Social media to enhance e-service quality.

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Preface

This Master's thesis was written with the goal of completing the last requirements for the Master of Science in Social Sciences program in Service Management of Copenhagen Business School.

I could not have written this thesis without the help of certain people. Therefore, I would like to acknowledge all those who have supported me the past months. First of all, my academic advisor from Copenhagen Business School, Assistant Professor Antonia Erz, for her valuable feedback and guidance in the process of writing this thesis. I am also very grateful to my friends, Iris Yocarini, Nicole van Tilburg, Vera Dullemond and Marieke Hoogeveen, for their suggestions, insights and encouragements. Finally, I would also like to sincerely thank my parents and sisters for their continuous support.

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Abstract

This paper seeks to investigate whether and how social media has an influence on the electronic service quality provided by online travel agencies as perceived by the consumer. Previous studies have already established several dimensions of e-service quality. A very small part of the existing research on e-service quality, acknowledges the impact that social media can have on e-service quality. In the past, website technology did not allow for interaction between contact personnel and customers or between customers. Therefore, it is understandable why interactions between consumers have not been included in the majority of the e-service quality frameworks. However, social media features have increasingly been allowing consumers to connect with organizations as well as other consumers.

Using previously identified e-service quality dimensions and literature on social media as a starting point, dimensions were identified that were expected to explain how online travel reviews influence e-service quality. Data was collected through an online self-administered questionnaire, where the respondents were asked to think back to a purchase made on the website of an online travel agency. The results of a principal component analysis showed that three dimensions could be formed. These were: ease of use, content quality and trustworthiness. According to the quality-value-loyalty chain, service quality enhances perceived value, which, in turn, contributes to customer loyalty (Parasuraman & Grewal, 2000). Therefore, in this research e-service quality dimensions were applied to examine the effect of online travel reviews on perceived value and loyalty intentions. Through a multiple regression analysis it was found that the trustworthiness of online travel reviews is the only dimension that has a significant influence on perceived value and loyalty intentions. It is suggested that, the trustworthiness of online travel reviews is indeed a driver of e-service quality. This means that by increasing the level of trustworthiness of online travel reviews, an online travel agency can improve the e-service quality they deliver.

Keywords: e-Service Quality, Social Media, Online Travel Agency

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1. Introduction

As e-commerce proliferates, online retailers are increasingly realizing that key determinants of success or failure are not merely Web presence or low price but rather the delivery of electronic service quality (Zeithaml, Parasuraman & Malhotra, 2000). *"To encourage repeat purchases and build customer loyalty, companies must shift the focus of e-business from e-commerce – the transactions – to e-service – all the cues and encounters that occur before, during, and after the transactions"* (Zeithaml et al., 2000).

In 2005, Parasuraman, Zeithaml and Malhotra wrote: "*To deliver superior service quality, managers of companies with Web presences must first understand how consumers perceive and evaluate online customer service*." Many researchers have, therefore, created frameworks that explain how e-service quality is created (e.g. Parasuraman et al., 2005; Wolfinbarger & Gilly, 2003; Collier & Bienstock, 2006).

This increased focus on e-service quality also applies to the tourism industry. Several academic articles state that online travel agencies will not be able to compete on price alone and that the quality of the service delivered is becoming more important. "*Online travel agencies gained competitive advantage over traditional brick and mortar travel agencies through cost transparency and convenience afforded by Web technology. […] However, recent developments in information technologies challenge this status of online travel agencies"* (Park, Gretzel & Sirakaya-Turk, 2007). Many consumers still visit online travel agencies, such as Expedia, but an increasing number of consumers turn to supplier Websites such as airline and hotel websites (Park et al., 2007). Moreover, also new substitutes, such as Airbnb, are a threat to the status of online travel agencies. This fierce competition increases the importance of the quality of e-service delivery for online travel agencies. As a result, several researchers have also created frameworks that measure the e-service quality of online travel agencies (e.g. Kaynama & Black, 2000; Kim & Lee, 2004; Park et al, 2007).

Despite the existence of various e-service quality frameworks, researchers have failed to identify how online interaction between consumers (through social media) influence e-service quality. Most of the existing e-service quality frameworks have focused on the usability of the website, with a focus on completing transactions effectively and efficiently (Tractinsky & Rao, 2001). According to Sigala (2009) *"previous research on e-service quality provide an adequate framework for measuring the interactivity and the service provision created by websites, but they have failed to recognize that e-service quality is more than just how a consumer interacts with a website.* Thus, the frameworks do not take into consideration how online human interactions affect e-service quality.

Social media features have increasingly been allowing consumers to connect with organizations as well as other consumers. Also in the travel industry, the use of social media has been increasing steadily. In fact, according to Xiang and Gretzel (2010), one mega trend that influences the tourism industry is social media: "*So-called social media Websites, representing various forms of consumer-generated content (CGC) such as blogs, virtual communities, wikis, social networks, collaborative tagging, and media files shared on sites like YouTube and Flickr, have gained substantial popularity in online travelers' use of the Internet. Many of these social media Websites assist consumers in posting and sharing their travel-related comments, opinions, and personal experiences, which then serve as information for others*." It appears that the rapid increase in the use of social media has created a significant gap in the theory regarding e-service quality.

The aim of this paper is to identify how social media can influence the consumer's perceived e-service quality when dealing with an online retailer. Through an extensive literature review, I will investigate whether the dimensions of e-service quality, as identified by various researchers since the 1980s, can also be applied to the social media features on the website on online travel agencies as drivers of e-service quality. After that, I will measure whether and how the dimensions influence perceived value and loyalty intentions. The results will provide more clarity regarding the influence of social media on e-service quality and the resulting value perception and loyalty intentions.

The results of this research will be particularly useful for online travel agencies, as the research focuses particularly on this industry. Nevertheless, the results will also be interesting for other online retailers, as the dimensions of e-service quality could also be applicable to their business. Existing research on e-service quality confirms that high quality websites can attract more browsers and shoppers compared to competing low quality sites (Park et al., 2007). Hence, knowledge about how social media could improve e-service quality is very useful for online travel agencies. Customers' perceived quality affects their satisfaction levels, behavioral intentions, loyalty, word-of-mouth behavior, and ultimately e-commerce profits (Park et al., 2007).

As I stated earlier, the research will focus on the e-service that online travel agencies provide. Within this study, online travel agencies are defined as travel agencies providing value-added travel services to potential customers through their website. Examples of online travel agencies include Expedia.com, Agoda.com and Booking.com.

1.1 Research Question and Purpose

Since the aim of the present paper is to research how perceived e-service quality is influenced by the presence of social media on the website of online travel agencies, I will investigate whether the existing dimensions of e-service quality can also be applied to social media features on the websites of online travel agencies. The main research question that will be answered is:

How does social media influence the perceived quality of the e-service provided by online travel agencies?

By answering the research question, I will be able to explain whether and how social media has an influence on e-service quality. The purpose of this research is, therefore, explanation.

2. Methodology

This chapter contains a discussion of the chosen research philosophy and research strategy that I will apply to answer the research question.

2.1 Research Philosophy and Research Strategy

To answer the research question a deductive research strategy will be applied. Deduction is a form of reasoning in which the researcher deduces from general claims more particular conclusions (Van Willigenburg, 2009). In the current paper, therefore, I will deduce the hypotheses from the existing literature on (e-)service quality and on social media, after which I will test the hypotheses empirically. The deductive research strategy is a justified strategy for the current research, as previous researchers of (e-)service quality have used this approach as well. Many researchers used theory to identify dimensions of service quality (e.g. Parasuraman et al., 1988 & 2005), after which they tested the identified dimensions empirically, through focus groups and structured questionnaires.

In order to answer the research question, the ontological and empistemological assumptions guiding the research must be also be considered. "*Ontological questions are questions about what exists in reality, about the way things exist, and about the connections between what exists"* (Van Willigenberg, 2009). I will apply the ontological assumptions of a cautious realist, which suggests that reality has an independent existence that cannot be observed directly or accurately due to imperfections in human senses and because observing is an interpretive process (Blaikie, 2010). *Epistemological assumptions are concerned with what kinds of knowledge are possible – how we can know these things – and with criteria for deciding when knowledge is both adequate and legitimate*" (Blaikie, 2010). I will apply the epistemological assumption of falsificationism. This assumption suggests that "*knowledge is produced by a process of trial and error in which theories are proposed and tested against empirical evidence*" (Blaikie, 2010). Furthermore, this assumption claims that knowledge is only true if it cannot be proven false. According to Blaikie (2010) the deductive research strategy is most likely to be used with the cautious realist ontology and the epistemology of falsificationism. Therefore, the ontological and epistemological assumptions guiding this research seem appropriate.

3. Literature review

In this chapter, I will discuss the relevant theories upon which I have based the hypotheses. The literature review is divided into 5 sections. Firstly, I will discuss why service quality is important, and can be considered as a driver of perceived value and loyalty intentions. Thereafter, I will discuss the existing literature on traditional service quality, which has served as the basis for the research on service quality delivery through websites (e-service quality). The existing literature on e-service quality will be discussed in section 3.3. The following section (3.4) will elaborate on the influence of social media on online travel search and booking, which leads to up to a discussion of the role of social media on e-service quality (section 3.5).

3.1 Quality-Value-Loyalty Chain

In the introduction I explained that online travel agencies will not be able to compete on price alone and that the quality of the service delivered is becoming more important. This notion is also brought forward by Parasuraman and Grewal (2000), who state that "*case studies and anecdotal evidence suggest that achieving sustainable competitive advantage in the marketplace will be very difficult with just superior products and reasonable prices; regardless of whether a company's core offerings are products or services, superior service quality is essential for excellent market performance on an enduring basis.*" The rationale behind this conclusion is that service quality is more difficult to imitate than are product quality and price (Parasuraman & Grewal, 2000). Furthermore, delivering superior service quality is important, as Parasuraman and Grewal (2000) derived from their previous studies that service quality enhances perceived value. Perceived value, in turn, contributes to customer loyalty. More specifically, perceived value results from the trade-off between the benefits a buyer receives and the monetary and nonmonetary costs of acquiring the offering (Parasuraman & Grewal, 2000; Zeithaml, Parasuraman & Malhotra, 2002). According to Parasuraman and Grewal (2000), much of the research on perceived value has focused primarily on product quality and price as components of perceived value. However, service quality is also a logical driver of perceived value, and in turn customer loyalty. Figure 1 depicts the quality-value-loyalty chain as suggested by Parasuraman and Grewal (2000).

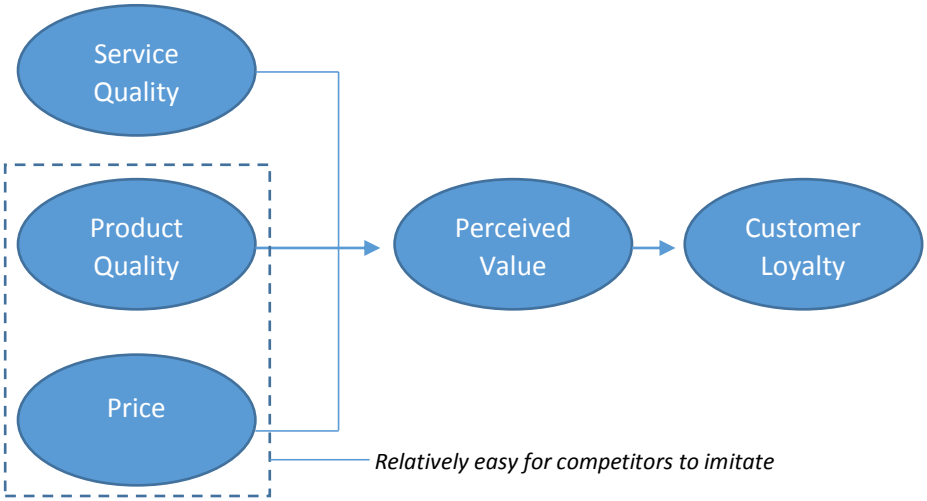

Figure 1: Key Drivers of Customer Loyalty (Parasuraman and Grewal, 2000)

Service quality, thus, is perceived as a driver of perceived value and, in turn, customer loyalty. "*As implied by the dotted box in Figure 1, the greater competitive leverage that service quality offers is also relevant in the context of perceived value and customer loyalty since these are important determinants of market performance*" (Parasuraman and Grewal, 2000). This means that a sustainable competitive advantage can be gained by improving service quality.

Because the quality-value-loyalty chain postulates that perceived value and loyalty intentions follow from high quality service performance, I will use these concepts to measure whether social media influences the e-service dimensions and, therewith, perceived value and loyalty intentions.

3.2 Service Quality

In the 1980's researchers first started investigating quality in service. While quality in tangible goods had been described and measured by marketers at that time, quality in service was largely undefined and unresearched (Parasuraman, Zeithaml and Berry, 1985). The interest in this research field sparked due to the significant growth in the service sector. Delivering superior service quality became a prerequisite for success, if not survival, of such businesses. "*Knowledge about goods quality, however, is insufficient to understand service quality. Three well-documented characteristics of services – intangibility, heterogeneity,*

and inseparability – must be acknowledged for a full understanding of service quality" (Parasuraman et al., 1985).

