From E-Satisfaction to E-Repurchase Intention: How Is E-Repurchase Intention Mediated by E-Satisfaction and Moderated by Traditional Shopping Attitudes?



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Abstract Successive developments in information technologies have brought important developments in the business world, one of which is e-commerce. Undoubtedly, consumers' continuous adoption of online shopping, which has been specially accelerated as the result of the pandemic, is not likely to end or reduce after the Covid-19 passes, increasing volume and transaction in e-retailing make e-business more challenging.

Under these circumstances, the most important requirement of sustainable development and profitability in e-business management is to retain loyal customers rather than one-time buyers. Hence, in an e-commerce setup, understanding the repurchase intention of consumers is essential in sustaining growth. Most previous studies have focused on one or two factors, ignoring the whole picture, depicting the most effective factors both e-satisfaction and e-repurchase intention. The main purpose of this study is to investigate the relationships between e-service quality, information quality, e-satisfaction, and e-repurchase intention by involving customer decision-making styles in the context. An online retailer, belonging to a large brick-and-mortar Turkish company was chosen to conduct the survey. Consequently, the data collected from the conveniently selected sample

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among the members of that e-retailer was used to test the research model using structural equation modeling. The results revealed efficiency, fulfillment, privacy, and information quality to influence both e-satisfaction and e-repurchase intention whereas after-sales e-services influencing e-satisfaction. Meanwhile, e-satisfaction mediates the relationship between the service quality of a website and e-repurchase intention. Furthermore, novelty and recreational shopping style attitude moderates the relationship between e-satisfaction and e-repurchase intention.

Keywords E-service quality · Information quality · E-customer satisfaction · E-repurchase intention · Shopping styles

1 Introduction

In Turkey, the number of e-retailers is on the rise and the country has a large young population, which means that there is a significant growth potential for e-commerce, and the lives of many people have shifted online during the Covid-19 pandemic period, further contributing to the prospects for expansion. According to the Turkish Ministry of Trade, the volume of e-commerce in Turkey grew 64% in the first half of 2020 relative to the same period of the last year. On a sector-by-sector basis, growth rates for e-commerce in 2020 were 434% for food and supermarkets, 116% for software, 95% for home and gardening products, 90% for home appliances, 58.5% for electronics, and 45% for clothing. The share of e-commerce in the first half of 2020 was 14.2% of total trade in Turkey, which is a notable increase from the same period of the previous year, when that figure stood at 8.4% (e-ticaret.gov.tr, accessed January 10, 2021), demonstrating both the importance and popularity of online shopping. As the figures above indicate, the Covid-19 pandemic has driven consumers to increasingly turn to online purchases, and as consequence companies have had to invest in e-commerce to ensure that their customers have the best shopping experiences possible. In such an intensively competitive environment, insights about how to develop and maintain customer loyalty are of paramount importance, as they may determine whether companies can survive.

As some earlier studies have shown, one of the key factors for surviving in an intensely competitive e-environment is the development of strategies that focus on services. Companies must deliver superior service experiences to their customers to ensure that they will engage in repurchase behavior and remain loyal (Gounaris et al., 2010). To achieve high levels of customer satisfaction, companies must provide high-quality services, as that often leads to favorable behavioral intentions (Brady & Robertson, 2001). Numerous researchers have examined the concept of e-service quality (e-SQ), the attributes of which are significantly associated with customer satisfaction and repurchase intention, but information quality has rarely been integrated into the extant studies in the literature. Furthermore, the interrelationship between customer satisfaction and repurchase intention may influence the shopping style attitudes of consumers, an issue that is of utmost importance in e-commerce

settings. This work considers those aspects neglected in the previous studies, thus contributing to the literature by suggesting and testing a more integrative model related to e-service quality and repurchase intention relations. This study aims to provide insights by taking an integrative approach, investigate the effects of e-service quality and information quality on e-satisfaction and e-repurchase intention. Moreover, understanding how e-satisfaction mediates the relationships between service quality and information quality, as well as e-repurchase intention, has never been more important. As the last step, this study also examines the moderating effect of the shopping styles described by Kendall and Sproles (1986) vis-à-vis traditional shopping attitudes.

This chapter starts with describing a conceptual framework of the e-service quality, e-satisfaction, e-repurchase intention, information quality, and shopper types. It continues onto the research methodology where the data collection method, the sampling method, measures, the demographics, and shopping-related characteristics of the respondents were covered followed by the findings of this empirical study. The empirical part of this study was based on field research conducted with the customers of one of the largest and most aggressive brick-and-mortar and brickand-click retail companies in Turkey. The tests of the hypothesis and the model were interrogated with structural equation modeling via Amos and SPSS v21.

The last part of the study discusses the confirmed direct effects of efficiency, fulfillment, privacy, and information quality on both e-satisfaction and e-repurchase intention. At the same time, e-recovery services were found to have a direct impact on e-satisfaction, whereas e-repurchase intention was indirectly affected. This study also concluded that e-satisfaction mediates the relationship between the dimensions of e-service quality and information quality as well as e-repurchase intention. Lastly, our research indicated that hedonic shopping attitudes, or hedonic consumer styles, moderated the relationship between e-satisfaction and e-repurchase intention for consumers making purchases from e-Company XYZ. This study contributes to the literature by emphasizing the importance of satisfaction to ensure repurchase behavior along with the direct effects of efficiency, fulfillment, privacy, and information quality to survive in an intensely competitive e-environment.

2 Conceptual Framework

2.1 E-Service Quality

Service can be defined as the efforts of an organization directed toward delivering high-quality experiences to consumers to satisfy their needs (Chang et al., 2015). Taherdoost et al. (2012) define e-services as "the provision of interactional, content-centered and electronic-based service over electronic networks" (p. 75). The importance of service quality in electronic commerce has been discussed by scholars for many years. Santos (2003) and Yang and Jun (2002) pointed to service

quality as a crucial determinant of success or failure in electronic commerce. Reichheld and Schefter (2000) described e-loyalty as a "secret weapon" and noted that focusing on service quality is of critical importance in e-commerce. Grönroos et al. (2000) posited that e-SQ is comprised of two dimensions, functional and process quality. Zeithaml et al. (2002) defined e-SQ as "the extent to which a website facilitates efficient and effective shopping, purchasing, and delivery of products and services" (p. 362). According to Kim et al. (2006), poor service quality negatively affects online retailers because it leads to a lack of trust, because of which shoppers may leave websites without completing their transactions. When service quality increases, however, customer experiences are enhanced at every touchpoint (Rosenbaum & Losada, 2017; Sahin et al., 2017). Collier and Bienstock (2006) have noted that when service quality is poor, customers "are just one click away from switching to another e-retailer" (pp. 260–261) because of a concomitant decrease in repurchase intention and loyalty. Thus, it can safely be concluded that e-SQ is an important issue in today's business world.

Abelse et al. (1999) proposed six operational criteria for e-SQ, listing them as "use, content, structure, linkage, search and appearance" (p. 40). Yang and Fang (2004) proposed similar determinants for e-SQ about the notion of SERVQUAL developed by Parasuraman et al. (1985) in terms of "reliability, responsiveness, access, ease of use, attentiveness, credibility, and security" (p. 313). Accessibility is an indispensable feature of virtual stores, as they are open 24 h a day. Given that situation, such stores should have advanced technical infrastructure and employ user-friendly navigation systems. Since customers access and connect to web stores and carry out their transactions themselves, websites should operate smoothly and efficiently so that customers can easily manage their purchases. Santos (2003) explained e-SQ concerning "consumers" overall evaluation and judgment of the excellence and quality of e-service offerings in the virtual market space" and added that it can "potentially increase attractiveness, hit rate, customer repurchase intention, stickiness, positive WOM and maximize the competitive advantages of an online company" (pp. 233–236).

As indicated by the studies mentioned above, there is a large body of research on e-service quality. Wolfinbarger and Gilly (2003) pointed to the use of e-mails as a means of measuring customer perceptions of e-tailing quality. Wolfinbarger and Gilly's (2003) E-S-QUAL scale, was later modified by Blut et al. (2015) with the inclusion of four specific dimensions. Later, Blut (2016) used those same dimensions with additional items appended to the scale. "WebQual" was developed as a way to deal with the evaluation of transactions, while "SITEQUAL," developed by Yoo and Donthu (2001), concerns the matter of site quality. The work of Szymanski and Hise (2000) took up the various aspects of web pages to evaluate transaction-specific issues about sites.

