences*, Vol. 1 No. 1, pp. 129–37. http://www.ajbms.org/articlepdf/ajbms_2011_1127.pdf

Ha, H.Y. (2012), "The Effects of Online Shopping Attributes on Satisfaction-Purchase Intention Link: A Longitudinal Study", *International Journal of Consumer Studies*, Vol. 36 No. 3, pp. 327–34. doi:10.1111/j.1470-6431.2011.01035.x

Hahs-Vaughn, D.L. and Lomax, R.G (2006), "Utilization of Sample Weights in Single-Level Structural Equation Modeling", *The Journal of Experimental Education*, Vol. 74 No. 2, pp. 163-190.

Harris, L.C. and Goode, M.M. (2004), "The Four Levels of Loyalty and the Pivotal Role of Trust: A Study of Online Service Dynamics", *Journal of Retailing*, Vol. 80, pp. 139–58. doi:10.1016/j.jretai.2004.04.002

Hsu, C.L., Chang, K.C. and Chen, M.C. (2012), "The Impact of Website Quality on Customer Satisfaction and Purchase Intention: Perceived Playfulness and Perceived Flow as Mediators", *Information Systems and E-Business Management*, Vol. 10 No. 4, 549–70. doi:10.1007/s10257-011-0181-5

Hung, S.Y., Chen, C.C. and Huang, N.H. (2014), "An Integrative Approach To Understanding Customer Satisfaction With E-Service of Online Stores", *Journal of Electronic Commerce Research*, Vol. 15 No. 1, pp. 40–57.

Jones, M.A. and Suh, J. (2000), "Transaction-specific satisfaction and overall satisfaction: An empirical analysis", *Journal of Services Marketing*, Vol. 14 No. 2, pp. 147–59.

Keaveney, S.M. and Parthasarathy, M. (2001), "Customer Switching Behavior in Online Services: An Exploratory Study of the Role of Selected Attitudinal, Behavioral, and Demographic Factors", *Journal of the Academy of Marketing Science*, Vol. 29 No. 4, pp. 374–90. http://link.springer.com/article/10.1177/03079450094225

Kim, D.J. (2010), "An Investigation of the Effect of Online Consumer Trust on Expectation, Satisfaction, and Post-Expectation", *Information Systems and E-Business Management*, Vol. 10 No. 2, pp. 219–40. doi:10.1007/s10257-010-0136-2

Kim, H.W., Xu, Y. and Gupta, S. (2012), "Which Is More Important in Internet Shopping, Perceived Price or Trust?", *Electronic Commerce Research and Applications*, Vol. 11 No. 3, Elsevier B.V., pp. 241–52. doi:10.1016/j.elerap.2011.06.003

Kim, S. and Stoel, L. (2004), "Apparel Retailers: Website Quality Dimensions and Satisfaction", *Journal of Retailing and Consumer Services*, Vol. 11 No. 2, pp. 109–17. doi:10.1016/S0969-6989(03)00010-9

Kline, R.B. (2011), *Principles and Practice of Structural Equation Modeling*. 3rd Edition, The Guilford Press, New York, NY.

Koufteros, X., Droge, C., Heim, G., Massad, N. and Vickery, S.K. (2014), "Encounter Satisfaction in E-Tailing: Are the Relationships of Order Fulfillment Service Quality with Its Antecedents and Consequences Moderated by Historical Satisfaction?", *Decision Sciences*, Vol. 45 No. 1, pp. 5–48. doi:10.1111/deci.12056

Kuo, Y.F. and Wu, C.M. (2012), "Satisfaction and Post-Purchase Intentions with Service Recovery of Online Shopping Websites: Perspectives on Perceived Justice and Emotions", *International Journal of Information Management*, Vol. 32 No. 2, pp. 127–38. doi:10.1016/j.ijinfomgt.2011.09.001

Lam, S.Y., Shankar, V., Erramilli, M.K. and Murthy, B. (2004), "Customer Value, Satisfaction, Loyalty, and Switching Costs: An Illustration From a Business-to-Business Service Context", *Journal of the Academy of Marketing Science*, Vol. 32 No. 3, pp. 293–311. doi:10.1177/0092070304263330