Services are intangible because they are "*performances or actions rather than objects, they cannot be seen, felt, tasted or touched in the same manner that you can sense tangible goods*" (Wilson, Zeithaml, Bitner and Gremler, 2012). Due to the intangibility of service, it is difficult for services to be displayed or communicated to consumers. This makes it difficult for consumers to assess the quality of services (Wilson et al., 2012).

A second characteristic is the heterogeneity of services. *"Because services are performances, frequently produced by humans, no two services will precisely be alike. […] The heterogeneity connected with services is largely the result of human interaction (between and among employees and customers) and all of the vagaries that accompany it"* (Wilson et al., 2012). Due to this heterogeneity, it can be difficult for organizations to ensure consistent service quality to its customers (Wilson et al., 2012).

Inseparability of services is the third characteristic mentioned by Parasuraman et al. (1985). According to Wilson et al. (2012) services are inseparable because most services are sold first and then produced and consumed simultaneously. They state that the customer is present while the service is being produced and thus may even take part in the production process. Wilson et al. (2012) further state that "*inseparability also means that customers will frequently interact with each other during the service production process and thus may affect each other's experiences".* As a result of inseparability, the service quality will be highly dependent on what happens in 'real time', which includes actions of employees and the interactions between employees and customers (Wilson et al., 2012).

3.2.1 The Grönroos Service Quality model

One of the first researchers investigating service quality was Christian Grönroos. In his 1984 article, he stated that publications on service marketing – research reports, scientific articles and books – did not include any explicit model of how the quality of a service is perceived and evaluated by consumers (Grönroos, 1984). Grönroos, therefore, attempted to create a model of service quality, which describes how the quality of services is perceived by customers. Based on existing literature on consumer behavior, he suggested that the perceived quality of a service will be the outcome of an evaluation process, where the

consumer compares his expectations with the service he perceives he has received (Grönroos, 1984). Perceived quality, thus, is the difference between perceived service and the expected service.

In order to create a service quality model, Grönroos (1984) attempted to identify the resources and activities, under the control and outside the control of the firm, that have an impact on expected and perceived service. Based on the literature on product performance, Grönroos (1984) developed two service performance dimensions that influence the perceived service quality.

The first dimension is called the technical quality dimension, which describes what the consumer receives as a result of his interactions with a service firm. According to Grönroos (1984), every service has some kind of (tangible) outcome, e.g. a hotel room with a bed to sleep in, a meal at a restaurant, transportation from one place to another. "*However, as the service is produced in interaction with the consumers, this technical quality dimension will not count for the total quality that the consumer perceives he gets. Obviously, he will also be influenced by the way in which the technical quality is transferred to him functionally.*" (Grönroos, 1984). Therefore, the second service performance dimension is called the functional quality dimension, and it concerns how the customer gets the technical outcome (the service process).

3.2.2 SERVQUAL

Although Grönroos' service quality model was published earlier, Parasuraman, Zeithaml and Berry (1985 & 1988) developed a service quality model (SERVQUAL) that has been the basis for much of the research performed in the following years.

The research of Parasuraman et al. (1985) is based on three underlying themes derived from previous publications on service quality (including Grönroos' contributions to the field). The first theme states that *"service quality is more difficult for the consumer to evaluate than goods quality."* This difficulty results from the intangibility characteristic of services. In comparison to goods, the consumers have less tangible cues to judge quality as they are generally limited to the service provider's physical facilities, equipment and personnel (Parasuraman, 1985).

The second underlying theme is that *"service quality perceptions result from a comparison of consumer expectations with actual service performance."* This is in line with the thinking of Grönroos (1984), whose service quality model was based on the belief that consumers compare the service they expected with the perceptions of the service they received.

The last theme brought forward by Parasuraman et al. (1985) states that "*quality evaluations are not made solely on the outcome of a service; they also involve evaluations of the process of service delivery.*" This means that service quality involves more than outcome; it also includes the manner in which the service is delivered. For this theme, Parasuraman et al. (1985) refer to Grönroos' (1984) hypothesis that two types of service quality exist: technical quality and functional quality. Lehtinen and Lehtinen (1991) also suggest that service quality is formed by the qualitative levels of a service on different dimensions of the service production process. They use three quality dimensions: *physical quality,* which includes the physical product and physical support (physical instruments and environment) needed in a service production process. The second dimension is *corporate quality*, which involves the company's image or profile. "*It is symbolic in nature and it concerns how customers and potential customers see the corporate entity, company or institution, its image or profile"* (Lehtinen & Lehtinen, 1991). The last dimension suggested by Lehtinen and Lehtinen (1991) is *interactive quality*, which derives from the interaction between contact personnel and customers as well as between some customers and other customers. The authors also suggest that interactive quality also includes the use of interaction equipment, such as an automatic bank teller or a self-service machine.

The first model Parasuraman et al. (1985) developed was based on their extensive exploratory investigation, using executive interviews with nationally recognized companies from four different service industries (retail banking, credit card, securities brokerage, and product repair and maintenance). A second research method that was applied were focus group interviews with current or recent users of the four services in question. From the focus groups the researchers derived that, *"regardless of the type of service, consumers used basically similar criteria in evaluating service quality. These criteria seem to fall into 10 key categories which are labeled 'service quality determinants'* (Parasuraman et al., 1985). The 10 categories are: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer, and tangibles. The focus group also supported the assumption that service quality is the result of the

consumer's comparison of expected service with perceived service (Parasuraman et al., 1985).

In 1988, Parasuraman et al. created a scale, the SERVQUAL, based on previous work of other researchers (e.g. Grönroos and Lehtinen & Lehtinen) and from their own previous qualitative research (1985) that defined 10 service quality determinants. The scale was tested quantitatively and the authors adjusted the SERVQUAL scale to consist of five dimensions (three original and two combined dimensions). Parasuraman et al. (1988) suggest the following labels and concise definitions for the dimensions:

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

According to the researchers: *"SERVQUAL is a concise multiple-item scale with good reliability and validity that retailers can use to better understand the service expectations and perceptions of consumers and, as a result, improve service"* (Parasuraman et al., 1988). Criticizers of the framework, however, state that the dimensions of service quality might differ for each industry. This means that the dimensions SERVQUAL might not be appropriate to apply for all types of services, and that "*the wording and subject of some individual items need to be customized to each service setting*" (Carman, 1990).

3.3 e-Service Quality

The Internet has changed many aspects of our lives, including how we purchase goods and services (Wilson et al., 2012). *"Electronic channels have vastly expanded the opportunities for goods and services marketers to distribute their offerings"* (Wilson et al., 2012). From the late nineties and early 2000s, businesses and researchers increasingly realized that a mere Web presence and the offering of low prices were not an effective long-term strategy to success in e-commerce. In fact, Zeithaml et al. wrote in 2000: "*The most experienced and effective electronic retailers are realizing that the key determinants of success or failure*

are not merely presence or low price but rather the delivery of quality service over the Web." Delivering service quality through a website, however, differs from delivering service in a traditional manner (people-delivered). "*The more a service relies on technology and/or equipment for service production and the less it relies on face-to-face contact with service providers, the less the service is characterized by inseparability and non-standardization"* (Wilson et al., 2012).

Furthermore, other authors state that online service have unique characteristics that offline services do not possess, such as server problems, outages for backing up information, and connectivity issues (Collier & Bienstock, 2006). Therefore, the existing service quality models, such as the widely accepted SERVQUAL, cannot be applied to measure e-service quality. This realization shifted the focus of research from traditional service to electronic service (e-service). E-service includes all cues and encounters that occur before, during and after the online transactions (Zeithaml et al., 2002). In order to measure e-service quality the Zeithaml et al. (2000) defined it as:

> *"the extent to which a Website facilitates efficient and effective shopping, purchasing, and delivery of products and services."*

This was the first formal definition of Website service quality and includes both pre- and post-Website service aspects. However, to deliver excellent service quality, it is important to understand how consumers perceive and evaluate online customer service. In 2000, Zeithaml et al. addressed these questions *"by developing a framework for consumer evaluation of e-service quality gleaned from focus-group research with customers who shop on the Internet."* The framework they developed was based on the SERVQUAL framework for measuring traditional service quality.

In 2005, Parasuraman et al. developed a multiple-item scale (E-S-QUAL) for measuring the service quality delivered by websites. "*Insights from existing research on e-service quality (e.g. Loiacono et al., 2000; Barnes and Vidgen, 2002; Yoo and Donthu, 2001) and a comprehensive conceptual study of the nature and structure of e-service quality (Zeithaml et al., 2000) formed the starting point for developing the e-service quality scale"* (Parasuraman et al., 2005). After a preliminary scale development stage, the researchers found that certain items of the preliminary E-S-QUAL scale relate to service recovery instead of routine service encounters. Parasuraman et al. (2005), therefore, developed a subscale of

E-S-QUAL – called E-RecS-QUAL – "*containing items focusing on handling service problems and inquiries, and being salient only to customers who had had nonroutine encounters with the sites.*"

The E-S-QUAL – the scale for the core dimensions of service quality – consists of 22 items on four dimensions:

Efficiency:	the ease and speed of accessing and using the website.
Fulfillment:	the extent to which the website's promises about order delivery and item availability are fulfilled.
System availability:	the correct technical functioning of the website.
Privacy:	the degree to which the website is safe and protects customer information.

The subscale E-RecS-QUAL – for measuring e-recovery service quality – consists of 11 items on three dimensions:

Responsiveness:	effective handling of problems and returns through the website.
Compensation:	the degree to which the website compensates customers for problems.
Contact:	the availability of assistance through telephone or online representatives.

In the following years, other researchers also developed e-service quality models that are mostly based on the SERVQUAL model (Sigala, 2009). *"Collectively, the extant knowledge suggests that e-service quality is a multidimensional construct, although the content of what constitutes e-service quality varies across studies"* (Zeithaml et al., 2002).The E-S-QUAL and the E-RecS-QUAL models, however, are praised as important steps in conceptualizing e-service quality (Collier & Bienstock, 2006).

3.3.1 E-service quality in the travel industry

In the previous section, I stated that the Internet has changed the way consumers purchase goods and services (Wilson et al., 2012). The planning and booking of travels has also become an activity that is increasingly performed online. According to NBTC NIPO (2014a),

in 2013 73% of the pre-booked domestic vacations in The Netherlands was booked online (compared to 17% by telephone and 3% at a physical desk). A similar trend is seen with pre-booked vacations abroad, as 79% of those vacations was booked online in 2013. With many online travel agencies fighting for a share of this market, the competition between online travel agencies has been increasing. Furthermore, although *"online travel agencies gained competitive advantage over traditional brick and mortar travel agencies through cost transparency and convenience afforded by Web technology"* (Park et al., 2007), the recent technological developments have also allowed substitute online booking options to enter the market. According to NBTC NIPO (2014b), other ways in which Dutch tourists book their vacations include direct bookings at the tour operator/accommodation & airline company and through social travel websites, auction websites and websites with reviews (NBTC NIPO, 2014b). This trend increases the level of competition for online travel agencies even more.

Due to this fierce competition in the online travel industry, academic scholars and practitioners recognized the need for delivering quality service on online travel agencies' websites. Similar to other industries, a mere Web presence and the offering of low price is no longer an effective, long-term strategy to success. Several authors have investigated what dimensions make up e-service quality in the travel industry.

One of the first authors to investigate e-service quality for online travel agencies were Kaynama and Black (2000). They developed an assessment tool, E-QUAL, "*to evaluate the service quality of electronic commerce businesses from the consumers' perspective.*" Kaynama and Black (2000) based the E-QUAL on the SERVQUAL framework for measuring traditional service quality and adjusted it to match the unique attributes of electronic commerce. The E-QUAL consisted of 7 criteria: (1) content, (2) accessibility, (3) navigation, (4) design and presentation, (5) responsiveness and feedback, (6) background information and (7) personalization and customization. *"The E-QUAL criteria were chosen specifically because of their similarity to the five dimensions of the SERVQUAL instrument already being used to assess service quality in traditional businesses"* (Kaynama and Black, 2000). Although this research was one of the first in the field, Ho and Lee (2007) criticized the research as "*the contents of their service quality constructs were brief and ambiguous, and the proposed conceptual framework was not verified either.*"

In 2004, Kim and Lee attempted to identify the underlying dimensions of Web service quality between online travel agencies and online travel suppliers. The authors identified the

following dimensions of Web service quality: information content, reputation and security, usefulness, responsiveness and personalization, and structure and ease of use. The importance of the dimensions varied between online travel agencies and online travel suppliers. However, information content was found to be an important web service quality dimension for both online travel agencies and online travel suppliers. "*Travel-related businesses are highly dependent on accurate and current information, which draws potential customers to the site. Therefore, it is essential that both online travel agencies and online travel suppliers improve information content presented on the Web […]"* (Kim and Lee, 2004).