All those studies examined the various features of e-SQ and offered different insights about how it can be evaluated. Building on the SERVQUAL model, Parasuraman et al. (2005) developed multi-item scales in two stages, E-S-QUAL and E-Recs-QUAL, as a means of capturing electronic service quality as a whole and measuring customer perceptions of service quality so that e-service businesses

can provide superior service quality to enhance both customer satisfaction and repurchase intention. E-S-QUAL refers to the e-core service quality to be delivered to online customers (Parasuraman et al., 2005) who meet no routine cases in the websites. Parasuraman et al. (2005) broadly defined e-SQ as encompassing "all phases of customer interactions with a website: The extent to which a website facilitates efficient and effective shopping, purchasing and delivery" (p. 217). As a concept dealing with e-core service quality, E-S-QUAL has four dimensions (pp. 220–221), which are presented below.

Efficiency is defined as the ease and speed with which a website can be accessed and used (Parasuraman et al., 2005, p. 220) as well as the functionality of the service, which makes it possible for transactions to be completed in a convenient manner (Kesharwani, 2020).

Fulfillment is related to the extent to which a site's promises about order deliveries and item availability are realized (Parasuraman et al., 2005, p. 220). Also, according to Blut (2016), it refers to delivery times and the accuracy of customer orders. It should be noted, however, that fulfillment can only be assessed once payment has been made. That is especially crucial since post-payment dissonance occurs more frequently in online contexts because customers only experience the tangibility of products after delivery (Liao & Keng, 2013).

System availability refers to correct technical operations (Parasuraman et al., 2005, p. 221).

Privacy means the safety of websites and the protection of customer information (Parasuraman et al., 2005, p. 220) and credit card payments (Blut, 2016). Privacy is crucial for ensuring the credibility and quality of websites (Wang et al., 2015). Privacy and security features are indicators of the effectiveness of a website (Schmidt et al., 2008; Fortes & Rita, 2016; Fortes et al., 2017). When they purchase items, customers must provide private information such as their address, credit card number, and so forth (Holloway & Beatty, 2008), and that can lead to concerns about protection against fraud; for that reason, security and privacy are major aspects of online service quality (Rita et al., 2019).

Parasuraman et al. developed the concepts E-S-QUAL and E-Rec-QUAL as preand post-web service approaches to offering superior service quality to enhance both customer satisfaction and repurchase intention, those constructs were taken up as the primary start-up variables of the conceptual model of this study.

2.2 E-Satisfaction, E-Repurchase Intention, and E-Service Recovery

Several studies have highlighted the four dimensions of E-S-QUAL discussed above, including the work of Kim et al. (2006), who pointed out the importance of those aspects of online retailing and summarized them in terms of "simplicity of using the site, ease of finding information and fast check-out with minimum effort" (p. 55). They also emphasized how people may leave a webpage and seek out others if they encounter difficulties in doing searches, downloading material,

and seeing items. The issue of privacy and security, particularly concerning the protection of personal and financial information, especially credit cards, represents yet another major sufficiency variable. Kim et al. (2006) noted the critical role that privacy plays in online shopping in terms of purchase intention, satisfaction, and overall site quality. Fulfillment and reliability bear "the strongest predictor of customer satisfaction and quality and the second strongest indicator of loyalty/intention to repurchase" (Zeithaml et al., 2002, p. 364). Yang and Fang (2004) described fulfillment within the scope of "accurate orders and keeping service promises" (p. 302), while Kim et al. (2006) defined it as one of the main service quality components for determining customer satisfaction or dissatisfaction. For system availability, Watcher (2002) recommended that e-retailers promptly resolve functionality problems such as missing links and broken buttons as they may lead to frustration during the process of browsing and purchasing, ultimately driving customers to leave the website without completing their transactions.

Satisfaction is critical for keeping consumers loyal and preventing them from defecting to other e-retailers. As Jiang and Rosenbloom (2005) have pointed out, "the only truly loyal customers are totally satisfied customers" (p. 152). Other studies have also investigated the relationship between e-satisfaction and e-service quality (Connolly et al., 2010; Gounaris et al., 2010; Schaupp, 2010; Xiao, 2016; Kaya et al., 2019; Zarei et al., 2019; Vo et al., 2020).

All the above studies clearly emphasize the impacts of the four dimensions of E-S-QUAL (efficiency, fulfillment, system availability, and privacy) on the satisfaction of e-consumers. When websites live up to those expectations, consumers tend to be more satisfied and are more likely to return to them for future purchases.

Therefore, the following hypotheses will be tested in this study:

- *H1: The quality level (including efficiency, fulfillment, and privacy dimensions) of websites' e-services positively affects consumer e-satisfaction.*
 - H1a: Efficiency, as a dimension of the quality level of websites' e-services positively affects consumer e-satisfaction.
 - H1b: Fulfillment, as a dimension of the quality level of websites' e-services positively affects consumer e-satisfaction.
 - *H1c: Privacy, as a dimension of the quality level of websites' e-services positively affects consumer e-satisfaction.*

King et al. (2016) suggest that consumers will continue to purchase from online retailers that maintain a high level of service quality. In that line of thinking, when consumers have positive experiences with online shopping, they will return to that website in the future (Collier & Bienstock, 2006). Ha et al. (2010) explain the relationship between satisfaction and repurchase intention by referring to attribution theory, and they point out that "consumer satisfaction judgments in a repurchase situation are updated spontaneously when previously formed satisfaction evaluations are available from memory and experience, with an exceeding expectation that means satisfaction facilitates customers' repurchase intention" (p. 1002).

As such, the factors that directly influence repurchase intention aside from information quality will be tested with the following hypotheses:

- H2: The quality level (including efficiency, fulfillment, and privacy dimensions) of websites' e-services positively affects the e-repurchase intention of consumers.
 - H2a: Efficiency, as a dimension of the quality level of websites' e-services positively affects the e-repurchase intention of consumers.
 - H2b: Fulfillment, as a dimension of the quality level of websites' e-services positively affects the e-repurchase intention of consumers.
 - H2c: Privacy, as a dimension of the quality level of websites' e-services positively affects the e-repurchase intention of consumers.

Since independent variables also affect satisfaction and the results of several studies have demonstrated that there is a direct relationship between satisfaction and repurchase intention (Fullerton & Taylor, 2002; Cole & Steven, 2006; Srivastava & Sharma, 2013; Abdullah et al., 2018), the mediating role that satisfaction plays between the dimensions of e-service quality and repurchase intention (Tandon et al., 2017; Lestari & Ellyawati, 2019) will be tested with the hypothesis below:

H3: E-satisfaction mediates the relationship between the service quality of a website and e-repurchase intention.

Ease of access to customer services and affirmative, responsive attitudes are critical in e-services. Griffith and Krampf (1998) describe those issues as key indicators that have a direct relationship with the factors of trust, repurchase intention, commitment, and word-of-mouth, all of which pave the way to achieving success in e-retailing. Parasuraman et al. (2005) define e-recovery service quality as the non-routine activities of websites that also have a strong effect on e-consumer satisfaction. They can be grouped into three dimensions: responsiveness, meaning the effective handling of problems and hence returns to the site; compensation, which is the ability of a site to solve customers' problems; and contact, which involves providing assistance services over the telephone or via online representatives (p. 220). When problems arise, being able to contact a customer service agent by phone or online has a critical effect on online shopping (Kim et al., 2006). Collier and Bienstock (2006) emphasize that there are direct impacts when an online company undertakes service recovery efforts, as they may "create a 'terrorist' customer who disseminates negative information about that retailer or an 'apostle' customer who actively encourages others to use that retailer" (p. 265). In light of those issues, the following hypothesis will be tested:

H4: When the e-service recovery quality of a website is high, consumers' esatisfaction while shopping online will also be high.

2.3 Information Quality

Information is a key component of all purchasing activities because it is assumed that people make rational decisions based on the information available to them. Korten (2009) defines it as "the one resource that is non-depletable and increases its real-wealth value when widely shared" (p. 135). Additionally, Thompson (2002) has described websites as "the most popular source of information" in online purchasing (p. 365). Since there are no physical salespersons to answer customers' questions in online settings, verbal and/or visual information becomes critical (Kim et al., 2006). Information quality signifies the value of the products offered on online platforms (Yang et al., 2005), as well as the production of the website and the outputs (Al Debei, 2014). Gao (2005) pointed out that "consumers with a higher level of domain expertise will search for more information between sites because they can effectively locate the information and evaluate it in the search process" (p. 33). Accordingly, the offering of high-quality information on a website will lead customers to make good purchase decisions. In a similar vein, Rust and Lemon (2001) conceptualize e-services as an information service. Li and Suomi (2007) describe e-services as the provision of different experiences through an "interactive flow of information" (p. 176) and ensuring the reliability, relevance, accuracy, timeliness, and thoroughness (Ahn et al., 2007; Chen et al., 2011) of information, as well as its correctness, currency, and completeness (Lin, 2010) along with consistency and dependability (Yang et al., 2005).