Larivière, B., Aksoy, L., Cooil, B. and Keiningham, T.L. (2011), "Does Satisfaction Matter More If a Multichannel Customer Is Also a Multicompany Customer?", *Journal of Service Management*, Vol. 22 No. 1, pp. 39–66. doi:10.1108/09564231111106910

Lee, J.-H. (2016), "Differences in Customer Satisfaction and Repurchase Intention for Online and Offline Purchases about South Korean Cosmetics" *Indian Journal of Science and Technology*, Vol. 9 No. S1, pp. 1–7. Available at: http://www.indjst.org/index.php/indjst/article/view/109878

Leung, S. O. (2011). A comparison of psychometric properties and normality in 4-, 5-, 6-, and 11-point Likert scales. Journal of Social Service Research, 37(4), 412-421.

Liang, C.J. and Chen, H.J. (2009), "A study of the impacts of website quality on customer relationship performance", *Total Quality Management*, Vol. 20 No. 9, pp. 971–88.

Liao, C.–H., Yen, H.R., Li, E.Y. (2011), "The effect of channel quality inconsistency on the association between e-service quality and customer relationships", *Internet Research*, Vol. 21 No. 4, pp. 458-478.

Lin, C.C., Wu, H.Y. and Chang, Y.F. (2011), "The Critical Factors Impact on Online Customer Satisfaction", Procedia Computer Science, Vol. 3, January, pp. 276–81. doi:10.1016/j.procs.2010.12.047

Lin, H.F. (2007), "The Impact of Website Quality Dimensions on Customer Satisfaction in the B2C E-Commerce Context", *Total Quality Management and Business Excellence*, Vol. 18 No. 4, pp. 363–78. http://www.tandfonline.com/doi/abs/10.1080/14783360701231302

Little, R.J.A. (1993), "Post-Stratification: A Modeler's Perspective", *Journal of the American Statistical Association*, Vol. 88 No. 423, pp. 1001–12. doi:10.1080/01621459.1993.10476368

Lu, J. (2003), "A model for evaluating E-commerce based on cost/benefit and customer satisfaction", *Information Systems Frontiers*, Vol. 5 No. 3, pp. 265–77. doi:10.1023/A:1025645210350

Ludin, I.H.B.H. and Cheng, B.L. (2014), "Factors Influencing Customer Satisfaction and E-Loyalty : Online Shopping Environment among the Young Adults", *Management Dynamics in the Knowledge Economy*, Vol. 2 No. 3, pp. 462–71.

Ma, Z. (2012), "The Factors Impact Customer Satisfaction in Online Banking Sector: The Chinese Perspective," *Advances in Control and Communication*, Vol. 137, pp. 625–32. http://link.springer.com/chapter/10.1007/978-3-642-26007-0_77

McKinney, V., Yoon, K. and Zahedi, F.M. (2002), "The Measurement of Web-Customer Satisfaction: An Expectation and Disconfirmation Approach", *Information Systems Research*, Vol. 13 No. 3, pp. 296–315. doi:10.1287/isre.13.3.296.76

Mentzer, J.T., Gomes, R. and Krapfel Jr, R.E. (1989), "Physical distribution service: A fundamental marketing concept?", *Journal of the Academy of Marketing Science*, Vol. 17 No. 1, pp. 53–62.

Montoya-Weiss, M.M., Voss, G.B. and Grewal, D. (2003), "Determinants of Online Channel Use and Overall Satisfaction with a Relational, Multichannel Service Provider," *Journal*

of the Academy of Marketing Science, Vol. 31 No. 4, pp. 448–58, doi:10.1177/0092070303254408

Nawi, N.B.C. and Al Mamun, A. (2014), "The Development of Customer Satisfaction Measurement Model for Small Online Apparel Businesses in Malaysia", *International Journal of Business and Management*, Vol. 9 No. 10, pp. 39–48. doi:10.5539/ijbm.v9n10p39

Oliver, R.L. (1999), "Whence Consumer Loyalty?", *Journal of Marketing*, Vol. 63 Special Issue, pp. 33–44.

Oliver, R.L. (1997), *Satisfaction: A Behavioral Perspective on the* Consumer, Irwin/McGraw-Hill, New York, NY.

