A Comparison of the Chinese and Korean Consumers' Response of Smart Clothing

Hyun Hee Park, Pauline Sullivan, Qin Li, Mi Jin Noh

Abstract — **Smart clothing competes in global market, so investigation of its adoption should be country specific in order to provide information important to its acceptance in different countries. The market share of technology and fashion products is increasing in Asia Pacific. There are differences between Chinese and Korean consumers regarding technology adoption and clothing consumer behavior. Thus, this study compares between country differences in the relation of personal innovation and price perception to smart clothing acceptance intention. As a result, smart clothing marketing strategies should emphasize technology innovation to reduce Chinese consumers' price perception. Smart clothing manufacturers should design smart clothing that Korean consumers perceive as aesthetically pleasing in order to increase product acceptance.**

Keywords—smart clothing, consumer responses, cross-cultural

I. Introduction

Companies continuously try to differentiate their products from competitors' by adding novel and innovative attributes to existing products [18]. An innovation currently being introduced is smart clothing products [4]. Smart clothing use sensors that measure vital body signs. For example, Uniqlo's T-shirts and underwear have sensors that increase resistance on muscles, forcing the wearer to exert more effort into walking which increases burning calories.

Diffusion theory provides a framework that helps companies estimate how an innovation will among spread potential users, and if consumers will adopt it [13]. Since smart clothing is not widely used by consumers, it is important to understand who will adopt this innovation and its potential adoption rate[16]. Smart clothing competes in a global market,

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so cross-cultural investigation of its adoption provides country specific information important to its acceptance [6]. Asia Pacific's technology and fashion product market share is increasing [2] [3]. While China and Korea have close historical ties, geographic proximity, and similar Eastern cultures; some differences exist in IT and clothing consumer behavior [11] [17]. Therefore, this study compares differences between Chinese and Korean consumers' responses of smart clothing.

II. Method

While China and Korea have close historical ties, geographic proximity, and similar Eastern cultures, some differences exist in consumption behavior related to IT or clothing products[7] [10] [17]. Purposive sampling provided a sample representative of the population and targeted groups [15].

Data was collected, via the survey method, from college students in Dalian, China, and Daegu, South Korea, as they are influential in innovative products and fashion adoption. The 18-34 year group represents approximately 27% of apparel purchases [3].

A total of 500 questionnaires were distributed. This yielded 431 (China: 218, Korea: 213) completed surveys. Since smart clothing is not yet commercially available yet, a survey of real users was not possible. Therefore, two stimuli photos and product descriptions (vest and jacket) were created for the survey as a basis for participants to respond to this innovation. As the original questionnaire was in foreign language, a back-to-back translation procedure was conducted to ensure translation validity. The literature provided variable items with content validity. A 7-point Likert scale (1=strongly disagree and 7=strongly agree) was adopted to measure the constructs. SPSS 18.0 was used for exploring the descriptive statistics, reliability analysis, and correlations and AMOS 17.0 for confirmatory factor analysis and hypothesis testing.

III. Results and implications

To evaluate cross-cultural differences statistically, we conducted Chi-square difference test between the two nations. Findings and their implications are as follows. First, both technology and fashion innovation negatively affected price perception, in China and Korea. This finding supports previous research about the relationship between fashion innovation and price perception[8] [9] [12]. Results from this study affirm Goldsmith's et al. [8] [9] argument that less price

perceptive consumers are prone to price to buy innovative products, when motivated.

Moreover, study results reveal the effect of technology innovation on price perception was greater for Chinese consumers, in comparison to Korean consumers. Thus, smart clothing marketing strategies should emphasize technology innovation to reduce Chinese consumers' price perception.

Second, fashion innovation positively affected Chinese consumers' smart clothing acceptance intentions, while technology innovation positively affected Korean consumers' smart clothing acceptance intentions. Findings disconfirm design as a stronger predictor of Korean, rather than Chinese, clothing acceptance intentions [7].

Country specific marketing communications should use targeted information to promote smart clothing purchases. In China, smart clothing should be positioned as fashionable product with a high-tech function while Korean marketing communications should strategically position smart clothing as an innovative technology product. Product function and detailed technology information can influence the perceptions of consumers with high technology innovation regarding smart clothing benefits. Also, smart clothing should be positioned in terms of its experiential value which was important to clothing consumers in a previous study [10]. Smart clothing manufacturers should design smart clothing that Korean consumers perceive as aesthetically pleasing in order to increase product acceptance.

Third, price perception negatively affects Chinese and Korean consumers' smart clothing acceptance intentions. Results in this study disconfirm are found price perception positively affects low price product acceptance intentions [1] [5] [14].

This study has several limitations. First, the sample included college students and may not represent other age groups. Secondly, the geographic generalizability of the Chinese results in China may be limited because of the potential for regional differences in consumer behavior. Third, the survey collected data about introduction of a product smart clothing; not yet commercially available. Results might differ if people had experience wearing smart clothing.

Future research should study consumers in other age groups and from a range of geographic regions to provide a better understanding of smart clothing adoption in Asia Pacific. Also, individual characteristic variables, demographic variables, and social variables associated with personal innovation and price perception should be explored within the context of patronage intentions.

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