

The acquirements of e-service quality in fashion e-storescapes: mediating effect in an S-O-R model

E-service quality in fashion e-storescapes

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Abstract

Purpose – This study aims to determine the effects of e-service quality (e-SQ) in fashion e-storescapes (online retail store environments) on e-customer citizenship behaviour (e-CCB) and e-repurchase intention (e-RI), as well as to investigate whether e-CCB plays a mediating role in these relations.

Design/methodology/approach – In line with the aim of this study, the relationships between the variables were examined by using the mediation effect analysis within the framework of a Stimulus-Organism-Response (S-O-R) model. An online survey was developed based on the scales with proven reliability and validity. The convenience sampling method on social media sites was used to collect data for analysis from 500 volunteer participants who had previously shopped online for fashion brands between 1st and 30th September 2020. The partial least squares (PLS) path analysis method was used to analyse the research model.

Findings – This study revealed that the dimensions of e-SQ, except e-efficiency and e-privacy, have positive effects on all dimensions of e-CCB. Concurrently, this study identified that the dimensions of e-CCB have positive effects on e-RI. Subsequently, the study determined that the dimensions of e-CCB played a full mediator role between the dimensions of e-SQ and e-RI.

Research limitations/implications – The primary limitation of this study is that the study is based on the perceptions of fashion e-customers about the customers' e-tailing (online retailing) experiences, which is only reached via the convenience sampling method.

Practical implications – In this study, the positive relationships between e-CCB and e-RI were accepted as the acquirements of e-SQ in fashion e-storescapes. In this context, the reasons for fashion customers to repurchase from an e-storescape are not only low prices and product variety, but also the exhibition of extra-role behaviours in the form of e-SQ acquirements. These implications, which will attract the attention of fashion e-tailers, may enable the e-tailers to modify the e-SQ of e-tailers' e-storescapes based on customer feedback.

Originality/value – This study is unique as the study draws on the S-O-R theory to provide insight into the stimulus effect of e-storescape e-SQ on the mediating role of e-CCB. The current study is expected to contribute to the literature by highlighting the reasons for changes in consumption attitudes, intentions and behaviours amongst customers that prefer e-tailing for fashion apparel shopping.

Keywords e-storescape, Fashion e-tailing, e-service quality, e-customer citizenship behaviour, e-repurchase intention

Paper type Research paper



1. Introduction

All apparel, from clothing to accessories, requires a more complex purchasing decision process, compared to other types of retail products (Zheng and Bensebaa, 2022), because

fashion customers expect to see, feel, touch and try on clothes before purchasing (Baek *et al.*, 2021). For this reason, some fashion brands have lagged in the transition to e-tailing, citing customers' possible challenges with online purchasing (Silva *et al.*, 2021). Nonetheless, revolutionary digital technologies, such as artificial intelligence and virtual reality, have expanded the website quality of online "retail store environment" (Gorji *et al.*, 2021) referred to in this study as e-storescape and significantly facilitated customers' transactions when purchasing clothing online (Alexander and Kent, 2021). Whilst website quality consists of service quality, information quality and system quality (Udo *et al.*, 2010; Ha and Stoel, 2012), only the e-service quality (e-SQ) of the e-storescape's website quality are discussed in this study. With the transformation of retailing into e-tailing (Altıntaş *et al.*, 2020), e-SQ of e-storescapes is seen as the main key to success, more so than the information and system quality of websites (Blut, 2016; King *et al.*, 2016; Nandankar *et al.*, 2023).

Parasuraman *et al.* (2005) defined e-SQ as the "extent to which a website facilitates efficient and effective shopping, purchasing, and delivery" (p. 5). The features of e-SQ are expected to facilitate service delivery and purchasing via the e-storescape, beginning with initial customer contact (Rolland and Freeman, 2010). Subsequently, customers expect certain e-SQ features from an e-storescape, e-efficiency "the ease and speed of accessing and using the website", e-system availability "the correct technical functioning of the site", e-fulfilment "the extent to which the site's promises about order delivery and item availability are fulfilled" and e-privacy "the degree to which the site is safe and protects customer information" (Parasuraman *et al.*, 2005; Zeithaml *et al.*, 2006).

The high e-SQ in e-storescapes not only puts their customers at ease, but also causes them to exhibit voluntary extra-role behaviour for the same brand, which is called e-customer citizenship behaviour (e-CCB) (Groth, 2005; Anaza and Zhao, 2013; Goutam *et al.*, 2022). In this context, e-CCB refers to helpful, constructive behaviours exhibited by willing customers that are valued or appreciated by businesses but are not related to the viable or explicit requirements of their role (Kim and Choi, 2016; Kim and Yi, 2017). Citizenship behaviours, including such extra-role behaviours as voluntary tolerance, constructive criticism and praise and suggestion, are also foundational to CCB (Gong and Yi, 2021). Therefore, it can be argued that the success of e-tailing depends on the joint efforts of e-tailers (who offer e-SQ) and e-customers (who exhibit extra-roles) (Carlson and O'Cass, 2010; Anaza and Zhao, 2013; Ponnusamy, 2015).

Yi and Gong's (2013) traditional CCB dimensions can be assumed when exhibited in an e-storescape as follows: e-feedback "includes comments, recommendations, and information from brand websites that customers communicated to Webmasters and that helps the firm to improve the long-term service creation process", e-helping "internet-mediated virtual helpfulness by sending useful instructions, comments or links to other customers", e-advocacy "defending and saying positive things about the business, the firm or the employee to others, such as friends or family on Web-based social media platforms" and e-tolerance "customers' willingness to be patient when e-tailers' service delivery does not meet the customer's expectations of adequate service, as in the case of delays or equipment shortages" (pp. 1280–1281).