Oliver, R.L. (2010), *Satisfaction: a behavioral perspective on the consumer*, Irwin/McGraw-Hill, New York, NY.

Olorunniwo, F., Hsu, M.K. and Udo, G.J. (2006), "Service Quality, Customer Satisfaction, and Behavioral Intentions in the Service Factory", *Journal of Services Marketing*, Vol. 20 No. 1, pp. 59–72. doi:10.1108/08876040610646581

Pereira, H.G., de Fátima Salgueiro, M. and Rita, P. (2017), "Online determinants of e-customer satisfaction: application to website purchases in tourism", *Service Business*, Vol. 11 No. 2, pp. 375–403.

Peterson, R. A., Sridhar, B. and Bronnenberg, B.J. (1997), "Exploring the Implications of the Internet for Consumer Marketing", *Journal of the Academy of Marketing Science*, Vol. 25 No. Fall, pp. 329–346.

Pham, T.S.H. and Ahammad, M.F. (2017), "Antecedents and consequences of online customer satisfaction: A holistic process perspective", *Technological Forecasting and Social Change*, Vol. 124, pp. 332–42. Available at: http://linkinghub.elsevier.com/retrieve/pii/S0040162517304638

Reichheld, F.F. and Schefter, P. (2000), "E-Loyalty: Your Secret Weapon on the Web", *Harvard Business Review*, Vol. 78 No. 4, pp. 105–13.

Rezabakhsh, B., Bornemann, D., Hansen, U. and Schrader, U. (2006), "Consumer Power: A Comparison of the Old Economy and the Internet Economy", *Journal of Consumer Policy*, Vol. 29 No. 1, pp. 3–36. doi:10.1007/s10603-005-3307-7

Roy, S.K. and Butaney, G.T. (2014), "Customer's Relative Loyalty: An Empirical Examination", *Journal of Strategic Marketing*, Vol. 22 No. 3, pp. 1–16. doi:10.1080/0965254X.2013.876074

Santos, J. (2003), "E-service Quality: A Model of Virtual Service Quality Dimensions", *Managing Service Quality: An International Journal*, Vol. 13 No. 3, pp. 233–46. doi:10.1108/09604520310476490

Schaupp, L.C. and Bélanger, F. (2005), "A Conjoint Analysis of Online Consumer Satisfaction", *Journal of Electronic Commerce Research*, Vol. 6 No. 2, pp. 95-111. http://www.jecr.org/sites/default/files/06_2_p02_0.pdf

Scherpenzeel, A. (2002). Why use 11-point scales. Swiss Household Panel (SHP), 9, 2008.

Schmenner, R.W. (1986), "How can service businesses survive and prosper?", *Sloan Management Review*, Vol. 27 No. 3, pp. 21-32.

Shankar, V. and Malthouse, E.C. (2007), "The Growth of Interactions and Dialogs in Interactive Marketing", *Journal of Interactive Marketing*, Vol. 21 No. 2, pp. 2–4. doi:10.1002/dir.20080

Shankar, V., Smith, A.K. and Rangaswamy, A. (2003), "Customer Satisfaction and Loyalty in Online and Offline Environments", *International Journal of Research in Marketing*, Vol. 20 No. 2, pp. 153–75. doi:10.1016/S0167-8116(03)00016-8

Sobel, M.E. (1987), "Direct and Indirect Effects in Linear Structural Equation Models", *Sociological Methods & Research*, Vol. 16 No. 1, pp. 155–76. doi:10.1177/0049124187016001006

StataCorp. (2013), *Stata 13 Survey Data Reference Manual*, Stata Press, College Station, TX.

Szymanski, D.M., and Hise, R.T. (2000), "E-Satisfaction: An Initial Examination", *Journal of Retailing*, Vol. 76 No. 3, pp. 309–22. doi:10.1016/S0022-4359(00)00035-X

Tandon, U., Kiran, R. and Sah, A.N. (2016), "Customer satisfaction using website functionality, perceived usability and perceived usefulness towards online shopping in India", *Information Development*, Vol. 32 No. 5, pp.1657–73. Available at: http://journals.sagepub.com/doi/10.1177/0266666915621106

Thirumalai, S. and Sinha, K.K. (2009), "Customization Strategies in Electronic Retailing : Implications of Customer Purchase Behavior", *Decision Sciences*, Vol. 40 No. 1, pp. 5–36.

