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Understanding Chinese consumer adoption of apparel mobile commerce: An extended TAM approach

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ABSTRACT

This study proposes and applies an extended technology acceptance model (TAM) that incorporates brand equity and website quality as determinants of perceived usefulness and perceived ease-of-use to predict Chinese consumer intention to use apparel mobile commerce (m-commerce). 786 eligible responses were collected via an online questionnaire survey. The psychometric properties of the proposed extended TAM model were examined and the multiple regression method was applied to test the hypotheses. All dimensions of brand equity (i.e., brand loyalty, brand association, brand perceived quality, and brand image) significantly affect Chinese consumer perceived ease of use of apparel m-commerce while brand loyalty, perceived quality, and image enhance consumer perceived usefulness. This suggests a greater need for attention to branding effect within an increasingly saturated apparel m-commerce channel. All dimensions of website quality (i.e., website system quality, information quality, and service quality) significantly influence consumer perceived usefulness of apparel m-commerce while website system quality and information quality increase perceived use easiness. These website qualities play an important role in meeting the needs of consumers who are looking for good usability of mobile shopping. Both perceived usefulness and perceived ease of use result in positive consumer attitudes toward shopping apparel via m-commerce channel. The positive attitude and perceived usefulness lead to a greater likelihood for Chinese consumers to use apparel m-commerce. The research model exhibits a high explanatory power, collectively accounting for 64.6% of the variance in Chinese consumer intention to use apparel m-commerce.

1. Introduction

In recent years, the rapid development of mobile commerce (m-commerce) has gained great attention from both practitioners and academics due to its enormous impact on economy, business and consumers (Marriott et al., 2017). Unlike traditional desktop computer-based electronic commerce (e-commerce), m-commerce allows transactions to be conducted at anywhere and anytime through mobile devices over a wireless telecommunication network (Holmes et al., 2013). This unique feature has provided consumers unprecedented convenience and flexibility in online shopping.

China's retail m-commerce market grew from US$180 billion in 2014 to US$737 billion in 2016 (eMarketer, 2016). eMarketer (2016) projects that by 2019 China's mobile retail sales will reach US$1.4 trillion, accounting for approximately 71.5% of its total online sales. A combination of various factors, including the booming telecom market, the supportive governmental policies and financial incentives, the economic transition from manufacturing/export oriented to consumption driven, and a growing massive middle-class consumer group, makes China one of the most attractive markets for conducting m-commerce (Filieri et al., 2017).

Compared to prior studies that analyzed m-commerce as a whole, many researchers suggested that product specific m-commerce studies could generate more applicable findings while avoiding confounding effect caused by product differences (Holmes et al., 2013; Sun and Chi, 2018). As one of most popular consumer products sold via e-commerce, apparel and related accessories accounts for approximately 30% of total e-commerce sales revenue in China (Deloitte, 2016; Sun and Chi, 2018). Scholars and marketers argued that m-commerce could provide another lucrative sales channel for apparel companies (McKinsey and Company, 2013). This suggests there is a great potential for growth as apparel currently only accounts for 16% of Chinese m-commerce sales revenue (CERC, 2016).

Apparel retailers may offer greater product acquisition options, competitive prices, and user friendly shopping experience via their mobile websites to attract more consumers with the purpose of revenue generation and market expansion (Sun and Chi, 2018). However, capital investment in m-commerce is not always translated to desired

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financial returns (Swilley, 2015). Many brands and retailers have failed to implement m-commerce that meets consumer needs (Chou et al., 2016).

As consumers are evolving along with advancement of mobile technology and proliferation of digital shopping channels, timely research is needed for understanding the consumer m-commerce adoption behavior (Jiang et al., 2016). This is particularly true for apparel m-commerce given its unique product characteristics (Kang and Johnson, 2013; Song et al., 2015; Sun and Chi, 2018). Park et al. (2015) argue that in brick-and-mortar channel, store image and interior quality have an enormous impact on consumer apparel buying decisions, and apparel online retail websites are similarly important because website quality affects consumer satisfaction and consequently purchase intention. Prior studies often examine perceived website quality as a key factor in consumer m-commerce satisfaction and adoption (Akram et al., 2018; Chi, 2018; Hsieh and Tsao, 2014; Tsao et al., 2016). Similarly, extant literature stresses the impact of brand equity on consumer mobile shopping behavior (Severi et al., 2014; Wang and Li, 2012). Greater brand loyalty, brand association, brand quality, and brand image enhance consumer awareness, favorability, and purchase intention toward a mobile website (Lella and Lipsman, 2016). As apparel companies compete for online influence, brand differentiation may support a carryover effect with improved intent to purchase among consumers exploring new shopping channels (Magrath and McCormick, 2013).

