Task facilitative tools, choice goals, and risk averseness: A process-view study of e-stores ☆

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ABSTRACT

Although the effects of interactivity and personalization tools on the browsing experience are the subject of previous research, relatively little research focuses on the effect of variable levels of such features on buyers' evaluations of choice goals. To address this gap, this study conducts an experiment with 273 participants to examine these relationships in the context of complex, high-risk purchase situations where the seller is new to the market and buyers demonstrate variable risk averseness. Findings identify a positive association between website design features and browsing outcomes. The study provides direction on determining the combination of website features according to buyer characteristics.

1. Introduction

A key challenge for internet-based retail start-ups is how to make their e-store a destination for customers, encourage them to browse the site longer, and increase the probability of purchase (Wang, Hernandez, & Minor, 2010). A recent industry report suggests that the browser-to-buyer conversion rate is as low as 3% for e-stores (Marketing Sherpa, 2012). New e-retailers that enter into the electronic marketplace every day find this situation more challenging because such e-retailers have limited product offerings, have no established brand image from their previous ventures, and customers do not know them. Research suggests that e-retailers often use two task-facilitative tools (interactivity and personalization) to assist browsers to access information about the product/service they intend to purchase, perform the task of assimilating this information and take necessary purchase decisions.

Interactivity tools assist browsers to communicate with the seller and engage in information search (Kim, Spielmann, & McMillan, 2012; Liu & Shrum, 2009; Song & Zinkhan, 2008). Personalization tools allow browsers to tailor the information and content of the website according to their requirements (Aguirre, Mahr, Grewal, de Ruyter, & Wetzels, 2015; Al-Qeisi, Dennis, Alamanos, & Jayawardhena, 2014; Ansari & Mela, 2003). As new-to-market e-retailers often have limited resources to spend on brand building activities, adopting these tools to enhance the stickiness of their website is crucial in establishing a relationship with the prospective buyers. The literature on information control emphasizes that the effectiveness of such tools depends on their ability to help users with their information search, assimilation of information, evaluation of choices, and decision making (Ariely, 2000; Heitmann, Lehman, & Herrman, 2007). Hence, presenting an array of decision-making tools regardless of individual user's requirements might create information overload, a sense of frustration, doubt about the seller's assistive intent, and higher evaluative cost of decision-making (Gupta, Yadav, & Vadarajan, 2009; Heitmann et al., 2007). However, little research explores how task-facilitative tools can influence prospective buyers' evaluation costs.

Research on consumer choice processing proposes that consumers try to achieve a hierarchy of goals when making their product selections (Bettman, Luce, & Payne, 1998; Heitmann et al., 2007). This work classifies goals as either approach goals where the consumers try to maximize the accuracy of their choice (choice confidence) and ease of justification in decision-making (justifiability) or avoidance goals where customers try to minimize the experience of negative emotions (negative affect) and anticipation of regret in decision making (anticipated regret). Although retail research highlights the role of such goals in post-purchase behavior such as spending more money or less money with the store (Arnold & Reynolds, 2012), little research focuses

on choice goals in the e-retail setting and particularly in the pre-purchase stage of decision making.

Gupta et al.'s (2009) work on information search argues that the effectiveness of task-facilitative tools depends on buyers' characteristics such as their ability to grasp the nuances of such features, their experience of using web design tools, and their involvement with the product type. As a result, presenting a wide selection of design tools might be beneficial for some users and a source of hindrance to others. However, in the case of a new or unfamiliar e-retailer, simply offering a balanced mix of task-facilitative tools to reduce the users' choice-evaluation costs is not enough because users might find better alternatives from more established and well-known e-stores. Therefore, understanding the potential impact of an individual's risk averseness on the effects of these tools is also important for the e-retailer to attract first-time users and encourage them to navigate their site.

Therefore this study has three objectives: (1) to understand the role of task-facilitative design tools (interactivity and personalization) on users' choice-evaluation costs for new-to-market e-retailers; (2) to understand how user's choice-evaluation costs might influence approach or avoidance goal orientations in the pre-purchase decision-making phase; and (3) to explore the moderating role of users' risk averseness on the relationship between task-facilitative tools and users' choice-evaluation costs. To explore these objectives, this research uses an experimental setup where users experience e-stores with varying levels of interactivity and personalization tools and pursue a specific task of choosing a high-involvement product to purchase. Following this introduction, Section 2 reviews the literature and develops the hypotheses. Section 3 describes the research method. Section 4 presents the findings. Section 5 offers a discussion of the findings together with their implications, limitations, and suggestions for future research.