Thirumalai, S. and Sinha, K.K. (2011), "Customization of the Online Purchase Process in Electronic Retailing and Customer Satisfaction: An Online Field Study", *Journal of Operations Management*, Vol. 29 No. 5, pp. 477–87. doi:10.1016/j.jom.2010.11.009

Thompson, M.R. (1997), *Theory of Sample Surveys*, Chapman & Hall, London, UK.

Van Doorn, J. and Verhoef, P.C. (2008), "Critical Incidents and the Impact of Satisfaction on Customer Share", *Journal of Marketing*, Vol. 72 No. 4, pp. 123–42. doi:10.1509/jmkg.72.4.123

Westbrook, R.A. and Reilly, M.D. (1983), "Value-percept disparity: an alternative to the disconfirmation of expectations theory of consumer satisfaction", in Bagozzi, R.P., Tybout, A.M. and Abor, A. (eds.), *Advances in Consumer Research*. Association for Consumer Research, Vol. 10, pp. 256–61) http://www.acrwebsite.org/search/view-conference-proceedings.aspx?Id=6120

Westbrook, R.A. (1981), "Sources of consumer satisfaction with retail outlets", *Journal of Retailing*, Vol. 57 No. 3, pp. 68-85.

Wind, J. and Rangaswamy, A. (2001), "Customerization: The next Revolution in Mass Customization", *Journal of Interactive Marketing*, Vol. 15 No. 1, pp. 13–32. doi:10.1002/1520-6653(200124)15:1<13::AID-DIR1001>3.0.CO;2-#

Wu, C.W., Huarng, K.H., Fiegantara, S. and Wu, P.C. (2012), "The Impact of Online Customer Satisfaction on the Yahoo Auction in Taiwan", *Service Business*, Vol. 6 No. 4, pp. 473–87. doi:10.1007/s11628-012-0155-9

Yang, Z., Peterson, R.T. and Huang, L. (2001), "Taking the Pulse of Internet Pharmacies", *Marketing Health Services*, Vol. 21 No. 2, pp. 4–10, http://www.ncbi.nlm.nih.gov/pubmed/11406905

Zhang, Q. (2013), "Research on Customer Satisfaction in B2C E-Commerce Market", in Du, W. (ed.), *Informatics and Management Science VI, Lecture Notes in Electrical Engineering Volume 209*, Springer-Verlag, London, UK, pp. 283–93.

Table 1: Reliability assessment

Construct	Measures	Item reliability	Composite reliability	AVE	SRMR	CD
Website Information Quality (WIQ)			0.943	0.770	0.006	0.976
	I1	0.816				
	I2	0.806				
	I3	0.933				
	I4	0.792				
	I5	0.603				
Website System Quality (WSYQ)			0.945	0.775	0.013	0.957
	SY1	0.752				
	SY2	0.826				
	SY3	0.895				
	SY4	0.866				
	SY5	0.614				
Website Service Quality (WSQ)			0.957	0.850	0.005	0.962
	S1	0.758				
	S2	0.822				
	S3	0.818				
	S4	0.771				
Transport Service Quality (TSQ)			0.939	0.836	0.001	0.950
	TS1	0.775				
	TS2	0.897				
	TS3	0.871				
Quality of the Means of Transport (TMQ)			0.940	0.759	0.011	0.949
	T1	0.687				
	T2	0.653				
	T3	0.714				
	T4	0.803				
	T5	0.847				
Price			0.967	0.908	0.001	0.967
	P1	0.915				
	P2	0.909				
	P3	0.898				
Historical Satisfaction (HSAT)			0.878	0.708	0.001	0.912
	HS1	0.556				
	HS2	0.874				
	HS3	0.682				
Encounter Overall Satisfaction (EOS)			0.938	0.800	0.003	0.973
	EOS1	0.625				
	EOS2	0.724				
	EOS3	0.923				
	EOS4	0.705				