Zeithaml et al. (2002) describe high-quality information as information that is "relevant, accurate, timely, customized and complete" (p. 364). Moreover, information quality relates to how customers perceive the information provided by e-retailers (Mun et al., 2013). Lynch and Ariely (2000) emphasize that highquality information and the ability to search for prices and product features can raise satisfaction levels through the contributions of experience and product purchases, resulting in revisits and repurchase intention. Vo et al. (2020) have highlighted the importance of the timeliness and accuracy of the information on websites as crucial elements for building trust and satisfaction. Mai (2012) points out that "information quality becomes a product of the degree to which the exchange and production of meaning have been successful" (p. 687).

The model developed by Doll and Torkzadeh (1988) for measuring end-user satisfaction has five determinants: content, format, ease of use, accuracy, and timeliness (p. 268). Although the first three were examined in this study within the scope of the E-S-QUAL scale, information quality including the last two dimensions of accuracy and timeliness were taken up as separate variables that affect e-satisfaction and e-repurchase intention because of the key role they play in the assessment of websites. For that reason, the following two hypotheses will be tested:

H5: As the information quality of an e-store increase, there is a concomitant increase in the (a) e-satisfaction (H5a), and (b) e-repurchase intentions of consumers (H5b).

2.4 Shopper Types

Several studies on shopper types (Kau et al., 2003; Huang, 2003; Rohm & Swaminathan, 2002; Kendall & Sproles, 1986) were reviewed to identify the decision-making styles of Turkish e-consumers. The extensive summary of different types of shopping style attitudes developed by Kendall and Sproles (1986) within the rubric of a customer style index (CSI) was found to be the most suitable for the basis of this research, but we were also able to narrow down that scope via studies about consumers in other countries.

Examinations of consumers' decision-making styles have contributed much to our understanding of their moderating effects on repurchase intention. Kendall and Sproles (1986) defined the decision-making styles of consumers as "a mental orientation characterizing a consumer's approach to make choices" (p. 283), and their CSI, which was based on cognitive and affective characteristics (p. 268), is widely used to define the characteristics of consumers about different products and/or home countries. The eight basic characteristics of decision-making defined by Kendall and Sproles (1986, p. 269) are as follows:

- 1. Perfectionist or high-quality consciousness
- 2. Brand consciousness
- 3. Novelty fashion consciousness
- 4. Recreational, hedonistic shopping consciousness
- 5. Price and "value for money" shopping consciousness
- 6. Impulsiveness
- 7. Confusion arising from an overabundance of choices (due to a proliferation of brands, stores, and consumer information)
- 8. Habitual, brand-loyal orientation to consumption

Over the years, Kendall and Sproles' typology was used in different studies, and it has received particular attention in recent times as well (Chang et al., 2020; Ceylan & Alagoz, 2020; Raskovic et al., 2020; Ozturk & Sahin, 2020). This study adopts the CSI model developed by Kendall and Sproles for online purchasing to test the following hypothesis:

H6: In the course of shopping, the relationship between e-satisfaction and erepurchase is affected in differing ways by different decision-making styles.

3 Research Method

3.1 Data Collection Method and Sampling

Our descriptive research was designed to bring to light the effects of e-service quality and information quality on e-satisfaction and e-repurchase intention. To assess those relationships, we created an online questionnaire to gather the preliminary data. The online questionnaire was based on the survey results of a pretest that was carried out with 62 people. Lastly, the online questionnaire was customized to fit the characteristics of the virtual environment of the company that was involved in the study. The company, which is an online retailer operating under the auspices and brand name of a large Turkish brick-and-mortar firm, sells products such as clothing, shoes, and accessories. For this study, the e-retailer will be referred to as Company XYZ per the terms of a mutual agreement of confidentiality. The company agreed to place the questionnaire on its website and take part in the survey on the condition that its name and data be kept confidential.

The data was obtained utilizing a judgmental sampling technique (Malhotra, 2009) from the customers of Company XYZ. When the study was carried out, the click and mortar division had 800,000 registered members, 50,000 of which (6.25%) company management described as being active because they kept up with Company XYZ's campaigns regularly, as evidenced by their interest in the company's messages and the frequency with which they visited its website. The company referred to them as "responsive customers." Company management sent those 50,000 active members a message stating that they would receive a gift card worth TRY ten for each completely answered questionnaire. In total, 1334 members took part in the survey, and 1075 completely and correctly answered questionnaires were analyzed, indicating a 2.7% response rate and a data validity rate of 81%. While Company XYZ surveyed over 1 week, most responses were received in the first 3 days. Consequently, enough responses were received, and the survey was terminated.

3.2 Measures

During the study, the e-SERVQUAL model developed by Parasuraman et al. (2005), was utilized including its e-core and e-recovery components, as a means of observing e-service quality. As noted earlier, E-S-QUAL has four dimensions—efficiency, fulfillment, privacy, and system availability—including 22 items that are measured with "Likert-type 5-point scales ranging from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's alpha values were 0.94 for efficiency; 0.83 for system availability; 0.89 for fulfillment; and 0.83 for privacy, with the CFA ranged from 0.67 to 0.83" (Parasuraman et al., 2005, pp. 220–221). The e-service recovery component of the E-S-QUAL model includes three dimensions, "responsiveness, compensation, and contact with 11 items. The Cronbach's alpha values were 0.88 for responsiveness; 0.77 for compensation; 0.81 for contact, with the CFA ranged from 0.68 to 0.73" (Parasuraman et al., 2005, p. 220). In the study by Parasuraman et al. (2005), satisfaction was adopted from the perceived value on a ten-point semantic differential scale and intent to repurchase was based on a loyalty intention Likert-type five-point scale.

Construct	Reference in the literature
E-S-QUAL	Parasuraman et al. (2005)
E-RecS-QUAL	Parasuraman et al. (2005)
Information Quality	Doll and Torkzadeh (1988)
E-satisfaction	Parasuraman et al. (2005)
E-repurchase Intention	Parasuraman et al. (2005)
Shopper Types	Kendall and Sproles (1986)
Demographic Variables	Parasuraman et al. (2005); Kim et al. (2006)

Table 1 The variables used in this study and their sources

A study by Doll and Torkzadeh (1988) about end-user computing satisfaction utilized five determinants for information quality: content, timeliness, format, accuracy, and ease of use. Since some of the items in the e-core component of the e-SERVQUAL questions are part of the abovementioned three determinants of information quality, Doll and Torkzadeh's accuracy and timeliness determinants i.e., those not interrogated via the e-SERVQUAL scale—were observed within the scope of information quality to prevent repetition. The Cronbach's alpha values were 0.91 for accuracy and 0.82 for timeliness (Doll & Torkzadeh, 1988).

The eight dimensions of Sproles and Kendall's (1986) traditional study on consumer decision-making styles were adopted as moderating variables in this research. The Cronbach's alpha values of those dimensions were 0.76 for recreational (hedonic) shopping, 0.75 for brand-conscious shopping, 0.74 for both novelty fashion and perfectionist shopping, 0.55 for overly confused shopping, 0.53 for habitual and brand-loyal shopping, and 0.48 for price-value conscious and impulsive shopping. Although the last two were under the 0.5 threshold, they were included to clarify the attitudes of the sample.

As an interval scale, the five-point Likert scale is mainly used for the constructs of research models, while ten-point semantic differential scales are used to measure the satisfaction levels of respondents. Additionally, nominal and ratio scales are also used to measure visit and shopping frequencies, average spending, and the sociodemographic characteristics of samples.

The variables that were tested in the model and their literature sources are shown in Table 1.

3.3 Demographic and Shopping-Related Characteristics of the Sample

Women made up 70.5% of the total sample. Almost half of the respondents (44.5%) were between 32 and 38 years old, 26% were between 25 and 31 years old, 19% were between 39 and 45 years old, 5% were between 25 and 31 years old, and the rest were more than 45 years old. About education, 19% of the

participants had completed high school, 67% of them had attended university, and 11% had done graduate studies. As for professions, 19% of the participants held administrative posts, 52% were salaried employees, 9% were business owners, 9% were housewives, and the remainder did not work.

In terms of technological background, most of the respondents (87%) had intermediate-advanced and advanced levels of computer literacy, and a major segment of the respondents (90%) were competent internet users, having used the internet for more than 7 years (92.2%). More than half of the participants (57.6%) engaged in e-shopping several times a month and 24% did so several times a week.

