The mediating effects of habit on continuance intention

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ABSTRACT

How do the behavioral-cognitive-emotional constructs of attitude, satisfaction, and habit drive consumer continuance intention of incumbent mobile technologies? From a survey of 528 consumers, we ran two structural equation models: model #1 is a base model of direct effects of attitudes and satisfaction on continuance intention; model #2 adds habit as a mediator variable. We show that consumer attitudes are stronger predictors of continuance intention, without mediation effects from habit. Consumer satisfaction only weakly predicts continuance intention and is mediated by habit. While satisfaction is correlated with consumer attitude, and satisfaction is correlated with habit, consumer attitudes seem unrelated to any habits. Attitude seems to be the strongest determinant of continuance intention; second, in the absence of compelling rational data, or given beliefs that competitors are largely undifferentiated, consumers might continue using the same product. Such complex interactions between variables may not be adequately captured in a straightforward variance model, however this study extends research in habit and continuance intention and provides for future research exploring the importance of habit over satisfaction and predominance of consumer attitudes in predicting continuance intention.

1. Introduction

Mobile phone adoption can be attributed to global themes: affordability, accessibility, ease of use, experience, perceived usefulness, service quality, social influences, and trust, among others (Venkatesh, Thong, & Xu, 2012; Wang et al., 2009). The same use drivers might apply to Philippine consumers. Mobile phone usage in the Philippines is high: Industry statistics indicate 107 phones per 100 people, i.e. people own multiple handsets or multiple SIM cards (Greene, 2013). An survey showed that 83% of Philippine consumers could not live without their mobile phone (Ipsos, 2013). Usage is high due to poor Philippine landline infrastructure, geographical diversity, population diffusion, and coverage variability. The country's 100 million people are spread throughout a 7000-island archipelago. While access to mobile signal is consistent in urban areas like Manila, Cebu and Davao, rural access has been spotty (Asian Mobile Market Forecast, 2014). Because of the country's modest GDP, most postpaid plans are too expensive for the majority of the population; an estimated 95% of all mobile phones operate on prepaid loads.

In the pre-Smartphone era, SMS (texting) was offered in the Philippines as a low-cost alternative to voice. As a result, Filipinos texted at more than twice the rate of neighboring countries, such as Indonesia and Japan (Ipsos, 2013). Moreover, a large portion of the

Philippine population resides in the Middle East, Europe, and North Asia, overseas Filipino workers (OFW). In the Smartphone era, the might remit funds and communicate through mobile apps like Facebook or Twitter, and over-the-top (OTT) apps such as Viber and SKYPE. The combination of high handset penetration, emigration, and technology shifts from SMS to OTT create what Drucker (1985) calls incongruities, for example, the bridge between the low economic status of consumers and new mobile technologies. The Filipino youth market, heavy users of mobile, for example, are known to squeeze maximum use of their limited budgets by creative manipulation of multiple SIM cards and bundled plans.

Filipino consumers may make economic evaluations of quality when choosing a mobile app. There is intense competition on quality of service, pricing, offerings, and incentive programs. As of 2017 two telecommunication companies ("Telcos") dominated the share of the Philippine market: SMART and GLOBE. Though the Telcos offered highly similar services, they continued to experience consumer defections. To lower churn, and to encourage data consumption, the Telcos supplied consumers with a broad array of weekly-prepaid offers, for example, unlimited Internet for one day for $1, or unlimited SMS for three days, etc. (Interviews with marketing and analytics officers of the Telcos). Given this fierce competition, consumers made frequent economic comparisons between the Telcos that lead to repurchase or switching intention.

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When consumers decide to continue or switch mobile use, they might first evaluate financial switching costs, such as the cost to break lock-in contracts, or the opportunity loss of cheaper plans; procedural switching costs, such as the inconvenience, time and effort to switch between carriers; relational switching costs, such as loyalty to brand (Blut, Frennea, Mittal, & Mothersbaugh, 2015); transition costs, the time and effort to adopt an alternative product (Samuelson & Zeckhauser, 1988). However, to what extent do non-switching costs explain intention? Our research question is: how do the behavioral-cognitive-emotional constructs of attitude, satisfaction, and habit drive the intention to continue the use of incumbent mobile technologies by consumers? This research is a step in understanding the factors influencing continuance intention of mobile-based applications. One must understand how not just cost-based, but also cognitive, behavioral, and affective factors influence consumers' decisions. Sellers might be able to better ascertain how to use all dimensions of cognition, affect, and behavior to influence consumer attitudes about their mobile applications.

2. Theoretical background

Our research model comprises four constructs: consumer satisfaction and continuance intention, modeled after Bhattacherjee (2001) and Limayem, Hirt, and Cheung (2007); attitude (Bajaj & Nidomulu, 1998; Karahanna, Straub, & Chervany, 1999) and habit (Amoroso & Ogawa, 2013; Amoroso & Lim, 2015b; Polites & Karahanna, 2012). These constructs serve as independent, moderating, or dependent variables in numerous studies (see Appendix A).