Figure 1 Conceptual framework

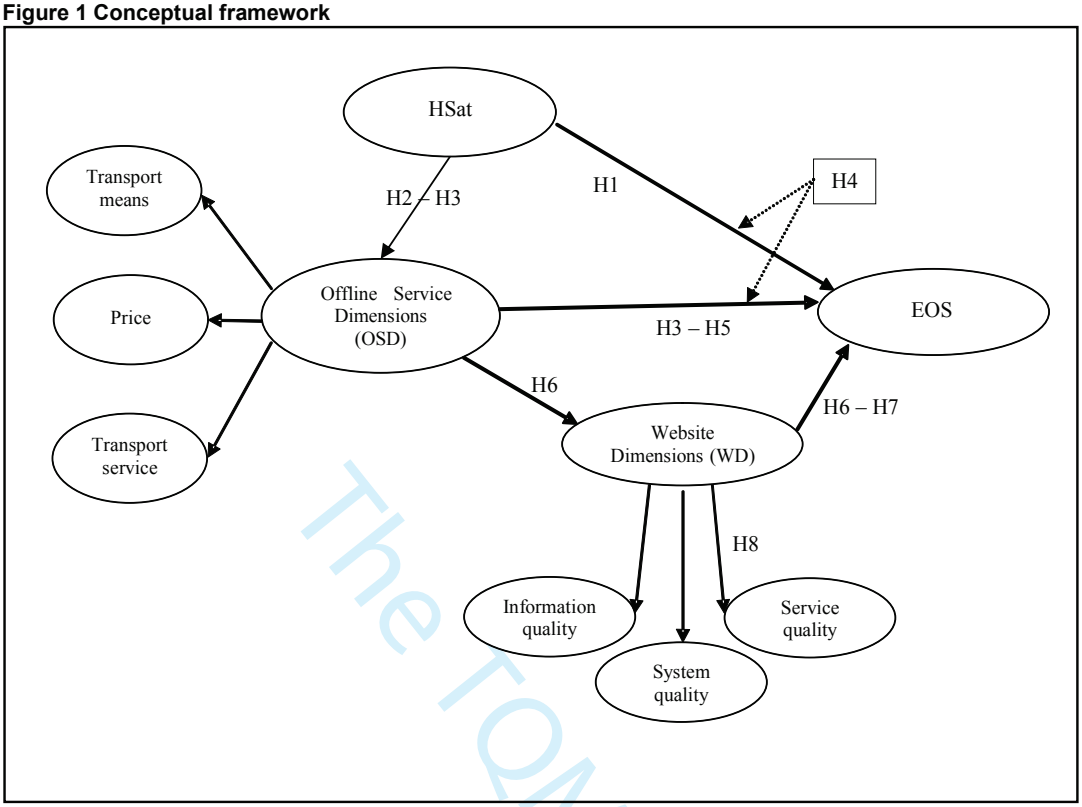