4 Findings

4.1 Exploratory Factor Analysis (Independent Variables and Moderating Variables)

The questions were translated and back translated to ensure validity issue. Thus, exploratory factor analysis was conducted. We used IBM-SPSS v21 to conduct the factor analysis for each of the independent variables (E-Rec-QUAL, E-S-QUAL, and information quality) and the moderator variable (shopping styles separately to reduce the number of variables included. As Table 2 indicates, both E-Rec-QUAL and information quality were found to be unidimensional variables, and the scale of E-S-QUAL was summarized in terms of three factors: efficiency, fulfillment, and privacy. Lastly, the variable of shopping style attitudes was divided into six dimensions, each of which described a different type of shopping: price-conscious, habitual, overwhelmed by choices, non-perfectionist, novelty, and recreational, which is a combination of the two separate components of novelty and brandconscious shopping. Subsequently, EFA was applied to all the independent and moderating variables mentioned above. The summary findings of the EFA are shown in Table 2. A good KMO of 0.958 indicated the suitability of inter-dimension correlation in an adequate sample volume for conducting factor analysis with the significance of Bartlett's test of sphericity at 0.00 (Durmus et al., 2010) and total variance explained at 74%. All the dimensions were found to be reliable with Cronbach Alpha values exceeding 0.70.

4.2 Exploratory Factor Analysis (E-Satisfaction and E-Repurchase Intention)

Factor analysis was applied to the two endogenous variables of the model: esatisfaction and e-repurchase intention. Tables 3 and 4 provide an overview of the analysis for e-satisfaction and e-repurchase. A KMO value of 0.5 in Table 3

			Factor	Factor variance	
			loading	explained	Cronbach's
Dimension	Codes	Statement	(%)	(%)	alpha
E-Rec-QUAL	2		1		1
E-service recovery	ERQ5	It takes care of problems promptly	0.814	18.68	0.959
-	ERQ6	This site compensates me for the problems it creates	0.801		
	ERQ4	It tells me what to do if my	0.793	-	
		transaction is not processed			
	ERQ8	This site provides a telephone number to reach the company	0.763		
	ERQ9	This site has customer service representatives available online	0.763		
	ERQ3	This site offers a meaningful guarantee	0.76		
	ERQ10	It offers the ability to speak to a live person for information if there is a problem.	0.756		
	ERQ7	It compensates me when what I ordered doesn't arrive on time	0.75		
ERQ2This site handles returns well.ERQ1It provides me w convenient option returning items		This site handles product returns well.	0.74		
		It provides me with convenient options for returning items	0.694		
E-S-QUAL		•			
Efficiency	ESQ6	This site is simple to use	0.78	13.897	0.941
	ESQ7	This site enables me to get on to it quickly	0.753		
	ESQ2	It makes it easy to get anywhere on the site	0.752		
	ESQ5	It loads its pages fast	0.743		
	ESQ4	Information at this site is well organized	0.736		
	ESQ3	It enables me to complete a transaction quickly	0.728		
	ESQ8	This site is well organized	0.718		
	ESQ1	This site makes it easy to find what I need	0.663		
	ESQ17	This site launches and runs right away	0.532		

 Table 2
 EFA results

(continued)

			Factor	Factor variance	
Dimension	Codes	Statement	loading	explained	Cronbach's
Fulfillment	ESQ10	It quickly delivers what I order	0.769	6.457	0.936
	ESQ9	It delivers orders when promised	0.768		
	ESQ13	It makes accurate promises about the delivery of products	0.662	•	
	ESQ11	It has in stock the items the company claims to have	0.645		
	ESQ12	It is truthful about its offerings	0.611		
Privacy	ESQ15	It does not share my personal information with other sites	0.739	4.252	0.940
	ESQ16	This site protects information about my credit card	0.719		
	ESQ14	It protects information about my web shopping behavior	0.662	-	
Information	quality				
	INFQ2	Do you think the output is presented in a useful format?	0.711	6.254	0.962
	INFQ3	Does the system provide up-to-date information?	0.703	-	
	INFQ4	Do you feel the output is dependable?	0.69		
	INFQ5	Does the system provide sufficient information?	0.677]	
	INFQ1	Are you satisfied with the accuracy of the system (site)?	0.674		
Shopping st	yle attitude	1			
Confused by over choice	SHPSTY23	Sometimes its hard to choose which stores to shop at	0.847	6.593	0.843
	SHPSTY24	The more I learn about products, the harder it seems to choose	0.81		
	SHPSTY22	There are so many brands to choose from that often I feel confused	0.79		
	SHPSTY19	Often, I make careless	0.674]	
	SHPSTY25	I change brands I order regularly	0.663		

Table 2 (continued)

			Factor	Factor variance	
Dimonsion	Codes	Statement	loading	explained	Cronbach's
Novelty	SHPSTY8	I usually have one or	0.753	5.144	0.774
and recre-		more outfits of the very			
ational	CHDCTV10	newest style	0.679		
	56251110	to date with the changing fashions	0.078		
	SHPSTY9	To get variety, I shop at different stores and choose different brands	0.65		
	SHPSTY13	Going shopping is one of the enjoyable activities of my life	0.648		
	SHPSTY12	I enjoy shopping just the fun of it	0.611		
Price con- scious- ness	SHPSTY18	I look carefully to find the best value for the money	0.763	4.612	0.758
	SHPSTY16	I buy as much as possible at sale prices	0.755		
	SHPSTY17	The lower price products are usually my choice	0.745		
Habitual	SHPSTY27	Once I find a product or brand I like, I stick with it	0.828	4.46	0.759
	SHPSTY26	I have favorite brands I buy over and over	0.782		
	SHPSTY28	I go to the same e-stores, each time I e-shop	0.682		
Non- perfectionis	SHPSTY2 t	I don't give my purchases much thought and care	0.848	3.655	0.832
	SHPSTY3	I shop quickly, buying the first product or brand I find that seems good enough	0.828		
	Total variand	ce explained		74.004	
	KMO-Kaise	r-Meyer-Olkin measure o	f sampling adequacy	0.958	
	Significance	;	0.00		

Table 2 (continued)

Dimension	Code	Statement	Factor loading	Factor variance explained (%)	Cronbach's alpha
Satisfaction	STF1	The overall convenience of using this site.	0.96	92.234	0.914
	STF2	How much does this site fulfill your expectations?	0.96		
	KMO (Kaiser-Meyer-Olkin)			
	measure	e of sampling adequacy	0.5		
	Signific	ance	0		

Table 3 Factor analysis results of e-satisfaction

 Table 4
 Factor analysis results of e-repurchase intention

Dimension	Code	Statement	Factor loading	Factor variance explained (%)	Cronbach's alpha
E-repurchase intention	RPCH2	Would you recommend this site to someone seeking your advice?	0.933	81.549	0.941
	RPCH1	Would you say positive things about this site to other people?	0.931		
	RPCH3	Would you encourage friends and others to do business on this site?	0.925		
	RPCH4	Would this site be your first choice for future transactions?	0.881		
	RPCH5	Would you do more shopping on this site in the upcoming months?	0.842		
	KMO (Ka	aiser-Meyer-Olkin)	0.852		
	Significar	ice	0		

indicated the weak suitability with the significance of Bartlett's test of sphericity at 0.00 and the factors' variance was at 92%. Table 3 also shows that the reliability of the construct of Cronbach Alpha is 0.914.

Findings of exploratory factor analysis for e-repurchase intention are presented in Table 4. KMO of 0.852 with the significance of Bartlett's test of sphericity at 0.00 indicates a good fit with the factor's variance explained at 81.5%. All the dimensions were found to be reliable with Cronbach's alpha values exceeding 0.70.

Both factor analyses resulted in statistically good values for the KMO, Bartlett's test of sphericity, and reliability. Both variables appeared as one component and all the original items, which had been two for e-satisfaction and five for e-repurchase intention, were retained under the same factor.

4.3 Test of the Research Model

Three confirmatory factor analyses (CFAs) were conducted to test the relationships between the variables of the model as is presented in Table 5, including the fit indices values.

First, as a means of measuring the impact of e-service quality on e-customers' satisfaction, CFA was carried out with five latent variables including the four dimensions (efficiency, privacy, fulfillment, and e-recovery service) of the quality level of websites, and information quality, and e-satisfaction as an endogenous variable. The correlation coefficients of the latent variables and the AVE and CR values are presented in Table 6.

As a result of the path analysis, all the paths between efficiency, fulfillment, and e-service recovery, as the dimensions of e-service quality and information quality, were found to have positive relationships with e-satisfaction at a 5% significance level. Privacy with a critical ratio -1.460 being under the threshold t value of 1.96, did not affect e-satisfaction at a 5% significance level. Information quality, which had a regression coefficient of 0.213, was the most influential variable for e-satisfaction, followed by fulfillment, e-recovery, and efficiency. Additionally, the critical ratio values of efficiency, fulfillment, e-recovery services and information quality were above the threshold t value of 1.96 at a 5% significance level. H1 except privacy and H4 were thus supported, as indicated by the figures in Table 7, and in Table 14.