Park et al. (2007) examined the influence of perceived website quality on willingness to use online travel agencies. The authors compared e-service quality dimensions that were identified in existing tourism and non-tourism studies. "*The web site quality aspects identified in the existing literature were sorted by their similarity in terms of definition and attributes measured. They were then summarized into core dimension"* (Park et al., 2007). The authors found no differences between tourism and non-tourism studies, except for fulfillment. This dimension, as suggested by Parasuraman et al. (2005), had until then not been described in the tourism field. Tourism products and service "*do not need physical delivery and are not returnable, thus leading to a less apparent need to measure service excellence in terms of fulfillment. However, OTAs still need to deliver on their promises*" (Park et al., 2007). Consequently, the authors included the fulfillment dimension in their framework, but modified it to match the characteristics of tourism products. In total, Park et al. (2007) identified six core dimensions of perceived website quality: ease of use, information/content, fulfillment, responsiveness, security/privacy, and visual appeal.

In 2007, Ho and Lee also identified the components of e-travel service quality. The research focused on investigating and identifying those features that are perceived by customers as the necessary elements of service quality for achieving their satisfaction. Through a literature study, Ho and Lee (2007) identified dimension of e-service quality from other e-service contexts. By incorporating the dimensions suggested by prior studies and through extensive analysis, five dimensions related to the evaluation of web-based travel service quality were identified by Ho and Lee (2007). "*According to the research results, online customers placed emphasis on information quality, security, website functionality,*

customer relationships, and responsiveness while considering e-travel service quality" (Ho and Lee, 2007).

3.3.2 Limitations of e-service quality frameworks

In 2001, Tractinsky and Rao wrote that *"traditional research and evaluations of Web sites have concentrated on the relatively rational criterion of the usability of the site. […] This utilitarian view leads to a tendency to design* [websites] *with a focus on completing transactions effectively and efficiently*. This concentration on usability also seems to apply to the previously discussed frameworks for measuring e-service quality. According to Sigala (2009) *"previous research on e-service quality provide an adequate framework for measuring the interactivity and the service provision created by websites, but they have failed to recognize that e-service quality is more than just how a consumer interacts with a website*. Thus, the frameworks do not take into consideration how online human interactions affect e-service quality.

In traditional service quality research, it has been suggested that the interaction between consumers also influences perceived service quality. For instance, Lehtinen and Lehtinen's (1991) quality dimension of interactive quality suggests that service quality is also derived from the interaction between contact personnel and customers as well as between some customers and other customers.

In the past, website technology did not allow for interaction between contact personnel and customers or between customers. Therefore, it is understandable why interactions between consumers have not been included in the e-service quality frameworks. With the increasing implementation of Web 2.0 features, such as social media, online interactions between consumers occur more frequently. In 2008, Bernoff and Li wrote that people are connecting online with one another in increasing numbers, thanks to blogs, social networking websites and countless communities across the web. Following Lehtinen and Lehtinen's (1991) suggestion that service quality is also derived from interaction between customers, e-service quality might also be influenced by online customer interactions. This leads to the identification of a gap in the existing literature, as current e-service quality models ignore the impact of online customer interactions and customer participation on e-service provision and e-service quality (Sigala, 2009).

In order to identify how social media presence on the website of an online travel agency could influence e-service quality, the next section of this literature review will firstly discuss how travelers use social media. More specifically, the literature will identify how travelers use social media when planning and booking a vacation on the website of an online travel agency. The relationship between social media and e-service quality will be discussed thereafter.

3.4 Social media and online travel agencies

Consumers are increasingly using social media when shopping online. "*Social media is a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow for the creation and exchange of User Generated Content"* (Kaplan & Haenlein, 2010). More specifically, social media focuses on participation and peer-to-peer communication between individuals with websites providing the capability to develop user-generated content and to exchange messages and comments between different users (Chaffey, 2011).

According to Bronner and De Hoog (2013), social media can be an important source of information whilst online shopping. Furthermore, the importance of social media as an information source while shopping online will increase when a product or service has several properties: accessibility, relevance and experience (Bronner & De Hoog, 2013). The first property, accessibility, suggests that there should be sufficient information about the product/service accessible through social media. Relevance means that the information should matter for making the right decision; and the experience property suggests that the information provided by other consumers should refer to aspects of a product/service that cannot be judged prior to purchase. Especially high-involvement products/services satisfy these properties (Bronner & De Hoog, 2013).

Hospitality and tourism product offerings are intangible goods, which means they cannot be evaluated before consumption. Furthermore, hospitality and tourism product offerings are considered high-risk purchases. Both characteristics increase the level of information needed before making a purchasing decision. A vacation, therefore, is a high-involvement product. Consequently, also in the travel industry consumers have been increasingly using social media when planning and booking vacation trips online. In fact, Bronner and De

Hoog (2013) wrote that "*holidays are an example of a high-involvement product/service for which social media have become quite important during the past few years.*" And according to Parra-López, Bulchand-Gidumal, Gutiérrez-Taño and Díaz-Armas (2011), tourists use the Internet before and during vacation trips to obtain information about the trips, share their experiences and compares services related to the trip.

Social media, such as review websites, blogs, Facebook and Twitter, allow consumers to exchange opinions about brands, products and services. "*As the digital version of word-of-mouth, social media represents the materialization, storage, and retrieval of word-of-mouth content online*" (Pan and Crotts, 2012). Due to the widely available opinions and experiences from other consumers, information provided by suppliers of consumer goods is no longer the major factor influencing purchasing decisions (Bronner & De Hoog, 2013).

3.4.1 User-generated content

According to Yoo and Gretzel (2011), a growing number of travelers use user-generated content as a source of information. This notion is also brought forward by Ayeh, Au and Law (2013), who state that user-generated content is increasingly becoming a major source of travel information for many travelers and they acknowledge its growing influence on travel decision making. According to Kaplan and Haenlein (2010), user-generated content includes the various forms of media content that are publicly available and created by end-users. More specifically, user-generated content "*needs to fulfill three basic requirements in order to be considered as such: first, it needs to be published either on a publicly accessible website or on a social networking site accessible to a selected group of people; second, it needs to show a certain amount of creative effort; and finally, it needs to have been created outside of professional routines and practices*" (Kaplan & Haenlein, 2010).

Yoo and Gretzel (2011) suggest that user-generated content is a new form of word-of-mouth. Traditionally word-of-mouth is defined as the communication between consumers about a product, service, or a company in which the sources are considered independent of commercial influence (Litvin, Goldsmith and Pan, 2008). Therefore, electronic word-of-mouth can be defined as all informal communications between consumers through Internet-based technology related to the usage or characteristics of particular goods and services, or their sellers (Litvin et al., 2008). Several studies have shown that user-generated content is

considered more trustworthy and credible compared to information created by marketing departments (Leung, Lee & Law, 2012).

One particular form of user-generated content are online travel reviews, which includes products ratings and short descriptions (Yoo & Gretzel, 2011). "*Online travel reviews tend to be very structured and do not serve the purpose of documenting an experience for oneself but rather are directed at others"* (Yoo & Gretzel, 2011). The popularity of online travel reviews for finding information and reading other consumers' experiences has been increasing. In fact, many online travel agencies provide an online travel review platform on their website. According to Redactie Twinkle (2010), research has shown that consumers would like to see more user generated content on travel websites. Furthermore, customer reviews (58%), independent reviews (53%) and customer ratings (42%) were found to be the most important forms of user-generated content when booking a vacation. Another study about hotel reviews conducted by ITB Berlin and the University of Worms (2014), showed that about 70% of consumers booking a hotel online read up to 20 unique reviews. Furthermore, the study also showed that if online reviews are questionable 35% is likely not to book the hotel.

3.4.2 Social networking

A second popular form of social media is social networking. A social network is a website "*that facilitates peer-to-peer communication within a group or between individuals through providing facilities to develop user-generated content and to exchange messages and comments between different users*" (Chaffey, Ellis-Chadwick, Mayer & Johnston, 2009). An example of a social networking site is Facebook. According to Xiang, Wang, O'Leary and Fesenmaier (2014) an increasing number of people use social networking sites for travel planning. In 2007 only 3.1% of their sample used social networking sites, whereas in 2012 this percentage had increased to 16% (Xiang et al., 2014).

Besides using social networks to communicate and share experiences with other consumers, consumers increasingly use social networks to communicate with organizations. According to a rapport of Sprout Social (2013) consumers are increasingly adopting social networks to interact with organizations for customer service, sales inquiries, compliments, complaints, or other purposeful reasons. This trend was also identified by Cone LLC (2010). Their

research showed that users who engage with organizations on social media mostly look for incentives (e.g. free products or services, coupons, discounts), need problems solved or product/service information, or want to give feedback on products and services. This shows a change in communication between organizations and consumers, as customer service traditionally occurred through telephone or e-mail. In fact, according to Sprout Social (2013), "*the most important trend happening in social media for brands is the rapid growth of inbound consumer engagement*." This trend is also occurring in the travel industry, as the number of inbound message on social networks increased 118% between 2012 and 2013 (Sprout Social, 2013). Unsurprisingly, many online travel agencies are active on one or multiple social networks in order to communicate with their customers and to allow customers to communicate with each other.

3.5 Social Media and e-service quality

In section 3.3.2 I stated that the existing e-service quality frameworks do not take into consideration how online customer interactions influence the perceived service quality of web shops. It is postulated that in web 2.0 enabled websites, e-service can also be provided by other customers and employees through social media. The e-service quality constructs should, therefore, also measure and reflect the increasing customer participation and the impact of interactions between consumers on the quality of e-service provision (Sigala, 2009).

Ho and Lee (2007) recognized the impact social media could have on e-service quality. Their e-service quality dimension of customer relationships, is related to the personalized services a website provides for its customers and their interactions with other website users through an online community. According to them "*an online community provided by websites gives users the opportunity to interact with website personnel or other users. This two-way communication makes it easier for users to search for information, make purchasing decisions, and give feedback to the website*" (Ho and Lee, 2007). Ho and Lee (2007) created a separate e-service quality dimension to measure the influence of social media on e-service quality. It includes the presence of a platform to exchange experiences and the presence of a chat room to turn to for more information.

Marianna Sigala (2009) also investigated the impact of Web 2.0 on e-service delivery. She created an extended e-service quality model that considers customer participation and inter-customer support in e-service settings (Sigala, 2009). Using Collier and Bienstock's (2006) e-service quality constructs of process and output e-service quality, Sigala (2009) suggested that online customer interactions impact both process e-service quality and e-service quality outputs. Firstly, the author suggests that customers can satisfy high-order needs and enhance their well-being by engaging in online customer interactions. This would lead to an increase in e-service quality outputs. Secondly, *"customers and social networks critically impact e-service quality provision by taking active service roles as partial employees in Web 2.0-enabled services"* (Sigala, 2009). The process quality construct of Collier and Bienstock (2006) is, therefore, extended with two more dimensions. The first dimension is electronic customer voluntary performance. According to Sigala (2009), customer voluntary performance consists of three major activities: (1) firm promotion such as word-of-mouth and recommendations, (2) provision of feedback, reviews and suggestions for improvement and innovation, and (3) showing courtesy to a firms' employees and customers (e.g. customers as co-producers of services). "*It can be argued that Web 2.0 enables customers to engage in an electronic customer voluntary performance that in turn facilitates firms to provide enhanced e-service provisions"* (Sigala, 2009). The second dimension added to the process construct of e-service quality is the inter-customer support of social networks and online communities (Sigala, 2009). Customer can receive functional and social support in service encounters from employees, friends and other unacquainted persons (Sigala, 2009). These customer interactions and the social knowledge are supported and generated by web 2.0 tools. In an online setting, therefore, customer interactions can also provide functional and social support. Hence, Sigala (2009) added quality of inter customer support as a third dimension of process e-service quality.

Sigala explained how social media features and the resulting online customer interactions can influence process e-service quality alongside the dimensions of e-service quality. However, she failed to take into consideration that social media might also influence the suggested dimensions of e-service quality. The definition of e-service quality is *"the extent to which a Website facilitates efficient and effective shopping, purchasing, and delivery of products and services"* (Parasuraman et al., 2005). This efficiency and effectiveness is measured through the e-service quality dimensions, such as efficiency, fulfillment, system

availability, privacy (Parasuraman et al., 2005). I will attempt to investigate whether the e-service quality dimensions are also suitable to apply to social media, in order to determine the role of social media in e-service quality. By providing consumers the possibility to use social media on the website, for instance by creating an online travel review platform, e-service providers could theoretically improve the e-service quality. This could be measured by applying the dimension of e-service quality to social media.

The current research will focus on two forms of social media. Firstly, online travel reviews instead of user-generated content in general will be applied. Online travel agencies mostly provide this form of user generated content on their website. Therefore, it is relevant for this industry to understand how this particular form of social media influences perceived e-service quality. Furthermore, it is one of the most used forms of user generated content that is used by consumers when planning a vacation. The second form of social media investigated in this research is social networks, such as Facebook and Twitter. Social networks are the most frequently used form of social media, used by online travel agencies to communicate with consumers. Social networks are considered communication platforms where company and customer can communicate as well as a platform where customers can talk with each other (Qualman, 2013).

