

Impacts of platform design on consumer commitment and online review intention: does use context matter in dual-platform e-commerce?

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Abstract

Purpose – The purpose of this study is to explore the antecedents of consumers' online review intention in e-commerce platforms from a unique perspective of consumer commitment and platform design. Meanwhile, for the dual-platform strategy, i.e. providing both the web and mobile platforms simultaneously, which is widely adopted in the industry but lacks theoretical concerns, this study aims to examine the differences that platform design influences consumer commitment, consequently contributing to online review intention, between the web and mobile contexts.

Design/methodology/approach – A cross-sectional online survey is employed, and a structural equation model-based approach is utilized to analyze the data collected from both the website-preferred consumers ($N = 167$) and the mobile app-preferred consumers ($N = 247$).

Findings – The results indicate that instrumental support design factors and socio-emotional support factors positively influence consumer commitment, which further affect online review intention positively. Furthermore, design factors in different use contexts generate different impacts, and consumer commitment generates a greater effect on online review intention in the mobile than in the web context. Empathy is found to be an important motivator of consumer commitment in both contexts.

Originality/value – To the best of the authors' knowledge, as one of the first attempts to capture the differences in the relationship between platform design on consumer commitment and online review intention in different use contexts within the dual-platform e-commerce, this study provides insights for e-commerce platform managers and designers to promote consumer commitment and online review engagement by prioritizing the platform design.

Keywords Online shopping, Social support theory, SOR framework, Consumer commitment, Dual platform, Dual-platform e-commerce, Online review intention, Platform design, Use context, Website and mobile app

Paper type Research paper



1. Introduction

E-commerce platform (ECP) is commonly considered to play a critical role as the major transaction medium in the digital economy (Kim and Lee, 2002), within which, consumers can not only complete shopping operations, but more importantly, they are able to access knowledge and experiences from others to make more informed purchase decisions in terms of the consumer-generated online reviews (Li and Xiao, 2020). Currently, most online vendors are inciting consumers to participate in such a value co-creation behavior on their ECPs (Yesiloglu *et al.*, 2021) and are highly motivated to understand and exploit this strategically critical resource (Oh and Yi, 2021). Due to the reciprocal nature of this form of value co-creation for both consumers and e-commerce companies, understanding the factors that affect the online review intention of consumers on ECPs becomes an important matter of concern.

Many factors that motivate consumers to post online reviews have been identified in prior studies, which include individual factors (e.g. knowledge self-efficacy) (Cheung and Lee, 2012), platform factors (e.g. platform assistant) (Hennig-Thurau *et al.*, 2004) and a few concerns on product/review characteristics (e.g. products' popularity) (Dellarocas *et al.*, 2010). Among these factors, the individual aspect of motivation has received the majority of research attention, far outweighing the consideration of platform factors. In fact, consumers posting online reviews as a computer-mediated communication process should involve a close interaction between the individual and the platform and follow a sequential pattern in which the platform use affects psychological states and subsequently behavioral intentions (van den Hooff and de Leeuw van Weenen, 2004). However, extant studies on the antecedents of online reviews in the e-commerce contexts have failed to reveal such a sequential mechanism.

In the field of organizational science, research has shown that many of the outcomes associated with the reciprocal relationship between individual and organization are related to the level of an individual's commitment to the organization or his/her work team (Bishop *et al.*, 2000). Whereas in an e-commerce context, *consumer commitment* to an ECP refers to a consumer's attitudinal desire to maintain a relationship with the ECP, which involves the consumer's beliefs and acceptance of the goals and values of the ECP, expression of genuine interest in the platform's welfare, expenditure of considerable effort on its behalf and desire to remain a customer (Ingram *et al.*, 2005; Newman and Sabherwal, 1996). Following the vein from organizational commitment to value co-creation in organizational studies, consumer commitment could also be a potential predictive variable for online review intention. Yet, this influence mechanism, to our knowledge, has not received sufficient empirical evidence in the existing e-commerce-related literature.

As the success of well-known e-commerce companies such as Amazon and eBay are partly attributed to the high degree of consumer commitment to their powerful ECPs (Gefen, 2002), it is another critical issue to understand what factors influence the establishment of consumer commitment. By adopting a variety of IT features, functions and capabilities, e-commerce companies designed their own ECPs, which create unique, novel and personalized experiences (Ostdick, 2016) and provide effective channels facilitating communication among their consumers. The deliberate design of the ECP contributes to promoting reciprocity relationships for e-commerce companies (Liang *et al.*, 2011; Roto-Vela and Casamassima, 2011) and achieving greater consumer commitment as well as economic value (Parise and Guinan, 2008; Lin *et al.*, 2020). Therefore, the design of ECP is expected to generate a considerable impact on consumer commitment, but previous studies on consumer commitment have mostly stopped at exploring their psychological or emotional antecedents, ignoring the impact of design factors on psychology and emotion (Iglesias *et al.*, 2019). Among the multitudinous designed artifacts and features of ECPs, it is noteworthy that recently, many online vendors have expanded their existing ECPs from single stationary website to an omnichannel environment including websites, mobile websites and mobile apps (Einav *et al.*, 2014; Schramm-Klein and Wagner, 2014), such a dual platform (i.e. providing website platform and mobile platform simultaneously) strategy creates an "always-on" or "ubiquitous" society (Luo *et al.*, 2021).

Although a series of design features have been identified and a range of design principles have been suggested in related literature (Kristin, 2010), the systematic understandings and the empirical investigations regarding the antecedents of consumer commitment to ECPs from the perspective of design are, to the best of our knowledge, still far from adequate, let alone in a dual-platform context. Since consumers interact directly through the ECP's web or mobile interface, this disregard for design factors leaves a lack of actionable guides for optimizing the design of the platform in practice to increase consumer commitment and willingness to comment online. Among the top 10 apps in the shopping category in the IOS app store, 8 apps offer both mobile app and web versions (QimaiData, 2021), and similar for Google Play (AppFollow, 2021). As a result, to integrate the mobile and the web platforms into a unique framework and investigate how e-commerce companies should design an effective dual platform to foster consumer commitment, encourage consumer to generate online reviews and enhance the value of ECP, emerges as a topic to be studied urgently, and the current study aims to fill this gap. Specifically, this study is designed to address the following two questions:

- RQ1.* What factors, from a perspective of platform design, will have an impact on the establishment of consumer commitment and the intention of posting online reviews?
- RQ2.* Do the underlying mechanisms characterizing the relationships among platform design, consumer commitment and online review intention differ, considering the two different use contexts in the dual platform?

Investigation of these issues adds new insights that would contribute to both ECP design and marketing literature. Drawing on the stimulus-organism-response (SOR) framework, the current study adds theoretical contributions by providing evidence that consumer commitment is an intervening construct mediating the relationship between platform design and online review intention. On one hand, drawing on the social support theory, two dimensions of platform support, i.e. instrumental support and socio-emotional support are identified as the external stimuli affecting consumer commitment to the ECP. On the other side, we focus on a dual-platform design solution that is currently widely adopted in practice but poorly explored in theory and seek to determine if there are significant differences in the influencing mechanisms when using the diverse platforms. The findings of this study provide a more operationalized reference for how e-commerce firms design effective ECPs in a dual-platform context as a practical matter.

2. Literature review

2.1 Online review intention and consumer commitment

Online review provides a rich source of information for consumers (Lin and Xu, 2017) and has also been recognized as an important contributor to the success of ECP (Kim *et al.*, 2016). Consumers posting online reviews on ECPs is a manifestation of value co-creation (Shin *et al.*, 2020). In such a reciprocal interaction, e-commerce companies can better understand the consumers' needs and preferences to improve the quality and refine business practices, while the consumers, in turn, benefit from a better product/service experience (Lee and Yang, 2015). Many factors that motivate consumers to post online reviews have been identified, for example, social benefits, economic incentives (Hennig-Thurau *et al.*, 2004), extreme experience (Dellarocas and Narayan, 2006), number of existing reviews (Wu and Huberman, 2008), etc. Table A1 in the Appendix summarizes studies related to the antecedents of online review intention/behavior, which shows that a handful of studies focus on the influence of review or product characteristics, while most studies concentrate from an individual perspective, over and above the consideration of platform factors. Although

Hennig-Thurau *et al.* (2004) and Vazquez *et al.* (2017) accounted for both individual and platform factors together as the antecedents, the relationship between these two types of factors was not revealed, and there was an overall lack of exploration in the existing literature regarding the mediating mechanisms from the independent variables to online review intention.

There were articulations in organizational research with respect to the employee-company co-creation of value. Employees co-create value and benefit with the organization mutually through citizenship behaviors, advocacy activities and dissemination of positive word-of-mouth (Bishop *et al.*, 2000; Shukla *et al.*, 2016; Akroun and Nagy, 2018). The organizational commitment covers connotations of a strong belief in and identification with the organization's goals and values, willingness to exert considerable effort for the organization and a keen desire to retain membership within the organization (Mowday *et al.*, 1982). While in the e-commerce environment, the object committed by consumers is the ECP. In line with previous studies (Ingram *et al.*, 2005; Newman and Sabherwal, 1996), in this research, we define consumer commitment to an ECP as customer's attitudinal desire to maintain a relationship with the ECP, which involves the consumer's belief and acceptance of the goals and values of the ECP, expression of genuine interest in the platform's welfare, expenditure of considerable effort on its behalf and desire to remain a customer.

For an e-commerce company, well-established consumer commitment to an ECP brings great benefits, for instance, more considerate and easy-to-satisfy customers (Heskett *et al.*, 1994), lower intention to quit (Becker, 1992), enhancing brand equity (Iglesias *et al.*, 2019) and motivating purchase intention (Wang *et al.*, 2019). Adhering to the lineage from organizational commitment to value co-creation in organizational studies, we address consumer commitment as a potential antecedent of online review intention. In previous marketing studies, the mechanism of user satisfaction and customer loyalty to induce positive outcomes has been proposed, but we note that they can only explain the continuous and repeated purchase behaviors of users. Beyond customer loyalty, the consumers committed to an ECP are not only willing to repeatedly engage with the platform to purchase products/services, but they are also in a position to go the extra mile to contribute their opinions and suggestions as public goods for the welfare of the platform (Cheung and Lee, 2012), based on their identification with the platform's values. However, extant e-commerce studies have lacked an association between consumer commitment and online review intention, and the current study expects to provide empirical evidence on the establishment of their interrelationship.

