Developing and validating a multidisciplinary scale of E-retailing website elements

Ibrahim Alnawas [a,*,1], Amr Al Khateeb [b,1]

[a] *Qatar University, Qatar*
[b] *Liverpool John Moores University, United Kingdom*

ABSTRACT

The purpose of this article is to theoretically identify the salient elements of e-retailing websites and empirically verify them through a rigorous scale development process. A mixed method approach was followed to achieve these objectives: a qualitative (content analysis) and a quantitative approach (factorial and confirmatory surveys). Three findings emerge from the current study. First: this study provides sound empirical support for e-retailing website elements as a high-order construct that consists of eight first-order factors. Second, the current research suggests that the measurement instrument for e-retailing website elements, which contains 54 items, is a valid and reliable using the following factors: hedonic website design elements, technical website design elements, website experiential elements, website relational elements, product-related elements, order-related elements, security-related elements and social media presence. Third, the proposed measurement instrument of e-retailing website elements strongly predicts e-satisfaction and e-trust. The key contribution of this study stems from developing and validating a multidisciplinary scale that synthesizes and integrates the major perspectives of e-retailing website elements.

1. Introduction

E-retailers' global sales are expected to grow to $6.5 trillion by 2023 (Oberlo, 2021), making e-commerce the largest retail channel over the coming years (Mordor Intelligence, 2020). While smartphone applications are known to drive traffic, the majority of purchases still takes place on websites (Sleeknote, 2021), which represent the most important source for product awareness (KPMG, 2017). In fact, website design is used by 75% of online consumers to judge the credibility of e-retailers (Sweor, 2021). Nevertheless, $756 billion were lost in 2019 due to inadequate websites (Optinmonster, 2020), and $2.6 billion due to slow loading (Sweor, 2021). Thus, e-retailers are required to build, develop and improve their websites to ensure that customers are satisfied when shopping online as much as offline (Rodríguez et al., 2020). It is not surprising, therefore, that a number of theoretical paradigms have emerged over the last two decades to identify the key elements of e-retailing websites including: e-service quality; relationship-marketing; and customer experience (see online Appendix A & B).

While these streams of literature have advanced our understanding of the topic, they demand attention for two reasons. First, the use of different theoretical paradigms has led to proposing a large number of what could define e-retailing website elements. Some of those elements are distinctive; others strongly overlap, and the remaining are similar to others but labelled differently. Thus, these elements, in their current state, are confusing, incoherent, problematic and do not inform researchers on how to measure e-retailing website elements; nor do they inform marketers regarding the most important elements in order to allocate their financial resources on systems that support those elements.

Second, when previous researchers drew on a specific theoretical paradigm, they proposed models that brought new website elements but excluded those proposed by other paradigms or paid more attention to the new elements at the expense of other ones. For example, studies drawing on e-service quality paradigm (e.g., Ashton and Prybutok, 2020; Brusch et al., 2019), focused primarily on website design and service quality but barely included any experiential elements. Similarly, studies driven by the relationship-marketing paradigm paid a significant attention to relational elements (e.g., Wisker, 2020; Soni, 2020) while those who took the customer experience perspective focused predominantly on experiential elements (e.g., Lee and Lee, 2019; Lee and Wu,

2017). With a large number of variables, it becomes largely unclear whether all of them are equally important to define e-retailers website elements, or whether some of them are more salient.

Nevertheless, no research to date has synthesized and integrated these theoretical/research paradigms into a broader conceptualization to capture the comprehensive nature of e-retailing website elements, and to provide e-retailers with more concrete evidence concerning the most important elements to maximize e-retailers and consumers' outcomes. The importance of developing a comprehensive and multidisciplinary scale stems from a number of reasons. First, as noted by Blut et al. (2016, p. 500), "existing measures are incomplete since they do not capture all online store attributes" and that most existing scales "fall short with respect to the different criteria that customers use to assess online stores" (p.502). Second, the spread of COVID-19 pandemic made consumers more willing for a contact-free shopping experience (Oliver Wyman, 2021) which increased the need for e-retailers, more than any time before, to make the online shopping more similar to offline (Rogeveen and Sethuraman, 2020). As noted by Deloitte (2020, p. 1), "the pandemic is rapidly changing our behaviour toward online channels, and the shifts are likely to stick post-pandemic". While some may assume that this shift is a short-term trend, recent surveys showed that customer preferences for online shopping continue (Oliver Wyman, 2021). Third, since the pandemic began, new consumer segments (e.g. elderly) have become e-shoppers, a very large number of firms have gone online, and different products categories have expanded (e.g. groceries). This intensified online competition to unprecedented levels (OECD, 2020) and offered consumers access to new varieties of products (Deloitte, 2020).

2. Literature review

This section provides an overview of the different streams of literature that addressed issues related to e-retailing website elements. In order to identify studies that are suitable for achieving the key objectives of the current research, we applied a number of criteria. First, the search process was limited to peer-reviewed journal articles published in international online databases such as EBSCO, Business Source Premier, ScienceDirect, Abi Proquest, and ISI Web of Science. Second, to ensure a diversity in perspectives and theoretical approaches/paradigms, we targeted studies published in different fields. This led to selecting more than 40 academic journals from various disciplines. Third, duplicate studies were excluded due to their limited benefits. Fourth, only studies that focused on e-retailer's website were considered, while those focusing on governmental websites, online portals, library websites, blogs, and B2B websites were excluded because some website elements appear to be context-specific. Therefore, developing generic measures that fit different websites might be unrealistic (Ladhari, 2010). Out of the 183 studies we identified, only 56 were deemed appropriate for the purpose of the current research. Those studies were grouped based on their theoretical/research paradigm (see Online Appendix A for an overview of the dimensions emphasised in previous studies and Online Appendix B for critiques and detailed examination of the studies) as follows: e-service quality (24 studies); customer experience (18 studies); and e-relationship marketing (14 studies).

2.1. Theoretical background

The extant literature has long suggested that identifying e-retailer website elements should not solely focus on the website interface given that "a customer's online buying experience consists of everything from information search, product evaluation, decision-making, making the transaction, delivery, returns and customer service" (Wolfinbarger and Gilly, 2003, p. 185). Accordingly, it is reasonable to assume that e-retailer website elements consist of two complementary factors: one related to the website's characteristics and another related to the e-retailer's offering. This reasoning is evident in previous

conceptualizations, where researchers identified some key website elements such as monetary savings (Chiu et al., 2014), product portfolio (Brusch et al., 2019), return and exchange policy (Finn, 2011), price offerings (Blut, 2016), attractiveness of selection (Kao and Lin, 2016), economic value (Mathwick et al., 2001), special treatments benefits (Soni, 2020), and financial bonds (Kousheshi et al., 2020), which tap into the e-retailer's offerings. Other conceptualizations, however, identified key website elements such as ease of use and functionality (Bauer et al., 2006), usability (Chen and Dibb, 2010), appearance (Kim and Stoel, 2004), aesthetics (Bressolles et al., 2014), and security (Blut, 2016), which tap into the website characteristics.