3.5.1 Identification of the e-service quality dimensions for social media

Various researchers have attempted to create frameworks for measuring e-service quality. The E-S-QUAL and E-RecS-QUAL framework of Parasuraman et al. (2005), however, might be the most cited and applied framework for measuring e-service quality. Although the scale is criticized by other researchers, this scale has been the basis for many other e-service quality models. For this reason, it seems appropriate to use the e-service quality dimensions of Parasuraman et al. (2005) as a starting point to determine how social media influences perceived e-service quality. An important point of criticism for the E-S-QUAL framework is that the content of what constitutes e-service quality varies across studies (Zeithaml et al., 2002). Therefore, I consider it appropriate to modify, add and remove dimensions from the E-S-QUAL framework to better fit with the e-service delivered by online travel agencies and the characteristics of social media.

The first dimension of e-service quality identified by Parasuraman et al. (2005) is efficiency, which includes the ease and speed of accessing and using the website. The efficiency attributes deal, therefore, with the design of the website (Parasuraman et al., 2005). The dimension includes (among others) the easiness of finding information, the simplicity of the website and how well the website is organized. Researchers investigating e-service quality in online travel agencies have applied similar dimensions, such as ease-of-use (e.g. Kim and Lee, 2004; Park et al., 2007). It could be hypothesized that online travel agencies that provide travel reviews on their website need to ensure that also the travel reviews on their website are easy to use in order to positively influence perceived quality. The first hypothesis is:

H1: The ease of using online travel reviews positively influences loyalty intentions

Following the quality-value-loyalty chain (Parasuraman & Grewal, 2000), which suggests that service quality is a driver of perceived value and also loyalty intentions, the second hypothesis is:

H2: Perceived value positively mediates the relation between the ease of using online travel reviews and loyalty intentions

The second dimension identified by Parasuraman et al. (2005) is fulfillment, which means the extent to which the website's promises about order delivery and item availability are fulfilled. Wolfinbarger and Gilly (2003) applied a similar explanation, stating that reliability/fulfillment involves accurate representation of the product, on-time delivery, and accurate orders. Unsurprisingly, the fulfillment dimension and the corresponding attributes do not suit with the service of online travel agencies. As Park et al. (2007) state: "*most airline tickets and hotel reservations do not need physical delivery and are not returnable, thus leading to a less apparent need to measure service excellence in terms of fulfillment. However, OTAs still need to deliver on their promises*." Therefore, although the attributes of fulfillment brought forward by Parasuraman et al. (2005) will not measure the fulfillment achieved by online travel agencies, the dimension should be included when measuring e-service quality in online travel agencies. According to Park et al. (2007) the fulfillment dimension for e-service quality in online travel agencies is defined as including the accuracy of service promises, order tracking, and information provided about online transactions. Online travel reviews can particularly improve the fulfillment aspect of accuracy of service

promises. It is hypothesized that the accuracy of the online travel reviews with regards to the service delivered positively influence e-service quality. This leads to the following hypothesis:

H3: The accuracy of online travel reviews positively influences loyalty intentions

Following the quality-value-loyalty chain as suggested by Parasuraman and Grewal (2000), the fourth hypothesis is:

H4: Perceived value positively mediates the relation between the accuracy of online travel reviews and loyalty intentions

System availability, the third dimension of the E-S-QUAL framework, covers the correct technical functioning of the website (Parasuraman et al., 2005). It concerns the availability of the website, whether the website crashes or freezes, and whether it runs smoothly. Since this dimension concerns the technical aspects of the website, there seems to be no apparent relationship between social media on this dimension. This dimension will, therefore, not be taken into consideration in this research.

The last dimension of the E-S-QUAL framework is privacy (Parasuraman et al., 2005). This dimension measures the degree to which the site is safe and protects customer information. It emphasizes the need for companies to continue to reassure customers through website design cues and external communications signaling the privacy/security of their websites (Parasuraman et al., 2005). The privacy/security dimension was also found to be a dimension of e-service quality of online travel agencies (Kim and Lee, 2004; Park et al, 2007; Ho and Lee, 2007). Similar to the dimension of system availability, there is no apparent relationship between social media and this dimension. This dimension will, therefore, also not be included in the current research.

A dimension that was not included in the E-S-QUAL framework of Parasuraman et al. (2005), is the information/content dimension. Many other researchers found that the quality of the information provided does have a significant influence on service quality (e.g. Aladwani & Palvia, 2002; Park et al., 2007; Ho and Lee, 2007). Since a vacation is a high risk, intangible product, it cannot be evaluated before consuming. This increases the importance of and need for information before making a purchasing decision. Consequently, the content quality of online travel reviews seems appropriate to include when attempting

to measure e-service quality in online travel agencies. This results in the following hypothesis:

H5: The content quality of online travel reviews positively influences loyalty intentions

Following the quality-value-loyalty chain as suggested by Parasuraman and Grewal (2000), the sixth hypothesis is:

H6: Perceived value positively mediates the relation between the content quality of online travel reviews and loyalty intentions

Parasuraman et al. (2005) created a subscale of e-service quality, which consists of responsiveness, compensation and contact. This E-RecS-QUAL scale was used for measuring e-recovery service quality. As was discussed previously, e-service providers can use social media, and in particular social networks, as a tool for providing recovery service. In particular the dimensions responsiveness and contact may be influenced by social media.

The compensation dimension regards the degree to which the website compensates (financially) for problems. This dimension concerns the policy of the e-service provider and, therefore, there is no apparent relationship between social media and the compensation dimension. This dimension will not be considered in the current research.

Responsiveness, the dimension that involves the effective handling of problems and returns through the website could be extended by social media. For obvious reasons, online travel agencies do not have to deal with returns as their service product is perishable and, thus, not returnable. However, online travel agencies still require to respond to consumers' requests, be quick in in solving customer problems and provide appropriate information when customers have a problem (Park et al., 2007). By using social networks as a communication platform, online travel agencies could improve their responsiveness and hence the e-service quality provided. Hypothesis 7, therefore, states that:

H7: The responsiveness of the e-service provider on social media positively influences loyalty intentions

Following the quality-value-loyalty chain as suggested by Parasuraman and Grewal (2000), the next hypothesis is:

H8: Perceived value positively mediates the relation between the responsiveness of the e-service provider on social media and loyalty intentions

The contact dimension regards the availability of assistance through telephone or online representatives. This dimension could also include the possibility for consumers to contact the online travel agency through social networks such as Twitter and Facebook. Also the possibility to come into contact with other consumers could also be included in this dimension. Hypothesis 9, therefore, is:

H9: The availability of assistance through social media positively influences loyalty intentions

Following the quality-value-loyalty chain as suggested by Parasuraman and Grewal (2000), the last hypothesis is:

H10: Perceived value positively mediates the relation between the availability of assistance through social media and loyalty intentions

Figure 2 shows the conceptual framework of the hypotheses described above.

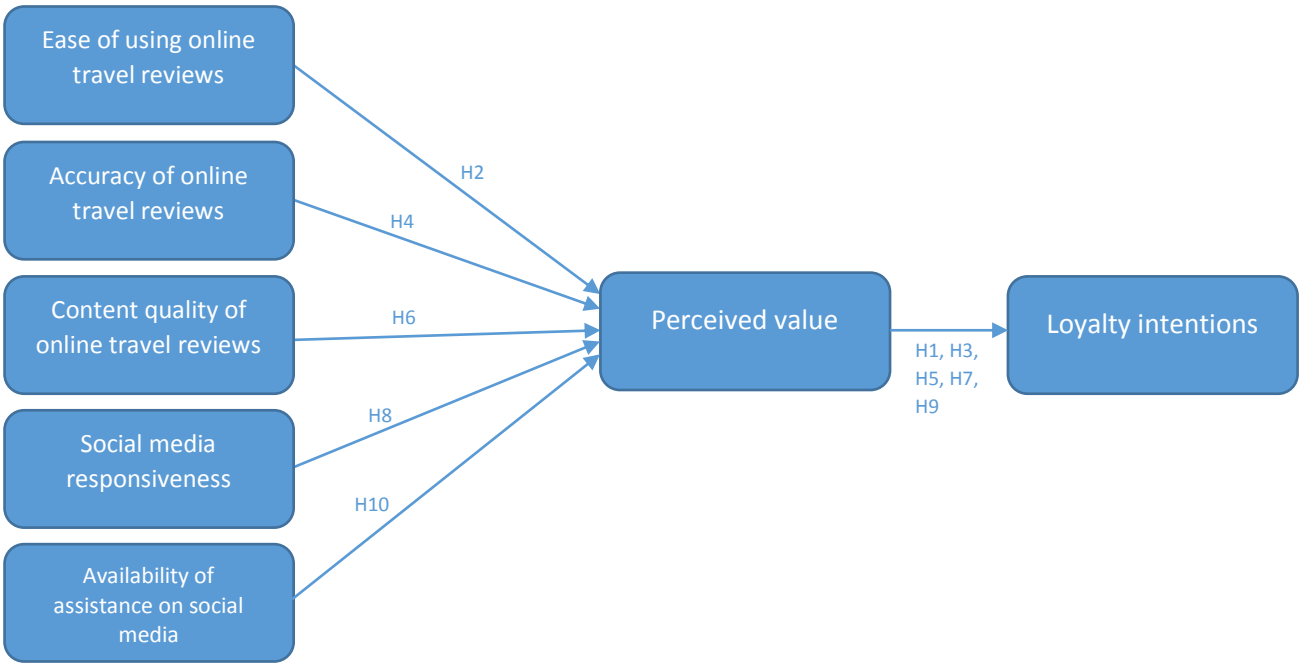

Figure 2: Conceptual Model

4. Research method

In order to test the hypotheses and answer the research question, I mainly collected primary data. The method of data collection was an online self-administered questionnaire. This format was chosen because such structured questions are easier to answer and take less time. Moreover, a self-administered questionnaire limits the potential error that can be caused by differences in questioning and recording responses. Most importantly, with a self-administered questionnaire the answers are directly comparable from respondent to respondent. This makes the analysis of the results easier, more accurate and less time consuming (Aaker, Kumar & Day, 2007; Malhotra & Birks, 2007). The data collected with the self-administered questionnaire are quantitative in nature. By collecting quantitative data objective and accurate results can be derived (Blaikie, 2010).

The questionnaire consisted of various questions, most of which were asked in a 5-point semantic differential scale, but also contained one open question and a small number of multiple choice questions. All respondents filled out the same questionnaire. The question were based on the dimensions of e-service quality of various researchers. In the questionnaire, the questions were divided randomly to avoid respondents identifying the underlying dimension.

Lastly, the questionnaire was conducted in English. According to Blaikie (2010), a survey imposes the language and logic of the researcher on the questionnaire respondents. Therefore, great care was taken to ensure that the language and logic used in the questionnaire were meaningful and valid to potential respondents (Blaikie, 2010). In total six people filled out the initial survey and read the questionnaire thoroughly. They were asked whether there were redundant questions, whether there were questions that were difficult to understand, whether there were English words that were too difficult, and whether there were questions that could be interpreted in multiple ways. They were also asked to time how long it took them to fill out the survey. Following their responses the number of questions in the survey was reduced (from approximately 70 to 35). Original questions regarding e-service quality were removed and only those questions related to social media were maintained, because the questionnaire was too long and too time consuming. Furthermore, some questions were removed because of redundancy, and other questions were rephrased.

4.1 The design of the questionnaire

The questionnaire is mostly based on the scale of the E-S-QUAL framework of Parasuraman et al. (2005). Like the E-S-QUAL, most of the other literature suggests that e-service quality is indeed a multidimensional construct, although the content of what constitutes e-SQ varies across the studies (Zeithaml et al., 2002). For this reason, I considered it appropriate to add and remove dimensions from the E-S-QUAL scale to improve the match with the service of online travel agencies. I have also removed and added items when I considered it appropriate to do so. The full questionnaire can be found in Appendix I.

As I discussed in section 3.3, the E-S-QUAL framework consists of four dimensions (efficiency, system availability, fulfillment, and privacy), as well as three dimensions for service recovery quality (responsiveness, compensation, and contact). I chose to exclude system availability, privacy and compensations as dimensions, as there is no hypothesized relation between these dimensions and social media.

The dimension 'efficiency' originally consists of eight items. Four 'efficiency' items of Parasuraman et al. (2005) were not appropriate to measure the ease of using online travel reviews and were excluded. Three items were rephrased to measure the ease of using online travel reviews instead of overall website efficiency. Furthermore two items from Gretzel and Yoo (2008) were added to the dimension, as the literature suggests that ratings and reviews could help make the purchasing process more efficient by reducing risk and by helping compare alternatives.