It can thus be said that an efficient and fulfilling website that operates with high eservice recovery levels and includes high-quality information increases consumers' e-satisfaction.

Another CFA was conducted with the five latent variables of efficiency, privacy, fulfillment, e-services recovery, and information quality; and e-repurchase intention as an endogenous variable. The analysis revealed that the effect of e-recovery on e-repurchase intention had a significance level of 0.25%, which is beyond the threshold level of 5%, but it was retained in the model for the mediating analysis (Baron & Kenny, 1986). The correlation coefficient of the latent variables and AVE and CR values are shown in Table 8.

Four exogenous variables, with efficiency, fulfillment, and privacy being dimensions of e-service quality and information quality, were found to have positive relationships with e-repurchase intention at a 5% significance level with critical ratio values higher than 1.96. E-service recovery had the least influence on the erepurchase intention at a 30% significance level. Information quality was found to be the most influential variable in e-repurchase intention with a regression coefficient of 0.438, followed by fulfillment, efficiency, and privacy. Additionally, the critical ratio values of efficiency, fulfillment, privacy, and information quality were above the threshold t value 1.96 at a 5% significance level, as is displayed in Table 9.

H5 was supported based on the results presented in Tables 7 and 9, and H2 was supported as well. Therefore, it can be concluded that an efficient, fulfilling,

		Standardized regression
Dimensions	Codes of questions	coefficients
E-recovery	ERQ6	0.862
	ERQ5	0.891
	ERQ4	0.866
	ERQ10	0.766
	ERQ9	0.771
	ERQ8	0.805
	ERQ7	0.823
	ERQ2	0.849
	ERQ3	0.825
	ERQ1	0.799
Efficiency	ESQ2	0.804
	ESQ7	0.870
	ESQ5	0.744
	ESQ4	0.782
	ESQ3	0.823
	ESQ8	0.838
	ESQ1	0.743
	ESQ17	0.706
	ESQ6	0.887
Information quality	INFQ1	0.881
	INFQ5	0.911
	INFQ4	0.947
	INFQ3	0.922
	INFQ2	0.910
Fulfillment	ESQ11	0.804
	ESQ12	0.922
	ESQ13	0.924
	ESQ10	0.796
	ESQ9	0.807
Privacy	ESQ16	0.921
,	ESQ15	0.934
	ESQ14	0.897
E-satisfaction	STF1	0.915
	STF2	0.923
E-repurchase intention	RPCH1	0.960
1	RPCH2	0.966
	RPCH3	0.899
	RPCH4	0.767
	RPCH5	0.710
Model fit indices	Actual values	
CMIN/DF	3.316	
GFI	0.902	-
CFI	0.967	1
NFI	0.953	-
RMSEA	0.046	
	1	1

 Table 5
 CFA results of the model

				Information		
	E-recovery	Fulfillment	Efficiency	quality	Privacy	E-satisfaction
E-recovery	(0.823)*					
Fulfillment	0.786	(0.853)*				
Efficiency	0.750	0.720	(0.802)*			
Information quality	0.755	0.674	0.762	(0.914)*		
Privacy	0.739	0.661	0.638	0.631	(0.919)*	
AVE**	0.68	0.73	0.64	0.84	0.84	0.84
CR***	0.96	0.93	0.94	0.96	0.94	0.92
Cronbach's Alpha	0.959	0.936	0.941	0.962	0.940	0.913

Table 6 Correlation coefficients and AVE and CR values: e-satisfaction is endogenous

*The root square of AVE; a correlation coefficient below the root square of the AVE verifies discriminant validity

*The threshold is ≥ 0.5

**The threshold is ≥ 0.7 , $p \leq 0.05$

Path to e-satisfaction	Regression coefficients	Critical ratio	Significance level
E-service recovery	0.142	2.436	0.015
Efficiency	0115	2.295	0.022
Information quality	0.213	4.112	***
Fulfillment	0.190	4.055	***
Privacy	-0.058	-1.460	0.144

 Table 7 Regression coefficients: e-satisfaction is endogenous

Table 8	Correlation	coefficients	and AVE and	l CR values:	e-repurchase	intention i	s endogenous
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				Information		E-repurchase
	E-recovery	Fulfillment	Efficiency	quality	Privacy	intention
E-recovery	(0.826)*					
Fulfillment	0.786	(0.853)*				
Efficiency	0.750	0.720	(0.803)*			
Information quality	0.755	0.674	0.762	(0.914)*		
Privacy	0.739	0.661	0.638	0.631	(0.917)*	
AVE**	0.68	0.73	0.64	0.84	0.84	0.75
CR***	0.96	0.93	0.94	0.96	0.94	0.94
Cronbach's alpha	0.959	0.936	0.941	0.962	0.940	0.941

*The root square of AVE; a correlation coefficient below the root square of the AVE verifies discriminant validity

*The threshold is ≥ 0.5

**The threshold is ≥ 0.7 , $p \leq 0.05$

Path to e-repurchase intention	Regression coefficients	Critical ratio	Significance level
Efficiency	0.123	3.016	0.003
Information quality	0.438	10.289	***
Fulfillment	0.196	5.131	***
Privacy	0.075	2.325	0.020
E-recovery	0.053	1.119	0.263

Table 9 Regression coefficients: e-repurchase intention is endogenous

and secure website that offers high-quality information increases the e-repurchase intention of consumers, supporting H2, as is presented in Table 14.

The results of earlier CFA analyses made it possible (Baron & Kenny, 1986; Civelek, 2018) to observe how e-satisfaction influences the relationships between e-service quality and e-repurchase intention. Hence, a third CFA was carried out with e-satisfaction as a mediator.

The third CFA indicated that the impact of e-recovery on e-repurchase intention completely disappeared because of the regression coefficient between e-recovery and e-repurchase intention, the significance level of which was 46%. At the same time, the relationship between privacy and e-satisfaction was maintained, although the significance level (15) was beyond 5% because of the statistically significant relationship between privacy and e-repurchase intention. The correlation coefficients of the latent variables and AVE and CR values are presented in Table 10.

As Table 11 indicates, the regression coefficients of efficiency, information quality, and fulfillment diminished whereas the weight of privacy increased, and the coefficient of e-recovery became statistically insignificant in the case of the mediating effect of satisfaction. Figure 1 shows the relationships between the variables of the tested research model.

While the above results demonstrate that e-recovery does not directly affect erepurchase intention, customers who are e-satisfied because of e-recovery services would tend to display e-repurchase intention; in other words, e-recovery indirectly affects e-repurchase intention. Nevertheless, there is a negative direct relationship between privacy and e-satisfaction at a significance level of 15%. Although the other latent variables have a direct impact on e-repurchase intention, they also mediate satisfaction in influencing e-repurchase intention.

As it is presented in Table 12; efficiency, fulfillment, privacy, and information quality were found to maintain a positive relationship with e-repurchase intention, whereas e-recovery relations deteriorated in cases of satisfaction mediation at a 5% significance level with critical ratio values higher than 1.96. E-satisfaction was also found to have a positive relationship with e-repurchase intention with a statistically valid critical ratio. Therefore, H3, which claims that satisfaction mediates efficiency, fulfillment, privacy, and information quality relations with e-repurchase intention, is supported at a 5% significance level, and it partially affects their relationships.

				Information			E-repurchase
	E-recovery	Fulfillment	Efficiency	quality	Privacy	E-satisfaction	intention
E-recovery	(0.827)*						
Fulfillment	0.786	(0.853)*					
Efficiency	0.752	0.721	(0.802)*				
Information quality	0.756	0.674	0.763	(0.914)*			
Privacy	0.739	0.661	0.638	0.631	(0.92)*		
AVE**	0.68	0.73	0.64	0.84	0.84	0.84	0.75
CR***	0.96	0.93	0.94	0.96	0.94	0.92	0.94
Cronbach's alpha val.	0.959	0.936	0.941	0.962	0.940	0.913	0.941
*The root square of AVE:	a correlation coef	ficient below the re	ot square of the	AVE verifies discrim	inant validity		

 Table 10
 Correlation coefficients and AVE and CR values: e-satisfaction and mediators

*The threshold is ≥ 0.7 , p < 0.95

Dath	Standardized a	enression co	officients
1 dtli	Standaruizeu i	egression ee	Ciliciciits
E-recovery E-satisfaction	0.154		0.152
Efficiency E-satisfaction	0.211		0.127
Information Quality E-satisfaction	0.205		0.202
Fulfillment E-satisfaction	0.211		0.210
Privacy E-satisfaction	-0.065*		-0.063*
E-recovery E-repurchase Intention.			0.029**
Efficiency E-repurchase Intention.		0.055	0.100
Information Quality E-repurchase Intention.		0.121	0.366
Fulfillment E-repurchase Intention.		0.399	0.171
Privacy E-repurchase Intention.		0.205	0.091
E-satisfaction E-repurchase Intention		0.080	0.164
Model fit indices			
CMIN/DF	3.824	3.543	3.316
GFI	0.904	0.901	0.902
CFI	0.964	0.966	0.967
NFI	0.952	0.953	0.953
RMSEA	0.051	0.049	0.046