From this perspective, it can be suggested that technical website design elements (e.g., searching capabilities, ease of use), hedonic website design elements (e.g., aesthetic design, innovative and fresh design), and security elements are related to website characteristics, whereas product related-elements (e.g., product availability, product recommendations and price suitability) are related to e-retailer's offerings. However, other key factors such as order-related elements and website-related elements tend to touch both website characteristics and e-retailer's offerings. For example, order conditions and order accuracy (see Collier and Bienstock, 2006) are more related to e-retailer's offerings than to website characteristics. Meanwhile, order updating/cancelling and order tracking (see Lee-Kelley et al., 2003) tap more into website characteristics than to e-retailer's offerings given that such elements require certain functions in the website to execute them. Similarly, some website relational elements such as interactivity (Boateng and Narteh, 2016; Yoon and Youn, 2016); and convenience (Srinivasan et al., 2002) are more related to the website characteristics. Instead, customization (e.g. sending tailored advertisements and selling customized products, Srinivasan et al., 2002), financial bonds (e.g. offering discounts and free service), social bonds (e.g. treating customers as friends and understanding their needs, Liang et al., 2008); and distributive fairness (e.g. order handling, selling quality products, Chen and Chou, 2012) are more related to the e-retailer's offerings. This indicates that any conceptualization of e-retailer website elements should include both website characteristics and e-retailer's offerings. This conclusion not only goes in line with the view of Wolfinbarger and Gilly (2003), but also addresses the concerns of Blut et al. (2016, p. 500), that "existing measures are incomplete since they do not capture all online store attributes" and that most existing scales "fall short with respect to the different criteria that customers use to assess online stores" (p.502).

2.1.1. E-Service Quality (E-SQ) paradigm

E-SQ focuses on delivering a complete customer shopping experience (Wolfinbarger and Gilly, 2003), and emphasizes the quality of service as a key source of competitive advantage given that it is hard to imitate (Piercy, 2014). Although this paradigm has been very insightful in enhancing our understanding of the topic, it requires attention for a number of reasons.

First, there is a lack of agreement among researchers concerning the nature and the exact number of dimensions forming the construct of E-SQ (Ladhari, 2010). Second, the most notable and highly cited scales in this area include: SITEQUAL (Yoo and Donthu, 2001), WebQual (Loiacono et al., 2002), eTailQ (Wolfinbarger and Gilly, 2003), E-S-Qual (Parasuraman et al., 2005), eTransQual (Bauer et al., 2006), e-SELFQUAL (Ding et al., 2011) and the Hierarchal Model (Blut, 2016). Although useful and insightful, these scales do not fully capture the comprehensive nature of e-retailer website elements. For instance, the scale of Yoo and Donthu (2001) did not include experiential, relational product, and order-related elements, while that of Loiacono et al. (2002) did not include order-related or product-related elements. Likewise, among the 25 items scaled developed by Wolfinbarger and Gilly (2003), there was only one item to measure experiential elements and one item to measure product-related elements, despite the large number of elements that capture these two factors. Additionally, the scale of Parasuraman et al. (2005) focused on technical, service quality and relational elements, but

did not include any hedonic, experiential, or product-related elements. Further, the scale presented by Blut (2016) did not include any items to measure experiential elements, and the relational items focused exclusively on customer service. As noted by Piercy (2014), excluding key salient elements leads to ignoring distinct customer demands, thus, affecting the performance of e-retailers.

Third, although a number of scales had some experiential elements, those elements were strictly confined to entertainment (e.g., Bauer et al., 2006; Kim and Stoel, 2004). This experience, however, was not included along with other experiences in the scale development process and then emerged as the salient one, but rather it was assumed by the researchers that it was the most important one. Such an assumption is misleading as there are many other experiences which could be equally important to entertainment yet they were not considered. Similarly, although several scales had some relational elements, they focused specifically on customer service and/or handling customer complaints. This is surprising because other relational elements, which could be as important as customer service, were not considered such as personalization, care and loyalty programs. Fourth, there is the issue of strong overlap between some of the proposed elements in E-SQ. For example, the measurements of E-SQ that focus on research and access (Rodríguez et al., 2020), product portfolio (Brusch et al., 2019), interactivity (Le et al., 2020), and technical quality (Kao and Lin, 2016) share great similarities with response time (Le et al., 2020), reliability (Bauer et al., 2006), informational-fit-to-task (Kim and Stoel, 2004), and process (Bauer et al., 2006) respectively.

Fifth, there is also a strong overlap between the elements of E-SQ and those proposed by other paradigms. For example, security (Chen and Dibb, 2010) customer service (Wolfinbarger and Gilly, 2003) and attractive selection (Kao and Lin, 2016), from E-SQ, share great similarities with confidence benefits (Soni, 2020), structural bonds (Kousheshi et al., 2020), and choice (Srinivasan et al., 2002), from relationship marketing. This shows that these elements are confusing and do not inform researchers on how to measure e-retailing website elements.

2.1.2. Customer experience paradigm

Similar to E-SQ, customer experience paradigm has been instrumental in enhancing our understanding of the key elements of e-retailing websites from an experiential perspective. Nevertheless, this paradigm demands attention for a number of reasons. First, a review of the literature indicates that there is a lack of agreement among researchers regarding the definition of online customer experience (OCE) due to the different theoretical approaches used to conceptualize OCE. This includes 'flow' (Ertemel et al., 2021; Rose et al., 2012), the intrinsic and extrinsic experiential values (Singh, 2019; Mathwick et al., 2001), the four basic systems used in psychology (Bleier et al., 2019), the hedonic and utilitarian benefits of online shopping (Nghia et al., 2021; Chiu et al., 2014), experience economy (Jeong et al., 2009), and sensory engagement (Pentina et al., 2011). As noted by Izogo and Jayawardhena (2018, p. 382), "a uniform view of what constitutes OCE does not exist".