2. Literature review and hypotheses development

A website requires a significant level of investment and effort to support the buying decision-making process (O'Keefe & McEachern, 1998). This study focuses solely on how interactivity and personalization tools that firms make available to users can facilitate information search and evaluation during the pre-purchase stage of this process for first-time browsers. Both types of tool attract the attention of researchers from marketing, human-computer interaction, and information systems disciplines (Chung & Zhao, 2004).

Fig. 1 presents a model to help to explain how interactivity and personalization tools affect browsing outcomes of first-time visitors of a new-to-market e-store. The model is based on Mehrabian and Russell's (1974) Stimulus–Organism–Response (S–O–R) paradigm. The authors develop this paradigm originally in environmental psychology to study the effects of physical stimuli on human emotions and

response behaviors, whereas other authors subsequently apply the paradigm in a retailing context to examine the effects of store atmosphere on shopping behavior (Donovan & Rossiter, 1982). More recently, several researchers adopt this paradigm to examine the effects of online website stimuli on consumer behavior (Eroglu, Machleit, & Davis, 2001; Richard, 2005; Wang et al., 2010). Fig. 1 suggests that interactivity and personalization tools (i.e. stimulus) can influence cognitive and affective internal states during pre-purchase decision making (i.e. organism), which in turn influence their goal orientation in terms of approach or avoidance behaviors toward the e-store (i.e., response). The next section provides justification for this model.

Task-facilitative tools influence the way users evaluate the information and make their product choice. Higher levels of web-design tools signify a higher perceived investment from the e-retailer, which induces a superior trusting belief toward the e-store (Gupta et al., 2009; Schlosser, White, & Lloyd, 2006). Song and Zinkhan (2008) propose that higher levels of web design features improve user satisfaction and attitude toward the website. Therefore, this study argues that higher levels of interactivity and personalization tools act as decision aids, improve the seller's intention to assist in users' decision-making and reduce their choice-evaluation costs.

H1a. The presence of website-design features that offer a high level of interactivity (as compared to a low level) reduces users' choice-evaluation costs.

H1b. The presence of website design features that offer a high level of personalization (as compared to a low level) reduces users' choice-evaluation costs.

Next, novice e-retailers must foster a sense of decision satisfaction among browsers, which will depend on the attainment of choice goals (approach versus avoidance goals) and the choice set that the seller provides (Heitmann et al., 2007). Markman and Brendl (2000) define goals as "representational structures that guide the system in its pursuit of a reference or end state" (p. 98). According to theories of regulatory self-focus, when people compare their current state with their end state and identify a gap between these states, they seek to resolve this discrepancy by approaching desired end states and avoiding undesired ones (Higgins, 1998). Although an individual's regulatory focus can reflect a personality trait, this study focuses solely on its representation as a situational feature. Higgins (1998) observation of the analysis of desired goals in terms of goals that focus on attaining positive outcomes (promotion goals) and those that focus on avoiding negative outcomes (prevention goals) offers a novel way for predicting consumers' behavior when they are evaluating products or making purchasing decisions. Building on the notion of 'regulatory fit', which individuals experience
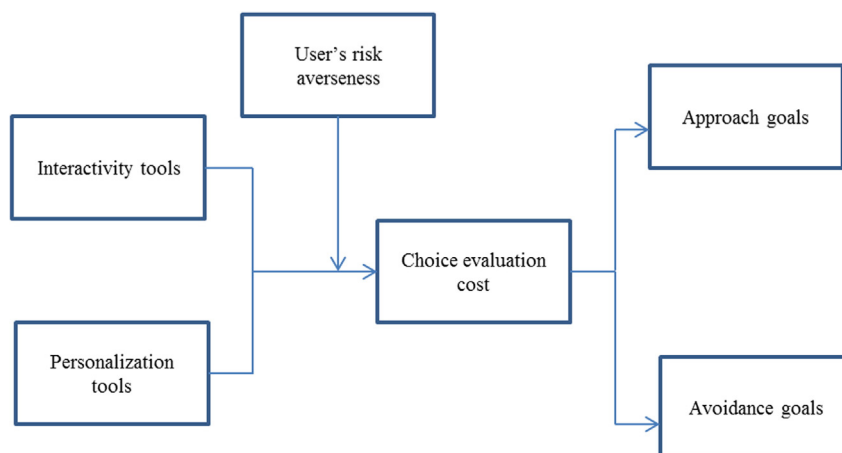

Fig. 1. Conceptual framework.