

## Consumers' Perception and Adoption of Virtual Fitting Rooms (VFRs): A Generational Cohort Comparison

Hanna Lee, Susquehanna University

Yingjiao Xu, North Carolina State University

Anne Porterfield, North Carolina State University

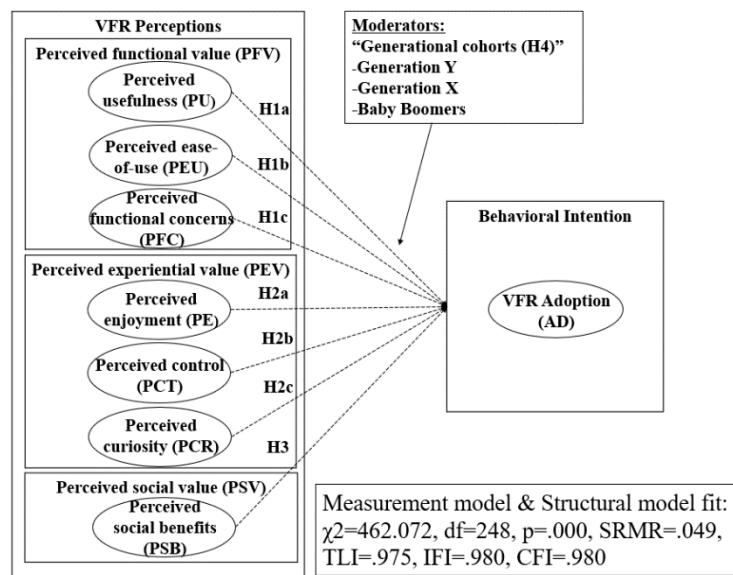
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**Introduction** The outbreak of Covid-19 has accelerated the popularity of e-commerce, which in turn has fueled the demand for Virtual Fitting Room (VFR) technology (Arterburn, 2020). Increasingly used in online fashion stores, VFR technology has great potential to overcome inherent problems of online apparel shopping—primarily, the lack of try on experience (Lee & Xu, 2019; Lee et al., 2020a). However, research fully investigating influential factors and examining consumers' adoption of VFR technology is limited. Despite the potential to improve consumer experience with multifaceted benefits, most studies focused on the technical ways to improve the accuracy of VFRs (e.g., Gültepe & Gündükbay, 2014; Merle et al., 2012). To reflect the integrative and multifaceted nature of shopping experiences, it is important to address consumers' perceived functional, experiential, and social value together to comprehensively understand consumers' varying beliefs and expectations toward VFRs. Further, as market demand is ultimately determined by consumers, it is critical to take into account the user's demographics, such as age, which was found to play a significant role in consumers online shopping and technology acceptance behaviors (Lissitsa & Kol, 2016; Zhang et al., 2019). It is particularly important to compare the VFR adoption process of consumers in different generational cohorts, as consumers in a same cohort can share similar life experiences, thereby can have different priorities that are unique relative to other cohorts and place different importance on certain shopping values (Jackson et al., 2011). The purpose of this study was to investigate 1) the influence of consumers' perceptions toward VFRs on the adoption intention and 2) the moderating effect of differences in generational cohorts on consumers' VFR adoption process.

**Literature Review** Consumers' decision to adopt a technology is determined by the degree to which consumers perceive that a technology can offer values (Lee et al., 2020a). With VFRs' ability to present virtually simulated visuals and offer advanced interactive features (e.g., mix-and-match, social sharing functions), consumers using VFRs can experience more product-related information, enhanced enjoyment, and social experiences via social interactions, comparison, and validation (Lee et al., 2020b; Li, 2012). Consistently, previous researchers identified multiple values as key determinants of VFR adoption, including functional, experiential, and social values (Lee, 2021; Lee et al., 2020b). Functional values refer to perceived usefulness, ease of use, and functional concerns, whereas experiential values refer to enjoyment, control, and curiosity (Lee, 2021; Lee et al., 2020a). Social values represent

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perceived social benefits of using VFRs, which are associated with identity expression (Lee, 2021). Meanwhile, research also suggested that generational differences can affect consumer



behaviors as shared life experiences of a particular group guide the formation of a group member's value systems and the consolidation of orientations that include values and goals. Thus, we expect to see differences in decision making processes among different generational cohorts and proposed that the influence of consumers' perceptions on adoption intentions toward VFRs varied between the three generational cohorts, namely Generation Y (21-39), Generation X (40-54), and Baby Boomers (55-64) (Jiri, 2016).

Figure 1. Research Framework

from 480 consumers aged between 21 and 64, who have experienced online apparel shopping and at least heard of VFRs in the past via an online survey. A convenience sample was used. The survey included 7-point Likert scales with items adapted from existing scales with acceptable reliabilities ( $\alpha>.70$ ). Then, structural equation modeling and multi-group comparison were conducted to test the proposed relationships (Figure 1).

**Results** Both the measurement model and the structural model showed acceptable fit (Figure 1). The SEM results suggested positive influences of PU ( $\beta=.210$ ), PE ( $\beta=.277$ ), PCR ( $\beta=.250$ ), and PSB ( $\beta=.114$ ) on AD toward VFRs (H1a, H2a, H2c, and H3, supported), whereas PEU, PFC and PCT did not show significant influences. The multi-group comparison results suggested a moderating effect of generational cohorts on consumers' VFR adoptions. Specifically, the influence of PEU on the AD was significantly greater for Baby Boomers ( $\beta=.651$ ), followed by the Gen X group ( $\beta=.510$ ) and the Gen Y group ( $\beta=.412$ ). Also, the influence of PFC on the AD was only significant in the Baby Boomers group ( $\beta=-.241$ ). However, except for PEU and PFC, there were no significant differences among the three groups.

**Conclusion** The results of this study identified functional, experiential, and social values as the key values consumers perceive as important in VFRs, providing empirical support for the integrative nature of consumer experiences when using VFRs. Additionally, the results revealed that the adoption of VFRs is contingent upon the generational cohort that consumers belong to due to different life experiences, which can be reflected in consumers' core values and priorities

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concerning shopping behavior. The findings from this study also offer managerial implications for VFR developers and fashion retailers by recommending the importance of 1) excelling on the three identified core values through advanced VFR design, and 2) offering VFR features tailored to each generational cohort that has varied preferences, and 3) staying sensitive to the level of skills and experiences differed by generational cohorts in their marketing (e.g., educate Baby boomers on VFR features to reduce functional concerns and emphasize ease of use).

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