Second, a review of existing studies in this area indicates that they have not resulted in developing scales that fully capture the comprehensive nature of e-retailer website elements. For example, Hoffman and Novak (2009, p. 24) noted that flow "has proven to be an elusive construct to define and use in practice", leading to failure to capture the components of OCE comprehensively (Izogo and Jayawardhena, 2018). Additionally, while the scale of Chiu et al. (2014) is useful, it focused specifically on product-related and experiential values elements, and there is hardly any item to measure technical/hedonic, order-related, or relational-related elements. Moreover, the scale of Jeong et al. (2009) focused exclusively on the emotions and sensations created by and knowledge acquired from interacting with the e-retailer website. The same can be also said about Pentina et al. (2011) and Bleier et al. (2019), where the former defined OCE as customers' sensory, cognitive, pragmatic, emotional, and relational involvement with their shopping process, and the latter defined it as "a customer's subjective, multidimensional psychological response to a product's presentation online" (p.98).

Third, there is a strong overlap between some of the proposed elements of OCE. For example, emotional experience (Khan et al., 2016), telepresence (Fiore et al., 2005), and educational experience (Jeong et al., 2009), strongly overlap with enjoyment (Lee and Wu, 2017), experiential exploration potential (Demangeot and Broderick, 2016), and informativeness (Bleier et al., 2019), respectively. There is also a strong overlap between the elements of OCE and those proposed by other paradigms. For example, informativeness (Bleier et al., 2019), aesthetics (Mathwick et al., 2001), product experience (Singh and Soderlund, 2020) share great similarities with information quality (Chen and Dibb, 2010), website appearance (Kim and Stoel, 2004), and attractiveness of selection (Kao and Lin, 2016), from E-SQ. This supports our view that, in order to truly be able to identify distinctive and unique website elements, the analysis should focus primarily on the items used to measure those elements, rather than on how they are labelled.

2.1.3. Relationship Marketing (RM) paradigm

Online relationship marketing views the website as an interactive and communication tool that allows e-retailers to monitor and capture, relevant, personalised, detailed and up-to-date customer insights, which can be used to foster a close relationship with customers through offering them customized communications, products and services (Steinhoff et al., 2019; Yoon and Youn, 2016). Unlike the previous two paradigms, the majority of studies drawing on RM is not primarily motivated by developing online relational scales, but rather, by examining the relational antecedents (Kousheshi et al., 2020; Soni, 2020; Faraoni et al., 2019; Yoon and Youn, 2016; Rafiq et al., 2013; Chen and Chou, 2012), or the relational consequences (Wisker, 2020) of online relationship quality. Only two studies were found to focus specifically on developing online relational scales (Zhang et al., 2016; Srinivasan et al., 2002). While the scale of Zhang et al. (2016) focused almost exclusively on relational elements, the one proposed by Srinivasan et al. (2002) did not include order-related or security elements, and barely had any experiential elements. Therefore, these studies tend to focus primarily on relational elements leading to a partial understanding of the key elements forming e-retailer website.

Additionally, some of the proposed elements from the relationship-marketing paradigm share great similarities. For example, the measurements that focus on social bonds (Kousheshi et al., 2020), personalization and collaboration (Boateng and Narteh, 2016), special treatment benefits (Soni, 2020), and interactional fairness (Chen and Chou, 2012), strongly overlap with care (Srinivasan et al., 2002), customization and community (Srinivasan et al., 2002) and financial and social bonds (Kousheshi et al., 2020), respectively. This confirms our previous conclusion that website elements in their current state are incoherent and problematic. It also suggests that any attempt to analyse and identify the key elements of e-retailer websites should focus primarily on the items used to measure those elements, rather than on how the elements are labelled or defined.

2.2. Research method

2.2.1. Phase one: content analysis

2.2.1.1. Stage 1: reviewing the literature. We conducted content analysis at item level to identify unique and distinctive elements. This is because the definitions and the labels of elements are confusing and overlapping. Consequently, neither the definition nor the label could be used to identify the key e-retailing website elements. Content analysis, as a research method, is a systematic and objective means of analysing documents and describing phenomena (Sandelowski, 1995). Through using an inductive approach, data move from the specific to the general, so that particular instances are observed and then combined into a larger

group (Chinn and Kramer, 1999). The scales used in each of the 56 studies, which had 1578 items, were reviewed and coded on a study-by-study basis. Codes that shared common meanings were then grouped and acted as a first-level node (i.e. sub-variable). Common first-level nodes were then grouped and acted as a second-level node (i.e. key factor/variable).

After coding and grouping the items into a first and second level node, we grouped items with similar codes and carefully inspected them to remove duplicates (i.e. items that had similar meanings). To do so, we used item-loadings, item-reliability and construct reliability as criteria to choose among the similar items. The outcome of this whole process was the identification of seven key factors, 35 sub-factors and 463 items.

2.2.1.2. Stage 2: seeking insights from practitioners and academics. We contacted five practitioners who were expert in e-retailing and four academics who had published extensively in areas related to the current study to comment on the seven factors and to assess the importance and representation of items belonging to each factor. Each practitioner/academic had a copy of the current research to truly understand its purposes. Additionally, a copy of the 1578 items were sent to them to ensure that the items captured various aspects of e-retailing website elements. This process resulted in reducing the number of sub-headings from 35 to 29 and the number of items from 463 to 307. Specifically, the following sub-headings: processes, customer benefits, service personnel, emotional experiences, customization and role were deleted.

However, the practitioners strongly recommended to add a new factor called 'social media presence', given its importance in the digital age and proposed seven items to measure it. The final eight factors that emerged from this phase were as follows:

- Technical Website Design
- Hedonic Website Design
- Website Experience
- Product-Related
- Website Relational
- Social Media Presence
- Order-Related
- Security-Related

2.2.2. Phase two: Quantitative Study

2.2.2.1. Stage 1: item reduction through a mean score analysis. Similar to scale development studies in online context (e.g., Wolfinbarger and Gilly, 2003), the 307 items were further reduced based on the level of importance of each item in online shopping using a seven-point Likert scale (1 = Not at all important; 7 = Very important). This stage was conducted with the help of a specialized marketing research firm called Dynata. Therefore, to truly identify the most relevant items, 300 respondents, who purchased online once a week, were randomly chosen from a UK online customer panel. Accordingly, a filter question was used (i.e. do you shop at least once a week from e-retailers) for this purpose.

Given that respondents in long surveys may spend less time on thinking about each survey question, resulting in low quality responses (Andreadis and Kartsounidou, 2020), the authors split the 307 items into two surveys. This procedure, which is common in research (Toepoel and Lugtig, 2018; Adiguzel and Wedel, 2008), is called 'modular design approach' (West et al., 2015). It involves "breaking the survey response task into distinct parts over a short period of time" and it assumes that people's behaviours and attitudes that they share on a survey do not change substantially over a short period of time (West et al., 2015, p. 112).

