Chinese Consumers' Adoption Behaviors toward Virtual Fitting Rooms: From the Perspective of Technology Acceptance Model

Ailin Li, Yingjiao Xu
North Carolina State University, USA

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Introduction Online apparel sales continue to grow faster than any other e-commerce product segments in China. However, inherent problems such as lack of fitting and try-on experience may have greatly reduced the growth potential of online retailing (Beck & Crié, 2016). Virtual fitting room (VFRs) make it possible for buyers to see themselves "wearing" different garments without actually wearing the clothes. Although VFRs have been adopted in China for about five years (Guo et al., 2014), they are not widely adopted in the fashion retail industry. Only few large online retailers have used VFRs, and most consumers even do not know they could use VFRs when shop online. Similarly, not much research has been conducted regarding consumer behavior toward using VFRs for their online apparel shopping. Therefore, the purpose of this study is to investigate Chinese consumers' adoption behavior toward VFRs by using the Technology Acceptance Model (Davis, 1985). Additionally, this study aimed to exam the influence of two relevant personality traits, fashion leadership and technology anxiety, on consumers' VFR adoption.

Theoretical Framework Technology Acceptance Model (TAM) developed by Davis (1985) has been widely employed in investigating consumers' acceptance behavior toward technology (Kuo et al., 2015). Researches suggested three key factors from TAM that might influence consumers' intention toward technology adoption, including perceived usefulness (PU) (Davis et al., 1992), perceived ease of use (PEOU) (Davis et al., 1992), and perceived enjoyment (PE) (Alalwan et al., 2018). Built upon existing literature, this study proposed that PU, PEOU and PE would have significant influences on Chinese consumers' adoption intention towards VFRs for their online apparel purchase. Additionally, prior researches also suggested influence of personality traits on consumers' technology adoption intentions, such as fashion leadership (Cheng, 2015) and technology anxiety (Yang & Forney, 2013). Therefore, this study also aimed to investigate the influence of fashion leadership and technology anxiety on Chinese consumers' adoption towards VFRs. Figure 1 depicts the proposed research framework for the study with hypotheses.

Methodology The data for this study were collected via an online survey tool. A snowball sampling method was used to recruit a convenience sample. A survey link was posted to a Chinese social media platform-WeChat. A total of 474 questionnaires were collected. After the data cleaning process, 414 questionnaires were retained for data analysis. Each of the variables was measured using a 5-point Likert scale with items modified and/or adapted from existing

scales. Linear regression was conducted to investigate the relationship between consumers' perceptions (PU, PEOU and PE) and adoption intention. Multiple independent T-tests and multi-group linear regression were conducted to test the effect of personality traits on consumers adoption towards VFRs.

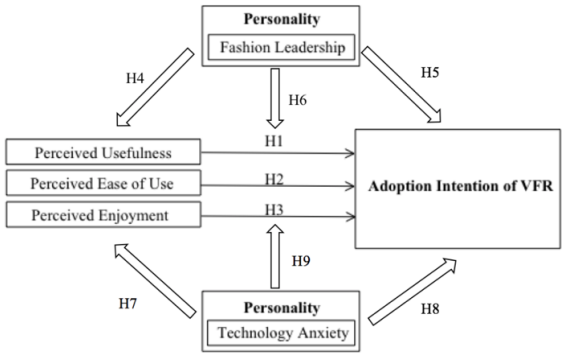

Figure 1. Theoretical framework containing hypotheses H1-H9

Results A linear regression analysis (p<.001, R^2=.519) of consumers' adoption intention toward VFRs revealed that PU, PE, and PEOU all had a significant positive influence on consumers' adoption intention toward VFRs (supporting H1, H2, and H3). To test the influences of the two relevant personality traits, using median split, respondents were classified as low FL vs. high FL groups (Fashion Leadership) and high TA vs. low TA groups (Technology Anxiety). Significant differences were revealed between the high and low fashion leadership consumer groups in terms of their perceptions and adoption intentions toward VFRs (supporting H4 and H5). While the three perceptions all had significant influences on consumers' adoption intention toward VFRs for both the high and low fashion leadership groups, their importance on adoption intention varied between the two groups. For the low FL groups, PE had the greatest importance, followed by PEOU and PU. For the high FL group, PEOU had the greatest importance, followed by PE and PU. Therefore, fashion leadership had a moderating effect on adoption intention toward VFRs (supporting H6). Similarly, significant differences were revealed between the high and low TA consumer groups in terms of their perceptions and adoption intentions toward VFRs (supporting H7 and H8). For both low and high TA groups, the three factors all had significant influence on consumers' adoption intention toward VFRs, however, their importance on adoption intention varied between the two groups. For the low TA groups, PEOU had the greatest importance, followed by PE and PU. For the high TA group, PE had the greatest importance, followed by PU and PEOU. Therefore, technology anxiety also had a moderating effect on the relationship between consumers' perceptions and adoption intentions toward VFRs (supporting H9).

Conclusion Overall, perceived usefulness, perceived ease of use and perceived enjoyment were found exerted significant positive influences on Chinese consumers' adoption intention toward VFRs. It was surprising and interesting to learn that perceived usefulness (PU) had the relatively least influence on Chinese consumers' adoption intention toward VFRs. Future studies may explore the reasons behind consumers' motivations to use VFRs. Additionally, the moderating effect of fashion leadership and technology anxiety were found on relationship between consumers' perceptions and adoption intention toward VFRs. This finding could provide inspiration to retailers and brands in their endeavors to motivate and encourage different consumers to use the VFR technologies for online apparel shopping.

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