2.1. Continuance intention

Our dependent variable, continuance intention, is the strength of consumers' intention to perform a specified behavior. In the IT context intention predicts actual usage of a technology (Bhattacherjee, 2001). It was proposed that continuance intention is a post-initial adoption behavior (Limayem et al., 2007). Continuance intention does well in predicting actual usage of a technology or application. Any factors that influence behavior act as indirect influences through continuance intention. Previous literature has established that continuing IT use, like continuance intention, is fundamentally intentional and rational; users make rational decisions based on perceptions such as ease of use and usefulness, expectations from experience, beliefs. But users also use affective, emotional responses, including satisfaction and cognitive absorption, for example, emotion, not just cognition, may be an input to the continuing use decision or intention formation (de Guinea & Markus, 2009). The IS literature has proposed various general models of IT usage intention: Bhattacherjee (2001) and Limayem et al. (2007) complement the theories of TAM (Davis et al., 1989) and UT-AUT (Venkatesh et al., 2003). However, for this paper we test the relationships of three drivers of continuance intention: consumer attitudes, consumer satisfaction, and habit.

2.2. Consumer attitudes

Consumer attitudes are positive or negative beliefs about a product, if formed by direct experiences about the product, and are predicted to be strongly related to actual use (Bajaj & Nidumolu, 1998; Karahanna et al., 1999). Put another way, attitudes are a consumer's identification about or preference of product over alternatives, and is one dimension of customer loyalty (Shih, 2011; Wixom & Todd, 2005). In online shopping, attitudes explain loyalty and continuance intention (Lee, Qu, & Kim, 2007; Liljander, Polsa, & Forsberg, 2007). Online consumers had higher attitude scores, which were directly related to their purchase decisions (Wu et al., 2003). Conversely, consumers tended to avoid items such as airline tickets because of their negative attitudes about security (Athimayan, 2002). Perceived usefulness was found to

be a significant determinant of attitude as well as continuance intention. Users are likely to have a positive attitude if they believe that usage of a technology will increase performance and productivity. (Chau & Hu, 2011). Attitude toward using was found to have a strong impact on continuance intention (Black, 2005). Affective commitment, a type of consumer attitude, was related to intention to purchase from the same vendor. This relationship showed a predecessor relationship between one or more consumer attitudes and loyalty as an outcome variable (Marshall, 2010).

For mobile technologies, attitudes were also linked to continued intention and usage. Kim, Galliers, Shin, Ryoo, and Kim (2012) found a strong relationship between attitude and intention to adopt mobile services, comparing Korea with the US. Several mobile studies found statistical relationships between attitudes and continuance intention (Amoroso & Ogawa, 2011; Shih, 2011). Other studies found a strong relationship between attitude and repurchase/use intention of mobile applications. (Lopez-Nicolas, Molina-Castillo, & Bouwman, 2008; Park, Yang, & Lehto, 2007). Lee (2007) showed how attitude influenced consumer loyalty in mobile service providers. Therefore, we hypothesize:

H1a. Consumer attitudes are positively correlated with Continuance Intention.

H1b. Consumer attitudes are positively correlated with Habit.

2.3. Consumer satisfaction

In the IS literature, satisfaction is an antecedent of behavioral intention or continuance intention (Bhattacherjee, 2001; Roca, Chiu, & Martinez, 2006). Satisfaction with e-stores, much like traditional retailers, is not derived solely from the consumer's satisfaction with the product but also convenience, site design, and financial security (Wu & Qi, 2010). As e-store performance rises, consumers will show higher satisfaction and tend to repeat purchase. Conversely, high dissatisfaction leads to switching to another vendor (Bhattacherjee, Limayem, & Cheung, 2012; Fan & Suh, 2014). Amoroso & Lim (2015a) and Shih (2011) showed a relationship between consumer satisfaction, continuance intention, and both behavioral loyalty and attitudinal loyalty. Wixom & Todd (2005) found that satisfaction affected usefulness and ease of use, which in turn affected purchase intention. By adopting expectations-confirmation model (ECM), Chong, Chan, and Ooi (2012) showed that satisfaction had significant influence on consumers' m-commerce continuance intention. They argued that satisfaction judgments will lead to an emotional response consequently continuance intention.

Another form of satisfaction is confirmation/disconfirmation, a state when individuals feel satisfied, neutral, or dissatisfied when outcomes are greater, equal to, or below expectations or desires. Confirmation thus varies with user expectations, and is one manifestation of the more latent construct of satisfaction (Briggs, Reinig, & de Vreede, 2008). Confirmation also typically occurs not at first adoption, but at subsequent iterations of evaluation and use. Consumers use prior experiences to reset their own expectations (Bhattacherjee, 2001; Bhattacherjee & Premkumar, 2004; Lin, Huang, & Hsu, 2015). Satisfaction was strongly correlated to habit and customer dedication to repurchase (Lin et al., 2015). Hsu, Chang, and Chuang (2015) found that habit moderated the relationship between satisfaction and purchase intention. Therefore, we posit:

H2a. Consumer satisfaction is positively correlated with Consumer Attitudes.

H2b. Consumer satisfaction is positively correlated with Habit.

H2c. Consumer satisfaction is positively correlated with Continuance Intention.