Whilst customers experience pleasure and sensory happiness whilst purchasing clothes from an e-storescape, they also seek comfort and security (Goel *et al.*, 2022). As long as fashion e-tailers offered superior premium e-SQ (without security, privacy and fraud risk) in the e-storescape, they can attract and retain e-customers and even guide their purchasing decisions (Ha and Stoel, 2012; Goel *et al.*, 2022).

Within the scope of the information above, how to improve the quality of service provided and how to encourage customers to exhibit extra-role behaviours in order to increase their repetitive shopping are important issues for e-tailing. According to recent studies, voluntary social media messaging by e-customers to other e-customers is seen as a valuable way to

disseminate information about a brand's services (Mudambi and Schuff, 2010). Moreover, e-tailing customers exhibit e-CCB via such tools as electronic word-of-mouth communication and brand communities (Verma and Yadav, 2021). Therefore, the e-SQ of e-storescape, which will increase the enthusiasm of customers to exhibit extra-role behaviours on social media, is seen as the antecedent of e-CCB (Paulssen *et al.*, 2019; Gorji *et al.*, 2021).

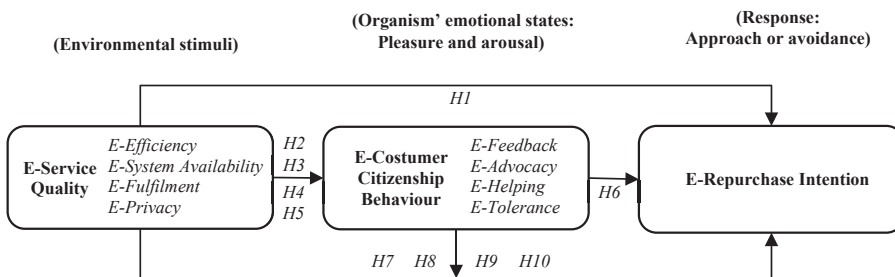
In this study, it is assumed that due to the high e-SQ offered in fashion e-storescapes, e-CCB exhibited by customers for the benefit of e-tailers can increase e-repurchase intention (e-RI). Therefore, this study, designed according to the Stimulus-Organism-Response (S-O-R) model, posits e-CCB as a mediating variable between e-SQ and e-RI. Subsequently, it aims to investigate whether a fashion e-storescape's e-SQ affects e-CCB and whether e-CCB has a mediating effect in the relationship between e-SQ and e-RI. To determine the fashion customers' perceptions of research variables in this quantitative study, we analysed the data obtained from voluntary e-customers shopping from an e-storescape. To the best of our knowledge, the present study is the first to address these multiple variables simultaneously. It is posited that the present study's findings will help fashion e-tailers find practical solutions to the needs and desires of e-customers. In the future, further studies with different samples can be conducted to evaluate the e-tailing of other sectors. This research has not received any special grant, contribution or support from any commercial or public institution or organisation.

2. Theoretical framework and hypothesis development

2.1 The S-O-R model

The theoretical framework of this study was created in accordance with the paradigms of the S-O-R model proposed by Mehrabian and Russell (1974). Mehrabian and Russell (1974) suggested that behaviours or intentions arise as a response to the action of the organism, which is set in motion by an environmental stimulus. Therefore, it can be said that response, which includes intention and behaviour, emerges as the result of the chosen stimulus and affected organism.

Donovan *et al.* (1994) used a modified version of the S-O-R theory to prove that emotions affect behaviours. This modified version of the model claims that the environmental stimuli are equivalent to emotional states such as pleasure, arousal approach or avoidance responses (Zheng and Bensebaa, 2022). Their version of the S-O-R model has been widely used to understand the emotional state of customers (organism) and to subsequently shape behavioural responses in the storescapes (Grewal *et al.*, 2021). Extra-role behaviours within the scope of CCB exhibited by customers who experience pleasure and emotional arousal in response to an e-tailer's SQ were considered emotional gestures (Zheng and Bensebaa, 2022). Subsequently, as shown in Figure 1, 10 main hypotheses were created to determine the significance and directions of the relationships between the independent, mediating and



Source(s): Figure by authors

Figure 1. Research model

dependent variables of the model. The first six hypotheses were designed to test the interrelationships between e-SQ, e-CCB and e-RI. Furthermore, the seventh through tenth hypotheses were created to test the mediating effects of e-CCB dimensions in the relationship between e-SQ dimensions and e-RI.

2.2 E-SQ and e-RI

Earlier SQ studies (Parasuraman *et al.*, 2005; Zeithaml *et al.*, 2006) focussed on the implementation in traditional stores. It was claimed that the quality of e-service has a major effect on altering the emotional state of customers (Nacass, 2018). According to Hsu *et al.* (2012), SQ is more important than system quality in terms of influencing RI. Thus, it is not possible to state that the only reason customers have a preference for the fashion e-storescape is low prices and high-quality products (Grewal *et al.*, 2021). Mummalaneni (2005) emphasised the relationships between website features, e-RI and emotional responses. Thus, it can be said that e-SQ has a significant impact on e-RI when using an e-commerce platform to purchase fashion products. Furthermore, it was proved that customers that have positive perceptions of e-SQ and communication opportunities in e-storescapes are more willing to exhibit extra-role behaviours for these businesses than consumers that do not (Anaza and Zhao, 2013). Based on the above-mentioned research, the following hypotheses were proposed to measure the effects of the dimensions of e-SQ on e-RI based on the perceptions of fashion e-customers:

- H1. There is a positive relationship between (1) e-efficiency, (2) e-system availability, (3) e-fulfilment and (4) e-privacy and e-RI.