Thus, the two surveys were given to the same respondents in two separate sessions. That is, the panellists who filled the first survey were identified using a panellist ID and were re-contacted after two days to take the second part of the survey. Additionally, Dynata provided the

authors with an identifier (i.e. a panelist ID) to allow them to combine the responses of each participant from both surveys. Dynata had to over-recruit by 59% (i.e. 478 surveys) in order to receive 300 complete and clean responses from both surveys. This over-recruitment process took place multiple times until reaching the agreed target of 300 respondents. Accordingly, items with a mean score ≥4.0 and standard deviations >2 (Brakus et al., 2009) were retained. This resulted in reducing the items to 174 items.

2.2.2.2. Stage 2: pilot study. The final survey was further subjected to an online pilot testing through inviting 50 UK university students to fill and comment on the survey. Similar to stage 1, those who purchased online once a week were qualified to participate in the survey. Thus, the same filter question was used (i.e. do you shop at least once a week from e-retailers) for this purpose. Few comments were made on item wording and considered in drafting the final version of the survey. For example, the following statement "When I use this website, there is a little waiting time between customer actions and website's response" was changed to "When I use this website, there is a little waiting time between my actions and website's response". Also the following statement "This Website has an active intelligent agent for answering questions" was not clear and we added "chatbot" in brackets since this is the word commonly used nowadays.

2.2.2.3. Stage 3: finalizing the survey. Similar to stage 1, the 174 items were split into two surveys targeting the same respondents over two days. In the first survey, four categories with 91 items (website experience element, website relational elements, social media presence, and security-related elements) were assessed using a five-point Likert scale. Specifically, respondents were asked to assess all the scales using the question: "Please express your level of agreement with each of the following statements" on a scale from 1 (strongly disagree) to 5 (strongly agree). The order of the four categories was shuffled automatically to participants, and the questions of each category were further randomized to reduce potential biases.

It is worth noting that when considering the industry for data collection purposes, some researchers collected data from a specific sector such as online grocery stores (Wisker, 2020), and online fashion stores (Pandey and Chawla, 2018). Other researchers, however, collected data based on a single e-retailer (e.g., Chiu et al., 2014), or a very few well-known e-retailers (e.g., Kumar and Anjaly, 2017). While such approaches help in identifying more tailored e-retailer website elements, they are either sector-specific or e-retailer-specific, which would affect the generalisability of the results. Alternatively, the majority of previous studies tend to collect data from multiple websites and across different sectors (see Appendix B). While this approach generates less detailed elements, it overcomes the lack of generalisability since it helps in identifying the most important e-retailer website elements regardless of the products being purchased (Flavian and Guinalíu, 2006). Thus, our data were collected from multiple websites across different sectors.

The survey started with a participant information sheet identifying the purposes of the research followed by a Yes/No filter question to ensure that respondents made an online purchase in the last month (Rodríguez et al., 2020). Those who answered yes, were asked to type the name of the e-retailer they visited most frequently and complete the online survey based on the name they listed (Yoon and Youn, 2016). Finally, a number of demographic questions was presented.

The second survey contained the remaining four categories, which consisted of 83 items. Similar to the first survey, the order of the four categories and the questions of each category were randomized automatically to each participant. Additionally, it was made clear to the respondents that they should use the same e-retailer they mentioned in the first survey when filling the second one. To ensure consistency, respondents in the second survey were asked again to list the name before

filling the survey. In case of discrepancy, the two surveys were omitted from the final number of the questionnaires.

2.2.2.4. Stage 4: item reduction through Exploratory Factorial Analysis (EFA). The purpose of this stage was to reduce the number of items and purify the scale through an EFA, which identifies the underlying factors that explain the correlations among a set of variables. To determine the sample required for EFA, we followed the work of Hinkin (1998) who recommended a minimum subject-to-item ratio of 5:1. This makes a sample of 1000 respondents adequate to run EFA given that it is above the threshold of 5:1 (i.e. 5x (number of items 174) = 870). The demographic characteristics of the sample are reported in Table 1, while the categories of e-retailers are provided in Table 2.

Accordingly, Dynata were hired again to collect 1000 complete and clean responses from a UK online consumer panel. The firm clearly explained to the respondents that this a two-stage survey, and that the second survey would take place after two days. Thus, the panellists who filled the first survey were identified using a panellist ID and were re-contacted after two days to take the second part of the survey. Additionally, Dynata provided the authors with an identifier (i.e. a panellist ID) to allow them to combine the responses of each participant from both surveys. Dynata had to over-recruit by 46% (i.e. 1461 surveys) in order to receive 1000 complete and clean responses from both surveys. This over-recruitment process took place multiple times until reaching the agreed target of 1000 respondents. Respondents were paid for the second survey, similar to the first one.

We used principal axis factoring analysis as the extraction method

Table 1
Samples' Demographic characteristics.

	Exploratory Sample	Confirmatory Sample
Gender		
Male	472 (47.2%)	133 (44.3%)
Female	528 (52.8%)	167 (55.7%)
Age		
18-24	79 (7.9%)	14 (4.6%)
25-34	183 (18.3%)	57 (19.0%)
35-44	188 (18.8%)	74 (24.6%)
45-54	191 (19.1%)	52 (17.3%)
55-64	170 (17.0%)	54 (18.0%)
65 or older	188 (18.8%)	49 (16.3%)
Income		
<£25,000	323 (32.3%)	80 (26.7%)
£25,000-£35,000	230 (23.0%)	83 (27.6%)
£35,001-£45,000	180 (18.0%)	53 (17.7%)
£45,001-£55,000	84 (8.4%)	19 (6.3%)
>£55,000	183 (18.3%)	65 (21.7%)
Level of education		
Secondary Education	241 (24.1%)	61 (20.3%)
Vocational Qualification	107 (10.7%)	44 (14.7%)
Post-Secondary Education	214 (21.4%)	55 (18.3%)
Undergraduate Degree	292 (29.2%)	87 (29.0%)
Post-graduate Degree	107 (10.7%)	41 (13.7%)
Doctorate Degree	39 (3.9%)	12 (4.0%)
Career		
Retailing	55 (5.5%)	28 (9.3%)
Engineering	65 (6.5%)	17 (5.7%)
Public service	50 (5.0%)	11 (3.7%)
Hospitality and tourism	21 (2.1%)	5 (1.7%)
Education field	66 (6.6%)	16 (5.3%)
IT computing	86 (8.6%)	40 (13.3%)
Finance and banking	57 (5.7%)	21 (7.0%)
Media or the arts	11 (1.1%)	0
Health social care	66 (6.6%)	32 (10.7%)
Other	522 (52.2%)	130 (43.3%)
How often do you purchase from XYZ?		
Daily	49 (4.9%)	8 (2.7%)
2-3 times a week	133 (13.3%)	47 (15.7%)
Once a week	323 (32.3%)	106 (35.3%)
One a month	397 (39.7%)	130 (43.3%)
Other	98 (9.8%)	9 (3%)

Table 2
E-retailers' categories.[a].