 Table 11 Composite results of the research model

p < 005. *Significance level 0.15%; **Insignificant



Fig. 1 The mediating effect of e-satisfaction between the variables of e-service quality, information quality, and e-repurchase intention

	Regression coefficients	Critical ratio	Significance level		
Path to e-satisfaction					
E-recovery	0.141	2.396	0.017		
Efficiency	0123	2.402	0.016		
Information quality	0.211	4.034	***		
Fulfillment	0.191	4.025	***		
Privacy	-0.056	-1.414	0.157		
Path to e-repurchase intention					
Efficiency	0.101	2.501	0.012		
Information quality	0.402	9.537	***		
Fulfillment	0.164	4.325	***		
Privacy	0.085	2.692	0.007		
E-recovery	0.028	0.606	0.545		
E-satisfaction	0.172	6.181	***		

Table 12 Regression coefficients

4.4 The Moderating Effects of Shopping Attitudes on E-Satisfaction and E-Repurchase Intention

As the last step of this empirical study, the moderating effects of shopping attitudes on e-satisfaction and e-repurchase intention were tested separately. Before testing the effects of the moderator, the standardized values of all the variables, which are referred to as Z variables in the models, and the interaction of the predictor(s) and moderator were calculated with the program SPSS v21, and the Z and interaction values were tested with AMOS v21.

Table 13 demonstrates that; the significance level of the interaction between esatisfaction and shopping attitudes, which were defined as being price-conscious, habitual, non-perfectionist, and confused by an overabundance of choices, was beyond the significance level of 0.10 whereas the interaction of satisfaction and novelty and recreational shopping attitude was under the significance level of 0.10. Thus, H6, which asserts that the relationship between e-satisfaction and erepurchase will be affected in different ways by different decision-making styles of shopping, is supported.

Figure 2 is the finalized model of this study which shows all relationships between the variables of the tested model at a 5% significance level. As it is seen in the path analysis; efficiency, fulfillment, and information quality directly influence both e-satisfaction and e-repurchase intention whereas e-service recovery does not directly impact e-repurchase intention, however, it has an indirect influence on e-repurchase intention via e-satisfaction which can be interpreted that customers who are e-satisfied from e-recovery services of an e-store, would tend to exhibit erepurchase intention. Meanwhile, privacy does not directly influence e-satisfaction, but it does e-repurchase intention, in other words people keep repurchasing intention through secure websites. Moreover, satisfaction has also mediation role in the

Path to Z repurchase intention	Regression coefficients	Significance level
Z satisfaction	0.479	***
Z price consciousness	0.305	***
Interaction of e-satisfaction and price consciousness	-0.006	0.807
Z satisfaction	0.480	***
Z habitual attitude	0.328	***
Interaction of e-satisfaction and habitual attitude	0.003	0.887
Z satisfaction	0.513	***
Z non-perfectionist attitude	0.135	***
Interaction of e-satisfaction and non-perfectionist attitude	-0.005	0.843
Z satisfaction	0.528	***
Z confused by overabundance of choices attitude	0.072	0.006
Interaction of e-satisfaction and confused by overabundance of choices attitude	-0.034	0.195
Z satisfaction	0.494	***
Z novelty and recreational	0.223	***
Interaction of e-satisfaction and novelty and recreational attitude	-0.039	0.087

 Table 13 Regression coefficients



Fig. 2 The moderating effects of shopping attitudes shaped by novelty and recreation

Hypothesis	Supported	Not supported
H1a	\checkmark	
H1b	\checkmark	
H1c		\checkmark
H2a	\checkmark	
H2b	\checkmark	
H2c	\checkmark	
H3	\checkmark	
H4	\checkmark	
H5a	\checkmark	
H5b	\checkmark	
H6(partially)	Novelty and recreational characteristics of the shopping attitude	Impulsiveness, perfectionist, brand consciousness, value for money consciousness characteristics of the shopping attitude

Table 14 Hypothesis test results

relationships between efficiency, fulfillment, privacy, information quality, and erepurchase intention, as it is explained in Tables 11 and 12. Finally, novelty and recreational shopping attitudes slightly moderate the effect of e-satisfaction on the e-repurchase intention at a 9% significance level, as displayed in Table 13. It can therefore be concluded that the relationship between e-satisfaction and e-repurchase will be slightly weaker for consumers who have a hedonic attitude marked by (a) novelty and (b) recreational aims when they engage in online shopping. Table 14 includes the summary results of the hypothesis test analysis.

5 Discussion

In an examination of the case of a large Turkish e-retailer, this study adopted the multi-item e-SERVQUAL scale developed by Parasuraman et al. (2005), which attempts to capture electronic service quality as a whole within the parameters of E-S-QUAL and E-RecS-QUAL while also measuring e-customers' service quality perceptions, with the ultimate goal of providing e-services companies with insights that they can use to offer superior service quality and thereby enhance both customers' e-satisfaction and e-repurchase intention. Moreover, we adopted the determinants of accuracy and timeliness developed by Doll and Torkzadeh (1988) so that we could better investigate information quality. In that process, we examined the mediating role of customer e-satisfaction and the moderating role of traditional shopping attitudes in a format adopted from Kendal and Sproles (1986). Firstly, the data we obtained provided support for an e-service quality scale with three dimensions efficiency, fulfillment, and privacy-as well as E-Rec-QUAL as unidimensional including all the items of the scale. The e-service quality and erecovery service dimensions we utilized were developed by Parasuraman et al. (2005). In terms of system availability, the statement "this website uploaded and opened quickly" replaced efficiency, while the remaining two dimensions did not appear statistically. As argued by Blut et al. (2015), the dimensions of e-service quality vary from culture to culture in association with overall service quality and they are also dependent upon the environmental and technical context of the country in question. The findings of this study indicate that Turkish customers perceive eservice quality based on four factors-efficiency, fulfillment, privacy/security, and customer service—instead of the five dimensions proposed by Parasuraman et al. (2005).

Secondly, information quality was also found to be a key feature for the esatisfaction and e-repurchase intention of consumers. The data supported all the items of accuracy and timeliness proposed by Doll and Torkzadeh (1988) as a unidimensional. Furthermore, that factor was influential on both e-satisfaction and e-repurchase intention. Regarding regression coefficients, we found that the direct effect of information quality on e-repurchase intention, which had a regression coefficient of 0.399, was higher than its effect on e-satisfaction, which had a regression coefficient of 0.205. Hence, it can be concluded that for the case of this study such an approach is suitable for considering information quality as a separate dimension.

Thirdly, the effect of e-service recovery on e-satisfaction was found to be high and direct, whereas that effect proved to be indirect for e-repurchase intention. Eservice recovery thus directly influences customer e-satisfaction and has an indirect impact on e-repurchase intention, meaning that customers who were dissatisfied with after-sales e-services would not make use of that website again. This result coincides with the conclusions of Jiang and Rosenbloom (2005), who asserted that "the only truly loyal customers are totally satisfied customers" (p. 152), suggesting that when customer service failures occur, it is unlikely that consumers will engage in repurchases from that site. Fourthly, only the dimension of a shopping attitude based on novelty and recreation appeared as a uni-dimension among the six traditional dimensions of CIS, and it moderates the effect of e-satisfaction on e-repurchase intention. The significant negative interaction term indicated that when consumers displayed more of a novelty and recreation attitude, e-satisfaction had less of an impact on the e-repurchase intention for consumers dealing with Company XYZ. That represents a critical finding for the company in terms of keeping its customer portfolio loyal. The claim put forward by Jiang and Rosenbloom (2005) about truly loyal customers being totally satisfied customers (p. 152) did not appear to hold for Company XYZ's customers whose shopping attitudes were based on novelty and recreation.

Lastly, our data analysis revealed that the dimensions "price-conscious, habitual, non-perfectionist, and confused by an overabundance of choices" of Sproles and Kendall's (1986) consumer-style index (CSI) did not moderate the effect of e-satisfaction on e-repurchase intention.

6 Conclusion

Based on Parasuraman, Zeithaml, and Malhotra's e-SERVQUAL model integrated with a model of information quality that includes Doll and Torkzadeh's (1988) dimensions of accuracy and timeliness, this study examined and reported on the significant direct and indirect effects of e-service quality and information quality on the e-repurchase intention of consumers through the mediating role of e-satisfaction.