It is then a question for the ECPs as to how they should enhance consumer commitment to promote the co-creation of value by posting online reviews. In Table A2 in the Appendix, we summarize the antecedents and consequences of commitment in past studies. Satisfaction and experience are observed as common antecedents, while commitment would lead to a range of positive outcomes including loyalty, citizenship behavior, word-of-mouth, etc. (Bishop *et al.*, 2000; Shukla *et al.*, 2016; Akroun and Nagy, 2018), and in many cases, commitment is present as a mediating mechanism. Most of these existing studies related to commitment focus on the psychological or emotional explanations of the building of commitment. One problem with exploring solely at the psychological and emotional levels is the challenge of deriving effective strategies to guide practice. Meanwhile, as in the e-commerce context, ECP is the important or even the only interface between e-commerce companies and consumers. In such a computer-mediated communication, the relationship between the design of the platform and the psychological and emotional state of the user cannot be disregarded. In this study, we anticipate a chain of "platform design-consumer commitment-online review intention," where consumer commitment stands as a mediator between the ECP design and online review intention.

2.2 Design of ECP

ECP is an important medium for e-commerce companies providing products and services as well as interacting with consumers (Hoque and Lohse, 1999). As the design of ECP reflects the business strategy of an e-commerce company and its operational policies, an effective design of ECP is essential for attracting and maintaining consumers' interests and further influencing their behaviors (Song and Zahedi, 2001). According to the diffusion theory, a user's choice of an innovative technology for searching and purchasing is affected by the features of the technology (Rogers, 1995), and there are several studies identifying the design features and factors of ECP. For example, Liu and Arnett (2000) summarized four factors that determine the success of an e-commerce website, i.e. information and service quality, system use, playfulness and system design quality. Kristin (2010) defined form, content and interface as three basic dimensions of Web 2.0 design, while Kim and Lee (2002) indicated that design factors could be categorized from the process and architecture perspective.

As design principles suggested by the literature, an ECP should be well designed to encourage participation, foster conversation, promote consumer satisfaction and incite them to return (Huang and Benyoucef, 2013). Some studies have focused on examining the relationships between ECP design and these goals. For instance, Constantinides *et al.* (2008) found that providing user-generated information and simple access could facilitate participation and stimulate users' creating, editing and disseminating behavior. Han *et al.* (2011) believed that design features promoting the sharing of user-concerned content could facilitate user participation. However, there emerge some contradictory conclusions about the consequences of design factors. For instance, Sun *et al.* (2015) indicated empathy to be a salient component of customer service quality positively affecting customer satisfaction and shopping intention, while Lin (2007) held that empathy had no significant effect on consumer satisfaction. A possible explanation for these contradictions is that there lacks a distinction between different platform contexts in these studies (Kim *et al.*, 2021). Actually, the success factors in the website platform do not promise to be effective with the mobile environment (Wang *et al.*, 2013). The differences in accessibility and usability between PCs and smartphones (Kim *et al.*, 2021) make it imperative for ECP designers to understand whether their users are accessing the ECP in mobile or non-mobile scenarios. But very scant literature considered the design of the website platform and the mobile platform synergistically and attempted to capture the differences in their impacts on user perceptions such as commitment (Schramm-Klein and Wagner, 2014).

2.3 Dual-platform e-commerce

The website used to be a standard configuration and important platform for online vendors selling products and communicating with consumers (Song and Zahedi, 2001). Recently, not only pure online vendors such as Amazon or Jingdong but also traditional retailers such as H&M both provide consumers with mobile shopping applications in addition to traditional online shopping websites (Schramm-Klein and Wagner, 2014). Dual platform, i.e. a platform in the form of a website plus a platform for the mobile app [1], has become a very common strategy adopted by many e-commerce companies nowadays, which is regarded as an integral part of their marketing and consumer engagement strategies (Racherla *et al.*, 2012).

Compared with the prosperity of the dual-platform strategies in practice, the related theoretical research is still very scarce. Some studies have noted the similarities between the two platforms, as shown by the fact that they both provided instant access to the same information source (Ghose *et al.*, 2013), while early adopters of mobile platforms seemed to be heavy website platform users (Einav *et al.*, 2014) and the mobile platform was often described as the extension of the website platform on mobile devices (Ngai and Gunasekaran, 2007). Yet, there are studies that attempt to find the differences between the two platforms (Wu *et al.*,

2010). For example, mobile devices typically have smaller screens, better portability and mobility, limited bandwidth and processing capability (Ghose *et al.*, 2013), in addition to the highly personal nature of privacy concerns and location awareness (Racherla *et al.*, 2012).

In the discipline of marketing, there are some studies investigating the role of web and mobile channels from a multichannel or omnichannel perspective (Brynjolfsson *et al.*, 2013), but most of these studies consider the effect of a single platform even though the multiple platforms coexist (Schramm-Klein and Wagner, 2014). There are some pioneer studies that try to combine the two platforms together. For example, Chang (2015) utilized the construct of use context to describe the situation that users encounter when they use mobile services through different platforms. Wang *et al.* (2013) examined the effect of trust in mobile service adoption under the context of web-mobile service transition. Huang *et al.* (2016) attempted to find the answer to whether a newly introduced mobile channel would bring new sales or cannibalize purchases from the incumbent web channel. However, in general, there is still a dearth of research with respect to the dual-platform circumstance where the website platform and the mobile platform provide services simultaneously, especially those regarding the dual-platform design and consumer commitment issues. This theory under consideration and lags behind practitioners may hinder the construction of effective ECP and the development of dual-platform strategies. Treating these two types of platforms indiscriminately may yield misleading conclusions (Kim *et al.*, 2020). Consequently, motivated by the aforementioned research gaps identified, our study aims to propose a framework for elaborating and examining mechanisms for establishing consumer commitment as well as the relationship between consumer commitment and online review intention from the perspective of platform design within a dual-platform e-commerce atmosphere.

3. Theoretical development

3.1 Theoretical background

There are two issues that need to be clarified based on the previous analysis: one is how to clearly describe the factors of platform design, while the other question is how to model the relationship among platform design, consumer commitment and online review intention. In this study, the social support theory and the SOR framework are employed to explain the two issues, respectively.

Social support can be defined broadly as “the availability of helping relationships and the quality of those relationships” (Leavy, 1983), and it has been widely demonstrated as a significant factor associated with reducing stress, enhancing psychological well-being and helpful behavioral outcomes (Liu *et al.*, 2020b). Similar to the social support within an organizational environment, in the e-commerce context, online vendors provide social support to the consumers, where the ECP plays a critical role as a medium. The perceived support of consumers when interacting with an ECP is expected to be positively related to greater psychological well-being, a more positive attitude toward the ECP, behavioral outcomes beneficial to the ECP (Rhoades and Eisenberger, 2002), as well as greater commitment and online review intention that are considered in this study.

The extant literature on the social support theory has made a conceptual distinction between two major types of social support: instrumental (or informational/material) support and socio-emotional (or emotional/affective) support (Podsiadlowski *et al.*, 2013). Instrumental support of ECP includes functions and resources that facilitate consumers accomplishing specific tasks or objectives such as searching and screening for products, viewing product descriptions and online reviews as well as placing orders and achieving payments. Socio-emotional support of ECP involves resources and features that encourage social interactions and responsiveness of emotional needs through the forms such as online community and instant consumer care service. The combination of instrumental and socio-emotional resources

provided by ECP can make a crucial contribution to consumers' shaping and implementing the values and objectives of the e-commerce companies (Hayton *et al.*, 2012).

The SOR is a theoretical framework developed from the classical stimulus-response (SR) theory in behaviorism. In the SOR framework, situational cues, individuals' internal states and subsequent behaviors are analogized as stimuli, mechanisms and responses, respectively, to describe their relationships (Chang, 2017). Situational cues change an individual's internal state and then influence his or her behavior. The SOR framework has been recently introduced into the field of e-commerce to model the relationship between e-commerce environment and consumer behavior (Zhang *et al.*, 2018b).

Environment cues characteristics such as the design features of websites or mobile applications have been considered by many studies in the fields of information systems (IS) and e-commerce as significant stimuli that influence consumers' cognitive or affective arousal and further intentional or behavioral reactions (Fang *et al.*, 2017). For instance, Parboteeah *et al.* (2009) proposed a web interface as a stimulus influencing online user's reactions when interacting with the website, which subsequently affected the user's urge to buy impulsively. In a mobile travel application context, Fang *et al.* (2017) operationalized the design attributes and performance attributes of a mobile travel app as stimuli that invoked app users' psychological engagement, benefits evaluation and behavioral engagement intention. Some studies based on the SOR framework have taken the multi-channel feature of e-commerce into account. For example, Zhang *et al.* (2018a) considered the impact of channel integration on consumer response in omni-channel retailing and examined the mediating effect of consumer empowerment, while Chang (2017) proposed a moderated mediation model to validate the influence of media multitasking on the impulse to buy. The theoretical and empirical findings of prior research inform us that the SOR framework may provide effective guidance for explaining how the design of ECP affects consumers' affective reactions and behavioral responses.

Drawing upon the SOR framework and the social support theory, within a dual-platform circumstance this study considers the design factors of ECP that provide both instrumental and socio-emotional support as the environmental stimuli affecting consumer commitment to ECP, which further leads to online review intention of consumers. The research model is shown in Figure 1, and the relationships among the constructs in the model along with the development of research hypotheses will be elaborated in the following sections.