Categories*		
Fashion and Accessories	9%	21%
Health and beauty	6%	5%
Comprehensive Site[b]	45%	34%
Department store	4%	12%
Consumer Electronics	6%	7%
Supermarket	11%	16%
Sport and Fitness	4%	2%
Home and Garden	5%	0%
Kids, Toys, Games and Babies	4%	2%
DIY	4%	1%
Flowers and Gifts	2%	0%

[a] The above categories were coded by the researchers based on the stores' names provided by the respondents.
[b] Refers to websites that sell a wide range of product categories (e.g., Amazon, Very and Argos).

and Promax as the rotation method (Guo et al., 2017). Additional recommendations were further followed, including: (a) item loadings >0.50; (b) cross-loadings <0.40; and (c) item communalities >0.50 (Hair et al., 2010). These recommendations led to reduce the number of items to 54 (See Table 3).

Examples of deleted items are:

"The website provides helpful information to help me correct the errors I made"

"The social media information about the store is worth sharing with others"

"This Website does a good job in facilitating socialization among visitors"

Table 4, however, shows that the 54 items loaded significantly on eight factors (0.523–0.905) and had adequate communalities, ranging from 0.502 to 0.837. Additionally, the *p* value for Bartlett's test was significantly below 0.05, and KMO measure of sampling adequacy (0.97) was above the threshold of 0.60. This process was followed by assessing the internal consistency of the eight scales through calculating Cronbach alpha coefficient (α), which is widely used for estimating the internal consistency of scales (Javali et al., 2011). Table 4 indicates that the eight scales had high levels of Cronbach alpha, ranging from 0.85 to 0.94, and all exceeded the cut-off-point of 0.70 (Hair et al., 2010).

Appendix C further shows the mean scores of the respondents' perceptions of the performance of their e-retailers across the eight dimensions. For examples, comprehensive sites (e.g., Amazon, very and Argos) had the highest mean scores of product-related elements (4.10) and order-related elements (4.43), while department stores had the highest mean scores of hedonic website design elements (3.89) and website relational elements (3.84). Fashion and accessories had the highest mean scores of social media presence (3.78) and website experience elements (3.61). Alternatively, DIY had the lowest mean scores of technical website design elements (3.73) and website experience elements (2.80). Sport and fitness had the lowest mean scores of hedonic website design elements (3.46) and website relational elements (3.25).

2.2.3. Stage five: confirmatory factor analysis
To confirm the factorial structure of the eight elements, a new survey was developed using the 54 items obtained from the EFA and distributed by Dynata to another 300 UK consumers fulfilling the rule of 5:1 (i.e. 54 items *5 = 270). The demographic characteristics of the sample was reported in Table 1.

AMOS-24 was used to validate and confirm the eight e-retailer website elements. A model of eight correlated factors was specified and the results (See Table 5) showed that four items were further deleted as they were below the cut-off-point of 0.70 (Hair et al., 2010). After

Table 3
Items retained from the factorial analysis.

Code	Items	Variable Name	Key Facets
TWDE1	The ordering of menu options at XYZ's website is logical	Technical Website Design Elements (TWDE)	Logical structure
TWDE2	The categories and buttons at XYZ's website are easy to understand		
TWDE3	XYZ's website has a helpful search function		Searching capabilities
TWDE4	I can find what I want at XYZ's website with a minimum number of clicks		
TWDE5	XYZ's website provides convenient ways to maneuver among related pages and between different sections		Ease of use
TWDE6	When I use XYZ's website, there is a little waiting time between my actions and website's response		Loading speed
SMPE1	XYZ's website is active on different social media platforms	Social Media Presence Elements (SMPE)	Having a presence on multiple social media
SMPE2	XYZ's website actively engages in live streams about products/services/events		Being active on social media
SMPE3	XYZ's website actively shares pictures of products on its social media accounts		
SMPE4	XYZ's website actively shares videos on its social media accounts		
SMPE5	XYZ's website actively shares important links on its social media accounts		
HWDE1	The design of XYZ's website is fresh and original	Hedonic Website Design Elements (HWDE)	Originality of design
HWDE2	The design of XYZ's website is innovative and creative		
HWDE3	XYZ's website is visually pleasing		Aesthetic design
HWDE4	XYZ's website has a good combination of graphics/colour elements		
WEE1	I have a lot of fun when I shop at XYZ's website	Website Experience Elements (WEE)	Entertaining experience
WEE2	Shopping on XYZ's website makes me excited		
WEE3	To me, shopping on XYZ's website is a way of relieving stress		
WEE4	XYZ's website replicates the kind of experience I have when I shop		Physical-like experience
WEE5	When I navigate XYZ's website, I feel I am shopping for real		
WEE6	When I navigate on XYZ's website, the experience of shopping is there		
WEE7	Shopping on XYZ's website makes me feel like I am in another world		Escapism experience
WEE8	I totally forget about my daily routine while shopping on XYZ's website		
WEE9	I get so involved when I shop from XYZ's website		

Table 3 (*continued*)

Code	Items	Variable Name	Key Facets
	that I forget everything else		
PRE1	XYZ's website has in stock the items that it claims to have	Product-Related Elements (PRE)	Product availability
PRE2	XYZ's website lets customers know about product availability during search		
PRE3	XYZ's website has a wide variety of products that interest me		Product variety
PRE4	XYZ's website is updated often with new products		
PRE5	XYZ's website regularly showcases the bestselling products		Product recommendations
PRE6	XYZ's website regularly displays products on offer		
PRE7	XYZ's website allows me to fully interact with products (e.g. discovering every detail, animating the moving parts, visualizing interior parts)		Product interactivity
PRE8	XYZ's website has multiple price choices		Price suitability
PRE9	I save money when I shop on XYZ's website		
WRE1	XYZ's website cares about satisfying my needs	Website Relational Elements (WRE)	Caring
WRE2	XYZ's 's website makes a credible commitment to maintain its relationship with me		
WRE3	XYZ provides me with personalised deals that are tailored to my activity context		Personalization
WRE4	XYZ provides me with more relevant promotional information that is tailored to my preferences or personal interests		
WRE5	XYZ's website consistently delivers loyalty program membership deals		Loyalty program
WRE6	XYZ's website has a good procedure for dealing with complaints		Handling customer complaints
WRE7	XYZ's website compensates customers for problems it creates		
WRE8	XYZ's website answers inquiries promptly		Responding to customer inquires
WRE9	XYZ's website provides solutions promptly		
ORE1	XYZ's website has convenient procedures to update customer's orders	Order-Related Elements (ORE)	Order updating/cancelling
ORE2	XYZ's website has convenient procedures to cancel customer's orders		
ORE3	XYZ's website's orders are protectively packaged when shipped		Packaging
ORE4	All orders by XYZ's website are delivered undamaged		
ORE5	XYZ's website always sends me the correct items that I order		Order accuracy
ORE6			