2.3 E-SQ and e-CCB

If the SQ of a fashion e-storescape is high, e-customers are expected to respond positively to the web admin, other visitors and the brand through their extra-role behaviours (Anaza and Zhao, 2013). Furthermore, Basu *et al.* (2021) posited that ideas and information regarding e-SQ at a level resulting in customers exhibiting citizenship behaviours offer opportunities for e-tailers to share success stories. At the same time, customer-centric SQ must be high to create an e-tailing service in which the best examples of e-CCB can be observed because as e-SQ increases, the desire of customers to exhibit e-CCB favourable to e-tailers also increases (Nguyen *et al.*, 2014). For example, in apparel e-tailing, SQ was reported to be very important for creating suitable environments for CCB, including concrete extra-role behaviours by which customers can share their opinions with web admins and e-tailers or help other e-customers (Carlson and O'Cass, 2010; Yi and Gong, 2013). Based on the research above, the following hypotheses were proposed to measure the effects of the dimensions of e-SQ on the dimensions of e-CCB:

- H2. There is a positive relationship between (1) e-efficiency, (2) e-system availability, (3) e-fulfilment and (4) e-privacy and e-feedback.
- H3. There is a positive relationship between (1) e-efficiency, (2) e-system availability, (3) e-fulfilment and (4) e-privacy and e-advocacy.
- H4. There is a positive relationship between (1) e-efficiency, (2) e-system availability, (3) e-fulfilment and (4) e-privacy and e-helping.
- H5. There is a positive relationship between (1) e-efficiency, (2) e-system availability, (3) e-fulfilment and (4) e-privacy and e-tolerance.

2.4 E-CCB and e-RI

Customers with e-tailing experience consistently compare their pre-shopping expectations to their actual purchase performance (Kim *et al.*, 2020). It was reported that fashion brands see

this as an opportunity to gather information that they can use to boost customer e-RI by instantly following customer experiences in the e-storescape (Fang *et al.*, 2011). Due to the principle of reciprocity, when customers benefit from a business interaction, they feel compelled to exhibit CCB and, therefore, take positive actions that are beneficial to the business (Xie *et al.*, 2017). In the e-storescape, purchasing and e-RI are amongst customers' in-role behaviours. Recent research has successfully used the S-O-R theory to investigate what influences a customer's e-RI in the e-storescape (Yilmazel and Göktaş, 2021). Gounaris *et al.* (2010) reported that customers use their most recent experience to decide whether to display repetitive behaviours, such as revisiting or repurchasing from an e-tailer. Finally, e-RI (response) by fashion customers is representative of a behavioural decision; however, e-CCB plays a role in repeat purchasing and e-RI (Grillo *et al.*, 2014). Thus, the following hypothesis was proposed to evaluate the effects of the dimensions of e-CCB on e-RI:

H6. There is a positive relationship between (1) e-feedback, (2) e-advocacy, (3) e-helping and (4) e-tolerance and e-RI.

2.5 The mediating role of e-CCB between e-SQ and e-RI

Stimulated by the high SQ of fashion e-storescape, customers' enthusiasm for extra-role behaviours with positive emotions towards other visitors and webmasters increases e-RI whilst building beneficial relationships amongst stakeholders. In fact, the organism (emotion and cognition) was also defined as being represented by cognitive and affective mediating states and processes that mediate the relationships between the stimulus and the individuals' responses (Kim and Lennon, 2013). Liu (2021) used the e-SQ of websites as external stimuli, cognitive emotions as mediators and purchase intentions as responses and constructed a model to study the influence of interaction on website shopping behaviour. According to the conceptual model of this study, e-SQ as a stimulus variable enhances e-RI response by enhancing e-CCB as a cognitive and emotional variable. Thus, the following hypotheses were proposed to identify the mediating effects of the dimensions of CCB between e-SQ and e-RI:

H7. E-feedback has a mediating role in the relationship between (1) e-efficiency, (2) e-system availability, (3) e-fulfilments and (4) e-privacy and e-RI.

H8. E-system availability has a mediating role in the relationship between (1) e-efficiency, (2) e-system availability, (3) e-fulfilments and (4) e-privacy and e-RI.

H9. E-fulfilments have a mediating role in the relationship between (1) e-efficiency, (2) e-system availability, (3) e-fulfilments and (4) e-privacy and e-RI.

H10. E-privacy has a mediating role in the relationship between (1) e-efficiency, (2) e-system availability, (3) e-fulfilment and (4) e-privacy and e-RI.

3. Research methodology

3.1 Data collection procedure

The study population included fashion customers aged 16 to 74 who made online purchases. The convenience sampling method on social media platforms (Instagram, Facebook, Twitter and WhatsApp) was used to collect data for analysis from 500 volunteer participants that had previously shopped online for fashion brands between 1st and 30th September 2020. All scale questions were responded to using a five-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). Amongst the 500 participants, 58% (n = 290) were female, 29% (n = 145) were aged 21–30 years, 61% (n = 305) had a bachelor's degree and 26.8% (n = 134) had a monthly income of US\$301-600.

The 22-item E-SQUAL scale with four factors (Parasuraman *et al.*, 2005) was used to measure the participants' perceptions of e-SQ. This study defined e-SQ as consisting of efficiency, system availability, fulfilment and privacy. E-efficiency was measured using eight items "e.g. this site makes it easy to find what I need etc." E-system availability was measured using four items "e.g. this site is always available for business etc." E-fulfilment was measured using seven items "e.g. it delivers orders when promised etc." E-privacy was measured using three items "e.g. it protects information about my Web-shopping behaviour etc."

