



Consumers' Adoption of Virtual Fitting Rooms: Antecedents and Moderating Factors

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Introduction Despite its significant growth and utilization, online shopping bears great risk concerns among consumers, mainly due to limited product information available for consumers to make complete product assessment, including product fit (Koufaris, 2002). Recent advances in virtual technologies have made it possible for consumers to virtually try on products before purchase. Using a mix of advanced virtual simulation technologies, virtual fitting rooms (VFR) can comparatively translate in-store fitting experiences to the online environment by simulating sensory elements into realistic visuals, reshaping consumers' online shopping experiences through additional functional and experiential values (Kim & Forsythe, 2008). However, researchers claimed that these values, which represent consumers' knowledge, cannot be perceived unless novel technologies become accessible and visible in the marketplace (Rogers, 2003). At the current stage, VFRs are not yet widely implemented in many countries and are still considered in the early stage of adoption. While South Korea and China were both observed offering relatively more technology applications in the retail industry, the level of technology applications and adoptions differs between the two countries (Achille, Remy, & Marchessou, 2018) due to their different infrastructure and culture values. Thus, the purpose of this study was to determine the effect of technology visibility and subsequent perceptions of VFRs on consumers' adoption intention toward VFRs. Also, the differences between Chinese and Korean consumers were examined to account the different culture influence.

Literature Review Perceived values are commonly classified into functional/utilitarian perceptions and experiential/hedonic perceptions (Davis, Bagozzi, & Warshaw, 1992). Research suggested that technology visibility had a profound role in eliciting consumers' perceived values toward the technology. Lack of access and visibility was argued to be the major cause for consumers' rejection of a new technology (Roger, 2003). Research also suggested that a number of culture related factors, such as infrastructure and societal receptiveness, can affect the rate of technology adoption (Herbig and Dunphy, 1998). That is, technology adoption could be a function of national culture. While both China and Korea are typically classified as having collectivism culture, the dynamics between collectivism vs. individualism are different between the two countries. Therefore, it was proposed that the influence of technology on consumers' perceptions and adoption intentions toward VFRs varied between the two countries.

Methodology Data were collected from 306 Chinese and 324 Korean young consumers, in their 20s and 30s, via an online survey. A convenient sampling was used, and an URL link to the survey was provided in a number of social media. The survey included 7-point Likert-type scales

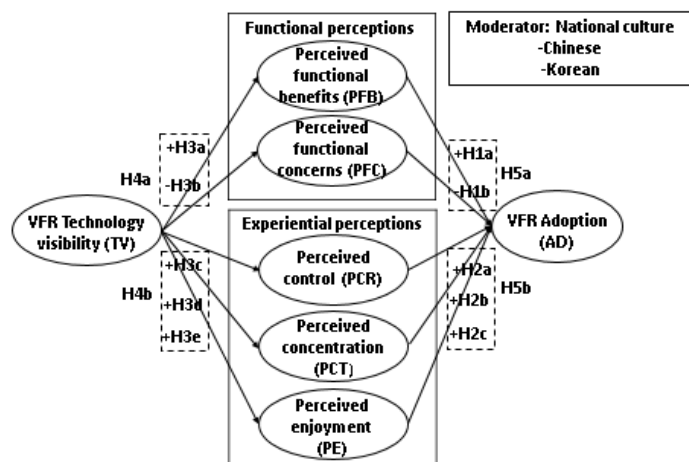


Figure 1. Research Framework

with items adapted from existing scales with acceptable reliabilities ($\alpha > .70$). Then, structural equation modeling from AMOS 22 was used to test the proposed relationships (Figure 1). A multi-group comparison was conducted to test the moderating effect of national culture on consumers' adoption toward VFRs.

Results Both the measurement model ($\chi^2=555.548$, $df=188$, $p=.000$, $SRMR=.047$, $TLI=.934$, $IFI=.947$, $CFI=.946$) and the structural model ($\chi^2=764.713$, $df=218$, $p=.000$,

$SRMR=.059$, $TLI=.907$, $IFI=.921$, $CFI=.920$) showed acceptable fit. The SEM results suggested that technology visibility had a significant influence on all of the VFR perceptions, including the functional perceptions of perceived benefits and concerns and the experiential perceptions of control, concentration and enjoyment (supporting H3). Out of the five perceptions, perceived functional benefits had the most significant influence on consumers' adoption intention toward VFRs (H1a), followed by the perceived enjoyment (H2c). Perceived concerns, perceived control and concentration did not exert significant influences on the VFR adoption. The multi-group comparison results suggested a moderating effect of national culture on consumers' VFR adoptions with a significant χ^2 difference between the SEM models for the two sub-groups, hence supporting H4 and H5. Specifically, the influence of technology visibility on functional and experiential perceptions was significantly greater for the Chinese group than for the Korean group, supporting H4a and H4b. Also, the paths from functional and experiential perceptions to the adoption intentional toward VFRs significantly differed between the Chinese and Korean groups. For the Chinese group, the perceived concerns exerted the most significant influence on the adoption intention. Whereas, for the Korean group, perceived concentration was also a significant factor, in addition to the perceived benefits and perceived enjoyment, hence partially supporting H5a and H5b.

Conclusion Academically, the results of this study confirmed the significant relationship between consumers' perceived functional and experiential perceptions and their adoption intention (Koufaris, 2002). Additionally, instead of just investigating the relationship between consumers' perceptions and adoption intentions, this study also explored and confirmed one particular antecedent factor for consumers' perceptions: technology visibility. More importantly, this study illustrated the influence of technology visibility through a cross cultural comparison between two different markets: the Chinese market and the Korean market. The results of this study revealed that the successful adoption of VFRs is contingent upon the national culture values. Managerially, the findings from this study lend insightful implications to the practitioners

in the VFR industry in their endeavors to encourage consumers' adoption of the technology, by recommending the importance to 1) facilitate the technology visibility; 2) excel on the core value of functional benefits; 3) enhance the added value of enjoyment; and 4) stay culture sensitive in marketing.

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