Parasuraman et al. (2005) did not include the information/content dimension in their framework. However, many other researchers found that the quality of the information provided does have a significant influence on service quality. Since a vacation is a high risk, intangible product, it cannot be evaluated before consuming. This increases the importance of and need for information before making a purchasing decision. Therefore, 10 items were included in the questionnaire to measure the content quality of ratings and reviews. The items were based on previously used items of Aladwani and Palvia (2002), Gretzel and Yoo (2008), Yang, Cai, Zhou and Zhou (2005) and Zhang and Von Dran (2002). Some items were rephrased to ensure the correct understanding of the words by the respondents. One item was based on the research of Litvin et al. (2008), who found that the perceived independency of a source is an important feature of online travel reviews. Furthermore, own

inspection of websites of online travel agencies showed that the possibility of identifying the profile of the reviewer is also considered important.

The items for the fulfillment dimension were changed to better fit with the service of online travel agencies. As Park et al. (2007) state: "*most airline tickets and hotel reservations do not need physical delivery and are not returnable, thus leading to a less apparent need to measure service excellence in terms of fulfillment. However, OTAs still need to deliver on their promises*." Only one item of Parasuraman et al. (2005), concerning the truthfulness of the online travel agency was maintained (albeit rephrased). Two other items were adapted from Wolfinbarger and Gilly (2003) and Gretzel and Yoo (2008).

The items measuring the responsiveness dimension include one adapted item from the Parasuraman et al. (2005) scale and one from the Wolfinbarger and Gilly (2003) article. Both questions were rephrased to cover the accessibility of online travel agencies through social media. A third item was constructed to cover the adequacy of the responsiveness.

In the contact dimension I included items regarding the possibility for consumers to contact the online travel agency through social networks such as Twitter and Facebook. This item is based on an original E-RecS-QUAL item of Parasuraman et al. (2005). Also the possibility to come into contact with other consumers through social media is included in this dimension. This item was based on notions of Qualman (2013) and Bernoff and Li (2008).

In order to measure whether the e-service quality dimensions have an impact on perceived value and, therewith, on loyalty intentions, the items applied by Parasuraman et al. (2005) were included in the questionnaire. These consisted of four statements regarding the value of using the website and five questions about loyalty intentions. Questions about loyalty intentions through social media were added to the loyalty intention questions. For instance, a question whether the respondent would recommend the online travel agency through social was included.

The remaining questions in the questionnaire were included to filter responses (to ensure only online travel agencies were considered), to identify the travel and information search behavior of the respondents and to identify the demographics of the sample.

5. Analysis

In this chapter I will discuss the findings of the questionnaire and determine whether the hypotheses stated in chapter 3 will be rejected or not. I will start, however, by describing the research sample. All tests were performed at a 5% significance level.

5.1 Sample description

In order to obtain a sample for this research, the non-probability sampling technique of convenience sampling was used. The respondents were approached through various Social Media platforms to which I had access, more particular Facebook and Twitter. Through sharing and retweeting a large number of people were reached. However, it is not possible to determine the exact number of people that were approached to participate in the research.

Despite the broad reach of the message, only 147 people started the questionnaire. Three respondents filled out the questionnaire while thinking of a direct supplier (AirBerlin) or another substitute for online travel agencies (Airbnb). 18 respondents withdrew from the questionnaire before answering the service quality questions. Potential reasons for this could be that the respondent never booked a vacation on the website of an online travel agency or never used online travel reviews, and thus could not answer the questions. Another group of 18 respondents withdrew from the questionnaire halfway through. Perhaps the respondents felt the questionnaire was too time consuming or too difficult. In total, 102 respondents filled out the survey completely. Six respondents withdrew from the questionnaire after answering the questions relating to the dimensions of e-service quality. Although the respondents did not fill out the questionnaire completely, the answers regarding the dimensions will be included in the analysis. Pairwise deletion will be used when drawing conclusions from variables with missing values. As a result, a total of 108 responses will be analyzed.

The average age of the respondents was 30.1 years, with ages ranging from 20 to 64 years. The majority of the sample (79%) was younger than 33 years. The sample, thus, consists mostly of millennials (Generation Y), who are born (roughly) between 1981 and 2000. The millennials make up about one third of the world population (Kurz, 2012). The percentage millennials in the sample is significantly higher ($|Z| = 9.783 > CV = 1.96$, refer to Appendix II for calculations) than the proportion of millennials in the world population. The large

proportion of millennials in the sample is, however, not surprising. The questionnaire could only be filled out when the respondent had experience with online travel agencies and online travel reviews. According to Hoffmann (2014), millennials are early adopters of technology who rely heavily on WOM. Moreover, 93% of the millennials use reviews prior to purchase and 97% of the millennials trust anonymous reviews on e-commerce websites (Hoffman, 2014). Millennials were very likely to fulfill the requirements of the questionnaire.

The percentage of males in the sample is 41% and hence the percentage of females in the sample is 59%. The majority of the sample is of Dutch origin (64%) and other nationalities have a clear minority in the sample (ranging from 0.9% to 5.6%). Based on the nationalities of the respondents, the sample is clearly not representative of the population. The majority of the sample is currently employed (approximately 60%), while the second largest group consists of students (approximately 29%).

In the literature review it was mentioned that about 70% of the consumers booking a hotel online read up to 20 unique reviews. The graph in figure 3 shows that many of the respondents read more than 6 reviews prior to making a purchase.

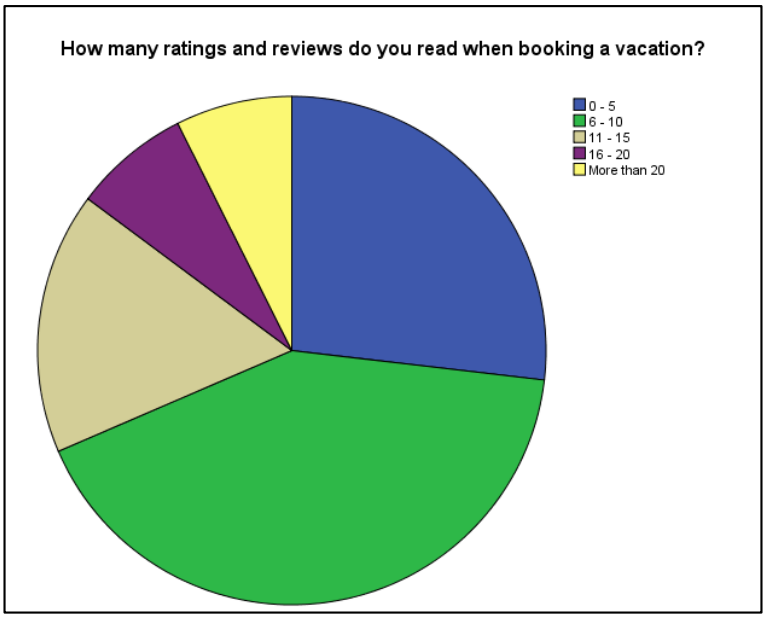

Figure 3: Number of travel reviews read prior to purchase

5.2 Evaluation of Scales

As discussed in chapter 4.1, the questionnaire consisted of a variety of items (questions) to measure the respondents' perceived value and loyalty intentions as well as their evaluation of ease of use, content quality, fulfillment, responsiveness and contact dimensions. Inspection of the dataset showed that approximately 70% of the respondents responded 'not applicable/do not know' to the items related to service recovery (responsiveness and contact). Parasuraman et al. (2005) experienced a similar pattern of missing data, as "*approximately one third to one half of the respondents did not respond to these items* [the service recovery items]*, presumably because they had not experienced the issues covered by the items.*" The e-retailing study by Wolfinbarger and Gilly (2003) also reported an average missing-value rate of 32% for similar items (Parasuraman et al., 2005). Due to large amount of missing values, it is not possible to draw conclusions from the data collected regarding service recovery. The sample would be too small (n = 22) and the probability to yield statistically significant results regarding service recovery would be too low (Brace, Kemp & Snelgar, 2009). Therefore, the data regarding service recovery will not be used in the analysis.

To investigate whether the remaining e-service quality items can be combined into the expected dimensions, firstly a principal component analysis was conducted with Varimax rotation. Before extracting the several components, it is important to examine whether principal component analysis is appropriate. The correlations between the items should not be 0, as this would mean that they cannot be combined to components, which is the purpose of this analysis. This is determined by inspecting the correlation matrix with all the variables included that I have measured (Brace et al., 2009). One item 'I can easily identify the profile of the reviewer' had few correlations greater than 0.3, and thus was removed from the further analysis. The new correlation matrix showed no other items with many values smaller than 0.3. Furthermore, there were no correlations larger than 0.9. The Bartlett's test of Sphericity examines whether the correlations between the variables are equal to zero. The results of Bartlett's test of sphericity show that the correlation matrix is not equal to the identity matrix ($\chi^2 = 1058.089$, $p = 0.000$), indicating that there are significant correlations among the variables.

A second test that can be performed is the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO), which determines the inter-correlations among the variables. Since I would like to establish components that summarize the data, inter-correlations among the variables is desirable. The KMO is 0.932. According to Fields (2009), a KMO value above 0.9 is superb. Thus, it can be assumed that there are sufficient inter-correlations among the variables, and all items seem suitable for principal component analysis. Lastly, the measure of sampling adequacy (MSA) for each item is higher than 0.55, indicating that there are sufficient inter-correlations among the variables. Consequently, all scales are suitable for principal component analysis.

The principal component analysis with the e-service quality items shows that there are three components with eigenvalues larger than 1.0, indicating that from the items 3 components can be extracted. Based on the factor loadings from the rotated component matrix and the theory discussed previously, 3 new dimensions are created. Each component has a Cronbach's α larger than 0.8, indicating that the three created components are reliable. Table 1 summarizes the different independent constructs.

The created dimensions are labeled and defined as follows:

Content Quality:	The extent to which a user thinks that the information provided through the online travel reviews is of good quality.
Ease of use:	The degree to which the online customer thinks that the online travel reviews are easy to use when searching for information.
Trustworthiness:	The degree to which a user thinks that he/she can trust the online travel review and the reviewer.

Table 1. Measurement properties of scales for independent constructs

Component Name	Factor Load.	Eigen Value	Variance Expl.	Cronb. Alpha
Component 1 – Content quality		8.510	50.059%	0.806
• I think that the ratings and reviews on the online travel agency website are informative	0.791			
• I think that the ratings and reviews on the online travel agency website are useful	0.732			
• I think that the ratings and reviews improve the truthfulness of the online travel agency website	0.636			
• The service that I received was described accurately by the ratings and reviews on the online travel agency website	0.569			
Component 2 – Trustworthiness		1.263	7.429%	0.878
• I think that the ratings and reviews on the online travel agency website are trustworthy	0.809			
• The ratings and reviews on the online travel agency website come from an independent source	0.740			
• I think that the ratings and reviews on the online travel agency website are believable	0.729			
• I think that the ratings and reviews on the online travel agency website are accurate	0.649			
Component 3 – Ease of use		1.050	6.174%	0.805
• I think that the ratings and reviews on the online travel agency website are well organized	0.771			
• The online travel agency website makes it easy for me to find ratings and reviews from other customers	0.753			
• I think that the ratings and reviews on the online travel agency website are simple to use	0.560			
• The ratings and reviews on the online travel agency website help me evaluate alternatives	0.521			

Another principal component analysis with Varimax rotation was performed to identify the dependent constructs. The correlation matrix shows that one item 'the price/quality ratio (value for money) of the products and services available at this website' had few correlations greater than 0.3, and was removed from the further analysis. The new correlation matrix showed no other items with many values smaller than 0.3. Furthermore, there were no correlations larger than 0.9. The results of Bartlett's test of sphericity show that the correlation matrix is not equal to the identity matrix ($\chi^2 = 889.670$, $p = 0.000$), indicating that there are significant correlations among the variables. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) has a value of 0.822, which is a great value, according to Fields (2009). Conclusively, there are sufficient inter-correlations among the variables, and all items seem suitable for principal component analysis. The measure of sampling adequacy (MSA) for each item is higher than 0.55, suggesting that there are sufficient inter-correlations among variables. Consequently, all scales are suitable for principal component analysis.

The principal component analysis shows that there are three components with eigenvalues larger than 1. This indicates that from the questions regarding loyalty intentions and perceived value three components can be created. Based on the factor loadings from the Rotated Component Matrix, the expected loyalty intention dimension will be divided into two components: 'loyalty intentions' and 'social media loyalty intentions'. The first component includes the original 'loyalty' items from Parasuraman et al. (2005), while the 'social media loyalty' component includes the new items regarding loyalty intentions through social media (e.g. ' Recommend this online travel agency to other consumers through social media'). The perceived value items all load on one component, as expected. Furthermore, each component has a Cronbach's α larger than 0.8, indicating that the three created components are reliable. Table 2 summarizes the findings.