The E-SQUAL scale, developed by Parasuraman *et al.* (2005), measures customers' perceptions of basic quality regarding the e-tailing processes and service flows in e-storescapes and not the technologically advanced user interface and ease of use of the website "aesthetics, convenience, product selection, price offerings and website personalisation" (Rita *et al.*, 2019). Therefore, this scale was chosen for this study since it is assumed that e-SQ measures the SQ of online shopping independently of technological developments according to current rules (Khan *et al.*, 2019). In addition, the E-SQUAL scale still maintains its popularity and is used in many studies to measure e-SQ with very high reliability and validity coefficients in different cultures (Akinci *et al.*, 2010; Ghosh, 2018; Erdoğan, 2022).

Respondents' willingness to exhibit extra-role behaviours based on their experience with the SQ of an e-storescape was measured by Yi and Gong's (2013) CCB scale and adapted for e-tailing by the authors. Therefore, in the study, it was deemed appropriate to name the CCB factors exhibited in e-tailing as e-feedback, e-advocacy, e-helping and e-tolerance. E-feedback was measured using three items "e.g. if I have a useful idea on how to improve e-service, I let the web admin know etc." E-helping was measured using four items "e.g. I assist other customers if they ask on a website etc." E-advocacy was measured using three items "e.g. I said positive things about the brand's service on their website to others etc." E-tolerance was measured using three items "e.g. if e-service is not delivered as expected, I would be willing to put up with it etc."

The attitudes of participants towards e-RI were measured using a scale modified by Fang *et al.* (2011) based on models proposed by Parasuraman *et al.* (2005). The three items on the scale were used to determine attitudes towards e-RI "e.g. if I could, I would like to continue using XYZ to purchase products etc."

3.2 Validity and reliability analysis of scales

By creating a measurement model to test the validity and reliability of the scales, their internal consistency, reliability and convergent and discriminant validity were examined. Cronbach's alpha and composite reliability (CR) were calculated to determine internal consistency and reliability. In the investigation of convergent validity, average variance extracted (AVE) values and factor loads were used. Factor loadings were 0.70, Cronbach's alpha and CR were ≥ 0.70 and AVE values were expected to be ≥ 0.50 (Hair *et al.*, 2006, 2022). The results are shown in Table 1.

The Cronbach's alpha coefficients of the factors were between 0.847 and 0.948; as the CR values calculated were between 0.847 and 0.966, internal consistency and reliability were provided. The values in Table 1 show that the factor loads were between 0.455 and 0.953. According to Hair *et al.* (2022), factor loadings should be ≥ 0.708 . They suggest that items with factor loads between 0.40 and 0.70 should be excluded from the model if their AVE or CR values are below the threshold value. Because the calculated AVE and CR values were greater than the threshold values, items with factor loads < 0.708 were not removed from the measurement model. Factor loads were between 0.455 and 0.953; as AVE values were between 0.624 and 0.905, it was understood that the necessary conditions for convergent validity were met.

In determining the discriminant validity, Henseler *et al.* (2015) suggested that the heterotrait-monotrait ratio of the correlation (HTMT) criterion be used. Table 2 displays the HTMT criterion.

Variables	Factors	Item code	Factor loading	Cronbach's alfa	CR	AVE			
E-Service Quality	E-Efficiency	eq1	0.899	0.902	0.926	0.623			
		eq2	0.911						
		eq3	0.903						
		eq4	0.875						
		eq5	0.871						
		eq6	0.488						
		eq7	0.752						
		eq8	0.455						
	E-System Availability	eq9	0.849				0.855	0.903	0.701
		eq10	0.716						
		eq11	0.872						
		eq12	0.898						
	E-Fulfilment	eq13	0.878				0.948	0.958	0.768
eq14		0.913							
eq15		0.902							
eq16		0.899							
eq17		0.918							
eq18		0.906							
eq19		0.694							
E-Privacy	eq20	0.948	0.948	0.966	0.905				
	eq21	0.953							
	eq22	0.953							
	eq22	0.953							
E-Repurchase Intention	rpi1	0.916	0.873	0.922	0.798				
	rpi2	0.898							
	rpi3	0.865							
E-Costumer Citizenship Behaviour	E-Feedback	ccb1	0.914	0.871	0.921	0.796			
		ccb2	0.928						
		ccb3	0.831						
	E-Advocacy	ccb4	0.905	0.902	0.939	0.836			
		ccb5	0.941						
		ccb6	0.896						
		ccb6	0.896						
	E-Helping	ccb7	0.843	0.847	0.897	0.686			
		ccb8	0.866						
		ccb9	0.845						
	E-Tolerance	ccb10	0.756	0.899	0.937	0.832			
		ccb11	0.919						
		ccb12	0.927						
ccb13		0.891							

Table 1.
Measurement model results

Source(s): Table by authors

According to the criterion of Henseler *et al.* (2015), the HTMT expresses the ratio of the mean of the correlations of the items of all variables in the study to the geometric means of the correlations of the items of the same variable. They reported that the HTMT should be < 0.90 for theoretically similar concepts and < 0.85 for divergent concepts. The HTMT coefficients shown in Table 2 are below the threshold value; in line with this finding, it can be stated that discriminant validity is achieved.