The findings indicated that service quality in Turkey's e-retail industry has a significant positive association with the dimensions of information quality. On the other hand, our mediating analysis demonstrated that other influential variables have an impact on e-repurchase intention besides e-satisfaction, such as the dimensions of information quality and e-service quality. The moderating role of the different shopping style attitudes which are based on the CSI and proposed by Kendall and Sproles was supported by the data analysis. Through the use of data obtained utilizing a questionnaire and structural equation modeling, we found that among the eight shopping style attitudes only the novelty and recreation attitude were found significantly affected the impacts of e-satisfaction on e-repurchase intention, while price-conscious, habitual, non-perfectionist, confused by an overabundance of choices, and novelty and recreation behavior did not significantly moderate those effects.

Furthermore, the relationship between e-satisfaction and the e-repurchase intention was not found to be negatively moderated by novelty and recreation attitudes, meaning that as the degree of novelty and recreation increased, the positive impact of e-satisfaction on e-repurchase intention decreased. The findings of this study shed light on those issues, helping us better understand the dynamics that have contributed to customer e-loyalty and their integrated effects in today's digitalized world and hence also in the e-commerce sector, including the e-retail industry, especially since the Covid-19 pandemic broke out in March of 2020. In that way, our findings have the potential to help guide marketing managers in the e-retail industry to implement effective strategies for maintaining long-lasting relationships with their customers.

It should be noted, however, that this research has some limitations that could be addressed in future studies. First, the study was only conducted with people associated with a particular e-retailer, Company XYZ, which makes the sample demographically homogeneous, thereby limiting the generalizability of the results. Future studies could address that limitation by using a broader sample of online shoppers. Furthermore, replication of the research model in other industries and an examination of other websites that differ from Company XYZ may provide additional insights. Future research could also explore the effects of other variables such as system availability and traditional shopping attitudes, and information quality could be taken up as a new dimension of e-core service quality and be evaluated on a sectoral, regional, and/or culture-specific basis.

References

- Abdullah, D., Hamir, N., Nor, N. M., Krishnaswamy, J., & Rostum, A. M. M. (2018). Food quality, service quality, price fairness, and restaurant re-patronage intention: The mediating role of customer satisfaction. *International Journal of Academic Research in Business and Social Sciences*, 8(17), 211–226.
- Abels, E. G., White, M. D., & Hahn, K. (1999). A user-based design process for websites. OCLC Systems and Services, 15(1), 35–44.
- Ahn, T., Ryu, S., & Han, I. (2007). The impact of web quality and playfulness on user acceptance of online retailing. *Information & Management*, 44, 263–275.
- Al-Debei, M. (2014). The quality and acceptance of websites: An empirical investigation in the context of higher education. *International Journal of Business Information Systems*, 15(2), 170–188.
- Barnes, S. J., & Vidgen, R. T. (2002). An integrative approach to the assessment of e-commerce quality. *Journal of Electronic Commerce Research*, 3(3), 114–127.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality* and Social Psychology, 51(6), 1173–1182.
- Blut, M. (2016). E-service quality: Development of a hierarchical model. *Journal of Retailing*, 92(4), 500–517. https://doi.org/10.1016/j.jretai.2016.09.002
- Blut, M., Chowdhry, N., Mittal, V., & Brock, C. (2015). E-service quality: A meta-analytic review. Journal of Retailing, 91(4), 679–700. https://doi.org/10.1016/j.jretai.2015.05.004
- Brady, M. K., & Robertson, C. J. (2001). Searching for a consensus on the antecedent role of service quality and satisfaction: An exploratory cross-national study. *Journal of Business Research*, 51(1), 53–60. https://doi.org/10.1016/so148.2963(99).00041.7
- Ceylan, E., & Alagöz, S. B. (2020). A study to determine the effect of consumers' decision-making styles on the organic food purchasing decision. *Karamanoğlu Mehmetbey University, Journal* of Social and Economic Research, 22(38), 148–163.
- Chang, H. J. J. J., Dokko, J., Min, J., & Rakib, M. A. N. (2020). A typology of online shopping consumers and its relation to online shopping perception and obsession. In *International Textile* and Apparel Association Annual Conference Proceedings, 77(1). Iowa State University Digital Press.

- Chang, M. Y., Pang, C., Tarn, J. M., Liu, T. S., & Yen, D. C. (2015). Exploring user acceptance of an e-hospital service: An empirical study in Taiwan. *Computer Standards and Interfaces*, 38, 35–43.
- Chen, J., Xu, H., & Whinston, A. B. (2011). Moderated online communities and quality of usergenerated content. *Journal of Management Information Systems*, 28(2), 237–268.
- Civelek, M. E. (2018). *Methodology of structural equation modeling*. Beta Basım. ISBN:978-605-242-090-4.
- Cole, S. T., & Illum, S. F. (2006). Examining the mediating role of festival visitors' satisfaction in the relationship between service quality and behavioral intentions. *Journal of Vacation Marketing*, 12(2), 160–173.
- Collier, J. E., & Bienstock, C. C. (2006). Measuring service quality in e-retailing. Journal of Service Research, 8(3), 260–275.
- Connolly, R., Bannister, F., & Kearney, A. (2010). Government website service quality: A study of the Irish revenue online service. *European Journal of Information Systems*, 19(6), 649–667. https://doi.org/10.1057/ejis.2010.45
- Demirbaş, E., Salman, G. G., & Uray, N. (2014). An inregrative model on the factors affecting consumers' satisfaction, trust and repurchase intention in online shopping. *Doctoral Thesis*. Bahcesehir University Graduate School of Social Sciences.
- Doll, W. J., & Torkzadeh, G. (1988). The measurement of end-user computing satisfaction. MIS Quarterly, 12(2), 259–274. https://doi.org/10.2307/248851
- Durmuş (Sipahi), B., Yurtkoru, E. S., & Çinko, M. (2010). Data analysis with SPSS in social sciences (3rd ed.). Beta. ISBN: 978-975-295-196-8.
- Fortes, N., Rita, P., & Pagani, M. (2017). The effects of privacy concerns, perceived risk, and trust on online purchasing behavior. *International Journal of Internet Marketing and Advertising*, 11(4), 307–329. https://doi.org/10.1504/IJIMA.2017.10007887
- Fortes, N., & Rita, P. (2016). Privacy concerns and online purchasing behavior: Towards an integrated model. *European Research on Management and Business Economics*, 22(3), 167–176.
- Fullerton, G., & Taylor, S. (2002). Mediating, interactive, and non-linear effects in service quality and satisfaction with services research. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 19(2), 124–136. https://doi.org/10.1111/j.1936-4490.2002.tb00675.x
- Gao, Y. (2005). Web systems design and online consumer behavior. Idea Group Publishing.
- Gounaris, S., Dimitriadis, S., & Stathakopoulos, V. (2010). An examination of the effects of service quality and satisfaction on customers' behavioral intentions in e-shopping. *Journal of Services Marketing*, 24(2), 142–156. https://doi.org/10.1108/08876041011031118
- Griffith, D. A., & Krampf, R. F. (1998). An examination of the web-based strategies of the top 100 U.S. retailers. *Journal of Marketing Theory and Practices*, 6(3), 12–23. https://doi.org/10.1080/ 10696679.1998.11501801
- Grönroos, C., Heinonen, F., Isonlemi, K., & Lindholm, M. (2000). The net offer model: A case example from the virtual marketspace. *Management Decision*, 8(4), 243–252.
- Schaupp, L. C. (2010). Web site success: Antecedents of web site satisfaction and re-use. *Journal of Internet Commerce*, 9(1), 42–64. https://doi.org/10.1080/15332861.2010.487414
- Ha, H., Janda, S., & Muthaly, S. K. (2010). A new understanding of the satisfaction model in an e-re-purchase situation. *European Journal of Marketing*, 44(7/8), 997–1016. https://doi.org/ 10.1108/03090561011047490
- Holloway, B. B., & Beatty, S. E. (2008). Satisfiers and dissatisfiers in the online environment: A critical incident assessment model. *Journal of Service Research*, 10(4), 347–364.
- Huang, M.-H. (2003). Modeling virtual expletory and shopping dynamics: An environmental psychology approach. *Information & Management*, 41, 39–47.
- Jiang, P., & Rosenbloom, B. (2005). customer intention to return online: Price perception, attribute level performance and satisfaction unfolding over time. *European Journal of Marketing*, 39(1/2), 150–174.