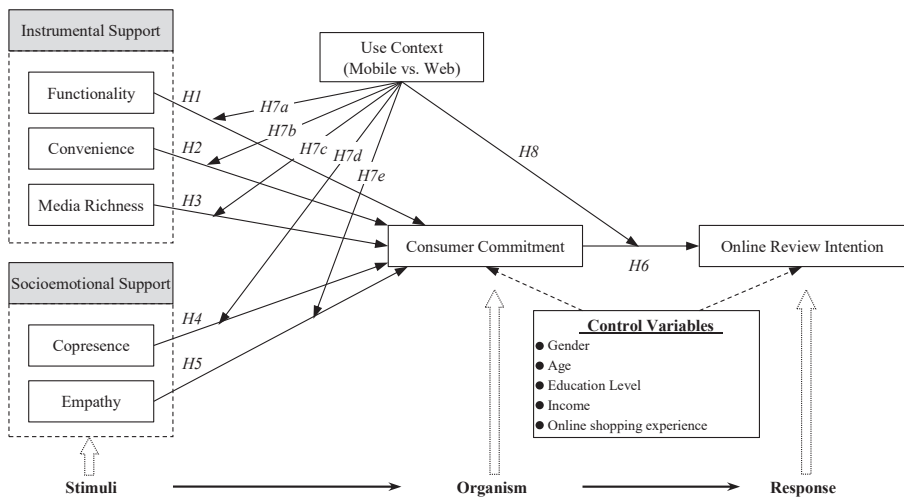


Figure 1.
Research model

3.2 Hypothesis development

3.2.1 *Effects of platform design on consumer commitment.* There is a consensus in previous studies that the greater the level of a website or a mobile app design, the greater the resulting satisfaction, e-loyalty, engagement or commitment of its consumers (Kim and Baek, 2018). According to the social exchange theory and the norm of reciprocity (Bishop *et al.*, 2000), consumers would experience commitment to an ECP, when they perceive the ECP provides them with a support. An ECP can instrumentally and socio-emotionally facilitate consumers to complete purchasing, information seeking or communicating tasks. Therefore, it may be expected that the design of an ECP in terms of instrumental support and socio-emotional support can enhance consumers' commitment to the ECP.

(1) Instrumental support design factors

Understanding the impacts of support requires the measurement and identification of its components (Omar *et al.*, 2021). As the main interface between online vendors and consumers (Hoque and Lohse, 1999), ECP should primarily render instrumental support to consumers, that is to provide consumers with well-designed functions and sufficient information so that the consumers can conveniently understand product quality, make decisions and complete purchasing on the platform. Following Zeithaml *et al.*'s (2002) conceptualization of e-service quality, Omar *et al.* (2021) described mobile shopping service quality as the extent to which the service "facilitates effective and efficient shopping, purchasing, and delivery of products and services." For adapting to the ECP environment, we operationalize the concepts of effective shopping, efficient shopping, as functionality and convenience, respectively, based on the dimensions of e-service quality, while regarding the delivery dimension, to operationalize it as the construct media richness when delivering the product/service. The three constructs are included in the research model as instrumental support design factors. According to the SOR framework, they will partially stimulate a consumer's commitment to an ECP.

Functionality refers to the IT-based features and tools as additional services that an ECP delivers on its website or app beyond the products or services provided to its consumers (Cenfetelli *et al.*, 2008). Consumer's experience on ECP is a process of self-service, from a technical perspective, a consumer can take advantage of web technologies such as navigation systems, search functions and mobile technologies such as QR code payment, multi-touch to complete transactions (Tarute *et al.*, 2017). Functionality is identified to be an important dimension of the e-service quality that influences consumer satisfaction (Sohn and Tadisina, 2008), while some IS adoption-related studies suggest that functionality is a key indicator for assessing the platform usefulness which directly affects the attitude of consumers (Dong and Wang, 2018). When the consumers' functional needs are met during the use of an ECP, they will naturally desire to continue their relationship with such a platform and identify with it (Lu *et al.*, 2012). This not only helps the consumers to build customer loyalty but also, according to the social exchange theory, they would be correspondingly more willing to consider the interests of the platform and put in their own extra efforts to develop the platform beyond shopping, imposing value co-creation behaviors and organizational citizenship behaviors (Liu *et al.*, 2020a), i.e. building consumer commitment. We thus advance the following hypothesis:

H1. Functionality has a positive effect on consumer commitment.

In line with Srinivasan *et al.* (2002), in this study, the construct convenience is defined as the extent to which a customer feels that an ECP is simple, intuitive, user friendly and handy. An ECP with a high degree of convenience allows its consumers to obtain information, navigate themselves and achieve transactions without much constraint (Kim and Baek, 2018), and

convenience has been identified as an important antecedent of website reach, e-store satisfaction and loyalty (Tarafdar and Zhang, 2008). Online consumers expect convenient access to information and transaction processing in a short response time, so if they are confronted with difficulties for a long time in the interaction with an ECP, they will be less likely to return (Cameron, 1999). Not limited to shopping, the convenience provided by ECP also facilitates users to participate in value co-creation activities through various channels and efficient ways at any time (Kim *et al.*, 2021). If the information sharing and advocacy that consumers dedicate to the welfare of the platform can be easily implemented, it will further promote their commitment to the platform. Taken together, we have a reason to anticipate that when a consumer perceives an ECP to be convenient to use, a higher level of consumer commitment to the ECP will engender. Therefore, the following hypothesis is proposed:

H2. Convenience has a positive effect on consumer commitment.

Media richness refers to the capacity of an ECP to process “rich” information (i.e. information that can overcome diverse frames of reference and change understanding in a timely manner) (Vickery *et al.*, 2004), to provide communication modes and social visual cues (Lu *et al.*, 2014). Rich media can bring multifaceted benefits from effective and efficient communication between parties (Vickery *et al.*, 2004; Tseng *et al.*, 2017), for example, reducing ambiguity or uncertainty in a relationship, ensuring a relatively completed set of information being transmitted, counteracting selective attention, distortion and recall and even far-reaching effects including the ultimate success of an organization (Vickery *et al.*, 2004). Consumer’s interaction with a media-rich medium can enhance his/her experience and induce pleasure and arousal during usage (Davis, 2010). According to Pollach (2008), richer media can lead to more positive affective states of consumers if their feelings and emotions can be shared in the process of information exchange, while Lu *et al.* (2014) suggested richer information could inspire greater trust. Therefore, if a consumer perceives an ECP’s efforts to build media richness for him, he will be confident that his contribution of information sharing, comments and feedback in the platform will be received and perceived by other consumers through multiple media, thus gaining recognition and triggering his continued contribution in the ECP. Accordingly, this study proposes the following hypothesis:

H3. Media richness has a positive impact on consumer commitment.

(2) Socio-emotional support design factors

In addition to obtaining instrumental support to complete transactions on the ECP, the consumers also expect the ECP to provide socio-emotional support rather than interacting with cold machines or emotionless interfaces. This kind of socio-emotional support originates from two sources: one is from other consumers in the same ECP, while the other is the online vendor or the ECP itself. If the consumers are unable to perceive the presence of others and their self-positioning in the platform, the platform’s support is futile. Therefore, copresence, defined as the subject feeling of being accessible and available to each other in the ECP (Ma and Agarwal, 2007), is conceptualized as the dimension of socio-emotional support from other consumers to describe the sense of being together regarding the psychological connection of minds. In the ECP, support from other consumers does not necessarily require a two-way substantive interaction, so we adopt the construct copresence instead of social presence. In terms of socio-emotional support from the platform, the construct empathy portrays the caring and individualized attention that an ECP gives its consumer in previous studies (Pit *et al.*, 1995), which measures the degree of sincerity conveyed by the ECP in attending to the individual consumer’s benefit (Kim and Lee, 2002).

In the virtual ECP environment, the platform designer can enhance consumers' sense of copresence through improving interactivity, speed of interaction and medium vividness (Khalifa and Shen, 2004). Specific design elements include chat room, community, instant messenger, displaying the status of others, providing participant profile, user's avatar and so on (Ma and Agarwal, 2007). Individuals' perception of the medium to connect them together has been identified as a significant predictor contributing to satisfaction in the computer-mediated communication context (Gunawardena and Zittle, 1997). Constantinides and Fountain (2008) also suggested that network effect and peer usage could remarkably motivate user attitude and loyalty. Without copresence, consumers may feel lonely in the ECP and their activities and expressions cannot be perceived and observed, which will negatively affect their value co-creating participation and citizenship behaviors in the platform. On the contrary, a feeling of copresence would motivate consumers to engage more on the platform to spotlight their efforts for the platform to gain a sense of being. Therefore, we have sufficient evidence to believe that if an ECP can provide more support for consumers to sense copresence with others, the consumers will tend to take in such a platform and become long-term customers. Thus, we propose:

H4. Copresence has a positive effect on consumer commitment.

Empathy reflects the extent to which the information and services provided by an ECP are tailored to fulfill the requirements of individual consumers (Lee, 2005). It has been dealt with as one of the five dimensions of the SERVQUAL scale to measure the perceived quality of service (Simon, 2013) and has been identified as an essential element in various helping situations (Marandi and Harris, 2010). Receiving caring and individualized attention from an ECP brings warmth to consumer's heart, and in an ECP that is standing in the shoes of their consumers, the consumers can arise a better impression of the quality of the ECP and have confidence in the performance of the service provider (Liang et al., 2011). Numerous studies provide strong evidence that empathy affects the decision to engage in prosocial behavior and is an important causal factor in transaction satisfaction (Simon, 2013). Therefore, if a consumer perceives that an ECP always provides features attending to his individual benefit, he will be motivated to adopt such ECP and reciprocally make considerable efforts or accomplish transactions on behalf of the ECP for a long time. Hence, we hypothesize that:

H5. Empathy has a positive impact on consumer commitment.

3.2.2 Effect of consumer commitment on online review intention. Online review intention stands for customer's willingness of sharing experiences, writing reviews and giving online feedback based on his/her purchases on an ECP (Cheung and Lee, 2012; Bock et al., 2005). Literature on online reviews support the view that consumers' decisions on whether to post online reviews after purchase will be affected by their social environment within the ECP (Moe and Schweidel, 2012). In organizational studies, the level of commitment an individual feels toward a specific organization is directly related to organizational citizenship behavior (Bishop et al., 2000). In addition to lessons drawn from job engagement research (Rich et al., 2010), we can anticipate that committed consumers of an ECP not only tend to choose the current platform for shopping but also pursue good citizenship behaviors that are informal, helpful and conscientious, among which generating online reviews is a representative one. The maintenance of a long-term relationship and the effort involved will make a consumer more willing to consider the interest of the ECP. The consumer will be more active in sharing the shopping experience by posting online reviews, which is beneficial to the stakeholders of the ECP, sellers and other consumers, no matter if his reviews are positive or negative. Accordingly, we propose the following hypothesis:

H6. Consumer commitment has a positive impact on online review intention.