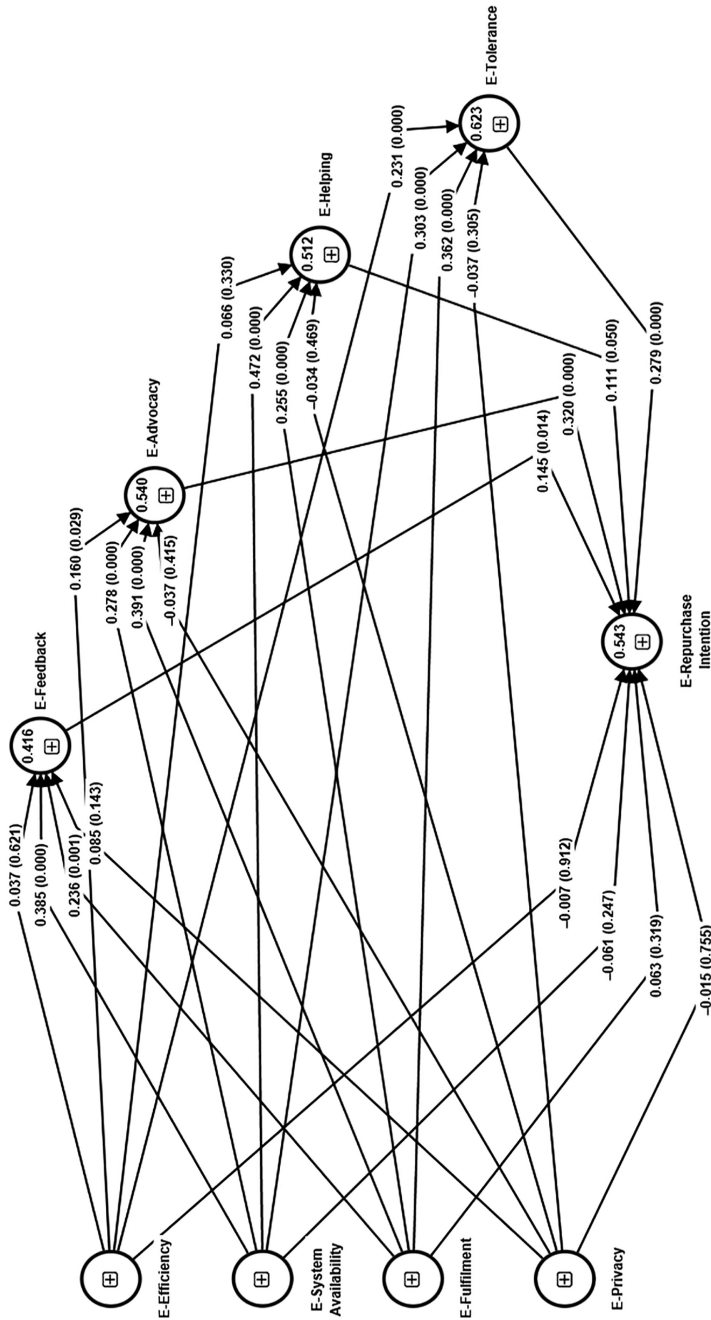
3.3 Findings

3.3.1 Structural equation model. A structural equation model was developed to test the study hypotheses. In this context, the results of the structural modelling assessment are presented in Figure 2.

Table 2.
Discriminant validity
assessment (HTMT
criterion)

	E-Advocacy	E-Efficiency	E-Feedback	E-Fulfillment	E-Helping	E-Privacy	E-Repurchase intention	E-Tolerance	E-System availability
E-Advocacy	0.679								
E-Efficiency	0.768	0.589							
E-Feedback	0.751	0.797	0.625						
E-Fulfillment	0.754	0.612	0.685	0.693					
E-Helping	0.327	0.701	0.351	0.400	0.278				
E-Privacy	0.760	0.582	0.681	0.647	0.654	0.277			
E-Repurchase Intention									
E-Tolerance	0.741	0.723	0.701	0.791	0.796	0.346	0.629		
E-System Availability	0.750	0.739	0.708	0.795	0.682	0.372	0.731	0.795	

Source(s): Table by authors



Source(s): Figure by authors

Figure 2. Structural equation model

SmartPLS 4 was used to analyse the data used for model evaluation (Ringle *et al.*, 2022). Linearity, path coefficients and a partial least squares (PLS) algorithm for R^2 , as well as PLSpredict analysis, were run for the predictive power (Q^2). Using the derived sampling, 10,000 sub-samples were taken from the sample and t-values were calculated. Table 3 shows the VIF, R^2 and Q^2 .

According to Hair *et al.* (2022), variance inflation factor (VIF) coefficients should be below the threshold of 5 to avoid a problem of linearity between variables. The VIF coefficients in Table 3 are <5, indicating that there was no issue of linearity between the variables. The R^2 values show that e-feedback was explained by 42%, e-advocacy was explained by 54%, e-helping was explained by 51%, e-tolerance was explained by 62% and e-RI was explained by 54%.

The fact that the Q^2 calculated for endogenous variables are greater than zero indicates that the research model has Q^2 (Hair *et al.*, 2022). Since the Q^2 values in Table 3 are greater than zero, it can be stated that the research model has Q^2 on endogenous variables. The impact coefficients of the research model are presented in Table 4.

Explanations of the hypothesis test results are as follows:

E-efficiency ($\beta = -0.007, p > 0.05$), e-system availability ($\beta = -0.061, p > 0.05$), e-fulfilment ($\beta = 0.063, p > 0.05$) and e-privacy ($\beta = -0.015, p > 0.05$) had no significant effects on e-RI. Thus, H1a, H1b, H1c and H1d were rejected.

E-efficiency ($\beta = 0.037, p > 0.05$) and e-privacy ($\beta = 0.085, p > 0.05$) had no significant effect on e-feedback, whilst e-system availability ($\beta = 0.385, p < 0.05$) and e-fulfilment ($\beta = 0.236, p < 0.05$) had a significant and positive effect. Thus, H2b and H2c were accepted.

E-privacy ($\beta = -0.037, p > 0.05$) had no significant effect on e-advocacy, whilst e-efficiency ($\beta = 0.160, p < 0.05$), e-system availability ($\beta = 0.278, p < 0.05$) and e-fulfilment ($\beta = 0.391, p < 0.05$) had a significant and positive effect. Thus, H3a, H3b and H3c were accepted.