- Kau, A. K., Tang, Y. E., & Ghose, S. (2003). Typology of online shoppers. Journal of Consumer Marketing, 20, 139–156.
- Kaya, B., Behravesh, E., Abubakar, A. M., Kaya, Ö. S., & Orús, C. (2019). The moderating role of website familiarity in the relationships between e-service quality, e-satisfaction and e-loyalty. *Journal of Internet Commerce*, 18(4), 369–394. https://doi.org/10.1080/ 15332861.2019.1668658
- Kendall, E. L., & Sproles, G. B. (1986). A methodology for profiling consumers' decision-making styles. *The Journal of Consumer Affairs*, 20(2), 267–279.
- Kesharwani, S. (2020). E-service quality in banking industry-a review. Global Journal of Enterprise Information System, 12(2), 111–118.
- Kim, M., Kim, J.-H., & Lennon, S. J. (2006). Online service attributes available on apparel retail websites: An E-S-QUAL approach. *Journal of Service Theory and Practice*, 16(1), 51–77.
- King, R. C., Schilhavy, R. A., Chowa, C., & Chin, W. W. (2016). Do customers identify with our website? The effects of website identification on repeat purchase intention. *International Journal of Electronic Commerce*, 20(3), 319–354.
- Korten, D. C. (2009). Agenda for a new economy. BerrettKoehler.
- Lestari, V. T., & Ellyawati, J. (2019). Effect of e-service quality on repurchase intention: Testing the role of e-satisfaction as mediator variable. *International Journal of Innovative Technology* and Exploring Engineering (IJITEE), 8(7), 158–162.
- Liao, T. H., & Keng, C. J. (2013). Online shopping delivery delay: Finding a psychological recovery. strategy by online consumer experiences. *Computers in Human Behavior*, 29(4), 1849–1861.
- Li, H., & Suomi, R. (2007). Evaluating electronic service quality: A transaction process-based evaluation model. *The European Conference on Information Management and Evaluation*, *September*, 331–340.
- Lin, H.-F. (2010). An application of fuzzy AHP for evaluating course website quality. *Computers & Education*, 54, 877–888.
- Lin, J., & Lu, H. (2000). Toward an understanding of the behavioral intention to use a website. International Journal of Information Management, 20(3), 197–208.
- Lynch, J. G., Jr., & Ariely, D. (2000). Wine online: Search cost affects competition on price, quality, and distribution. *Marketing Science*, 19(1), 83–103.
- Mai, J.-E. (2012). The quality and qualities of information. Journal of the American Society for Information Science and Technology, 64(4), 675–688. https://doi.org/10.1002/asi.22783
- Malhotra, N. (2009). *Marketing research: An applied orientation* (6th ed.). Pearson. ISBN-13: 9780133071757.
- Mansouri, S. A., Aktas, E., & Besikci, U. (2016). Green scheduling of a two-machine flow shop: Trade-off between makespan and energy consumption. *European Journal of Operational Research*, 248(3), 772–788. https://doi.org/10.1016/j.ejor.2015.08.064
- Mun, Y. Y., Yoon, J. J., Davis, J. M., & Lee, T. (2013). Untangling the antecedents of initial trust in web-based health information: the roles of argument quality, source expertise, and user perceptions of information quality and risk. *Decision Support Systems*, 55(1), 284–295.
- Öztürk, E., & Şahin, A. (2020). Effects of consumers' decision-making styles on abandoning online shopping bags. *Cukurova University Social Sciences Institute Journal.*, 29(3), 70–90.
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multi-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(3), 41–50.
- Rašković, M., Ding, Z., Hirose, M., Žabkar, V., & Fam, K. S. (2020). Segmenting young-adult consumers in East Asia and Central and Eastern Europe–The role of consumer ethnocentrism and decision-making styles. *Journal of Business Research*, 108, 496–507.
- Regina Connolly, R., Bannister, F., & Kearney, A. (2010). Government website service quality: A study of the Irish revenue online service. *European Journal of Information Systems*, 19, 649– 667.

- Reichheld, F. F., & Schefter, P. (2000). E-loyalty: Your secret weapon on the web. Harvard Business Review, July–August, 105–113.
- Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon*, 5(10), 1–14. https://doi.org/10.1016/ j.heliyon.2019.e02690
- Rohm, A. J., & Swaminathan, V. (2002). A typology of online shoppers based on shopping motivations. *Journal of Business Research*, 57, 748–757.
- Rosenbaum, M. S., & Losada, M. (2017). How to create a realistic customer journey map. Business Horizons, 60(1), 143–150. https://doi.org/10.1016/j.bushor.2016.09.010
- Rust, R. T., & Lemon, K. N. (2001). E-service and the consumer. *International Journal of Electronic Commerce*, 5(3), 85–101.
- Sahin, A., Kitapçi, H., Altindag, E., & Gok, M. S. (2017). Investigating the impacts of brand experience and service quality. *International Journal of Market Research*, 59(6), 707–724. https://doi.org/10.2501/IJMR-2017-051
- Santos, J. (2003). E-service quality: A model of virtual service quality dimensions. Managing Service Quality, 13(3), 233–246.
- Schmidt, S., Cantallops, A. S., & Santos, C. P. (2008). The characteristics of hotel websites and their Implications for website effectiveness. *International Journal of Hospitality Management*, 27(4), 504–516. https://doi.org/10.1016/j.ijhm.2007.08.002
- Smith, D., Menon, S., & Sivakumar, K. (2005). Online peer and editorial recommendations, trust, and choice in virtual markets. *Journal of Interactive Marketing*, 19(3), 15–37.
- Srivastava, K., & Sharma, N. K. (2013). Service quality, corporate brand image, and switching behavior: The mediating role of customer satisfaction and repurchase intention. *Services Marketing Quarterly*, 34(4), 274–291.
- Szymanski, D. M., & Hise, R. T. (2000). E-satisfaction: An initial examination. Journal of Retailing, 76(3), 309–322. https://doi.org/10.1016/S0022-4359(00)00035-X
- Taherdoost, H., Sahibuddin, S., Ibrahim, S., Kalantari, A., Jalaliyoon, N., & Ameri, S. (2012). Examination of electronic service definitions. In 2012 International Conference on Advanced Computer Science Applications and Technologies (ACSAT) (pp. 73–77). IEEE.
- Tandon, U., Kiran, R., & Sah, A. N. (2017). Customer satisfaction as a mediator between website service quality and repurchase intention: An emerging economy case. *Service Science*, 9(2), 106–120.
- Thompson, S. H. T. (2002). Attitudes towards online shopping and the internet. *Behavior and Information Technology*, 21(4), 259–271.
- Vo, N. T., Chovancová, M., & Tri, H. T. (2020). The impact of e-service quality on customer satisfaction and consumer engagement behaviors toward luxury hotels. *Journal of Quality Assurance in Hospitality and Tourism*, 21(5), 499–523. https://doi.org/10.1080/ 1528008X.2019.1695701
- Wang, L., Law, R., Guillet, B. D., Hung, K., & Fong, D. K. C. (2015). Impact of hotel website quality on online booking intentions: E-trust as a mediator. *International Journal of Hospital Management*, 47, 108–115.
- Watcher, K. (2002). Longitudinal assessment of web retailers: Issues from a consumer point of view Journal of Fashion Marketing and Management, 6(2), 134–145.
- Wolfinbarger, M., & Gilly, M. C. (2003). E-TailQ: Dimensionalizing, measuring, and predicting e-tail quality. *Journal of Retailing*, 79(3), 183–198. https://doi.org/10.1016/S0022-4359(03)00034-4
- Xiao, Q. (2016). Managing E-commerce platform quality and its performance implication: A multiple-group structural model comparison. *Journal of Internet Commerce*, 15(2), 142–162. https://doi.org/10.1080/15332861.2016.1143214
- Yang, Z., Cai, S., Zhou, Z., & Zhou, N. (2005). Development and validation of an instrument to measure user perceived service quality of information presenting web portals. *Information & Management*, 42, 575–589.

- Yang, Z., & Fang, X. (2004). Online service quality dimensions and their relationships with satisfaction: A content analysis of customer reviews of securities brokerage services. *International Journal of Service Industry Management*, 15(3), 302–332.
- Yang, Z., & Jun, M. (2002). Consumer perception of e-service quality: From internet purchaser and non-purchaser perspectives. *Journal of Business Strategies*, 19(1), 19–40.
- Yoo, B., & Donthu, N. (2001). Developing a scale to measure the perceived quality of internet shopping site (SITEQUAL). *Quarterly Journal of Electronic Commerce*, 2(1), 31–45.
- Zarei, G., Nuri, B. A., & Noroozi, N. (2019). The effect of Internet service quality on consumers' purchase behavior: The role of satisfaction, attitude, and purchase intention. *Journal of Internet Commerce*, 18(2), 197–220. https://doi.org/10.1080/15332861.2019.1585724
- Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through websites: A critical review of extant knowledge. *Journal of the Academy of Marketing*, 30(4), 362–375.