3.2.3 Differentiated effects of use contexts. In the context of dual-platform e-commerce, consumers have two alternative and interconnected interfaces to perform a specific purchase-related task, in which way two different use contexts emerge. We refer to use context to a set of conditions or user states that consumers encounter when they interact with an ECP in different places and times through various interfaces (Chang, 2015). In this study, we take the two most typical use contexts into consideration, namely, the website and the mobile app. Previous studies inform us that there exist considerable differences between the two use contexts. For example, literature on marketing suggests traditional web-based online marketing to be a push strategy while mobile app marketing is a pull strategy (Kim *et al.*, 2016) in that the users can pull services as needed.

According to the goodness-of-fit model (Forsythe and Compas, 1987), events perceived as uncontrollable are best suited to the emotion-focused coping while controllable-appraised events fit best to the problem-focused coping (Podsiadlowski *et al.*, 2013). The stressor-support matching theory also states that controllable stressful events elicit the need for instrumental support and uncontrollable events elicit the need for emotional support (Cutrona, 1990). When the consumers are in a mobile use context, they can access an ECP anytime and anywhere due to the on-the-go nature of smartphones (Dwivedi *et al.*, 2021). At this point, they are in an environment where there is uncertainty about what is going on around them, and they are even on the move. Uncontrollable stressful events that consumers may encounter at this time can trigger the demand for more socio-emotional support (Spooner-Lane, 2004). If an ECP can respond duly when a consumer wants to get socio-emotional support, it will undoubtedly enhance the consumer's willingness to commit to the platform. Additionally, consumer's demand for the convenience of purchasing and obtaining information anytime and anywhere when using mobile apps is also stronger than that of websites. Therefore, it can be expected that in the use context of mobile apps, the design of ECP in terms of convenience, copresence and empathy will contribute more to consumer commitment than in the use context of the web.

On the other hand, when a consumer uses a PC to visit shopping websites, they usually need to go through the process of turning on the computer, entering the website address and logging in with username and password, in a relatively fixed place (de Haan *et al.*, 2018). The consumer exerts extra efforts and may anticipate getting more platform functionality and obtaining richer media because the mobile platform is limited by the screen size, usually has incomplete functions and the displayed information is not rich enough (Kim *et al.*, 2021). When a consumer is visiting a shopping website, his psychological state is relatively controllable. At this time, the consumer needs more instrumental support for the ECP in terms of functionality and media richness than socio-emotional support (Spooner-Lane, 2004). Thus, well-designed ECP in terms of functionality and media richness may gain a higher level of consumer commitment. Based on the above two aspects of analysis, we propose the following hypotheses about the differentiated effects of use context on the relationship between platform design and consumer commitment:

- H7a.* The positive impact of functionality on consumer commitment is stronger in the Web context than in the Mobile context. (Web > Mobile)
- H7b.* The positive impact of convenience on consumer commitment is stronger in the Mobile context than in the Web context. (Mobile > Web)
- H7c.* The positive impact of media richness on consumer commitment is stronger in the Web context than in the Mobile context. (Web > Mobile)
- H7d.* The positive impact of copresence on consumer commitment is stronger in the Mobile context than in the Web context. (Mobile > Web)

H7e. The positive impact of empathy on consumer commitment is stronger in the Mobile context than in the Web context. (Mobile > Web)

Moreover, as an organism in the SOR framework, consumer commitment in different use contexts may result in different responses. The accessibility of a mobile platform in socio-emotional interaction between consumers facilitates them to communicate with each other and motivates them to express opinions (Gruen *et al.*, 2006). In addition, when a committed consumer plans to share an experience or complain about something, the use of the mobile platform is more convenient for him to post online reviews without being limited to a specific fixed location, as in the website platform extra efforts of the consumer are needed to perform an equivalent action (Mariani *et al.*, 2019). Therefore, compared with the website context, the impact of consumer commitment on online review intention is expected to be higher in the use context of the mobile app, and the following hypothesis is proposed:

H8. The positive impact of consumer commitment on online review intention is stronger in the Mobile context than in the Web context. (Mobile > Web)

4. Research methodology

4.1 Questionnaire design and construct measurement

We conducted a survey of online shopping consumers to investigate the research questions. To ensure content validity, all measurement items came from the validated instruments in previous studies and were adaptively revised to fit the context of this study. In the initial questionnaire, a total of 27 items related to the constructs were included, while a seven-point Likert scale was used to measure all the constructs except for the control variables, where 1 denoted “strongly disagree” and 7 denoted “strongly agree.” Since the original scales were in English, we translated these scales into Chinese using the conventional back-translation method and compared the back-translated scales with the original ones to guarantee the accuracy and quality of translations. Then we conducted a two-stage pretest to ensure the reliability and validity of our instruments. First, the questionnaires were sent to six senior researchers and engineers in the fields of e-commerce and IS design. Based on their feedback after checking for the ambiguity in wording, logical consistency and contextual relevance, several items were slightly reworded, and one item was removed. Then we conducted a pilot study on 22 frequent online shoppers and asked for their comments on the structure and the items of the questionnaire until the final version with good reliability and validity was obtained. The constructs and the items used for the formal survey are listed in Table 1.

4.2 Control variables

We included gender, age, income, educational level and online shopping experience as the control variables in our model for controlling the extraneous effects of certain individual characteristics. Gender, age, income and educational level were selected because they were often suggested by extant literature as demographic controls in the field of e-commerce and might have potential effects on an individual’s psychological status (Yang *et al.*, 2017). Moreover, as the attitude formation theory suggested consumer experience as a key determinant that affected how attitude is formed (Yoon *et al.*, 2013), we also controlled for the online shopping experience because whether a consumer had a rich online shopping experience might affect his/her commitment and online review intention as well.

4.3 Data collection

An online survey was conducted to collect the empirical data for this study. The questionnaire consisted of four parts. The first part briefly explained the purpose of academic

Construct	Item#	Measurement item	Reference
Functionality (FU)	FU1	The ECP has tools and functions that provide services beyond just the product that I may be purchasing	Cenfetelli <i>et al.</i> (2005)
	FU2	The ECP has tools that help me before, during and after purchase	
	FU3	The ECP has helpful features which add value to my overall product experience	
	FU4	The ECP provides functions that help me in the various stages I go through to acquire a product	
Convenience (CV)	CV1	The ECP is very convenient to use	Chang and Chen (2008)
	CV2	A first-time customer can make a purchase from the ECP without much help	
	CV3	I can make a purchase at any time and any place via the ECP	
Media richness (MR)	MR1	The ECP enables me to get information quickly	Vickery <i>et al.</i> (2004)
	MR2	The ECP enables me to get reliable information	
	MR3	The ECP enables me to get rich information	
	MR4	The ECP provides diverse types of information in visual, audio and electronic modes	
	MR5	The ECP enables me to choose information depending on demand	
Copresence (CP)	CP1	I ever have a sense of “being there with other people” in the ECP	Ma and Agarwal (2007)
	CP2	I have a sense that I am together with other members in the virtual environment of the ECP	
Empathy (EM)	EM1	The ECP gives customers individual attention	Kim and Lee (2002), Gefen (2002)
	EM2	The ECP gives customers personal attention	
	EM3	The ECP has the customers’ best interests at heart	
	EM4	The ECP understands the specific needs of its customers	
Consumer Commitment (CC)	CC1	I am committed to maintaining my relationship with the ECP	Ma and Chan (2014)
	CC2	I want my relationship with the ECP to last for a very long time	
	CC3	I feel very strongly linked to my relationship with the ECP	
	CC4	I would feel very upset if my relationship with the ECP were to end	
	CC5	I tend toward the long-term future of my relationship with the ECP	
Online review Intention (ORI)	ORI1	I intend to share my experiences with others in the ECP more frequently in the future	Cheung and Lee (2012), Bock <i>et al.</i> (2005)
	ORI2	I will always provide my experiences at the request of other members of the ECP	
	ORI3	I will try to share my experiences with other members of the ECP in a more effective way	

Table 1.
Research constructs
and measurements

Note(s): All items are measured on a seven-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (7)

research and the confidentiality of questionnaire information. In the second part, we explicitly stated that only those who had an online shopping experience within the past six months could participate in this survey. In the third part of the questionnaire, the participants were asked to provide their personal information, such as gender, age, education level, annual income and online shopping experience. The last part included the questions designed to

measure all the constructs in our model. We designed the electronic version of the questionnaire through the online survey platform wjx.com, a professional survey website in China and utilized the snowball technology commonly adopted in data collection to request the participants to share the survey link through instant messaging tools such as WeChat and QQ to increase the number of samples (Jia *et al.*, 2018).