Table 3 (*continued*)

Code	Items	Variable Name	Key Facets
	XYZ's website always sends me the correct quantities that I order		
ORE7	XYZ's website provides useful tracking tools for checking the status of an order		Order tracking and shipping
ORE8	XYZ's website has reasonable shipping and handling costs		
SEC1	XYZ's website clearly states their privacy policy	Security-Related Elements	Having rigorous privacy policies
SEC2	XYZ's website never uses my information without authorization		
SEC3	XYZ's website has rigorous procedures to protect information about customers' credit card		Having rigorous security systems
SEC4	XYZ's website has rigorous security systems		

removing those items, the reliability of each scales was assessed, ranging from 0.878 to 0.936. Concerning the convergent validity, it was assessed through average variance extracted (AVE). Table 5 shows that the AVE of each factor exceeded the threshold of 0.50 (i.e. 0.52–0.71) (Hair et al., 2010). Further, the criterion of Fornell and Larcker (1981) was used to evaluate the discriminant validity of the eight factors. Table 5 shows that the square root of the AVE of each variable was higher than the correlation between any pair of variables (see Table 6).

Similar to other studies on scale development in online context (e.g., Wolfinbarger and Gilly, 2003), the construct of e-retailer website elements was validated as a second-order construct that consists of eight first-order variables. The fit indices of this conceptualization were all within the acceptable range: CMIN/DF (2.7), RMSEA (0.06), IFI (0.94), TLI (0.93) and CFI (0.94).

2.2.4. *Stage six: common method bias*

Following the suggestions of Podsakoff et al. (2003), we assessed common method bias using a common latent factor (CLF) approach, which compares the standardized regression weights of two measurement models: one with CLF and without CLF (Archimi et al., 2010). The maximum difference in standardized regression weights with and without CLF was 0.19, which is below the cut-off criteria of 0.25, indicating that common method bias was not an issue.

2.2.5. *Stage Seven: nomological validity*

Nomological validity is essential in the final stage of scale development and established through testing for the existence of any relationship between the proposed construct and a theoretically related variable (Peter and Churchill, 1986). E-satisfaction and e-trust were chosen specifically for this purpose because there is ample of empirical evidence in the existing literature that confirms the effect of E-SQ (e.g., Bressolles et al., 2014), e-relationship marketing (e.g., Soni, 2020), and online customer experience (e.g., Pandey and Chawla, 2018) on e-satisfaction and e-trust. Thus, three and five-item scales, adopted from Anderson and Srinivasan (2003), were used to measure e-trust and e-satisfaction, respectively, and included in the confirmatory survey (See Table 4 for reliability and AVE scores of these two variables).

To test the impact of the second-order construct of e-retailer website elements on e-trust and e-satisfaction, AMOS-24 was used. The fit indices of the CMIN/DF (2.61), RMSEA (0.065), IFI (0.92), TLI (0.91) and CFI (0.92). The results showed that the effect of e-retailer website elements on e-trust ($\Upsilon = 0.66$, $R^2 = 0.43$) and e-satisfaction ($\Upsilon = 0.73$, $R^2 = 0.52$) was very high, thus establishing nomological validity.

3. Discussion and conclusions

Our study addresses the need to provide a comprehensive scale to measure e-retailing website elements. Unlike previous studies, which focused predominantly on website design and service quality, or experiential elements or relational elements, our study shows that these elements together need to be considered when assessing e-retailing website elements. The uniqueness of this scales comes from two aspects. First, it draws on three different theoretical paradigms, thus enhancing the comprehensiveness of the measurements. Second, it uses a unique methodological approach (i.e., modular design approach), thus enhancing the reliability of measurements.

Thus, following a rigorous step-by-step scale development and validation process, we have identified 54 items in our new scale, measuring 8 dimensions of e-retailing website elements: Technical Website Design Elements (TWDE), Social Media Presence Elements (SMPE), Hedonic Website Design Elements (HWDE), Website Experience Elements (WEE), Product-Related Elements (PRE), Website Relational Elements (WRE), Order-Related Elements (ORE) and Security-Related Elements (SRE). The inclusion of these dimensions confirms the early view of Wolfinbarger and Gilly (2003, p. 185), that "a customer's online buying experience consists of every-thing from information search, product evaluation, decision making, making the transaction, delivery, returns and customer service. Yet, the focus of the majority of researchers studying etailing has been only on the customer's interface with the website".

Regarding the first dimension (i.e., TWDE), it captures issues related to ease of use, logical structure, search capabilities and loading speed. These elements, which were initially introduced nearly 20 years ago (Yoo and Donthu, 2001; Loiacono et al., 2002), still represent the core of TWDE. This is consistent with the recent findings of Optinmonster (2020) that technical website problems are responsible for e-retailers to loss of a substantial amount of money.

Concerning SMPE, our scale shows that consumers consider e-retailers who are active on different social media platforms, engage in live streaming about products/services, share pictures, videos and important links on social media accounts as the key elements when it comes to social media presence. It should be noted that this dimension is an advancement to the literature as none of the studies drawing on the three paradigms has ever included it when measuring e-retailer website elements. This further reflects how online consumer behaviour has changed since early scales were proposed (e.g., Yoo and Donthu, 2001). While social media accounts bring traffic to the e-retailer's website, having links to them on the e-retailer's website provide a number of benefits. First, it facilitates following these accounts by customers and enhances their overall experience with the e-retailer. Second, it saves customers' time and effort by showing where the e-retailer is active across various social media platforms. Third, it gives the website more credibility, particularly for new customers, by demonstrating active social media presence. Fourth, it provides additional ways through which customers can get in touch with the e-retailer, making it more convenient for them.

Regarding HWDE, this dimension captures elements related to the extent to which an e-retailer website is fresh, original, innovative, creative, visually appealing, and has a good combination of graphics/colour elements. Such elements have been strongly stressed by studies drawing on E-SQ or OCE paradigm, and to a lesser extent by those drawing on RM paradigm. This research further confirms the essence of these elements in representing the dimension of HWDE.

