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## The Relationship between Consumer Characteristics and Online Co-design Involvement

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Key words: co-design, consumer characteristics, expectation, involvement

**Introduction.** Co-design process allows consumers to take an active role to co-create the product (Bolton & Saxena-Iyer, 2009). In the process, consumers' individual characteristics and their design ability play a central part (Fiore, Lee, & Kunz, 2004). Thus, consumers' expectations and future involvement in the co-design process are expected to be different based on his or her individual characteristics. Furthermore, consumers may want to involve in co-design process in different ways depending on the product categories. In this regard, we explored various consumer characteristics as influential factors determining consumers' co-design expectations and their desired involvement. The findings will provide insightful perspectives to online co-design service providers who want to develop products satisfying consumers' expectations as well as to encourage consumer involvement.

**Literature Review.** Relevant literatures were reviewed in order to develop measurements for consumer characteristics, co-design expectations, and future involvement (Smith & Schaefer, 1969; Yoo, 2011; Jun, Choo, & Kim, 2010; Fiore et al., 2004). We tested fashion involvement, innovativeness, and creativity as consumer characteristics relative to co-design involvement. According to Jun et al. (2010) fashion involvement and innovativeness are two key consumer characteristics determining apparel consumption. In addition, creativity was tested as another consumer characteristic since the co-design process involves consumers creativity. We also tested the moderating effects of expected cognitive stress co-designing products online and satisfaction with standardized products as these variables are expected to influence consumers' involvement with the online co-design process. Yoo (2011)'s scale regarding consumer attitude toward innovation including cognitive stress and satisfaction with standardized products were adopted. Currently, online co-design websites provide variety of product categories including t-shirts, hoodies, shoes, bags, ties, necklaces, etc. for co-design. Design features and functions undertaking co-design processes online vary depending on product types. Thus, we compared the influence of consumer characteristics on co-design involvement between the product categories, as some of the characteristics may have different influence on the co-design process in different product categories.

**Method.** Upon receipt of approval for use of human subjects, data collection took place via Mechanical Turk, a crowd sourcing Internet marketplace that enables requesters to complete human-intelligence tasks ([www.mturk.com](http://www.mturk.com)). 210 potential consumers of co-design products (age  $m=29.44$ ,  $SD=9.65$ ) voluntarily participated in the online survey for a monetary payment as a human-intelligence task. Participants responded to an online questionnaire containing established measures of the variables under investigation: fashion involvement, innovativeness, creativity, co-design expectations and future involvement. Participants indicated their responses using 7-point scales. Participants also supplied demographic information.

**Results.** Multiple regression analysis was conducted to examine relationships between consumer characteristics (i.e., fashion involvement, innovativeness, and creativity) and co-design expectations and future involvement. Fashion involvement ( $\beta=.257$ ,  $t=5.319$ ,  $p<.001$ ) and innovativeness ( $\beta=.478$ ,  $t=9.957$ ,  $p<.001$ ) positively predicted consumers' co-design expectations ( $R^2=.503$ ,  $F=281.783$ ,  $p<.001$ ). Further, fashion involvement ( $\beta=.171$ ,  $t=3.181$ ,  $p<.01$ ) and innovativeness ( $\beta=.474$ ,  $t=8.903$ ,  $p<.001$ ) also positively predicted consumers' co-design future involvement ( $R^2=.387$ ,  $F=176.176$ ,  $p<.001$ ). Co-design expectations positively predicted future involvement ( $\beta=.852$ ,  $t=47.013$ ,  $p<.001$ ;  $R^2=.725$ ,  $F=2210.197$ ,  $p<.001$ ). However, there was no significant relationship between creativity and co-design variables. Consumers with high fashion involvement and innovativeness have positive expectations for co-design products and online co-design process. Also, consumers who scored high in fashion involvement and innovativeness show greater willingness to participate in online co-design in the future. Furthermore, we tested moderating effects of cognitive stress and satisfaction with standardized products using a median split approach. Expected cognitive stress participating in online co-design process moderated the relationship between fashion involvement and co-design expectations as well as future involvement. Satisfaction with standardized products had a significant moderating effect on the relationship between fashion involvement and future involvement with co-design. Lastly, results of category comparison show that the relationships between consumer characteristics and co-design involvement vary depending on product category (i.e., clothing, bags, shoes, accessories).

**Discussion and Conclusions.** Fashion involvement and innovativeness appear to be influential consumer characteristics determining positive expectations and future involvement toward participating in online co-design process. Thus, consumers' fashion involvement and innovativeness could be used as important information guiding consumer segmentation and strategic target marketing for online websites providing co-design services. Furthermore, co-design service providers should develop marketing strategies to control consumers' cognitive stress in order to encourage consumers to participate in online co-design. Lastly, online co-design service providers should consider consumer characteristics selectively depending on product category they provide.

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