The questionnaire was formally released on June 1, 2019, and lasted for three months and a total of 517 responses were collected. We carefully checked all the returned questionnaires and excluded 30 incomplete or careless ones. In order to distinguish the use context of different participants, we followed the approach suggested by Schramm-Klein and Wagner (2014) to investigate the participants' post-experience situation with one of the two use contexts. The use context was determined based on the participant's responses to two questions. The first question asked the participants on which platform did his/her last purchase was completed, the website or the mobile app, while the second question required the participants to answer whether their common shopping platforms were the websites, the mobile apps or similar. If a participant's answers to these two questions were inconsistent, we considered their use context to be ambiguous, and only the questionnaires with the same answers to the two questions were accepted for the next step of empirical analysis. After excluding 73 questionnaires with unclear use context, 414 available samples were finally obtained, with a valid rate of 80.08%. The use context of 167 out of the 414 respondents was determined as a website, while the remaining 247 respondents were in a mobile use context. The demographic characteristics of the valid respondents are shown in Table 2, which is basically consistent with the structure of Chinese Internet users and online shoppers released by the China Internet Network Information Center (CNNIC, 2018, 2019). For example, the male Internet users accounted for 47.6%; the Internet users aged 29–49 dominated, totaling 65.6%;

Demographic variable		Count	Percentage	Website <i>N</i> = 167		Mobile <i>N</i> = 247	
				Count	Percentage	Count	Percentage
Gender	Male	194	46.9%	76	45.5%	118	47.8%
	Female	220	53.1%	91	54.5%	129	52.2%
Age	<20	45	10.9%	19	11.4%	26	10.5%
	20–29	165	39.9%	70	41.9%	95	38.5%
	30–39	117	28.3%	42	25.1%	75	30.4%
	40–49	62	15.0%	24	14.4%	38	15.4%
	>50	25	6.0%	12	7.2%	13	5.3%
Education	Junior high school or less	80	19.3%	37	22.2%	43	17.4%
	High school	142	34.3%	56	33.5%	86	34.8%
	Bachelor's degree	140	33.8%	58	34.7%	82	33.2%
	Master's degree or higher	52	12.6%	16	9.6%	36	14.6%
Personal income per month	None	32	7.7%	14	8.4%	18	7.3%
	<=CNY 1499	46	11.1%	21	12.6%	25	10.1%
	CNY 1500–2999	78	18.8%	27	16.2%	51	20.6%
	CNY 3000–4999	79	19.1%	37	22.2%	42	17.0%
	CNY 5000–7999	95	22.9%	39	23.4%	56	22.7%
>=CNY 8000	84	20.3%	29	17.4%	55	22.3%	
Online shopping experience	<1 year	32	7.7%	9	5.4%	23	9.3%
	1–2 years	133	32.1%	57	34.1%	76	30.8%
	3–5 years	138	33.3%	55	32.9%	83	33.6%
	5–8 years	73	17.6%	34	20.4%	39	15.8%
	>8 years	38	9.2%	12	7.2%	26	10.5%

Table 2.
Demographic characteristics of the samples (*N* = 414)

32.7% of the online shoppers had a bachelor's degree. Therefore, the data sample for this study is represented in its composition.

4.4 Data assessment

No-response bias was assessed to check the self-selected nature response and the external validity. We compared the responses received in the early stage (i.e. the first 30 days) with those in the late stage (i.e. the last 30 days), and the result of the *t*-test demonstrated that the significance level (*p*) of functionality, convenience, media richness, copresence, empathy, consumer commitment and online review intention were 0.422, 0.636, 0.699, 0.690, 0.472, 0.406 and 0.441, respectively. All of them were above 0.05, suggesting that no significant difference was found between the early and the late responses and the non-response bias was insignificant in this study. As in the 73 abandoned questionnaires, the participants either did not provide a clear use context or did not conduct online shopping in the past six months, we further compared the final 414 questionnaires and the 73 abandoned questionnaires to evaluate the external validity. The *t*-test results showed that the significance levels of all the constructs were greater than 0.05, thus the external validity was not a significant issue. Additionally, the Harman's single-factor test was employed to evaluate the possible existence of common method variance (CMV) (Zhang *et al.*, 2017). We utilized SPSS 20.0 to conduct an exploratory factor analysis (EFA) for all of the seven latent variables, and the result indicated that no single factor accounted for the majority of the total variance. We also conducted a CMV test following the method of Liang *et al.* (2007). The average substantively explained variance of the indicators was significantly larger than the average method-based variance and most of the method factor loadings were not significant. Thus, the CMV was not a serious concern for this study.

5. Results

5.1 Testing results of measurement model

Compared with the partial least squares-based structural equation modeling (PLS-SEM), the covariance-based structural equation modeling (CB-SEM) is more suitable for the task of this study regarding the theory testing and confirmation while its results are more stringent (Dash and Paul, 2021), so we conducted a CB-SEM analysis for our model testing. AMOS 20.0 was employed to test the measurement model. We evaluated the construct reliability, convergent and discriminant validity in three steps. First, we assessed the construct reliability with composite reliability (CR) (Fornell and Larcker, 1981), and as Table 3 presents, the CR value of each construct is greater than 0.7, while the Cronbach's alpha coefficients of all the constructs are also higher than the suggested value of 0.7. Thus, the reliability of constructs in this study is satisfactory. We also conducted an EFA to validate the items (Zhang and Liu, 2021), and the result demonstrated that all of the 26 items had high loadings on their related constructs and low cross-loadings on other variables, and the extracted seven components explained 81.54% of the total variance. Then, the convergent validity of the scales was tested. The standardized loading of each item on the constructs was calculated and each item-to-construct loading exceeded the criterion of 0.7, meanwhile, the lowest average variance extracted (AVE) of the construct was 0.685, higher than the recommended level of 0.5, which demonstrated an acceptable convergent validity of our model.

As there should be no strong correlations between the constructs, in the third step, the discriminant validity was tested by examining whether the correlation coefficients between the constructs were less than the square root of the AVE. As shown in Table 4, none of the correlation coefficients is greater than the square roots of the AVE on the diagonal above, indicating that the discriminant validity meets the requirement.

Construct	Item	Standard loading >0.7	AVE >0.5	CR >0.7	Cronbach's alpha >0.7
FU	FU1	0.812	0.716	0.908	0.907
	FU2	0.863			
	FU3	0.892			
	FU4	0.804			
CV	CV1	0.869	0.784	0.916	0.916
	CV2	0.912			
	CV3	0.875			
MR	MR1	0.791	0.685	0.916	0.916
	MR2	0.832			
	MR3	0.839			
	MR4	0.854			
	MR5	0.822			
CP	CP1	0.937	0.707	0.826	0.813
	CP2	0.732			
EM	EM1	0.838	0.749	0.923	0.922
	EM2	0.883			
	EM3	0.910			
	EM4	0.829			
CC	CC1	0.847	0.758	0.940	0.940
	CC2	0.882			
	CC3	0.867			
	CC4	0.892			
	CC5	0.865			
ORI	ORI1	0.906	0.815	0.930	0.929
	ORI2	0.917			
	ORI3	0.885			

Table 3. Convergent validity and internal reliability

	FU	CV	MR	CP	EM	CC	ORI
FU	0.846						
CV	0.393	0.885					
MR	0.396	0.259	0.828				
CP	0.111	0.099	0.155	0.841			
EM	0.297	0.279	0.272	0.197	0.865		
CC	0.489	0.425	0.393	0.310	0.424	0.871	
ORI	0.294	0.235	0.251	0.279	0.263	0.517	0.903

Table 4. Correlation matrix and square roots of AVEs

Note(s): The diagonal numbers are the square root of AVE

5.2 Structural model and testing results

AMOS 20.0 was used to test the structural model. We evaluated various fitting indicators of the theoretical model with the whole dataset. The ratio between χ^2 and the degree of freedom was 2.059. The root mean square error of approximation (RMSEA) was 0.051. The adjusted goodness of fit index (AGFI) was 0.865. The normed fit index (NFI) was 0.916. The non-normed fit index (NNFI) was 0.944. The comparative fit index (CFI) was 0.955. All the model-fit indicators meet the recommended criteria (Moody *et al.*, 2018), thus indicating a good fit between the model and the data. In addition, we also assessed the model fit for the web group and the mobile group, respectively, all the model-fit indicators for both groups also surpassed the recommended threshold, demonstrating the validity of the structural model. The testing results of the model-fit indicators for the structural model are presented in Table 5.

The testing results of the research hypotheses are shown in Figure 2, including the *R*-square value and the path coefficients. The hypothesis testing was carried out in two parts. First, we gathered all the sample data to test the main effects assumed by H1 to H6. The test results are shown as the numbers in braces in Figure 2. Our model explains 43.4% of the variance of consumer commitment and 30.8% of the variance of online review intention, which indicates sufficient explanatory power of the model. The standardized path coefficients of functionality ($\beta = 0.182, p < 0.001$), convenience ($\beta = 0.225, p < 0.001$), media richness ($\beta = 0.153, p < 0.01$), copresence ($\beta = 0.153, p < 0.001$) and empathy ($\beta = 0.250, p < 0.001$) with consumer commitment, as well as the standardized path coefficients of consumer commitment with online review intention are positive and significant. Thus, H1, H2, H3, H4, H5 and H6 are all supported.

Next, in order to examine the robustness of the above hypotheses in different use contexts, we divided the empirical data into website group and mobile group according to different use contexts and repeated the above steps to test the main effect of H1 to H6 hypotheses. In Figure 2, the numbers in square brackets are the path coefficients and the *R*-square values of the web group, and the numbers in parentheses are the path coefficients and the *R*-square values of the mobile group. From the two groups of path coefficients, the relationship between empathy and consumer commitment and the correlation between consumer commitment and online review intention are both positive and significant, which provide strong evidence for H5 and H6. However, the path coefficients between functionality, convenience, media richness, copresence and consumer commitment are not significant in some groups.

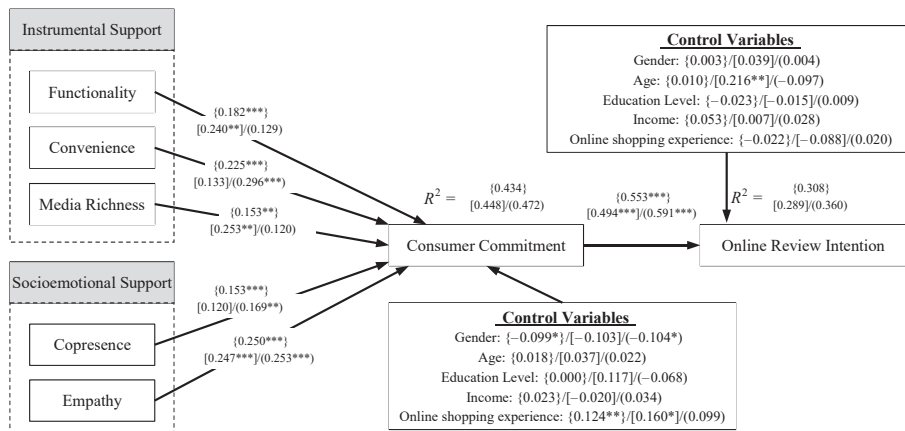


Figure 2.
Results of structural model

Note(s): * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The numbers in the braces are for all groups, the numbers in the square brackets are for web groups and the numbers in the parentheses are for mobile groups

Table 5.
Model-fit indices of the structural model

Recommended cut-off value	$\chi^2/df < 3$	RMSEA < 0.08	AGFI > 0.80	NFI > 0.80	NNFI > 0.90	CFI > 0.90
All groups	2.059	0.051	0.865	0.916	0.944	0.955
Web group	1.375	0.048	0.804	0.860	0.946	0.956
Mobile group	1.880	0.060	0.801	0.886	0.929	0.942

Specifically, in the mobile use context, functionality and media richness have no significant impact on consumer commitment, while in the web use context, the impacts of convenience and copresence on consumer commitment are not significant. Therefore, although H1 to H4 are supported with the whole dataset, the impacts of ECP design factors on consumer commitment in terms of functionality, media richness, convenience and copresence are questionable when the use context is taken into consideration. The testing results of the hypothesized main effects are summarized in Table 6.