Table 2. Measurement properties of scales for dependent constructs

Component Name	Factor Load.	Eigen Value	Variance Expl.	Cronb. Alpha
Component 1 – Loyalty Intentions		5.120	46.546%	0.875
• Say positive things about this online travel agency to other people	0.842			
• Recommend this online travel agency to someone who seeks your advice	0.787			
• Do more business with this online travel agency in the future	0.759			
• Consider this online travel agency to be your first choice for future transactions	0.732			
• Encourage friends and others to do business with this online travel agency				
Component 2 – Social Media Loyalty Intentions		2.332	21.204%	0.967
• Recommend this online travel agency to other consumers through social media	0.959			
• Encourage other consumers through social media to do business with this online travel agency	0.957			
• Say positive things about the online travel agency through social media	0.925			
Component 3 – Perceived value		1.244	11.306%	0.893
• The extent to which the website gives you a feeling of being in control	0.898			
• The overall value you get from this website for your money and effort	0.872			
• The overall convenience of using this website	0.560			

After creating the independent and dependent components, the dataset now consists of six variables that reliably indicate the respondents' evaluation of 'ease of use', 'content quality', 'trustworthiness', and their level of 'perceived value', 'loyalty intentions', and 'social media loyalty intentions'.

5.3 Testing the Hypotheses

The variables created in the previous chapter will be used to test the hypotheses that were discussed in chapter 3. Due to the low amount of responses, it will be impossible to test the hypotheses regarding the service recovery quality dimensions. The hypotheses regarding responsiveness (H7 and H8) and contact (H9 and H10) must, therefore, be excluded from further analysis. On the other hand, the analysis also showed that the loyalty dimension must be divided into two separate dimensions: 'loyalty intentions' and 'social media loyalty intentions'. The new conceptual model follows:

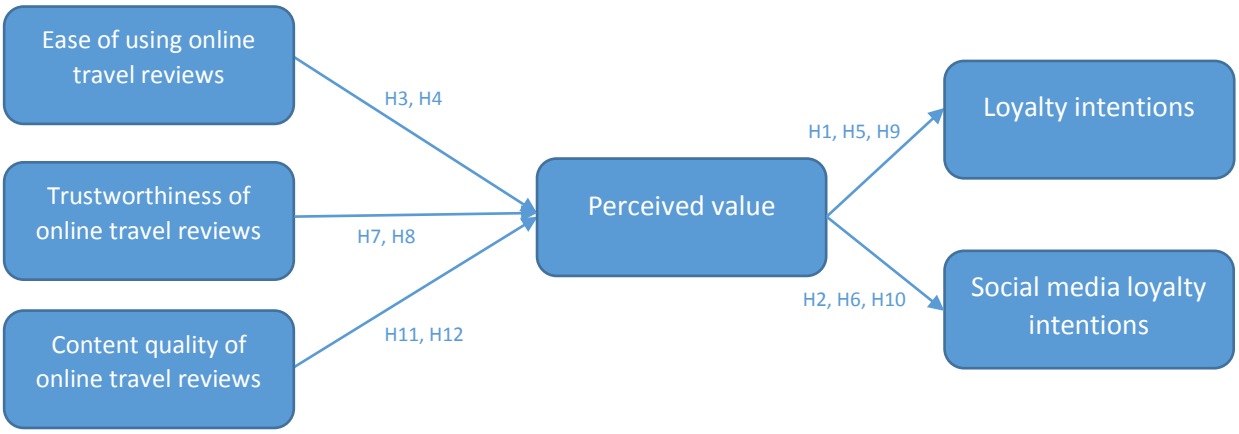

Figure 4: New conceptual model

According to the new conceptual model, the service quality dimensions have an effect on loyalty intentions (H1, H5, H9) and social media loyalty intentions (H2, H6, H10). Furthermore, perceived value is expected to mediate the relationship between the quality dimensions and loyalty intentions (H3, H7, H11) and between the quality dimensions and social media loyalty intentions (H4, H8, H12). All tests that will be performed to test the hypotheses, will be performed at a 5% significance level.

5.3.1 The relationship between the quality dimensions and loyalty intentions

A multiple regression model was run to examine the influence of the 3 quality dimensions on loyalty intentions. By doing this, it is possible to determine the role of the individual quality dimensions while correcting for the correlations between the quality dimensions. The model that was tested was as follows:

$$\text{Loyalty intentions} = \beta 1.0 + \beta 1.1 * \text{Ease of use} + \beta 1.2 * \text{Content Quality} + \beta 1.3 * \text{Trustworthiness} + \varepsilon$$

The results show that the overall model is somewhat significant ($F = 2.606$, $p = 0.056$). Therefore, the model will result in a somewhat significantly good degree of prediction of the dependent variable 'loyalty intentions'. This means that the model can be used to predict the value of loyalty intentions. The results in Appendix III show that the model has a low R^2 ($R^2 = 0.074$), and thus only explains a small amount of variation in the outcome variable 'loyalty intentions'. Table 3 provides an overview of the coefficients and their significance.

Table 3. Coefficients and their significance

Dependent Variable	*Loyalty Intentions*		
Independent Variable	B	SE	Sig.
Constant	14.774	2.207	0.000
Ease of use	0.111	0.187	0.553
Content Quality	-0.167	0.188	0.378
Trustworthiness	0.376	0.175	0.034*

From the table can be derived that only trustworthiness has a significant positive effect on loyalty intentions. This means that if the perceived trustworthiness increases, the loyalty intentions of the consumer also increases. Consequently, the hypotheses that ease of use and content quality have an influence on loyalty intentions (H1 and H9) are rejected, while the hypothesis that trustworthiness influences loyalty intentions (H5) is not rejected.

5.3.2 The relationship between the quality dimensions and social media loyalty intentions

A second multiple regression model was run to examine the influence of the 3 quality dimensions on social media loyalty intentions. The model that was tested was:

$$\text{Social Media Loyalty Intentions} = \beta 2.0 + \beta 2.1 * \text{Ease of use} + \beta 2.2 * \text{Content Quality} + \beta 2.3 * \text{Trustworthiness} + \varepsilon$$

From the results (shown in Appendix IV) can be derived that the model only explains a small amount of variation in the dependent variable 'social media loyalty intentions'. The R^2 has a low value ($R^2 = 0.052$), which means the model only explains 5.2% of the variation. The results also show the model does not differ significantly from the mean as a model ($F = 1.780$, $p = 0.156$). This indicates that the model, overall, does not allow for a significantly good degree of prediction of the dependent variable. It can be concluded that the predictor variables 'ease of use', 'content quality' and 'trustworthiness' do not have a significant influence on 'social media loyalty intentions'. It follows that the hypotheses that ease of use, content quality and trustworthiness have an influence on social media loyalty intentions (H2, H6 and H10) are rejected.

5.3.3 The relationship between the quality dimensions and perceived value

In order to identify whether the e-service quality dimensions have an influence on perceived value, a third regression model was created and tested. The model that was tested was:

$$\text{Perceived Value} = \beta 3.0 + \beta 3.1 * \text{Ease of use} + \beta 3.2 * \text{Content Quality} + \beta 3.3 * \text{Trustworthiness} + \varepsilon$$

Appendix V shows the results of the multiple regression analysis. From the results can be derived that the R^2 has a low value ($R^2 = 0.089$), which means the model only explains 8.9% of the variation in the dependent variable 'perceived value. The results also indicate that the model overall is significant ($F = 3.285$, $p = 0.027$). This means that the model is a significant fit of the data overall, and can be used to predict the value of perceived value. Table 4 provides an overview of the coefficients and their significance.

Table 4. Coefficients and their significance

Dependent Variable	*Perceived Value*		
Independent Variable	B	SE	Sig.
Constant	17.729	1.951	0.000
Ease of use	0.149	0.165	0.368
Content Quality	-0.017	0.166	0.918
Trustworthiness	0.248	0.155	0.112

From the table can be derived that none of the independent variables have a significant influence on the dependent variable 'perceived value'. This result can occur when the set of predictor variables is highly collinear. However, the output (see Appendix V) shows that for the current model the VIF values are all well below 10 and the tolerance statistics are well above 0.2. Therefore, I can conclude that there is no multicollinearity within the data.

The lack of significance of should be interpreted with caution, because simple regressions for each predictor variable and dependent variable 'perceived value' (see Appendix VI) show that the individual predictor variables have a significant effect on perceived value ($F_{\text{ease of use}} = 6.372$, $p = 0.013$)($F_{\text{content quality}} = 4.967$, $p = 0.028$)($F_{\text{trustworthiness}} = 8.729$, $p = 0.004$). Table 5 summarizes the unique coefficients and their significance.

Table 5. Coefficients and their significance – simple regressions

Dependent Variable	*Perceived Value*		
Independent Variable	B	SE	Sig.
Ease of use	0.300	0.119	0.013
Content Quality	0.245	0.110	0.028
Trustworthiness	0.318	0.107	0.004

5.3.4 Perceived value as a mediator

The conceptual model shows that the relationships between the quality dimension and loyalty intentions and social media loyalty intentions are expected to be mediated by perceived value. This means that the relationship between the quality dimensions and loyalty intentions / social media loyalty intentions is indirect and passes through perceived value.

In order to determine whether perceived value has a mediating effect, three conditions need to be tested. Firstly, the quality dimensions need to have a direct effect on (social media) loyalty intentions. The quality dimensions also need to have an effect on perceived value. Furthermore, the significant effect of the quality dimensions on (social media) loyalty intentions disappears or becomes smaller when I control for the effect of perceived value.

From the results of the previously discussed multiple regressions, it can already be derived that the quality dimensions do not have a significant effect on social media loyalty intentions. The first condition for mediation between the quality dimensions and social media loyalty intentions has, thus, been breached. This means that testing for mediation between these variables is senseless and hypotheses 4, 8 and 12 can be rejected.

However, a somewhat significant relationship was found between the quality dimensions and loyalty intentions (F = = 2.606, p = 0.056). The regression model between the quality dimensions and perceived value was also found to be significant (F = 3.285, p = 0.027). This means that the first two conditions for mediation to occur have been fulfilled. In order to test whether a significant effect of the quality dimensions on loyalty intentions disappears or becomes smaller when I control for the effect of perceived value, the following model was run:

$$\text{Loyalty Intentions} = \beta 4.0 + \beta 4.1 * \text{Ease of use} + \beta 4.2 * \text{Content Quality} + \beta 4.3 * \text{Trustworthiness} + \beta 4.4 * \text{Perceived Value} + \varepsilon$$

The output from the regression shows that the R^2 is higher compared to the other R^2. The value of R^2 is 0.286, suggesting that the model explains a higher proportion of the variation in the outcome variable. Furthermore, the model is significant (F = 9,721, p = 0.000), which means the all the conditions for mediation are met and the models can be used to predict the outcome variables. Table 6 provides an overview of the coefficients and their significance for the models regarding the three conditions.

Table 6. Coefficients and their significance

	Regression 1			*Regression 2*			*Regression 3*		
Dependent Variable	*Loyalty Intentions*			*Perceived Value*			*Loyalty Intentions*		
Independent Variable	B	SE	Sig.	B	SE	Sig.	B	SE	Sig.
Constant	14.774	2.207	0.000	17.729	1.951	0.000	5.171	2.644	0.053
Ease of use	0.111	0.187	0.553	0.149	0.165	0.368	0.030	0.165	0.854
Content Quality	-0.167	0.188	0.378	-0.017	0.166	0.918	-0.157	0.166	0.346
Trustworthiness	0.376	0.175	0.034*	0.248	0.155	0.112	0.242	0.156	0.125
Perceived Value							0.542	0.101	0.000*

The coefficients and their significance in table 6 show that, despite the significance of the overall model, the quality dimensions on their own do not have a significant influence on perceived value. Following the three conditions for mediation, it seems that mediation would not be possible. However, according to Fields (2013) it is also important to look at the sizes of the regression parameters. From the table can be derived that the regression coefficient for trustworthiness decreases quite considerably when the mediating variable 'perceived value' is included (change in coefficient = 0.376 – 0.242 = 0.134). This might indicate that perceived value is indeed a mediating variable between trustworthiness and loyalty intentions. There is no indication that the effects of ease of use and content quality are mediated by perceived value, and thus hypotheses 3 and 11 are rejected.

I performed a simple regression with trustworthiness as independent variable and loyalty intentions as dependent variable. This regression is significant ($F = 7.061$, $p = 0.009$), and hence the first condition of mediation is fulfilled. A second simple regression shows that trustworthiness has a significant effect on perceived value ($F = 8.724$, $p = 0.004$), which means that the independent variable also significantly predicts the mediating variable. When including the mediating variable in the model, the outputs show that the model is significant ($F = 19.162$, $p = 0.000$). Furthermore, the significance of the influence if trustworthiness on loyalty intentions disappears and trustworthiness predicts the value of loyalty intentions less strongly compared to the first regression. The coefficients and their significance are summarized in table 7:

Table 7. Coefficients and their significance

Dependent Variable	*Regression 1* *Loyalty Intentions*			*Regression 2* *Perceived Value*			*Regression 3* *Loyalty Intentions*		
Independent Variable	B	SE	Sig.	B	SE	Sig.	B	SE	Sig.
Trustworthiness	0.323	0.122	0.009*	0.318	0.107	0.004*	0.151	0.112	0.179
Perceived Value							0.540	0.100	0.000*

It appears that the relationship between trustworthiness and loyalty intentions is fully mediated by perceived value. The results of a Sobel-test confirm that the mediating effect is indeed significant (p = 0.009). Consequently, hypothesis 7 is not rejected.