Variables	Factors	VIF	R^2	Q^2
E-Efficiency	E-Feedback	3,699	0.416	0.400
E-System Availability		2,231		
E-Fulfilment		2,937		
E-Privacy	E-Advocacy	1,825	0.540	0.528
E-Efficiency		3,699		
E-System Availability		2,231		
E-Fulfilment	E-Helping	2,937	0.512	0.503
E-Privacy		1,825		
E-Efficiency		3,699		
E-System Availability	E-Tolerance	2,231	0.623	0.614
E-Fulfilment		2,937		
E-Privacy		1,825		
E-Efficiency	E-Repurchase Intention	3,699	0.543	0.367
E-System Availability		3,880		
E-Fulfilment		2,925		
E-Privacy		3,521		
E-Feedback		1,859		
E-Advocacy		2,188		
E-Helping		2,826		
E-Tolerance		2,318		
		2,916		

Table 3.
Research model
coefficients

Source(s): Table by authors

Path	β	Sd	<i>t</i> value	<i>p</i> Value	Results	
H1a	E-Efficiency → E-Repurchase Intention	-0.007	0.067	0.111	0.912	NS Rejected
H1b	E-System Availability → E-Repurchase Intention	-0.061	0.053	1,157	0.247	NS Rejected
H1c	E- Fulfilment → E-Repurchase Intention	0.063	0.064	0.996	0.319	NS Rejected
H1d	E- Privacy → E-Repurchase Intention	-0.015	0.047	0.312	0.755	NS Rejected
H2a	E-Efficiency → E-Feedback	0.037	0.075	0.495	0.621	NS Rejected
H2b	E-System Availability → E-Feedback	0.385	0.059	6,561	0.000	S Accepted
H2c	E- Fulfilment → E-Feedback	0.236	0.071	3,343	0.001	S Accepted
H2d	E- Privacy → E-Feedback	0.085	0.058	1,463	0.143	NS Rejected
H3a	E-Efficiency → E-Advocacy	0.160	0.073	2,191	0.029	S Accepted
H3b	E-System Availability → E-Advocacy	0.278	0.051	5,414	0.000	S Accepted
H3c	E- Fulfilment → E-Advocacy	0.391	0.062	6,321	0.000	S Accepted
H3d	E- Privacy → E-Advocacy	-0.037	0.046	0.815	0.415	NS Rejected
H4a	E-Efficiency → E- Helping	0.066	0.068	0.975	0.330	NS Rejected
H4b	E-System Availability → E- Helping	0.472	0.047	10,002	0.000	S Accepted
H4c	E- Fulfilment → E- Helping	0.255	0.056	4,542	0.000	S Accepted
H4d	E- Privacy → E- Helping	-0.034	0.047	0.725	0.469	NS Rejected
H5a	E-Efficiency → E-Tolerance	0.231	0.063	3,671	0.000	S Accepted
H5b	E-System Availability → E-Tolerance	0.303	0.049	6,165	0.000	S Accepted
H5c	E- Fulfilment → E-Tolerance	0.362	0.061	5,960	0.000	S Accepted
H5d	E- Privacy → E-Tolerance	-0.037	0.036	1,026	0.305	NS Rejected
H6a	E-Feedback → E-Repurchase Intention	0.145	0.059	2,468	0.014	S Accepted
H6b	E-Advocacy → E-Repurchase Intention	0.320	0.066	4,831	0.000	S Accepted
H6c	E-Helping → E-Repurchase Intention	0.111	0.057	1,960	0.050	S Accepted
H6d	E-Tolerance → E-Repurchase Intention	0.279	0.059	4,724	0.000	S Accepted
H7a	E-Efficiency → E-Feedback → E-Repurchase Intention	0.005	0.012	0.464	0.643	NS Rejected
H7b	E-System Availability → E-Feedback → E-Repurchase Intention	0.056	0.024	2,295	0.022	S Accepted
H7c	E-Fulfilment → E-Feedback → E-Repurchase Intention	0.034	0.018	1,976	0.049	S Accepted
H7d	E-Privacy → E-Feedback → E-Repurchase Intention	0.012	0.011	1,121	0.262	NS Rejected
H8a	E-Efficiency → E-Advocacy → E-Repurchase Intention	0.051	0.028	1,996	0.047	S Accepted
H8b	E-System Availability → E-Advocacy → E-Repurchase Intention	0.089	0.026	3,470	0.001	S Accepted
H8c	E-Fulfilment → E-Advocacy → E-Repurchase Intention	0.125	0.032	3,884	0.000	S Accepted
H8d	E-Privacy → E-Advocacy → E-Repurchase Intention	-0.012	0.016	0.757	0.449	NS Rejected
H9a	E-Efficiency → E-Helping → E-Repurchase Intention	0.007	0.009	0.831	0.406	NS Rejected
H9b	E-System Availability → E-Helping → E-Repurchase Intention	0.052	0.027	1,990	0.046	S Accepted
H9c	E-Fulfilment → E-Helping → E-Repurchase Intention	0.033	0.016	1,975	0.049	S Accepted
H9d	E-Privacy → E-Helping → E-Repurchase Intention	-0.004	0.006	0.637	0.524	NS Rejected
H10a	E-Efficiency → E-Tolerance → E-Repurchase Intention	0.065	0.024	2,743	0.006	S Accepted
H10b	E-System Availability → E-Tolerance → E-Repurchase Intention	0.085	0.021	3,937	0.000	S Accepted
H10c	E-Fulfilment → E-Tolerance → E-Repurchase Intention	0.101	0.028	3,606	0.000	S Accepted
H10d	E-Privacy → E-Tolerance → E-Repurchase Intention	-0.010	0.011	0.964	0.335	NS Rejected

Note(s): S = significant and NS = non-significant

p* < 0.05, *p* < 0.01 and ****p* < 0.001

Source(s): Table by authors

Table 4. Significance of impact coefficients and research hypotheses

E-efficiency ($\beta = 0.066, p > 0.05$) and e-privacy ($\beta = -0.034, p > 0.05$) had no significant effect on e-helping, whilst e-system availability ($\beta = 0.472, p < 0.05$) and e-fulfilment ($\beta = 0.255, p < 0.05$) had a significant and positive effect. Thus, H4b and H4c were accepted.