We further tested the effects of the five control variables in the model (i.e. gender, age, income, educational level and online shopping experience) on consumer commitment and online review intention. The negative association between gender and consumer commitment is significant ($\beta = -0.099, p < 0.05$). In the mobile use context, the negative association is significant ($\beta = -0.104, p < 0.05$), whereas in the web use context, the association between gender and consumer commitment is not significant. The positive association between online shopping experience and consumer commitment is also significant ($\beta = 0.124, p < 0.01$), which is positive and significant in web context ($\beta = 0.160, p < 0.05$), but not significant in mobile use context. The influence of age on online review intention is significantly positive in the web group ($\beta = 0.216, p < 0.01$), but not significant in the mobile group and all groups. We do not find a significant relationship between gender, online shopping experience and online review intention. In addition, there is no significant effect of income and education level on consumer commitment and online review intention.

5.3 Mediating effects testing results

The bootstrapping procedure was employed to evaluate the mediating effect of consumer commitment in the relationship to the impact of platform design and online review intention (Hayes, 2013). This method does not impose the distribution assumption thus has a better adaptability than the testing procedures such as the Sobel test that requires the normal distribution of data (Hayes, 2013).

For the mediating model of this study, we set up 5,000 bootstrapped samples for calculation. Table 7 presents the estimated direct and indirect effect along with the corresponding 95% bootstrapped confidence intervals (CI). It can be inferred that the mediating effect is statistically significant if the 95% CI for the estimated effect does not include zero (Zhao et al., 2010). The bootstrapped results in Table 7 demonstrate the mediating effects from functionality (bootstrap estimate = 0.2730 [CI: 0.2075, 0.3483]), convenience (bootstrap estimate = 0.2214 [CI: 0.1649, 0.2844]), media richness (bootstrap estimate = 0.2156 [CI: 0.1660, 0.2721]) and empathy (bootstrap estimate = 0.1983 [CI: 0.1503, 0.2531]) through consumer commitment to online review intention are significant, whereas the direct effects from these constructs to online review intention are not significant, thus indicating full mediations of consumer commitment occur between functionality,

Effect	Hypothesis	Path	Path coefficient (All/Web/Mobile)	Result		
				All	Web	Mobile
Main effect	H1	FU → CC	0.182***/0.240**/0.129	S	S	NS
	H2	CV → CC	0.225***/0.133/0.296***	S	NS	S
	H3	MR → CC	0.153**/0.253**/0.120	S	S	NS
	H4	CP → CC	0.153***/0.120/0.169**	S	NS	S
	H5	EM → CC	0.250***/0.247***/0.253***	S	S	S
	H6	CC → ORI	0.553***/0.494***/0.591***	S	S	S

Note(s): * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; S = Supported, NS = No supported

Table 6.
Results of the
main effects

Table 7.
Parameters and 95%CI
for the paths of
the model

Model pathway	Estimated	95% CI		Result
		Lower	Upper	
Direct effect FU → ORI	0.0613	-0.0467	0.1693	NS
Indirect effect FU → CC → ORI	0.2730	0.2075	0.3483	S
Direct effect CV → ORI	0.0183	-0.0753	0.1120	NS
Indirect effect CV → CC → ORI	0.2214	0.1649	0.2844	S
Direct effect MR → ORI	0.0629	-0.0370	0.1628	NS
Indirect effect MR → CC → ORI	0.2156	0.1660	0.2721	S
Direct effect CP → ORI	0.1478	0.0508	0.2447	S
Indirect effect CP → CC → ORI	0.1658	0.1141	0.2254	S
Direct effect EM → ORI	0.0501	-0.0364	0.1366	NS
Indirect effect EM → CC → ORI	0.1983	0.1503	0.2531	S

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

convenience, media richness, empathy and online review intention. Moreover, the direct effect from copresence to online review intention is significant (bootstrap estimate = 0.1478 [CI: 0.0508, 0.2447]). This finding indicates that consumer commitment partially mediates the relationship between copresence and online review intention. Hence, we have the evidence to hold that consumer commitment “sits” between the platform design and online review intention.

5.4 Comparison between groups

The hypotheses of H7a to H7e and H8 involve the differentiated effects between the web and mobile use contexts. For comparing the two groups, it is necessary to assess whether the web and mobile groups measure the latent variable in a similar pattern (Carte and Russell, 2003). Hence we first conducted a Box’s M test of equal covariance matrices on each item between the two groups. The result reveals that there is no significant difference between the two groups in terms of measurement items, so it makes sense to compare the two sets of paths. A widely adopted *t*-test method in previous studies was employed to compare the respective path coefficient in the structural model of the two use contexts [2]. As shown in Table 8, the path coefficients between functionality, media richness and consumer commitment are significantly stronger for the web context compared with the mobile context (for functionality, $t = 13.27, p < 0.001$; for media richness, $t = 19.24, p < 0.001$). Thereby H7a and H7c are supported. The path coefficients between convenience, copresence and consumer commitment are substantially lower for the web context compared with the mobile context ($t = 24.48, p < 0.001$ for convenience and $t = 5.93, p < 0.001$ for copresence), which confirm H7b and H7d. The path coefficient between consumer commitment and online review

Table 8.
Results of path
comparison tests
across groups

Hypothesis: Path	Coefficient (Standard error)		<i>t</i> -value	Result
	Web (<i>N</i> = 167)	Mobile (<i>N</i> = 247)		
H7a: FU → CC (Web > Mobile)	0.240 (0.078)	0.129 (0.087)	13.27***	S
H7b: CV → CC (Mobile > Web)	0.133 (0.075)	0.296 (0.060)	24.48***	S
H7c: MR → CC (Web > Mobile)	0.253 (0.077)	0.120 (0.063)	19.24***	S
H7d: CP → CC (Mobile > Web)	0.120 (0.103)	0.169 (0.065)	5.93***	S
H7e: EM → CC (Mobile > Web)	0.247 (0.068)	0.253 (0.055)	0.77	NS
H8: CC → ORI (Mobile > Web)	0.494 (0.078)	0.591 (0.073)	12.90***	S

Note(s): * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; S=Support, NS=No support

intention is significantly higher for the mobile context than that for the web context, therefore H8 is also supported. However, no significant difference can be found when comparing the path coefficients between empathy and consumer commitment for the web context and the mobile context ($t = 0.77, p > 0.05$), thus H7e is not supported.

5.5 Robustness check

To further ensure the rigor and generalizability of our findings, we conducted a robustness test as follows. In the previous data processing, we attempted to identify the main use context in which each respondent adopted through a self-reporting approach. However, a consumer may use both of the platforms or transit from one to another in practice (Wang *et al.*, 2013), so it is questionable whether the mixed effects of the two contexts can be effectively separated. To test the validity of our sample grouping and subsequent analysis of the results based on different groups, a scenario-based experiment was designed. Two hundred college students (100 female and 100 male) from a university in China were recruited to participate in this experiment, and each of them was asked to complete a birthday gift selection for his/her best friend at an ECP. The majority of the subjects were between 20 and 24 years old (88.5%), and 94.5% of the subjects had more than three years of experience in using the Internet. As we requested at recruitment, all the subjects had online shopping experience and online review reading/posting experience. The 200 subjects were randomly assigned to a mobile app group or a website group, each with 100 participants, and each group was further randomly assigned to shop using the Jingdong or Taobao platforms, the two largest ECPs in China, with 50 participants in each subgroup. They were instructed to use only the prescribed platform and context to complete the task, with a 15-min time limit, and were allowed to use all the features provided by the platform, including communicating with the customer service. They were also told before the assignment began that they would complete a questionnaire based entirely on the platform they would be using.

After the shopping task was completed, we had the subjects first select the platform they had previously used (Jingdong or Taobao) and the use context (mobile or web) to ensure that they were filling out the subsequent questionnaire for the given use context. All but one of the 200 subjects assigned to the website group incorrectly selected the mobile use context, indicating that our manipulation was effective. Next, we used the 199 scenario-manipulated questionnaires as the data source and conducted the previous analysis process again. The test of the measurement model indicated that the data had good reliability and validity, while the results of the structural model test were consistent with the previous test results. We further divided the 199 samples by the use context and compared the path coefficients for the 100 mobile group samples and the 99 website group samples, and the results were also in line with the previous results on the moderating effects. Thus, our results demonstrate good robustness and generalizability.

6. Discussion

Taking advantage of the SOR framework and the social support theory, this study attempts to investigate the determinants of consumer commitment and its impact on online review intention from a unique dual-platform design perspective. This study examines the effects of both instrumental support (i.e. functionality, convenience and media richness) and socio-emotional support (i.e. copresence and empathy) from ECP on the commitment and online review intention of e-commerce consumers. In contrast to the previous studies related to consumer commitment in single-use context, this study expands our understanding of the differences in the antecedents and consequences of consumer commitment between the web and the mobile contexts by distinguishing the two typical use contexts in the current

e-commerce atmosphere that are rarely examined empirically before. The key findings that emerged from this study are threefold.

