Effect of Consumer Beliefs on Online Purchase Behavior: The Influence of Demographic Characteristics and Consumption Values ☆

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Abstract

The three most common beliefs that consumers have about shopping online are that it saves time, saves money and helps find products that best match needs. But how do these beliefs, either individually or in combination, influence online purchase behavior? The premise of the article is that the effect of beliefs on online purchase behavior is moderated by demographic characteristics such as income, education, and generational age, and by consumption values such as the inclination to consider many alternatives before making a choice, the enjoyment of shopping, and the tendency to research products prior to making a purchase. The findings on how beliefs and consumption values influence purchase behavior can assist online retailers formulate product positioning strategies that create more value for consumer segments through better customization, thereby enhancing retailer profits. The findings can also help public policy makers design communication strategies to help lower-income consumers realize the same benefits of e-commerce as their higher-income counterparts.
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Due to the rapid growth of e-commerce, consumer purchase decisions are increasingly being made in online stores. In the 12 years that the U.S. Census Bureau has kept track, e-commerce sales have grown at a double-digit rate from $5 billion in 1998 to an estimated $160 billion in 2010 (http://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf). Based on the latest statistics, e-commerce sales registered a 14% increase in 3Q 2010 in comparison to a 4.0% increase in overall retail sales for the same period. Web-based stores offer immense choice and provide a "virtual" shopping experience that is more real-world than ever before, through the use interactive video, animation, flash, zoom, 3-D rotating images, and "live" online assistance.

Shopping on the Internet is commonplace. For example, in 2007, nearly 60% of American consumers used the Internet to research products, while 50% made an online purchase. The Internet has made it easier for consumers to search for the best price when that is most important due to the profusion of merchants on the Web (Brynjolfsson and Smith 2000). The large selections offered by these merchants coupled with the ability of consumers to navigate through these product assortments have also made it easier to search for the best product fit (i.e., the match between product attributes and consumer needs) when that is most important. A study of new car buyers showed that consumers who shopped online paid $450 less (on average) for their purchases (Scott Morton, Zettelmeyer, and Silva-Risso 2001). The increased variety provided by online merchants has given rise to the long-tail phenomenon (Brynjolfsson, Hu, and Smith 2006), where even the most demanding consumers can find products that closely match their needs. But the extent to which consumers realize these benefits depends on the beliefs they have about e-shopping, their demographic characteristics and their consumption values.

According to a 2008 report on "Online Shopping" from Pew Internet & American Life Project, the top three beliefs that consumers have about online shopping relate to saving time,

finding a low price, and obtaining the best product fit, i.e., the match between product attributes and consumer needs (Horrigan 2008). Consumer beliefs can relate to either the benefits of online search or the costs of online search or both. Who are the consumers whose beliefs relate more to the cost of search (e.g., saving time) compared to those whose beliefs relate more to the benefit of search (e.g., finding a low price or obtaining the best product fit)? For example, do consumers with more income believe that online shopping saves times to a greater extent than their lower-income counterparts? And to what extent do these beliefs and related consumption values such as shopping enjoyment and the inclination to consider many alternatives before making a choice influence online purchase behavior?

An understanding of how beliefs and consumption values influence purchase behavior can assist online retailers to create more value for consumers thereby reducing their price sensitivity and enhancing retailer margins. Web customization strategies that are consistent with existing belief structures are also likely to enhance customer satisfaction, increase loyalty, and potentially lead to cognitive lock-in (Johnson, Bellman, and Lohse 2003). For example, consumers whose belief structures focus more on saving time could be presented with a customized product assortment generated by an adaptive Web design (Baraglia and Silvestri 2007; Goy, Ardissono, and Petrone 2007) that emphasizes time, convenience and ease of navigation, and de-emphasizes price. On the other hand, the same adaptive Web design could highlight low-priced products for consumers whose belief structures value saving money. Likewise, for consumers whose belief structures relate more to finding the best product fit, an adaptive Web design could be used to highlight the breadth, depth and the variety of the product assortment offered by the online merchant.

On the public policy front, past research indicates that certain segments of consumers may have benefited disproportionately more from the Internet than other groups (Zettelmeyer, Scott Morton, and Silva-Risso 2005; Pauly, Herring, and Song 2002). An understanding of how beliefs and consumption values influence purchase behavior could also be used by public policy makers to formulate communication strategies to help lower-income consumers realize the same benefits of e-commerce as their higher-income counterparts (Baye, Morgan, and Scholten 2003).

Relevant Literature

An important theme in research on online shopping has focused on belief–attitude–intention theories, such as the as the theory of reasoned action (Ajzen and Fishbein 1980), theory of planned behavior (Ajzen 1991), and the technology acceptance model (Davis 1993). The typical findings from these studies are that consumers beliefs relating to the perceived risk of e-shopping, the perceived usefulness, ease of use, and trust in the related Web technology influence online purchase intentions (Hansen, Jensen, and Solgaard 2004; Koufaris 2002; Van der Heijden, Verhagen, and Creemers 2003; Verhoef and Langerak 2001). The focus of the above studies has been on the

factors that influence the consumer decision to adopt online shopping either in conjunction with or as an alternative to traditional retail shopping. What is missing from this stream of research is how the content of beliefs relating to the phenomenon of interest (i.e., online shopping), rather than beliefs about the technology itself (i.e., perceived usefulness, ease of use) influences intentions and behavior.

The theory of consumption values (Sheth, Newman, and Gross 1991) provides an appropriate conceptual framework for filling this knowledge gap because it examines how consumption values and beliefs influence consumer decisions. For instance, how consumers allocate time, money and effort while shopping is a key tenet of the theory and has been mentioned as being "central to an understanding of consumer decision making" (Sheth, Newman, and Gross 1991, p 8). The consumer beliefs examined in this research directly relate to the use of these scarce resources.

A related stream of research on shopping orientations has found that consumer predispositions toward online shopping influence online purchase (Childers et al. 2001; Li, Kuo, and Russell 1999). Based on a review of 65 empirical studies on online shopping, a distinction has been drawn between time-conscious and price-conscious shoppers (Cao and Mokhtarian 2005). To the above classification, we add product-fit conscious consumers as a third category because recent research has found that the adoption of long-tail strategies by online retailers (Brynjolfsson, Hu, and Smith 2006; Hofacker 2008) has made it possible for online shoppers to increasingly focus on finding products that best match needs (Atkinson et al. 2010). The consumer beliefs examined in this research are closely linked to the shopping orientations mentioned above.

Theoretical Approach and Hypotheses

The purpose of the research is to investigate how consumer beliefs about the potential benefits of online shopping (e.g., saving time, saving money, finding a product that matches needs) influence online purchase behavior, and how the relationship between consumer beliefs and online purchase behavior is moderated by consumer characteristics such as income, education, and generational age, and by consumption values such as the inclination to consider many alternatives before making a choice, the enjoyment of shopping, and the tendency to research products prior to making a purchase. As a baseline prediction we expect that all three beliefs examined in this research will be positively related to online purchase behavior. The more important question is how these primary effects are influenced by consumer characteristics and consumption values. A related question is whether consumers who believe that online shopping saves time also believe that it saves money and enables finding products that best match needs? Or is there an implicit trade-off built into consumer belief structures, so that consumers who think that online shopping saves time believe that it saves money to a lesser degree?

To consider both the primary and secondary effects in a comprehensive manner, a cross-disciplinary approach based on