E-privacy ($\beta = -0.037, p > 0.05$) had no significant effect on e-tolerance, whilst e-efficiency ($\beta = 0.231, p < 0.05$), e-system availability ($\beta = 0.303, p < 0.05$) and e-fulfilment ($\beta = 0.362, p < 0.05$) had a significant and positive effect. Therefore, H5a, H5b and H5c were accepted.

E-feedback ($\beta = 0.145, p < 0.05$), e-advocacy ($\beta = 0.320, p < 0.05$), e-system availability ($\beta = 0.111, p < 0.05$) and e-fulfilment ($\beta = 0.279, p < 0.05$) had significant and positive effects on e-RI. Therefore, H6a, H6b, H6c and H6d were accepted.

The significant (indirect effect) effects of the independent variables on the mediating variables and the significant effect of the mediating variables on the dependent variables are considered to be the mediating effect (Zhao *et al.*, 2010). Thus, H7, H8, H9 and H10 ($p < 0.05$) were accepted. Table 5 shows the mediating effect types determined by the significant indirect effects.

4. Conclusions and implications

4.1 Discussion of major findings

Whilst clothing is known as a product that should be touched, felt and tried, the spread of the Internet has increased fashion e-tailing and even virtual clothing samples in the metaverse. Naturally, it is expected that e-SQ dimensions and its acquisitions would change in fashion e-tailing. In such a dilemma, this empirical study was conducted to understand the situation of ready-to-wear e-tailing in Türkiye, where traditional merchandising environments are more common. As such, it was assumed that if the SQ of fashion e-storescapes were high, customers would exhibit e-CCB and hence feel e-RI for the same e-storescape.

Although there are studies examining the interrelationships between e-SQ, customer satisfaction, e-CCB and e-RI (Groth, 2005; Yi *et al.*, 2011; Ponnusamy, 2015; Blut, 2016; Goel *et al.*, 2022), no study has been found that can fully guide the relationships that fit the scope of this study, because in this study the direct effects of e-SQ on e-CCB, the direct effects of e-CCB affected by e-SQ on e-RI and indirect effects of e-SQ on e-RI were investigated. In addition, previous models examining the effects of e-SQ on e-RI do not have mediation of e-CCB.

Above all, it can be argued that customer-oriented retail marketing is increasingly associated with e-tailing. As a result, the first major finding is that Turkish fashion consumers, like the rest of the world, had to keep up with e-shopping at a time when it was not possible to lag behind both the pandemic conditions and developing technology.

The second major finding is that not all dimensions of e-SQ have significant effects on e-RI. This finding is accepted as the most prominent evidence of the mediating effects of e-CCB in relationships between e-SQ and e-RI. In addition, according to the mediation test findings (H7, H8, H9 and H10), this study proved that e-CCB dimensions play a full mediator role

Path	Type of mediation
E-System Availability → E-Feedback → E-Repurchase Intention	Full Mediation
E-Fulfilment → E-Feedback → E-Repurchase Intention	
E-Efficiency → E-Advocacy → E-Repurchase Intention	
E-System Availability → E-Advocacy → E-Repurchase Intention	
E-Fulfilment → E-Advocacy → E-Repurchase Intention	
E-System Availability → E-Helping → E-Repurchase Intention	
E-Fulfilment → E-Helping → E-Repurchase Intention	
E-Efficiency → E-Tolerance → E-Repurchase Intention	
E-System Availability → E-Tolerance → E-Repurchase Intention	
E-Fulfilment → E-Tolerance → E-Repurchase Intention	

Source(s): Table by authors

Table 5.
Type of Mediation

(e-SQ→e-CCB→e-RI) in the relationships between e-SQ dimensions and e-RI. As such, it has been demonstrated that if customers' e-SQ perceptions of a recent shopping experience are positive and sufficient for them to exhibit e-CCB, their e-RI will increase.

The third major finding is that the dimensions of e-SQ, with the exception of e-efficiency and e-privacy, have significant positive effects on all dimensions of e-CCB. The paradoxical effect of the e-efficiency and e-privacy dimensions of the e-SQ on all the dimensions of the e-CCB is seen as supporting the evaluations reached because of this study as explained below. Due to the nature of online shopping, e-sellers must learn about customers' credit cards, contact details and attitudes towards purchasing. A customer's e-repurchase of clothing from an e-tailer is an indication of their trust in that e-tailer, because beneath this customer trust lies the belief that the e-seller will keep their personal information safe. Otherwise, e-RI e-customers from the same product group will not use previously untrusted e-tailers. Within the scope of this major finding, important conclusions were reached regarding the sub-dimensions of e-SQ and e-CCB. In the e-storescapes, SQ has been found to provide faster processes for customers, lead to less queuing time and improve customers' e-CCB. E-customers who experience the SQ of an e-storescape can provide e-feedback to e-tailers regarding the positive or negative quality of services and encourage other e-customers to avoid e-purchasing from these e-tailers. It also found that the user-friendly e-SQ dimensions of e-tailing can encourage customers who are content to effortlessly access their desired apparel creations to exhibit e-CCB. In addition, customers who trust e-commerce sites that only sell stocked products and deliver the promised orders to the right address on time were not let down.