First, among the platform design factors in terms of the instrumental support dimension, support for functionality, convenience and media richness as determinants for consumer commitment are found as hypothesized. However, in different use contexts, these design factors have different impacts. Functionality and media richness in the web use context show greater effects on consumer commitment than in the mobile use context. The web consumers are suggested to have more expectations of functionality and media richness in contrast to the mobile consumers as to when trading-off the choice of the “fixed PC + web browser” and the “mobile device + app.” The reason why consumers choose the former is that it can often provide more integrated platform functions, as well as more abundant information cues such as multimedia (Kim *et al.*, 2021). Convenience is found to significantly affect the consumer commitment of mobile consumers but does not significantly influence the consumer commitment of web consumers. This finding may be attributed to the absence of psychological anticipation and the demands of the web consumers to purchase anytime and anywhere, as in web context, they need to complete a series of actions such as sitting down, opening a browser, entering a website URL and logging in to start shopping (de Haan *et al.*, 2018). Although the impacts of the three instrumental design factors on consumer commitment are significant in the case of all datasets, we further identify the subtle differences in the mechanisms of platform design factors within the two different use contexts.

Second, among the platform design factors in terms of socio-emotional support, both copresence and empathy are verified to be significantly associated with consumer commitment as hypothesized. Similar standpoints have been contended by previous studies (Sun *et al.*, 2015). However, after distinguishing different use contexts, we obtain detailed findings. We initially expect the impacts of these two kinds of socio-emotional support on consumer commitment to be higher in the mobile context than in the web context as a consumer’s socio-emotional needs regarding copresence and empathy are relatively uncontrollable according to the goodness-of-fit model (Forsythe and Compas, 1987). As far as copresence is concerned, in the mobile use context, its path coefficient to consumer commitment is significantly greater than in the web use context, which supports our hypothesis. But on the part of empathy, no significant difference is found between the two contexts, which is inconsistent with our hypothesis. One possible explanation is that when a consumer goes through some tedious steps to access an ECP through the web context, he/she may indeed suffer from some problems or difficulties that need to be solved by the ECP, and the customer caring is expected to be provided. As previous studies suggested, the limited screen size of smartphones made it tougher for consumers to comprehend and process all the information immediately and comprehensively when faced with problems (Adipat *et al.*, 2011). The inconvenience of smartphones in this regard may cause consumers to switch to non-mobile devices to interact more efficiently with the platform, thus allowing their personal needs and desires to be met by the ECP (de Haan *et al.*, 2018). Such a rational way of addressing users’ emotional concerns through the relatively controlled web use context to some extent challenges the goodness-of-fit model and the stressor-support matching theory in the understanding of establishing the “Controllable-Instrumental” and “Uncontrollable-Emotional” pairings (Forsythe and Compas, 1987; Cutrona, 1990).

Third, the relationship between consumer commitment and online review intention is confirmed to be significantly positive, which is aligned with the relationship between commitment and contribution revealed in the past organizational and community research (Harrison-Walker, 2001; Ma and Chan, 2014). Going beyond the concerns of these studies, we further derive that the correlation between consumer commitment and online review intention is greater in the mobile use context compared with the web use context.

Our findings on this moderating effect support the former one of the two major contrasting arguments between devices and online reviews, i.e. the “accessibility argument” (Ghose and Han, 2011) vs the “usability argument” (de Haan *et al.*, 2018). It is also found that consumer commitment mediates the effect of platform design on online review intention in an ECP. Consumer commitment directly influences online review intention, partially mediates the relationship between copresence and online review intention and fully mediates the relationships between functionality, convenience, media richness, empathy and online review intention. E-commerce consumers can easily turn to the alternative ECPs (Chang *et al.*, 2017), hence, promoting strong cohesiveness and a sense of belonging among the members and building member commitment are critical tasks for many platforms and communities. This finding supports the conclusions drawn on other situations in previous studies, which is, commitment mediates between the antecedent and consequence variables to maintain the relationship between organizations, platforms or communities and their members (Kuo and Feng, 2013; Hashim and Tan, 2015).

Finally, the results regarding the control variables indicate that gender and online shopping experience significantly influence consumer commitment, and age is positively related to online review intention for the web context, whereas income and education have insignificant impacts. This finding demonstrates that the male consumers will have a higher commitment to an ECP compared with the female consumers, possibly because the females’ lower self-efficacy of IT skill makes them tend to exert greater concerns for risk of online service and undergo anxiety (Im *et al.*, 2008), which further retard them to become loyal consumers and expend more decisions to try new services (Sanchez-Franco *et al.*, 2009). The online shopping experience has been identified by previous studies as a factor influencing consumer’s online satisfaction (Yoon *et al.*, 2013). In this study, the result indicates a significantly positive link between online shopping experience and consumer commitment, that is, experienced online shopping veteran has a higher consumer commitment than online shopping novice, which is consistent with Rodgers *et al.* (2005). The older consumers are more willing to comment on the web platform, probably because some of them still keep the habit of using the PC and are more proficient in expressing their opinions on the web.

7. Conclusion

7.1 Theoretical implications

The current study provides several theoretical implications. First, this study identifies a new mechanism for consumers’ intention to post online reviews in ECPs. Although the antecedents of online reviews have been intensively studied in the past literature, where some platform-related factors such as platform assistant (Hennig-Thurau *et al.*, 2004), and individual-related motivators like perceived pressure (Picazo-Vela *et al.*, 2010), have been proposed, the mechanism through which the platform and the individual factors jointly contribute to consumers’ online review intention remains unclear. This study considers consumer online review as a form of value co-creation (Shin *et al.*, 2020) and draws on the association between commitment and value co-creation behaviors in the field of organizational studies (Bishop *et al.*, 2000) to relate consumer commitment as an antecedent to online review intentions, which extends the existing literature on the understanding of the antecedents of online reviews. Given the role of ECP as the possible only interface between consumers and e-commerce firms (Song and Zahedi, 2001) and the importance of design for IS (Xiao *et al.*, 2021), we further explore the explanatory variables for consumer commitment building from the unique perspective of platform design. The relationships among platform design, consumer commitment and online review intention are characterized by establishing a theoretical model based on the SOR framework. Thus, this study provides additional insights that can augment the SOR theory literature by

demonstrating how consumer commitment is established from platform design factors and affects behavioral intentions of e-commerce consumers in terms of online review intention.

Second, another major contribution of this study is that we advance the knowledge of dual-platform e-commerce by identifying and comparing the two categories of use contexts, i.e. web and mobile. Although many e-commerce companies adopt websites and mobile apps to provide services in parallel and research concerning the multichannel environment of e-commerce is increasing recently, there is still an evident gap between theoretical research and practice. The majority of current studies, to our knowledge, fail to document the different characteristics of each individual sub-platform (Sinisalo, 2011). This work provides an understanding of how the mobile platform is different from the web platform. Specifically, through the empirical test we find that in the website platform, the significances of design on functionality and media richness for consumer commitment are greater than in the mobile platform, where well design in terms of convenience and copresence is more valuable. This to some extent mirrors the meta-motivation of consumers to use different platforms (Deng and Poole, 2010), i.e. different metamotivational states bring about different psychological effects. Empathy design is important for both platforms, and consumer commitment has a greater impact on online review intention in the mobile context, which supports the “accessibility argument” in the online review intention debate (Ghose and Han, 2011). Thus, this work contributes to the e-commerce literature by addressing the existing gaps in prior studies where the effects of some antecedents of consumer commitment remain mixed. We provide a clear boundary condition for explaining the mechanism of platform design factors to affect consumer commitment as well as consumer commitment to influence online review intention.

Third, we extend the application of the social support theory in the field of ECP design by identifying factors from the design of the user interface affecting consumer’s perception and behavioral intention to the platform. Although previous studies have extensively documented various design-related predictors of IS adoption (Xiao, 2021), there is yet a lack of a systematic classification of these predictors in the information system design. The social support theory has been increasingly studied in the field of IS and e-commerce recently (Zhang *et al.*, 2018a), and some researchers have explored the impact of social support provided by websites or mobile platforms on user’s behaviors and intentions, such as Liang *et al.* (2011) and Deng and Liu (2017). However, most of the extant studies test the social support directly or the conceptual dimensions of social support, e.g. tangible support, esteem support, appraisal support and emotional support (Deng and Liu, 2017), as model constructs. This study contributes to the social support theory by categorizing the identified design-related predictors into instrumental support (i.e. functionality, convenience and media richness) and socio-emotional support (copresence and empathy) as antecedents affecting consumer commitment, which provides a systematic and operationalized description for specific platform design elements.

7.2 Managerial implications

The results hold implications for managerial practice. First, in a highly competitive marketplace, managers of ECPs not only expect to retain loyal customers but also desire to hear the voices of consumers and gain valuable insights (Yang *et al.*, 2019). To inspire consumers throughout their journey and create repeat business is a critical priority for an ECP’s survival (Herhausen *et al.*, 2019). To achieve such a goal, our study proposes and validates a chain of “platform design – consumer commitment – review intention,” which prompts ECP managers to provide their consumers with comprehensive support during their platform journey by focusing on the design of the platform so that they can go beyond loyalty to build consumer commitment and create higher value with the business. As such, our results inform ECP managers that it is worthwhile and rewarding to invest in the platform

optimization design to engineer consumer journeys that go beyond merely completing the shopping functionalities. The ECP managers should do everything possible to enable their consumers to build commitment to the platform through a variety of approaches. We recommend that the platforms not only grant more price discounts and better customer care for the loyal customers who make repeat purchases but, more importantly, provide more incentives for the committed consumers who make a voice in the development of the platform and its products/services.

Second, e-commerce companies have made significant attempts to integrate the new technologies into ECPs to create personalized and efficient shopping experiences, such as virtual reality, augmented reality, voice/image search, social media plugins, AI-driven assistants, etc. (Omar *et al.*, 2021), which enhance the functionality, convenience and media richness of the platforms to varying degrees and allow the consumers to feel copresence with others and caring from the platforms. Our findings on the comparison of the mobile and the web contexts remind the ECP managers and designers to be mindful of the differences between platforms in implementing these emerging technologies. The web platform should focus on providing complete functionalities and rich communication mediums, while in the mobile platform, these are not the most important. It is more critical to respond to the user needs in a shorter period and improve the efficiency of user interaction with the platform; for example, more considerations are invested to optimize the design of product navigation, interface layout and interaction mode.