Therefore, this study aims to investigate how brand equity and mobile website quality affect Chinese consumer perceived use experience of apparel m-commerce that in turn influences consumer attitude and consequent intent to use apparel m-commerce. The proposed and validated extended technology acceptance model (TAM) adds richness to the understanding of consumer m-commerce adoption behavior from brand equity and website quality perspectives. Specifically, the objectives of this study are threefold: first, based on the technology acceptance model (TAM) this study proposes a research model for examining the effects of apparel brand equity and mobile website quality on Chinese consumer apparel m-commerce acceptance; second, the psychometric properties of the developed model are examined using the primary consumer survey data gathered in China. The significant factors influencing the Chinese consumer apparel m-commerce acceptance are statistically determined. Finally, based on the results, some managerial implications for marketers and companies are provided.

2. Literature review and hypothesis development

In this section, the technology acceptance model (TAM) is reviewed, which provides the theoretical foundation for the present study and justify the casual relationships between the constructs in the proposed research model. The pertinent literature on the investigated constructs, including consumer intention to use apparel m-commerce, attitude, perceived usefulness, perceived ease of use, brand equity, and website quality, are also reviewed. The hypotheses are proposed based on the review of the literature.

2.1. Theoretical Foundation

The technology acceptance model (TAM) is a widely recognized and utilized theoretical model that predicts user acceptance of information technology (Hsu and Lu, 2004). TAM explains information technology adoption behavior through two primary variables: perceived ease of use (PEU) and perceived usefulness (PU) (Davis, 1989). Perceived usefulness (PU) is defined as the degree to which a person believes that using a particular technology would enhance his/her job performance. Perceived ease of use (PEU) is defined as the degree to which using the technology will be free of effort (Faqih and Jaradat, 2015). In TAM, both PU and PEU influence the individual's attitude towards using a new technology. Attitude and PU, in turn, affect the individual's intention to use the technology. Additionally, perceived ease of use (PEU) enhances perceived usefulness (PU) of information technology (Davis, 1989).

Besides PEU and PU, some additional factors have been added to TAM to achieve a higher explanatory power (Cheema et al., 2013; Saricam, 2015). These additional factors include demographic characteristics of consumers, the e-commerce or m-commerce site specific variables (e.g., trust, security etc.), social factors (e.g., perceived enjoyment, social influences etc.) brand equity, and past use experience (Bailey et al., 2017; Groß, 2018; Li et al., 2012; Severi and Ling, 2013; Sun and Chi, 2018; Wang and Li, 2012).

2.2. Investigated constructs

2.2.1. Intention to use apparel M-Commerce

TAM indicates that the consumer behavioral intention is the determinant of actual behavior since people usually behave as what they intend to do within the available context and time (Davis, 1989; Cheema et al., 2013). Behavioral intention measures an individual's strength to perform a specific action based on perceptions of response and desired outcome (Faqih and Jaradat, 2015). When attitude is positive towards a behavioral response, the individual is more likely to perform such behavior to achieve certain rewards (Davis, 1989).

Apparel m-commerce is still in its initial development stage although it has been growing rapidly in recent years (Sun and Chi, 2018). Adaption to digital payment via mobile devices is a lifestyle change for consumers (Bailey et al., 2017). Compared to actual use of apparel m-commerce, industry practitioners and academic researchers are more interested in understanding the potential (i.e., intent to use) and the salient factors generating the potential (Severi and Ling, 2013; Sun and Chi, 2018). Prior studies demonstrated that use intension could strongly predict individual's actual use of new information technologies such as smart phones, e-wallet, e-commerce and m-commerce (Bailey et al., 2017; Severi and Ling, 2013; Sun and Chi, 2018; Zhou, 2011). Thus, consumer intention to use apparel m-commerce is investigated in this study.

2.2.2. Attitude

Attitude refers to the evaluation of a particular object that leads to the development of a belief about the object attributes (Ajzen, 2012). As a determinant of behavioral intention in TAM, attitude has been a significant predictor of user acceptance of information technologies (Bailey et al., 2017; Crespo et al., 2013; Sun and Chi, 2018). Prior studies often operationalize attitude as an alternative measurement of consumer satisfaction. Shiau and Luo (2012) indicated that attitude reflects consumer satisfaction towards his/her online shopping experience. Their findings showed attitude leading to satisfaction is the most significant factor in predicting consumer future intention to shop online. In a study conducted by Pookulangara et al. (2011), findings revealed that attitude significantly influenced consumer intention to switch shopping channels. Izquierdo-Yusta et al. (2015) demonstrated that attitude exerts positive influence on consumer intention to opt in mobile advertising. Similarly, Sun and Chi (2018) found positive attitude towards apparel m-commerce resulted in perceived satisfaction that in turn generated consumer intention to use m-commerce. Hence the following hypothesis is proposed:

H1:. *Consumer attitudes toward apparel m-commerce positively affect their intention to use apparel m-commerce.*

2.2.3. Perceived usefulness

Perceived usefulness (PU) explores information technology adoption as consumer perceptions of job performance enhancement capability. Consumers who perceive an information technology as capable of enhancing their job performance without the compromise of usage difficulties are more likely to adopt the technology (Davis, 1989).