The fourth major finding is that all dimensions of the e-CCB have significant and positive effects on the e-RI. Amongst the e-CCB dimensions, e-advocacy of customers has the greatest impact on e-RI, followed by e-tolerance, e-feedback and e-helping. It has been determined that e-customers have a high level of e-tolerance against minor problems caused by reasons beyond the control of e-tailers. However, it was accepted that if e-customers have difficulty choosing, ordering and paying whilst e-purchasing clothes from an e-tailer, they will not exhibit e-advocacy or e-tolerance towards that e-tailer.

4.2 Theoretical implications

The first important theoretical implication of this study is that whilst previous research has mostly associated e-CCB with social exchange theory in this study, S-O-R theory is well established with e-CCB in the e-tailing literature. This study conceptualised the e-SQ of a storescape as an essential antecedent of e-CCB. On the other hand, e-CCB and e-RI were evaluated as acquirements of e-SQ in this study due to their possible commercial benefits (public relations, advertising and high turnover etc.).

The second important theoretical implication is that e-CCB is considered an organism variable in the model, while SQ of e-tailers is a stimulus variable. Customers (e-CCB [organism]) are expected to feel close to an e-tailer and their salespeople, as well as exhibit extra-role behaviours, in environments where e-SQ (stimulus) is pleasure/arousal. Thus, based on the S-O-R theory, it can be said that the resulting approach or avoidance responses promoted by emotional states such as pleasure and arousal lead to e-RI from the e-tailer.

Another theoretical implication is that fashion customers consider it crucial to exhibit e-CCB as an acquirement of e-SQ, especially whilst selecting fashion brands for e-RI. Hence, it was predicted that customers who perceive the e-SQ of a fashion e-storescape to be of higher quality than others will exhibit more e-CCB for that e-tailer.

One of the most important theoretical implications of this study is that the prevalence of e-storescapes in fashion retail are not only low prices and an assortment of clothes, but also easy selection and access, fast delivery and confidentiality for fashion customers.

Consequently, e-tailing is an unavoidable path for fashion retailers and fashion consumers. E-SQ dimensions (e-efficiency, e-system availability, e-fulfilment and e-privacy) of an e-tailer's website become evident in customers' first e-shopping experience. When fashion customers visit a familiar and comfortable e-tailer website, they exhibit e-CCB (e-feedback, e-advocacy, e-helping and e-tolerance), unrelated to in-role behaviours. Subsequently, it was considered an important theoretical implication in this study that customers will exhibit e-CCB due to high SQ in an e-storescape and will intend to e-repurchase from the same e-tailer.

4.3 Managerial implications

This study contributed to the fashion e-commerce literature by demonstrating the relationships between e-SQ, e-CCB and e-RI amongst fashion e-commerce customers, which has managerial implications. The first is that in a warm-blooded society that likes to be social, the adaptation of fashion customers to e-tailing is vital for businesses. In this context, feedback of fashion customers who experience e-consumption should be considered very important for brands engaged in e-tailing.

The second managerial implication is that in purchases from e-tailers, extra-role (e-feedback, e-advocacy, e-helping and e-tolerance) behaviours as well as in-role (creating an e-shopping cart and making an e-payment) behaviours are very important sources of information for e-tailers. Consumer tendencies towards purchasing and researching the products/services they need through digital platforms should lead businesses to develop new strategies for attracting and maintaining consumers online.

According to the results of this study, some suggestions are offered to e-tailers or managers for increasing the quality of retail e-services and at the same time expanding the citizenship behaviour of fashion customers. Primarily, fashion e-tailers should be closely involved in evaluating and addressing e-SQ issues efficiently and effectively. Likewise, website administrators need to know how competing e-tailers are performing on various internal and external dimensions to determine appropriate e-SQ criteria. Following this, e-tailers must understand and evaluate e-customer expectations, measure their perceptions periodically and develop plans to improve e-SQ to elicit the types of e-CCB that encourage e-RI.

Moreover, e-tailers must guarantee that they will outperform their competitors. Thus, corporate marketing activities should create environments where their current customers can exhibit e-CCB. In this way, e-tailers can protect their current customers from competitors. At the same time, via its existing customers, e-tailers can contact potential customers and convince them to evaluate their products. Because positive customer feedback about businesses is an important factor that should not be overlooked, it will be more effective for the e-RI of potential customers. Since no similar study exists for this special sample group and this special product group, the managerial implications of this research will contribute to the literature and will be shared with Turkish fashion e-retailers.

4.4 Limitations and further studies

The present study has some limitations. This research is based on Turkish fashion e-tailing customers. As such, the implications of the study's findings should be considered valid according to the terms and conditions of the period during which the study was conducted. Thus, the data from this sample may lead to different conclusions when researching other products, sectors and even markets. Because people in different countries have different cultural habits, this can affect their predisposition (greater or lesser) to develop e-RI. In the future, different findings can be obtained from different sample groups.

Another limitation is that the data gathered via the convenience sampling method are only relevant to fashion e-tailing. The findings of this study might vary with respect to customers' perceptions of different sectors. Moreover, omnichannel fashion retailers and pure e-tailers were not differentiated in the research model.

In addition, it might be considered beneficial for subsequent studies to compare customers of low, medium and high-segment fashion brands. Simultaneously, qualitative data obtained from customers can be analysed to gain a deeper understanding of the decision-making process associated with e-RI. Finally, as the present study is amongst the few on e-CCB in Türkiye, it is expected that the findings will contribute to the literature and the fashion e-tailing sector as well.

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