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The role of sunk costs in online consumer decision-making

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ABSTRACT

Sunk costs, which can cause inconsistencies between consumer behavior and economic theory, have been widely studied in different research areas and among various consumer groups. Nevertheless, the authors found that to date there has been no empirical research examining how sunk costs affect consumer behavior with regard to online shopping in different product types. Therefore, this study used the following $2 \times 2 \times 2$ experimental design to study the effects of sunk costs on consumers' online shopping decisions. The results show that (1) sunk costs have significant effects on consumer online shopping behavior. However, due to the different product characteristics, the impacts were weaker effective when consumers bought search goods than when they purchased experience goods; (2) the sunk costs (Membership fee vs. Deposit) of an initial choice and a new choice had interaction effects on consumer intention to purchase a new product; and (3) the sunk costs and service quality of an initial choice and new choice would affect the level of regret felt with regard to the consumer's initial choice. In addition, some recommendations on market positioning and service quality design are made, which practitioners can refer to when formulating marketing strategies.

1. Introduction

Previous studies have found that sunk costs can cause inconsistencies between economic theory and actual consumer behavior (Thaler 1985). According to economic theory, a rational consumer makes a purchase decision based on the incremental cost or interest, and will forgo the time, effort, money, and other costs that s/he has previously invested in the purchase because the latter are sunk costs that cannot be reversed (Arkes and Hutzel 2000, Dick and Lord 1998, Soman and Cheema 2001). Therefore, a cost or investment that has been incurred in the past should not influence present decision-making. Nevertheless, many scholars (e.g., Kwak and Park 2008) have noted that sunk costs/investments typically have significant effects on actual consumption/investment behavior. In other words, people typically consider the irreversible sunk costs that are associated with a particular transaction when they make a purchase decision (Arkes and Blumer 1985, Dick and Lord 1998, Soman and Cheema 2001), and thus these costs generate commitments to prior choices.

Sunk costs have been observed to have strong effects on consumer choices and behavior in different areas and among various consumer groups. For example, Arkes and Blumer (1985) noted that after consumers paid non-refundable fees to two different leisure centers, Michigan and Wisconsin, although most preferred the latter, they still chose the former, even though it charged higher fees and provided a lower level of expected utility. In another case, Kwak and Park (2008) conducted an experiment to investigate the willingness of people to attend an outdoor concert. In one setting, people were required to pay a certain amount (sunk cost condition), whereas in the other setting, they were admitted free of charge (no sunk cost condition). The results indicated that the respondents who had paid the fee were significantly more likely to attend the concert than those who were admitted for free. Many important research results related to the effects of sunk costs have been obtained in the areas of consumer purchases (Heath and Soll 1996), consumer decision-making (Gourville and Soman 1998), market concentration (Li et al. 2008), buyer–supplier relationship stability (Huang et al. 2011), and management decision-making (Park et al. 2010, Biyalagorsky et al. 1998) in traditional consumption platforms.

In contrast, Internet shopping is emerging as one of the most important vehicles for transactions between buyers and sellers (Chen et al. 2009, Chen et al. 2010, Su 2008). Scholars have discussed consumers' online buying behavior from a number of different perspectives, examining price and bidding strategies with regard to online auctions (Korgaonkar et al. 2010), the relationships between the perceived convenience of shopping offline, product types, and purchase intentions (Chiang and Dholakia

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2003), and the relationships between information direction, website reputation, and electronic word-of-mouth (e-WOM) (Park and Lee 2009). However, the theory of sunk costs has been rarely applied in studies of consumer behavior in an online shopping context, although Coleman (2009) did examine their effects on users of online dating sites. Latcovich and Smith (2001) argued that the Internet allows consumer to search for information at very low, or even no cost, and that the absence of spatial product differentiation in an online context promotes competitive pricing. Some researchers have also noted that the influence of product characteristics on consumer responses, i.e., the type of products sold online and consumer behavior toward these, remains relatively unexplored (Reynolds et al. 2009, Korgaonkar et al. 2010). Past studies have indicated that common online search goods include 3C (computer, communication and consumer electronic) products (Korgaonkar et al. 2010), books (Chiang and Dholakia 2003, Park and Lee 2009), and tickets services (Hsieh et al. 2005). Online experience goods include perfume (Chiang and Dholakia 2003) and hotel and information services (Hsieh et al. 2005). This study thus chose online novel reading services (a search good) and B&B reservations (an experience good) as the focal products in its experiments.[1]

As mentioned above, while the concept of sunk costs has been widely applied in considering consumer choices in traditional consumption platforms, no empirical studies have compared their effects on consumer decision-making for different product types in an online context. This study thus adopted the sunk cost perspective to examine online consumer decision-making and perceptions of different products. Based on the definition of product types developed by Nelson (1974), online novels (Study 1: the search good) and bed and breakfast (B&B) rooms (Study 2: the experience good) were chosen as the focal products to examine how sunk costs affect consumers' initial (new) choices and their subsequent level of regret. In addition, using the definition of sunk costs presented by Jang et al. (2007), while keeping in mind the specific features of online novels and B&B guesthouses, we identified the sunk costs in this work as the ''membership fee'' (Study 1) and the ''deposit'' (Study 2). Finally, to examine how sunk costs affect different groups, college students were the subjects in Study 1, whereas workers were the subjects in Study 2.