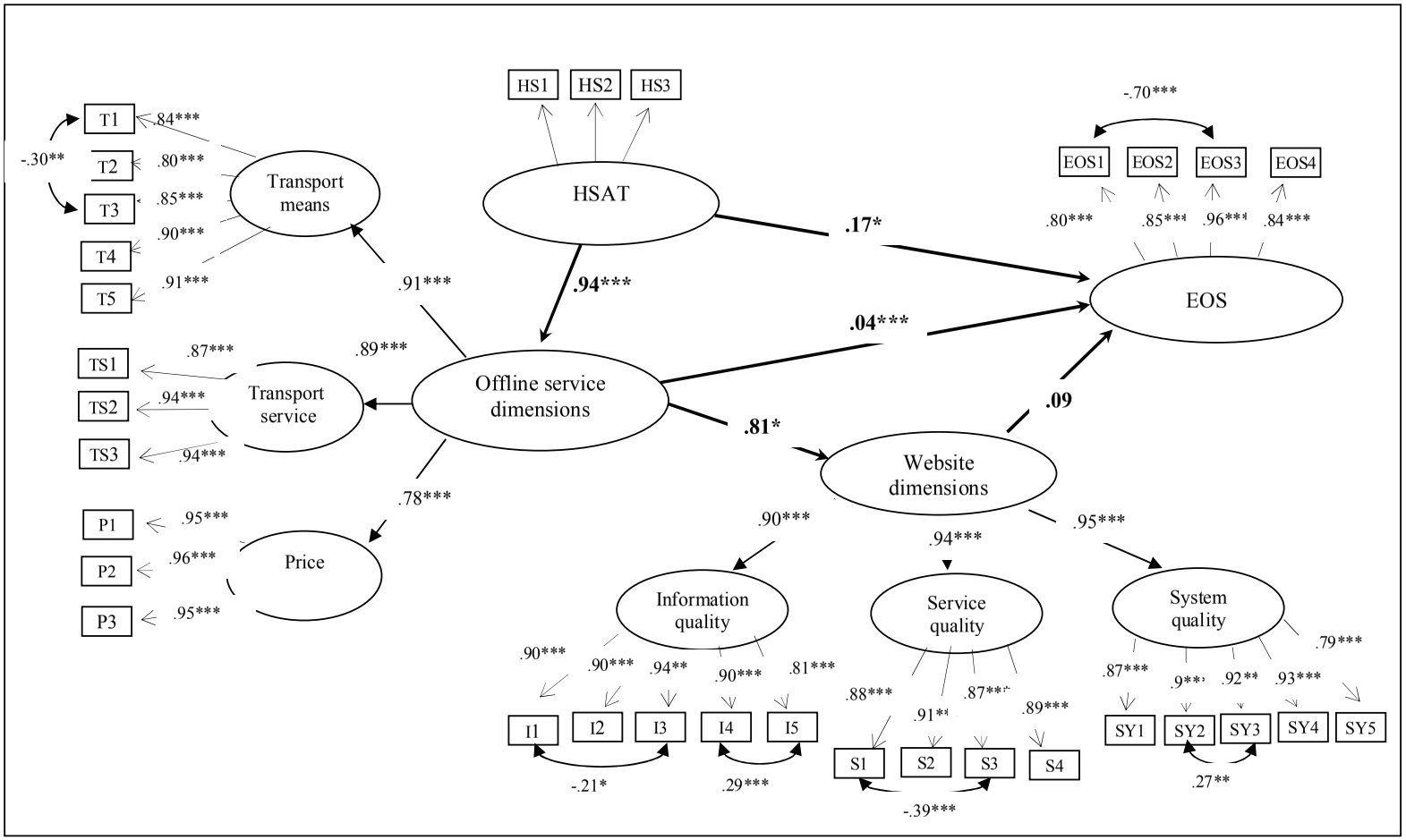