5.3.5 Model of trustworthiness as predictor variable of loyalty intentions

Figure 5 provides an overview of all the significant relationships that were found with this research. The conceptual model illustrates that only e-service quality dimension trustworthiness has a positive effect on loyalty intentions (H5). The figure also shows that the relationship between trustworthiness and loyalty intentions is fully mediated by perceived value (H7)

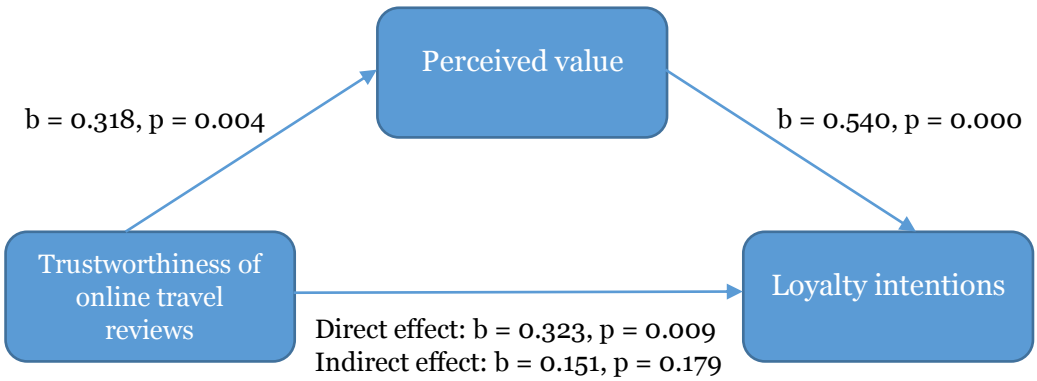

Figure 5: Model of Loyalty Intentions with trustworthiness as predictor variable

6. Discussion

The aim of this research was to investigate how perceived e-service quality is influenced by the presence of social media on the website of online travel agencies. Previous studies have already established several dimensions of e-service quality. Most notably the study of Parasuraman et al. (2005), in which 5 dimensions for e-service quality were identified: efficiency, system availability, fulfillment and privacy; as well as three e-recovery service dimensions: responsiveness, compensation and contact. A very small part of the existing research on e-service quality, acknowledges the impact that social media can have on e-service quality. In the past, website technology did not allow for interaction between contact personnel and customers or between customers. Therefore, it is understandable why interactions between consumers have not been included in the majority of the e-service quality frameworks. However, social media features have increasingly been allowing consumers to connect with organizations as well as other consumers. Following Lehtinen and Lehtinen's (1991) suggestion that traditional service quality is also derived from interaction between customers, e-service quality might also be influenced by online customer interactions. And thus, it seems logical to investigate whether and how this online interaction has an impact on e-service quality.

Existing e-service quality dimensions from various researchers (e.g. Parasuraman et al., 2005; Park et al.,2007; Wolfinbarger & Gilly, 2003) were used as a starting point to determine how social media influences perceived e-service quality. The dimensions were adapted to match the characteristics of social media and the service of online travel agencies. To investigate whether social media has an influence on e-service quality, an online self-administered questionnaire was conducted. Although the intention was to measure both the effect of both e-service quality dimensions and e-recovery service dimensions on loyalty intentions, it was only possible to measure the effect of the former. Many respondents indicated the service recovery questions did not apply to their situation or that they did not know the answer, resulting in a low number of respondents.

Through a principal component analysis, 3 dimensions of e-service quality were identified. These were: ease of using online travel reviews, content quality of online travel reviews and trustworthiness of online travel reviews. Furthermore, the principal component analysis of the items of perceived value and loyalty intentions, showed that the loyalty intention questions actually consisted of two components: loyalty intentions and social media loyalty intentions.

According to the quality-value-loyalty chain, service quality enhances perceived value, which, in turn, contributes to customer loyalty (Parasuraman & Grewal, 2000). Therefore, in this research e-service quality dimensions were applied to examine the effect of online travel reviews on perceived value and loyalty intentions.

6.2 Theoretical Contribution

The most important finding of this research is that the trustworthiness of online travel reviews has a significant influence on perceived value and loyalty intentions. It can be suggested that the trustworthiness of online travel reviews is indeed a driver of e-service quality. This means that by increasing the level of trustworthiness of online travel reviews (the degree to which a user thinks that he/she can trust the online travel review and the reviewer), an online travel agency can improve the e-service quality they deliver.

In 1988, Parasuraman et al. found that the knowledge and courtesy of employees and their ability to inspire trust and confidence has a significant influence on traditional service. This assurance dimension of service quality somewhat resembles the trustworthiness dimension, which includes trust and confidence in the online reviewer. This resemblance strengthens the conclusion that the trustworthiness of the online travel review is a driver of e-service quality and therewith of perceived value and loyalty. Various other researchers have also found similar results. In their research, Flavián, Guinalíu and Gurrea (2006) investigated whether perceived website usability, trust and satisfaction have an influence on the loyalty shown by Internet users. They considered trust to be a multidimensional construct made up of three dimensions: honesty, benevolence and perceived competence. *"Honesty is the belief that another person will keep his or her word, fulfil promises and be sincere. Benevolence is the belief that one of the parties is interested in the wellbeing of the other without intention of opportunistic behavior and motivated by a search for a mutually beneficial*

relationship. […] Perceived competence is the degree with which the consumer perceives that the supplier is in possession of the necessary knowledge and skills to complete an agreement or exchange." (Flavían et al., 2006). Their results showed that higher levels of trust in the website indeed have a significant effect on loyalty (website fidelity and the consumer's intention to buy). Furthermore, Yoo, Lee, Gretzel and Fesenmaier (2009) suggested that consumers perceive online consumer generated media as less trustworthy than traditional word-of-mouth. They state that this is caused by the anonymous nature of consumer generated media, which makes it difficult to identify the source of the message and its credibility. Also the perceived expertise of the source is important in creating trust. The study of Yoo et al. (2009) examined the factors affecting trust and its influence on the perceived impacts and the benefits of consumer generated media use within the context of trip planning. They found that perceived expertise and the source credibility of travel-related consumer generated media creators indeed significantly influence trust in travel-related consumer generated media. Furthermore, Yoo et al. (2009) found that the trust in online travel-related consumer generated media increases the benefits travelers derive from its use in the course of planning pleasure trips and has real behavioral implications. The current research confirms these earlier findings. A high level of trust in the user-generated media influences their value perceived and the loyalty intentions. This is especially true, since the items included in the trustworthiness dimension resemble the factors influencing trust that were found in the earlier researches.

Other findings of this research were that content quality and ease of use do not significantly influence the loyalty intentions of consumers. Quite surprising is that the relationship between content quality and loyalty intentions is non-significant. This dimension was included because of the intangible and high risk nature of vacations. The service cannot be evaluated before consuming, thus increasing the need for information from the online travel agency. Despite evidence that consumers are increasingly using online travel reviews while booking a vacation, the quality of the reviews do not influence e-service quality. The non-significance of ease of use is also surprising as this dimensions is frequently found to be a significant influence on e-service quality, perceived value and loyalty intentions (e.g. Parasuraman et al., 2005; Park et al., 2007). A possible explanation is that online travel agencies (and other review website) often have similar designs. An online travel review for a hotel generally includes an average overall ranking and sub-rankings, and the possibility

to read a consumer's individual ranking and review of the hotel. Furthermore, some online travel agencies provide a profile of the reviewer (e.g. type of travel party, travel purpose, age, gender, etc.). The design and ease of using the online travel reviews has, perhaps, been standardized to a great extent and thus does not influence the e-service quality anymore.

The results also showed that ease of using online travel reviews, the content quality and the trustworthiness do not have an effect on social media loyalty. Looking at the items that make up the social media loyalty dimension, it can be concluded that this dimension involves the intention to spread electronic word-of-mouth. The items concern whether the consumer will recommend the online travel agency through social media, whether he will encourage others through social media to do business with the online travel agency and whether he will say positive things on social media. According to Litvin et al. (2008) consumers spread word-of-mouth because they feel positively or negatively about a product/service experience, are (dis)satisfied, feel pleasure or sadness, and wish to share these experiences with others. Possibly the feelings towards the content quality, the trustworthiness and the ease of using online travel reviews do not generate feelings that are strong enough to motivate consumers to spread word-of-mouth through social media regarding the online travel agencies. Feelings regarding the complete service experience (which could also include the online travel reviews) are perhaps more important for the consumers to share via social media. Future researchers could investigate whether this is the case.

6.3 Implications for managers

Besides contributing to the theory on e-service quality, the results of the current research also have several important implications for managers of online travel agencies and possibly also other types of service providers. Already in the introduction of this paper, I stated that achieving a sustainable competitive advantage in the market place is difficult with merely a web presence or low prices (Zeithaml et al., 2000), but superior service quality is essential for excellent market performance on an enduring basis (Parasuraman & Grewal, 2000). Over the years, academics have developed frameworks that allow service providers to evaluate their service and to find possible improvements in their service. The current research has shown that the trustworthiness of online travel reviews is a significant contributor e-service quality. The more a consumer trusts the reviews he reads on the

website, the more favorably he will evaluate the service quality delivered by the website. Clearly, this is an important discovery for online travel agencies who increasingly have to provide superior service quality to succeed in the competitive marketplace. Yoo et al. (2009) found that the perceived expertise and credibility of the reviewer are important drivers of trust in online travel reviews. This means that online travel agencies can improve the trustworthiness of the travel reviews on their website by encouraging the reviewers to provide enough information about themselves to make it easy for other consumers to assess their expertise and credibility (Yoo et al., 2009).

6.4 Limitations and future research

Several limitations were encountered during this research which need to be accounted for. First of all, the sample was collected through the convenience sampling method. Although this method is the least expensive and least time consuming of all sampling techniques, it has serious limitations (Malhotra & Birks, 2007). The sample is not representable of any definable population, and consequently, it is not theoretically meaningful to generalize the findings of this research (Malhotra & Birks, 2007). Furthermore, the sample consists mostly of Dutch people, and a smaller group of various other nationalities. Future research should focus on examining the influence of social media with samples from different cultures, as the influence of the e-service quality dimensions might vary in different cultures. This is supported by Sigala and Sakellaridis (2004), who wrote: "*In the case of tourism and hospitality Web sites, research on the impact of culture on Web site service quality dimensions becomes more important because of two major reasons. First, tourism and hospitality Web sites frequently target multinational and multicultural audiences. Second, as a result of the former, the greatest majority of tourism and hospitality Web sites are trying to develop successful localized and national gateways of their Web stores (e.g., opodo.fr, opodo.de, opodo.co.uk).*

Furthermore, the sample only consisted of 108 respondents. Although that is sufficient for both factor analysis (minimum n =100 (Brace et al., 2009)) and multiple linear regression (minimum n = number of predictor variables times 10 (Brace et al., 2009)), the number of respondents was the absolute minimum for a reliable analysis. In order to derive more reliable results, a larger sample size would have been better. Perhaps this could be achieved

by collaborating with an online travel agency and sending out the questionnaire to their customers. In the questionnaire used in this research, respondents were asked to think of an online travel agency they had done business with in the past. This might have caused problems for the respondents, since a large group of the respondents (approximately 33%) used an encounter that occurred longer than 6 months ago. Thus, a larger and more reliable sample could possibly be obtained in future research by conducting the questionnaire to the customers of one, or perhaps even multiple, online travel agencies.

Future researcher investigating the influence of social media on e-service quality could apply a different research method. In the current research, the dimensions of e-service quality were based on existing literature on (e-)service quality and social media. By using focus groups as a research method, future researchers could possibly derive more qualitative insights from consumers and establish different dimensions of e-service quality. The dimensions derived from the focus group could then be analyzed through quantitative analysis, similar to the analysis of the current research. Another approach to the research could be using the perspective from online travel agencies. The current research is focused on the consumer's perspective of e-service quality, whereas organizations may have a differing view on the matter.

Lastly, future researchers should attempt to examine the relationship between social media and e-service quality in different industries. Criticizers of the original SERVQUAL framework state that the dimensions of service quality might differ for each industry (Carman, 1990). It is, thus, very likely that this is also the case in the dimensions of e-service quality investigated in this research. In future research the wording and subject of some individual items need to be customized to each specific service setting (Carman, 1990).

7. Conclusion

The aim of the present paper was to examine how perceived e-service quality is influenced by the presence of social media on the website of online travel agencies. Through an extensive literature I postulated that several existing dimensions of e-service quality can also be applied to social media features on the websites of online travel agencies. This research focused on the effect of online travel reviews on e-service quality. Online travel reviews are a form of social media.