As far as WEE dimension is concerned, our scale identifies three experiences, namely; entertaining, physical-like and escapism as the salient ones. Unlike studies drawing on E-SQ, which only considered entertainment experience, our research shows that physical-like and escapism experience along with entertainment represent the core of WEE. Additionally, while prior research stressed the importance of social experience (Dagger and O'Brien, 2010) and educational experience

Table 4

Factor loadings and cronbach alpha.

	Component								Communality	Cronbach alpha (α)
	1	2	3	4	5	6	7	8		
WEE1		.731							.659	0.95
WEE2		.887							.770	
WEE3		.905							.837	
WEE4		.903							.826	
WEE5		.860							.743	
WEE6		.797							.723	
WEE7		.800							.728	
WEE8		.674							.657	
WEE9		.617							.664	
WRE1					.640				.688	0.91
WRE2					.696				.685	
WRE3					.725				.755	
WRE4					.795				.757	
WRE5					.784				.745	
WRE6					.743				.702	
WRE7					.556				.502	
WRE8					.695				.597	
WRE9					.550				.522	
TWDE1							.523		.661	0.92
TWDE2							.651		.689	
TWDE3							.788		.721	
TWDE4							.691		.682	
TWDE5							.556		.572	
TWDE6							.584		.638	
SMPE1				.722					.611	0.89
SMPE2				.864					.792	
SMPE3				.867					.782	
SMPE4				.724					.644	
SMPE5				.839					.729	
HWDE1						.670			.595	0.87
HWDE2						.853			.781	
HWDE3						.817			.773	
HWDE4						.747			.719	
PRE1			.633						.606	0.90
PRE2			.657						.677	
PRE3			.689						.635	
PRE4			.645						.581	
PRE5			.583						.564	
PRE6			.560						.535	
PRE7			.696						.537	
PRE8			.745						.623	
PER9			.701						.567	
ORE1	.695								.621	0.91
ORE2	.692								.640	
ORE3	.536								.512	
ORE4	.702								.564	
ORE5	.528								.559	
ORE6	.783								.606	
ORE7	.764								.668	
ORE8	.889								.611	
SEC1								.701	.630	0.85
SEC2								.675	.620	
SEC3								.664	.572	
SEC4								.746	.615	

(Jeong et al., 2009), our research did not confirm that. In the digital age, where information has exploded, consumers can obtain information about products/services from various online sources, apart from the e-retailer's website. This may explain why educational experience did not emerge as a salient one. Furthermore, the widespread availability of a large number of social media platforms have enabled consumers to easily socialize online. This may have reduced the importance of using an e-retailer's website to socialize with other customers and possibly explains why social experience did not emerge as a core one.

Concerning PRE, prior research drawing on E-SQ emphasised product-related elements such as product portfolio (Brusch et al., 2019) and product range (Piercy, 2014). Our research concurs with that and further enhances the depth of PRE through identifying product availability, variety, recommendations, interactivity and pricing as key elements of this dimension. Scales drawing on OCE (e.g. Bleier et al., 2019)

or RM paradigm (e.g., Zhang et al., 2016) rarely address this dimension.

Additionally, prior literature drawing on E-SQ (Ashton and Prybutok, 2020; Collier and Bienstock, 2006) stressed the significance of ORE, an issue hardly addressed by studies drawing on OCE or RM paradigm. Our research shows that order updating/cancelling, packaging, accuracy, tracking and shipping represent key elements of this dimension. It is worth noting, however, that not all previous studies drawing on E-SQ considered PRE or ORE as key elements of e-retailer website elements. Those who considered them, however, focused only on one dimension and did not measure the two simultaneously when assessing e-retailer website elements. Therefore, our results show that it is not an 'either or situation', but, rather, both PRE and ORE should be considered.

WRE captures elements related to caring, personalization, loyalty program, handling customer complaints and responding to customer inquiries. These are in line with elements identified by studies drawing

Table 5
Regression weights, Cronbach Alpha and AVE.

	Regression weight	Cronbach alpha	AVE
WEE1	0.741	0.909	0.53
WEE2	0.753		
WEE3	0.767		
WEE4	0.71		
WEE5	0.703		
WEE6	0.706		
WEE7	0.725		
WEE8	0.735		
WEE9	0.739		
WRE1	0.81	0.936	0.65
WRE2	0.839		
WRE3	0.875		
WRE4	0.867		
WRE6	0.843		
WRE7	0.718		
WRE8	0.731		
WRE9	0.728		
TWDE1	0.733	0.878	0.59
TWDE2	0.704		
TWDE3	0.823		
TWDE4	0.788		
TWDE5	0.791		
SMPE1	0.79	0.925	0.71
SMPE2	0.891		
SMPE3	0.89		
SMPE4	0.798		
SMPE5	0.844		
HWDE1	0.767	0.91	0.71
HWDE2	0.87		
HWDE3	0.886		
HWDE4	0.852		
PRE1	0.72	0.88	0.52
PRE2	0.746		
PRE3	0.71		
PRE4	0.714		
PRE5	0.721		
PRE6	0.715		
PRE9	0.747		
ORE1	0.717	0.895	0.52
ORE2	0.715		
ORE3	0.701		
ORE4	0.747		
ORE5	0.72		
ORE6	0.708		
ORE7	0.715		
ORE8	0.728		
SEC1	0.752	0.895	0.68
SEC2	0.801		
SEC3	0.858		
SEC4	0.885		
Dependent Variables			
Trust1	0.838	0.87	0.70
Trust2	0.776		
Trust3	0.885		
Satisfaction1	0.736	0.88	0.61
Satisfaction2	0.69		
Satisfaction3	0.849		
Satisfaction4	0.788		
Satisfaction5	0.780		

on RM (Zhang et al., 2016; Srinivasan et al., 2002). Although studies drawing on E-SQ included some relational elements in their scales, they focused specifically on customer service and/or handling customer complaints (e.g., Brusch et al., 2019; Blut, 2016; Piercy, 2014). Our research, confirms these elements and further emphasizes loyalty program, caring and personalization as key website-relational elements.

SRE is concerned with the extent to which e-retailers have rigorous security systems. Although prior research introduced this dimension nearly 20 years ago (Wolfinbarger and Gilly, 2003; Yoo and Donthu, 2001), it is still considered a salient element when shopping online. Nevertheless, studies drawing on OCE rarely considered this dimension when measuring customer experience with an e-retailer website. In sum, by taking the three paradigms together, our scale provides distinctive items, overcomes the issues of overlap between various scales within and outside the three paradigms, and offers comprehensive measurements of various website elements.