Figure 2: SEM Model - Standardized coefficient



Appendix A: constructs, items and measures

The constructs, items and measures used in this study as well as their references are reported in Table A1. It is worth noting that a preliminary list of items was presented to a panel of experts in the field, such as website engineers and customers, who suggested additional items, recommended the removal of some redundant items and clarified the wording of various items. Therefore, several minor modifications of the content and structure of the items were made prior to the formal survey.

Table A1: Constructs, items, measures used in the study

CONSTRUCT	ITEM	MEASURE/REFERENCE
Website Information Quality (WIQ) *Question*: The respondents were asked to rate their satisfaction level on the following characteristics of the website information quality[1]	I1	Accuracy
	I2	Usefulness
	I3	Completeness
	I4	Relevance
	I5	Timeliness
	All items have been adapted from Delone & McLean (2003) and are normally considered as *informativeness* characteristics (Lin, 2007).	
Website System Quality (WSYQ) *Question*: The respondents were asked to rate their satisfaction level on the following characteristics of the website system quality	SY1	Accessibility - adapted from DeLone & McLean (2003), Lin (2007)
	SY2	Ease of use - adapted from DeLone & McLean (2003), Lin (2007)
	SY3	Navigability - studied by e.g., Al-Kasasbeh, Dasgupta, & AL-Faouri (2011)
	SY4	Interactivity - studied by e.g., Palmer (2002), Yadav & Varadarajan (2005)
	SY5	Website design - adapted from DeLone & McLean (2003), Lin (2007)
Website Service Quality (WSQ) *Question*: The respondents were asked to rate their satisfaction level on the following characteristics of the website service quality	S1	Responsiveness - Zeithaml et al. (2002); DeLone & McLean (2003)
	S2	Perceived control - Ba & Johansson (2008)
	S3	Reliability - e.g., DeLone & McLean (2003); Wolfinbarger & Gilly (2003)
	S4	Perceived degree of trust - DeLone & McLean (2003); Lin (2007); Kim et al. (2012); Wu et al. (2012)
Transport Service Quality (TSQ) *Question*: The respondents were asked to rate their satisfaction level on the following characteristics of the transport service quality	TS1	Driver courtesy and professionalism
	TS2	Driving ability and expertise
	TS3	Service reliability
	Items adapted from previous studies (e.g., Olorunniwo et al., 2006)	
The Quality of the Means of Transport *Question*: The respondents were asked to rate their satisfaction level on the following characteristics of the quality of the means of transport	T1	Cleanness
	T2	Comfort
	T3	Cooling/Heating System
	T4	Perceived Safety
	T5	Accessibility and Usability
	Items adapted from previous studies (e.g., Olorunniwo et al., 2006)	
Price (PRICE) *Question*: The respondents were asked to rate their satisfaction level on the following price	P1	Price Level - adapted from Koufteros et al. (2014)
	P2	Value For Money - adapted from Koufteros et al. (2014)
	P3	Price Satisfaction Experienced at the Most Recent Buying Experiences - adapted from Shankar et al. (2003)

characteristics		
Historical Satisfaction (HSAT) *Question*: The respondents were asked to rate their satisfaction level concerning historical satisfaction characteristics	HS1	Past Travel Experiences with the Service Provider, Excluding the Most Recent Journeys
	HS2	Excellence of Transport Quality Services Provided Historically
	HS3	Service Fulfillment Expectations Experienced Historically with the Service Provider
	Items adapted from Koufteros et al. (2014)	
Encounter Overall Satisfaction (EOS) *Question*: The respondents were asked to rate their satisfaction level at their last shopping journey online on the following characteristics	EOS1	Overall Satisfaction Level following their most Recent Tickets Purchased on Line – adapted from Shankar et al. (2003); Koufteros et al. (2004)
	EOS2	Overall Service Fulfillment following the most Recent Purchase Made on Line
	EOS3	Overall Service Quality Experience following the most Recent Purchase Made on Line
	EOS4	Overall Satisfaction about the Service Provider following the most Recent Purchase Made on Line

[1] The scale used for all items ranged from 0 to 10 (0=completely unsatisfied 10= completely satisfied).

Appendix B Measurement Model: pattern of correlations among factors

The conceptual model (Figure 1) suggests that website dimensions and offline service dimensions are second-order factors and are respectively a function of three first-order constructs. In particular, the website construct is a function of information quality, system quality and service quality while the offline service construct is a function of means of transport, price and travel services. Therefore, firstly first-order CFA solutions are evaluated and then the magnitude and pattern of correlations among factors in the first-order solution are examined.

Table B1 shows the squared inter-correlations among the study variables. They represent the shared variance among the variables and do not exceed the square root of the average variance explained. For each latent variable, AVE was greater than the squared correlation between the latent variable in question and the other latent variables included in the model. Although some of the correlation coefficients were found to be relatively high, the 95% confidence intervals for the inter-factor correlation did not include one. In particular, the correlation coefficient between web system quality and web service quality is close to the value of AVE but its confidence interval did not include one. Consequently, these confidence interval tests support the discriminant validity of the constructs analyzed. Discriminant validity is therefore justified in this study.

Table B1: Inter-construct correlations

	WIQ	**WSYQ**	**WSQ**	**TSQ**	**TMQ**	**Price**	**HSAT**	**EOS**
WIQ	**0.770**							
WSYQ	0.703	**0.775**						
WSQ	0.714	0.770	**0.850**					
TSQ	0.456	0.495	0.510	**0.836**				
TMQ	0.417	0.499	0.487	0.717	**0.759**			
Price	0.247	0.288	0.322	0.434	0.475	**0.908**		
HSAT	0.416	0.445	0.322	0.705	0.687	0.662	**0.708**	

EOS	0.416	0.071	0.469	0.054	0.065	0.042	0.061	**0.800**