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## **The effect of online visual merchandising cues on consumers' flow experience, satisfaction, and approach/avoidance behavior.**

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Keywords: Flow, Visual Cues, Interactivity, Craftsmanship

**Introduction and Background.** Consumer flow experience in the online environment plays an important role in influencing various marketing outcomes such as exploratory behavior, purchase intention, addictive behavior, positive subjective experience, and perceived usefulness (Hoffman & Novak, 2009). Hsu et al. (2012) defined flow as “a state of optimal psychological experience (Novak et al. 2000) or most enjoyable experience possible when a person is unconsciously engaged in an activity such that she or he becomes so absorbed thereby losing the sense of self (Chung and Tan 2004, p. 753)”. Understanding what specific factors of the online environment that have an impact on consumer flow experience is very important. Consumers almost always rely on visual appeal of the online environment when shopping online (Eroglu et al., 2001). Thus, this study analyzed the effects of online visual merchandising cues on consumer flow experience.

**Theoretical Framework and Hypotheses.** The S-O-R framework (Merabiran & Russell, 1974) is used to analyze the effects of visual merchandising cues on flow experience. Eroglu et al. (2001) stated that, in the case of online context, stimulus (S) refers to all visible and audible cues, which affect consumer's internal or perceptual states. Organism (O) applies to affective and cognitive states, which plays a role as the mediator between stimulus and response. And the response (R) is the final satisfaction and behavioral outcome. Eroglu et al. (2003) showed that online store atmospherics affect organismic states: pleasure, arousal, and attitude. In this study, the stimulus is online visual merchandising cues. Based on a review of prior studies, this study organizes visual merchandising cues into three parts: (a) Online product presentation: product density, model appeal, image quality, variety of selection, vividness, and interactivity of product presentation, (b) Visual website design: coherence, richness, colorfulness, and craftsmanship, and (c) Web advertising: banner ads and promotional text on the website.

Little empirical research has been done to understand the effects of online visual merchandising cues on flow. Therefore, the organism of this study is flow. As noted by Hsu et al. (2012), website quality (information, system, and service quality) has a significant impact on perceived flow, which affects consumer satisfaction and purchase intention. And, the responses are consumer satisfaction, and approach/avoidance behavior. Prior studies explain satisfaction (Eroglu et al., 2003) and approach/avoidance behavior (Eroglu et al., 2003; Demminga et al., 2013) as response variables. Based on the S-O-R framework, the following hypotheses are presented: A diverse set of visual merchandising cues (online product presentation, visual website design, web advertising) will influence the consumer flow experience (H1), satisfaction (H2), and approach/avoidance behavior (H3); and flow will mediate the relationship between

visual merchandising cues and satisfaction (H4) and approach/avoidance behavior (H5).

**Methods.** A total of 174 US college students took part in this study. According to a report by Mintel (2013), millennials prefer online shopping more than older consumers. Participants were recruited through M-Turk. Forever 21, GAP and H&M online shopping sites were selected for this study because they target young consumers. Participants were equally distributed among these three sites. After providing their informed consent, they were asked to explore these three sites. After their exploration, they filled out a questionnaire. All items were selected from previous studies with high reliability. Also, seven-point Likert scales were used for this study.

**Results.** Multiple regression analysis was used to test all hypotheses. Significant regressions for consumer flow experience, satisfaction, and approach/avoidance behavior were found ( $F(11,163) = 22.154, p < 0.001$ ;  $F(11,163) = 35.099, p < 0.001$ ;  $F(11,163) = 10.234, p < 0.001$ ) with coefficients of multiple determination ( $R^2$ ) of 0.599, 0.703, and 0.409. However, all visual merchandising cues did not have significant effects on flow experience, satisfaction, and approach/avoidance behavior. Results showed that interactivity of product presentation ( $\beta = 0.235, t = 2.364, p < 0.05$ ), image quality ( $\beta = 0.234, t = 2.177, p < 0.05$ ), and website advertisement (banner ads and promotional text on the advertisement) ( $\beta = 0.583, t = 7.438, p < 0.05$ ) had significantly positive effects on the consumer flow experience. However, craftsmanship negatively influenced flow ( $\beta = -0.286, t = -2.899, p < 0.05$ ). Other visual merchandising cues did not show any significant effect on flow. H1 was partially supported.

Also, image quality ( $\beta = 0.210, t = 2.323, p < 0.05$ ), richness ( $\beta = 0.167, t = 1.988, p < 0.05$ ), and website advertisement ( $\beta = 0.554, t = 8.385, p < 0.001$ ) positively affected consumers' satisfaction. Other visual merchandising cues did not significantly influence satisfaction. Thus, H2 was partially supported. There was no significant direct effect of visual merchandising cues on approach/avoidance behavior. H3 was not supported.

Sobel test showed that the consumer flow experience partially mediated the relationship between interactivity ( $p < 0.001$ ), image quality ( $p < 0.001$ ), website advertisement ( $p < 0.001$ ), and craftsmanship ( $p < 0.001$ ) and satisfaction. So, H4 was partially supported. Also, this test showed that the consumer flow experience fully mediated the relationship between approach and avoidance behavior and interactivity ( $p < 0.001$ ), image quality ( $p < 0.001$ ), website advertisement ( $p < 0.001$ ), and craftsmanship ( $p < 0.001$ ). H5 was partially supported.

**Discussion.** The findings showed that interactivity of product presentation, image quality, and website advertisement are the three most important visual merchandising cues affecting the consumer flow experience. However, fine craftsmanship restricts the consumer flow experience. Online retailers need to contemplate what craftsmanship or professionally designed website need for their customers. Furthermore, website advertisement, image quality, and richness directly enhance consumer satisfaction. Therefore, developing a rich environment with high image quality, interactivity, and attractive advertisement is essential to providing consumers with absorbent and satisfactory shopping experiences.

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