The results of several multiple regression analyses showed that the trustworthiness of online travel reviews has a significant positive influence on both perceived value and loyalty intentions. Trustworthiness of online travel reviews were defined as the degree to which a user thinks that he/she can trust the online travel review and the reviewer. Since the quality-value-loyalty chain suggests that service quality is a driver of perceived value and loyalty, the answer to the research question is that social media influences e-service quality positively when the consumer perceives the user-generated content as trustworthy. This research did not show that the ease of using and the content quality of online travel reviews have a significant influence on perceived value and loyalty intentions. Hence, it cannot be concluded that these are dimensions of e-service quality.

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Appendix I: The Questionnaire

When answering the following questions, please think back of the last time you booked a vacation or hotel room on the website of an online travel agency.

An online travel agency is <u>not</u> a direct supplier (e.g. a hotel or an airline company), but an intermediary between you and the supplier(s). Examples of online travel agencies include: Expedia, Booking.com, Agoda, Hotels.com. Traditional travel agencies with a web shop can also be considered as an online travel agency (e.g. TUI, Thomas Cook).

1. Please indicate which online travel agency you will have in mind when answering the questions.

2. When did you book a vacation on this website?
    - Less than a month ago
    - Between 1 month and 6 months ago
    - Between 6 months and 12 months ago
    - Longer than a year ago

3. How many ratings and reviews do you read when booking a vacation?
    - 0 - 5
    - 6 – 10
    - 11 – 15
    - 16 – 20
    - More than 20

4. Please rate the website's performance on each item using a 5-point scale (1 = strongly disagree, 5 = strongly agree).

Efficiency / Ease of Use

The online travel agency website makes it easy for me to find ratings and reviews from other customers.	1 2 3 4 5
The ratings and reviews on the online travel agency website make the booking decision easier for me.	1 2 3 4 5
The ratings and reviews on the online travel agency website help me evaluate alternatives.	1 2 3 4 5
I think that the ratings and reviews on the online travel agency website are well organized.	1 2 3 4 5
I think that the ratings and reviews on the online travel agency website are simple to use	1 2 3 4 5

Information / Content

I think that the ratings and reviews on the online travel agency website are useful	1 2 3 4 5
I think that the number of ratings and reviews on the online travel agency website is sufficient	1 2 3 4 5
I think that the ratings and reviews on the online travel agency website are informative	1 2 3 4 5
I think that the ratings and reviews on the online travel agency website are up-to-date	1 2 3 4 5
I think that the ratings and reviews on the online travel agency website are accurate	1 2 3 4 5
I think that the ratings and reviews on the online travel agency website are relevant	1 2 3 4 5
I think that the ratings and reviews on the online travel agency website are believable	1 2 3 4 5
I think that the ratings and reviews on the online travel agency website are trustworthy	1 2 3 4 5
The ratings and reviews on the online travel agency website come from an independent source (the reviewer is not paid to write a review/does not benefit from writing a review)	1 2 3 4 5
I can easily identify the profile of the reviewer	1 2 3 4 5

Fulfillment

I think that the ratings and reviews improve the truthfulness of the online travel agency website	1 2 3 4 5
The ratings and reviews on the online travel agency website reduce the uncertainty I feel when I make a booking decision.	1 2 3 4 5
The service that I received was described accurately by the ratings and reviews on the online travel agency website.	1 2 3 4 5

Social media Responsiveness

The online travel agency takes care of my problems on social media promptly (e.g. via Facebook, Twitter).	1 2 3 4 5 n/a
The online travel agency is ready and willing to respond to my needs/problems through social media (e.g. via Facebook, Twitter).	1 2 3 4 5 n/a
The online travel agency responds adequately to my needs through social media (e.g. via Facebook, Twitter).	1 2 3 4 5 n/a

Social media Contact

This site has customer service representatives available through social media (e.g. Facebook, Twitter).	1 2 3 4 5 n/a
This site enables me to communicate with other consumers on social media (e.g. Facebook, Twitter, forums)	1 2 3 4 5 n/a

5. Please rate the website on each item using a scale of 1 to 10 (1 = poor, 10 = excellent).

Perceived Value

The price/quality ratio (value for money) of the products and services available at this website	1 2 3 4 5 6 7 8 9 10
The overall convenience of using this website.	1 2 3 4 5 6 7 8 9 10
The extent to which the website gives you a feeling of being in control.	1 2 3 4 5 6 7 8 9 10
The overall value you get from this website for your money and effort.	1 2 3 4 5 6 7 8 9 10

6. Indicate your likelihood of engaging in each behavior on a 5-point scale (1 = very unlikely, 5 = very likely).

Loyalty Intentions
How likely are you to . . .

Say positive things about this online travel agency to other people?	1 2 3 4 5
Recommend this online travel agency to someone who seeks your advice?	1 2 3 4 5
Encourage friends and others to do business with this online travel agency?	1 2 3 4 5
Consider this online travel agency to be your first choice for future transactions?	1 2 3 4 5
Do more business with this online travel agency in the future?	1 2 3 4 5
Say positive things about the online travel agency through social media?	1 2 3 4 5
Recommend this online travel agency to other consumers through social media?	1 2 3 4 5
Encourage other consumers through social media to do business with this online travel agency?	1 2 3 4 5

7. What is your age?

8. What is your gender?
    - Male
    - Female

9. What is your employment states? Are you currently …
    - Student
    - Employed
    - Out of work and looking for work
    - Out of work but not looking for work
    - Retired
    - Unable to work
    - Other

10. What is your nationality?

11. What is the number of trips you took in the past two years?
    - None
    - 1 – 2 trips
    - 3 – 6 trips
    - More than 7 trips

Appendix II: Calculations of Z-test

At a 5% significance level:

$$Z = \frac{p-\pi}{\sigma_p} \; with \; \sigma_p = \sqrt{\frac{\pi(1-\pi)}{n}}$$

Comparing proportions millennials of sample and world population

H_0 = the percentage millennials in the population where the sample came from = 33.0 %
H_1 = the percentage millennials in the population where the sample came from ≠ 33.0%

$Z = \frac{0.79 - 0.33}{0.047} = 9.783$ $\sigma = \sqrt{\frac{0.33\,(1 - 0.33)}{100}} = 0.047$

Reject H_0 if $|Z| > CV$
$|Z| > 1.96$
$9.783 > 1.96$ → reject H_0

Appendix III: The effect of the e-service quality dimensions on loyalty intentions

Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	,272[a]	,074	,046	3,799

a. Predictors: (Constant), Ease of Use, Trustworthiness, Content Quality

ANOVA[a]

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	112,855	3	37,618	2,606	,056[b]
	Residual	1414,606	98	14,435		
	Total	1527,461	101			

a. Dependent Variable: Loyalty Intentions

b. Predictors: (Constant), Ease of Use, Trustworthiness, Content Quality

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	*Std. Error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	14,774	2,207		6,694	,000		
	Content Quality	-,167	,188	-,132	-,886	,378	,427	2,343
	Trustworthiness	,376	,175	,299	2,152	,034	,489	2,044
	Ease of Use	,111	,187	,081	,596	,553	,518	1,932

a. Dependent Variable: Loyalty Intentions

Appendix IV: The effect of the e-service quality dimensions on social media loyalty intentions

Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	,227[a]	,052	,023	3,604

a. Predictors: (Constant), Ease of Use, Trustworthiness, Content Quality

ANOVA[a]

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	69,373	3	23,124	1,780	,156[b]
	Residual	1273,147	98	12,991		
	Total	1342,520	101			

a. Dependent Variable: Social Media Loyalty Intentions

b. Predictors: (Constant), Ease of Use, Trustworthiness, Content Quality

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	*Std. Error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	5,425	2,094		2,591	,011		
	Content Quality	-,245	,179	-,207	-1,373	,173	,427	2,343
	Trustworthiness	,352	,166	,299	2,123	,036	,489	2,044
	Ease of Use	,050	,177	,039	,284	,777	,518	1,932

a. Dependent Variable: Social Media Loyalty Intentions

Appendix V: The effect of the e-service quality dimensions on perceived value

Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	,298[a]	,089	,061	3,358

a. Predictors: (Constant), Ease of Use, Trustworthiness, Content Quality

ANOVA[a]

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	107,752	3	35,917	3,185	,027[b]
	Residual	1105,071	98	11,276		
	Total	1212,824	101			

a. Dependent Variable: Perceived Value

b. Predictors: (Constant), Ease of Use, Trustworthiness, Content Quality

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	*Std. Error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	17,728	1,951		9,088	,000		
	Content Quality	-,017	,166	-,015	-,104	,918	,427	2,343
	Trustworthiness	,248	,155	,221	1,603	,112	,489	2,044
	Ease of Use	,149	,165	,121	,904	,368	,518	1,932

a. Dependent Variable: Perceived Value

Appendix VI: The effect of the individual e-service quality dimensions on perceived value

Predictor variable = Ease of use

Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	,244[a]	,060	,050	3,377

a. Predictors: (Constant), Ease of Use

ANOVA[a]

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	72,169	1	72,169	6,327	,013[b]
	Residual	1140,655	100	11,407		
	Total	1212,824	101			

a. Dependent Variable: Perceived Value

b. Predictors: (Constant), Ease of Use

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	*Std. Error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	18,547	1,871		9,915	,000		
	Ease of Use	,300	,119	,244	2,515	,013	1,000	1,000

a. Dependent Variable: Perceived Value

Predictor variable = Content Quality

Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	,218[a]	,047	,038	3,399

a. Predictors: (Constant), Content Quality

ANOVA[a]

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	57,386	1	57,386	4,967	,028[b]
	Residual	1155,437	100	11,554		
	Total	1212,824	101			

a. Dependent Variable: Perceived Value

b. Predictors: (Constant), Content Quality

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	*Std. Error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	19,539	1,667		11,723	,000		
	Content Quality	,245	,110	,218	2,229	,028	1,000	1,000

a. Dependent Variable: Perceived Value

Predictor variable = Trustworthiness

Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	,283[a]	,080	,071	3,340

a. *Predictors: (Constant), Trustworthiness*

ANOVA[a]

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	97,368	1	97,368	8,729	,004[b]
	Residual	1115,456	100	11,155		
	Total	1212,824	101			

a. Dependent Variable: Perceived Value

b. Predictors: (Constant), Trustworthiness

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	*Std. Error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	18,811	1,514		12,424	,000		
	Trustworthiness	,318	,107	,283	2,954	,004	1,000	1,000

a. Dependent Variable: Perceived Value

Appendix VII: Perceived value as a mediator

Predictor variables: Ease of use, Content Quality, Trustworthiness and Perceived Value

Dependent Variable: Loyalty Intentions

Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	,535[a]	,286	,257	3,353

a. Predictors: (Constant), Perceived Value, Content Quality, Ease of Use, Trustworthiness

ANOVA[a]

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	437,094	4	109,274	9,721	,000[b]
	Residual	1090,367	97	11,241		
	Total	1527,461	101			

a. Dependent Variable: Loyalty Intentions

b. Predictors: (Constant), Perceived Value, Content Quality, Ease of Use, Trustworthiness

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	*Std. Error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	5,171	2,644		1,956	,053		
	Content Quality	-,157	,166	-,124	-,948	,346	,427	2,344
	Trustworthiness	,242	,156	,192	1,549	,125	,477	2,097
	Ease of Use	,030	,165	,022	,184	,854	,513	1,948
	Perceived value	,542	,101	,483	5,371	,000	,911	1,098

a. Dependent Variable: Loyalty Intentions

Predictor variables: Trustworthiness

Dependent variable: Loyalty Intentions

Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	,257[a]	,066	,057	3,777

a. Predictors: (Constant), Trustworthiness

ANOVA[a]

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	100,734	1	100,734	7,061	,009[b]
	Residual	1426,726	100	14,267		
	Total	1527,461	101			

a. Dependent Variable: Loyalty Intentions

b. Predictors: (Constant), Trustworthiness

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	*Std. Error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	14,746	1,712		8,612	,000		
	Trustworthiness	,323	,122	,257	2,657	,009	1,000	1,000

a. Dependent Variable: Loyalty Intentions

Predictor variables: Trustworthiness and Perceived Value

Dependent variable: Perceived Value

Refer to Appendix VI

Predictor variables: Trustworthiness and Perceived Value

Dependent variable: Loyalty Intentions

Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	,528[a]	,279	,265	3,335

a. Predictors: (Constant), Perceived Value, Trustworthiness

ANOVA[a]

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	Regression	426,287	2	213,143	19,162	,000[b]
	Residual	1101,174	99	11,123		
	Total	1527,461	101			

a. Dependent Variable: Loyalty Intentions

b. Predictors: (Constant), Perceived Value, Trustworthiness

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	*Std. Error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	4,584	2,411		1,901	,060		
	Trustworthiness	,151	,112	,120	1,353	,179	,920	1,087
	Perceived value	,540	,100	,481	5,410	,000	,920	1,087

a. Dependent Variable: Loyalty Intentions