4. Managerial implications

Our research provides valuable managerial implications for e-retailers. First, the proposed instrument can be used by e-retailers as a practical check-list. The scores of website elements provide insightful information on the practices that need to be improved in order to enhance consumers' positive experience and increase satisfaction and trust. Second, the scale can be used by collecting longitudinal data so that marketing managers can understand how customers' preferences change over time and identify the most important elements of websites to help shape the positioning strategy of the e-retailer. This can be implemented in line with assessing competitors' websites. By compiling data from the e-retailer's and competitors' websites marketers can review and alter the positioning strategy to respond to consumer's changing preferences. Third, smaller-scale e-retailers with limited budgets should prioritize important attributes, from their customers' perspective, and maximize them by investing primarily in them.

Fourth, e-retailers need to be aware that the type of product they sell might affect the dimension(s) that should be emphasised. For example, purchasing services is considered risky and uncertain compared to purchasing goods due to the intangibility and variability of services (Zeithaml and Bitner, 1996). As such, active social media accounts of e-retailers could play an important role in allowing customers to interact with the opinions and comments of others and to receive personalised information (e.g., usage experiences, Lim et al., 2015), thus, reducing risk and uncertainty. Similarly, the lack of quality cues in services may make consumers spend more time exploring, navigating and browsing the e-retailer's different webpages to gather further information about the purchase (Shobeiri et al., 2015). Since they stay longer on the website compared to those purchasing online goods, this requires e-retailers of services to make their website more pleasant and less boring (ibid). Moreover, services are characterized by inseparability, indicating that customers are more involved in tailoring of services (Johnson, 2003), which highlights the importance of caring and personalization to allow customers to express their needs and receive personalised services (Verhagen et al., 2010). Taking these together would make the dimensions social media presence, technical website design elements,

Table 6
Discriminant validity.

	1	2	3	4	5	6	7	8
1. Order-related elements	**0.719**							
2. Technical website design elements	0.594	**0.769**						
3. Social media presence	0.366	0.434	**0.844**					
4. Hedonic website design elements	0.506	0.600	0.578	**0.845**				
5. Website experiential elements	0.273	0.408	0.615	0.596	**0.732**			
6. Product-related elements	0.644	0.612	0.554	0.609	0.526	**0.723**		
7. Website relational elements	0.463	0.586	0.550	0.623	0.603	0.664	**0.804**	
8. Security-related elements	0.555	0.578	0.562	0.602	0.545	0.584	0.595	**0.826**

website experiential elements and website relational elements more important for e-retailers offering services. However, while purchasing services online is dynamically tailored to customer needs through using interactive tools and real-time information processing, consumer purchasing goods online tend to consider product variety as an important incentive since it reduces search costs and helps in matching products to their preferences (Verhagen et al., 2010). Moreover, unlike purchasing online services, which is characterized by inseparability and intangibility, purchasing goods would make consumers more concerned about issues related to packaging, order tracking, shipping, accuracy, and delivery time. Overall, this makes product-related and order-related elements essential for goods than for services.

Fifth, e-retailers need to be aware that the nature of purchase (i.e., hedonic vs. utilitarian) might influence the dimensions being emphasised. For example, shopping for utilitarian products tends to focus mainly on product acquisition, whereas it tends to focus on the fun and enjoyment of the buying process for hedonic products (Luk et al., 2013). This would make order-related elements (e.g., tracking, shipping and delivery) more important for utilitarian products, while hedonic website design and website experiential elements more important for hedonic products. Additionally, it is more difficult to justify spending on hedonic compared to utilitarian goods given the sense of guilt associated with them and the difficulty of quantifying their benefits (Okada, 2005). This would make interacting with other customers for affirmation or talking to customer service key in helping consumers persuade themselves and justify their purchase (Mallapragada et al., 2016). Such issues would suggest that social media presence and website-relational elements are more important for hedonic than for utilitarian products. This is because social media facilitates communication and interaction with other customers, while website-relational elements enable customers to talk with service personnel whenever needed. However, unlike hedonic products, elements that facilitates communication and interaction might cause redundancy of information given that utilitarian products are often purchased routinely (ibid). In addition, due to the functional nature of utilitarian products, technical aspects such as functionality, navigation and layout can be beneficial in facilitating the provision of information that appeal to the consumer's reason. This would make technical website design elements more prominent when purchasing utilitarian than hedonic products.

5. Directions for future research

The current study focuses on e-retailing websites. Further research could be conducted on smartphone applications to see how such elements differ between the two tools. For example, smartphone apps focus on simplicity and offer some benefits over web browsers such as personalised notifications about deals and order updates and the use of phone location services. It would be interesting to see if these benefits have implications for technical website design, website relational and order-related elements. Smartphone apps, however, require additional permissions from users and, thus, it would be interesting to see the impact on security-related elements. More importantly, customers visit the e-retailer's website, which does not require any download. App users, however, must visit an app store and download the app. The app is chosen amongst endless number of competing ones. Due to these two factors, it would be interesting to investigate which of the 8 dimensions identified in the current study is (are) important determinant(s) to choosing and downloading the app and how they differ across the two means of purchasing online (i.e., website vs. apps).

Second, it would be interesting to examine the extent to which product type plays a role in emphasizing different website elements. For example, it was explained previously that social media presence and website-relational elements would be more important for services than goods due to the intangibility, inseparability and high variability of services. Alternatively, it was pointed out previously that product and order-related elements might be more important for goods than services

as they help online customers purchasing goods to reduce searching costs and match products to their preferences. Verifying such issues would be of significant importance as it will generate solid evidence on the exact effect of product type in the context of e-retailing, thus helping e-retailers to further prioritize the key website elements that should be emphasised.

Third, it would be also interesting to investigate the extent to which the nature of purchase (i.e. hedonic vs. utilitarian) plays a central role in emphasizing different website elements. For example, it was explained previously that social media presence and website-relational elements would be more important for hedonic than utilitarian products, while technical website design elements would more important for utilitarian than for hedonic products. Therefore, examining such issues would deepen our understanding of the topic and generate concrete evidence on the exact role of hedonic vs. utilitarian products in the context of e-retailing. Fourth, we examined the effect of our scale on trust and satisfaction, which are mainly cognitive in their representation (Nyffenegger et al., 2015). Given the comprehensiveness nature of our scale, it would be interesting to examine its effect on emotional-laden constructs such as brand passion and emotional brand attachment. This would further enhance the validity of the scale and open the eyes of e-retailers on new avenues to develop their brands.

Fourth, our results suggest that there are some variations concerning the performance of different types of e-retailers across the 8 dimensions. It would be interesting for future research to examine the role of sector in emphasizing different dimensions.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jretconser.2021.102905.

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