2. Literature

2.1. Sunk costs

Sunk costs are costs that have already been incurred and cannot be reversed, and thus they are a type of stranded cost. Thaler (1980) proposed that when sunk costs are used as a payment for goods or services would increase the frequency of use for such goods or services. Thaler (1980) also found that customers who had bought tickets for a sports match had a higher attendance rate than those who had received free ones, even in bad weather. This violates the theoretical principle that rational consumers should make decisions by measuring the marginal costs (e.g., gasoline costs and discomfort) against the benefits (e.g., pleasure) that they might encounter when watching a game in bad weather, rather than only considering the cost of the tickets.

[1] Online novel reading websites provide a platform that enables users to read novels online, using a variety of devices, such a PCs, tablets and smartphones. Online novels are chosen as the search good as consumers can collect more information about them by interacting with other community members on the related website, and thus make more considered decisions. In contrast, information about specific B&Bs is relatively difficult to acquire, and often cannot be known until after a consumer has actually completed their stay, and thus B&Bs are chosen as the experience good.

In addition, Prelec and Loewenstein (1998) defined the connection between transaction costs and benefits as ''coupling''. When consumers buy goods, the sales price is the transaction cost, whereas the utility that accrues from the purchase is the benefits. Consumers use the benefits that they have gained from using a good to compensate for the purchasing cost. If consumers do not use the purchased item, they will thus feel as though they have given up the related benefits, and will feel regret due to their inability to compensate for the loss of the money that they have already spent (Gourville and Soman 1998). In contrast, to avoid feeling that they have wasted money after a purchase, consumers will choose to use the purchased item (Okada 2001). Studies on consumer decision making indicate that people often fall victim to the so-called sunk cost effect (Arkes and Blumer 1985, Garland 1990, Garland and Newport 1991), which violates the basic economic principle that sunk costs should have nothing to do with the present decision-making (Frank 1994). More specifically, consumers' purchasing decisions should rely on the marginal costs and benefits of the product choices, and thus sunk costs should not affect subsequent purchasing decisions or consumer attitudes (Dick and Lord 1998). However, previous research clearly indicates that consumers often consider previous investments (i.e., the sunk costs) and become willing to invest additional resources, which results in incorrect decisions (e.g., Arkes and Blumer 1985, Arkes and Hutzel 2000, Kahneman and Tversky 1984).

Based on the above findings, it can be concluded that people are affected by sunk costs because (1) they will look for any opportunity to rectify a previous, incorrect decision (Kahneman and Tversky 1979); (2) they do not want to waste money (Arkes 1996); (3) they want to prove that their previous decisions were correct (Brockner 1992); and (4) they are unwilling to face the reality that they can never fully recover the benefits of their investment (Thaler 1980). Thaler (1985) thus suggested that payment for goods or services will increase the tendency of consumers to use these goods or services in the future, a conclusion that appears in a number of sunk cost studies (e.g., McElhinney and Proctor 2005, Staw and Hoang 1995). For example, Dick and Lord (1998) found that people who have paid membership fees will try to justify their decision and show a stronger attitudinal preference for the stores at which they are members than will non-members. Again, this study will identify the membership fee (Study 1) and deposit (Study 2) as the sunk costs, and it is expected that consumers who have paid a membership fee or deposit will remain loyal to their initial choices, even when they learn about higher-quality products or products offered by a lower priced membership program. Based on this, the following hypothesis is proposed:

H1. Due to the sunk cost (membership fee and/or deposit) effect, consumers will remain loyal to their initial choices (online novel A or B&B A), even when a competitor offers a higher-quality product or lower priced membership program.

Using switching barriers as an example, Patterson and Smith (2003) claimed that searching for service suppliers would generate switching costs (a type of sunk cost), including psychological, physical, and economic costs. Switching costs thus provide service suppliers with opportunities to maintain relationships, commitment, loyalty, and satisfaction (Shang et al. 2006). Using chain banking services as an example, Chebat et al. (2011) noted that switching costs are a type of sunk cost, and that as these increase they will directly reduce switching behavior. Jang et al. (2007) argued that higher membership fees ($100 vs. $10) will produce a higher switching barrier, resulting in more commitment to the initial choice. In other words, people that have paid higher costs in the past and feel that they have made higher expenditures will