Third, our unsupported hypothesis regarding the construct of empathy also yields valuable implications. Interestingly, empathy as an emotional need does not build consumer commitment significantly less in the controlled web use context than in the mobile context, suggesting that the web platform is a non-negligible medium for the consumers to communicate their emotional concerns with the platform and deserves the attention of the ECP managers. While there are radical opinions that mobile shopping platforms will completely replace shopping websites, our empirical results tell us that this is not the case, at least for now. When the results of the moderating effect of use context on consumer commitment and online review intention are taken into account, it could be speculated that the consumers tend to use cell phones when posting simple reviews and are still more likely to choose the web platforms when they encounter problems that require complex interactions with the platform. The web version of ECP should NOT be abandoned.

Moreover, when testing the effect of the control variables, we find gender and online shopping experience to have significant impacts on consumer commitment. The male consumers have higher consumer commitment than the females, and the online shopping “older drivers” are more inclined to establish a long-term relationship with the platform than the rookies. Hence, the platform should consider how to develop effective strategies to capture the favor of female consumers and new users. For example, to provide them with personalized platform visual style, promotional campaigns, coupons and accurate recommendations. Of course, all these cannot infringe the rights and interests of the male consumers and the old users, avoiding the embarrassment of “big data discrimination.”

7.3 Limitations and future research

Although this study provides valuable enlightenment for both researchers and practitioners of ECP, there are still certain limitations. First, in terms of the empirical data used in this study, it mainly comes from the survey of consumers' usage of ECPs in China. Our samples indeed exhibit various consumers in terms of gender, age, education, income and online shopping experience; however, if the number of samples can be increased and samples from other countries or regions can be included, the representativeness of samples can be improved, and the robustness and generalization ability of the research findings can be

verified meanwhile. Second, our research model is tested relying on a subjective survey including self-reported perceptions and intentions. This kind of data may potentially induce biases and suffer from typical weakness of any intention versus actual behavior. Objective measures that capture consumer's actual online shopping, visiting and reviewing behavior would enhance the persuasiveness of results. Third, for the purpose of proposing a parsimonious model to explain the antecedents and consequences of consumer commitment, we only single out five platform design factors as the stimuli and identify online review intention as the response to the organism that can be measured from the consumer's perspective. However, various factors such as the reward mechanisms may affect consumer commitment and online review intention and some behaviors such as offline word-of-mouth can also be regarded as the outcome of consumer commitment. The proposed model explains 43.4% variance of consumer commitment and 30.8% of online review intention, the explanatory ability of which can be improved by replenishing new variables to the model.

Our findings raise some possible concerns for future studies. First, we only consider the two most typical use contexts under the dual-platform environment of e-commerce, namely, the web and the mobile. Actually, there are many use contexts that can be included to analyze the impacts of platform design. For example, future research can test the use contexts in terms of time (weekday vs. weekend), location (at home vs. at office) and so on. Even more subtle situations can be investigated, as [Einav et al. \(2014\)](#) indicate that consumers use eBay on mobile devices even if at home to find the products through the app rather than through the general Internet search. The breakthrough of emerging technologies, such as the 5G and virtual reality, may also catalyze the emergence of new use contexts, which would bring new topics for the design of ECPs.

Second, we deem instrumental support and socio-emotional support as two main stimuli of consumer commitment. However, these two categories of support are still ambiguous and can be specified. For example, [Deng and Liu \(2017\)](#) identified four types of social support from mobile social media websites, i.e. tangible support, esteem support, appraisal support and emotional support. The influence of design features in terms of these support on consumer commitment and behavioral intention can be explored further.

Third, this work does not consider the type of product that consumers buy from the ECP. However, the usage patterns across e-channels might vary for various product categories ([Schramm-Klein and Wagner, 2014](#)). An investigation that involves multifarious products is expected to yield richer insights on how the design of ECPs would vary across different categories of products.

Finally, similar to many other empirical studies in the IS field, the findings are derived from a one-shot correlational study, which fails to explain the casual directions among the latent constructs. In the future, the proposed relationships can be tested in experimental settings by developing prototype interfaces and manipulating the levels of design features or in natural experimental contexts to identify the causal effects of design features through econometrics and statistical approaches such as the difference-in-differences. Researchers can also examine whether the "backfire effect" would arise if the consumers perceive an ECP to be too feature-rich, ubiquitous and considerate.

Notes

1. The mobile platform in this study does not include "mobile website," which is built via website technology and can be accessed on mobile devices. As indicated by [Einav et al. \(2014\)](#), mobile website only accounts for 1.4% of total eBay purchases.
2. $S_{pooled} = \sqrt{\{[(N_1 - 1)/(N_1 + N_2 - 2)] \times SE_1^2 + [(N_2 - 1)/(N_1 + N_2 - 2)] \times SE_2^2\}}$;
 $t = (PC_1 - PC_2) / [S_{pooled} \times \sqrt{1/N_1 + 1/N_2}]$, where S_{pooled} is the pooled estimator for the variance;
 t is t -statistic with $(N_1 + N_2 - 2)$ degree of freedom; N_i is the sample size of dataset for group i ;

SE_i is the standard error of path in the structural model of group i ; PC is the path coefficient in the structural model of group i .

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Context	Dependent variable	Mediating mechanism	Antecedent factor		Individual	Product/ Review feature	Source
			Platform	Platform			
Consumer opinion platform	eWOM intention	N/A	N/A	N/A	Reputation, reciprocity, sense of belonging, enjoyment of helping moral obligation, knowledge self-efficacy	N/A	Cheung and Lee (2012)
Restaurant rating	Intention to write online reviews	N/A	N/A	N/A	Perceived behavioral control, subjective norms, ego involvement, taking vengeance	N/A	Dixit <i>et al.</i> (2019)
Online shopping	Intention to provide an online review	N/A	N/A	N/A	Attitude, perceived pressure, neuroticism, conscientiousness	N/A	Pkcazo-Vela <i>et al.</i> (2010)
Reputation system	Praise feedback behavior	N/A	N/A	N/A	Fear of confrontation, incentive for reducing nuisance costs	N/A	Li <i>et al.</i> (2016)
Online travel reviews	eWOM writing	Satisfaction	N/A	N/A	Online expectation confirmation, offline expectation confirmation	N/A	Nam <i>et al.</i> (2020)
Consumer opinion platform	eWOM behavior	N/A	Platform assistant	N/A	Venting negative feelings, concern for other consumers, Self-enhancement, social benefits, economic incentives, helping the company, advice seeking	N/A	Hennig-Thurau <i>et al.</i> (2004)
Mobile instant messaging	Positive WOM	Pleasure/Arousal	Socialness perception, Media richness	N/A	Involvement	N/A	Vazquez <i>et al.</i> (2017)
Online travel website	Online review generation	N/A	Communication channel	N/A	N/A	N/A	Kim <i>et al.</i> (2021)
Online travel agency	Consumer review-posting behavior	Perceived Cost	Characteristics of mobile devices	N/A	N/A	N/A	Kim <i>et al.</i> (2020)
Online travel agency	Online review posting	N/A	N/A	Expertise	N/A	Number of digest reviews	Liu <i>et al.</i> (2019)
Online product review forums	Online review contribution	N/A	N/A	N/A	N/A	Products' popularity	Dellarocas <i>et al.</i> (2010)

Table A1. Studies on antecedents of online review behavior/intention

Context	Commitment variable	Antecedent	Outcome	Source
Organizational studies	Organizational commitment	Job satisfaction, environmental alternatives, job tension, need achievement, centralization, motivating potential score, leader reward behavior, leader punishment behavior	N/A	Bateman and Strasser (1984)
Organizational studies	Organizational commitment	Personal/ job characteristics, work experiences	Desire to remain, intention to remain, attendance, employee retention, job performance	Steers (1977)
Manufacturing team	Organizational/ team commitment	Perceived organizational/team support	Intention to quit, organizational citizenship behaviors, job performance	Bishop <i>et al.</i> (2000)
Organizational knowledge sharing	Commitment	CMC use	Knowledge donating/collecting	van den Hooff and de Leeuw van Weenen (2004)
Employee management	Affective organizational commitment	Job satisfaction, customer-linkage satisfaction	Citizenship behaviors, customer-linkage behaviors	Paulin <i>et al.</i> (2006)
Marketing	Relationship commitment	Communication effectiveness, functional quality, technical quality	N/A	Sharma and Patterson (1999)
Technology-mediated services	Commitment	Satisfaction	Brand loyalty	Giovanis and Athanasopoulou (2018)
Hotel service	Affective/ normative/ continuance commitment	Employee trust, employee satisfaction	Attitudinal loyalty, behavioral loyalty	Yao <i>et al.</i> (2019)
Branded retailing	Affective/ calculative commitment	Customer brand experience	Brand loyalty	Khan <i>et al.</i> (2020)
Luxury brands	Affective/ Calculative/ Normative commitment	Social switching cost, service quality, trust, lost benefit cost, alternative attractiveness, subject norm	Consumption satisfaction, advocacy intention	Shukla <i>et al.</i> (2016)
Banking brand experience	Customer affective commitment	Sensory brand experience, customer satisfaction	Brand equity	Iglesias <i>et al.</i> (2019)
Virtual brand community	Commitment	Economic/Hedonic benefits	Brand relationship quality, WOM	Akrouf and Nagy (2018)

Table A2.
Studies on antecedents
and outcomes of
commitment

(continued)

Context	Commitment variable	Antecedent	Outcome	Source
Online brand community	Community commitment	Needs-supplies fit, demands-abilities fit	Willingness to contribute	Shen <i>et al.</i> (2018)
B2B manufacturing	Customer commitment	Customer trust, customer identification	Purchase intention, price premium	Keh and Xie (2009)
Smart technology	Commitment to learn	N/A	Behavioral intention, customer participation	Foroudi <i>et al.</i> (2018)
Cross-border m-commerce	Relationship commitment	Trust, satisfaction, investment size, relationship benefit	Intention to use	Cui <i>et al.</i> (2020)

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