CrossMark

Understanding determinants and barriers of mobile shopping adoption using behavioral reasoning theory

Anil Gupta[a,*], Neelika Arora[b]

[a] Senior Assistant Professor, The Business School / School of Hospitality and Tourism Management, University of Jammu, Jammu 180006, J & K, India
[b] Assistant Professor, Department of HRM & OB, Central University of Jammu, Jammu, J & K, India

ARTICLE INFO

ABSTRACT

Technology has transformed the way retail business is done with leading players shifting to mobile specific platforms. The purpose of this study is to examine the mobile shopping adoption using a novel approach of behavioral reasoning theory, which aims to test the relative influence of reasons for, and importance of reasons against adoption of mobile shopping among Indian consumers. The hypotheses were tested using the representative sample of 237 Indian consumers and analyzing the data using PLS-SEM technique. The findings support that 'reasons for' and 'reasons against' are prime determinant of attitude and intentions. Among the reasons for, price saving orientation is the major determinant for mobile shopping adoption and among the reasons against, self efficacy is the major determinant against mobile shopping adoption. The findings also confirm that value of "openness to change" significantly influences reasons for adoption and has no impact on reasons against and attitude towards mobile shopping. The findings of this study emphasize the importance of examining both the pro-adoption and anti-adoption factors while developing marketing strategy.

1. Introduction

With over 230 million Smartphone users in 2016, India became the second largest market in the world replacing United State of America. By 2020, it is expected that seventy percent of the world population will use smartphone consuming eighty percent of the mobile data traffic. Smartphone are increasingly replacing traditional personal computers for most of the online transactions. Emergence of mobile commerce, especially m-banking and mobile shopping is catching the attention of new generation consumers. The online shopping landscape is becoming competitive with both global players (e.g. amazon, ebay) and national players (e.g. flipkart, myntra, snapdeal) strategically working towards grabbing the market share. All these players have also launched their mobile apps with specific players aiming at exclusive mobile app channels. Flipkart, India's leading e-commerce company saw 50 million mobile apps installs by early 2016. Despite the aggressive marketing strategy of these retailers, unorganized sector still dominates the retail landscape in India. There are millions of customers who are yet to experience the benefits of online and new formats of retailing.

In this paper, we use a novel consumer behavior model – behavioral reasoning theory to understand the antecedents of consumers' adoption of mobile shopping. Extant research has examined determinants of mobile shopping (San-Martín, Prodanova, and Jiménez, 2015; Wang, Malthouse and Krishnamurthi, 2015) and also barriers that prevent consumers to use mobile shopping (Lian and Yen, 2013, 2014). In this study, we will study both the determinants and barriers of m-shopping adoption in a single framework. This study contributes to mobile shopping and innovation adoption literature by investigating how reasons and values serve as an important antecedent to m-shopping adoption in addition to consumers' attitude. The results from our study contribute to new empirical evidence by examining the role of facilitators and barriers in consumers' decision making in mobile shopping adoption. In the following section, we provide an overview of mobile shopping, behavioral reasoning theory and then outline the proposed model and testable hypothesis. The detailed research methodology is then followed by results, discussion and implications for marketers.

The result suggests that in addition to attitude towards mobile shopping, 'reasons for' and 'reasons against' have an influence on adoption intentions. Our findings also confirm that consumer value can have a significant influence on consumers reasoning regarding the adoption decision.

* Corresponding author.
  E-mail addresses: anil1975@yahoo.com (A. Gupta), a_neelika@yahoo.com (N. Arora).

2. Literature review

2.1. Emergence of mobile shopping

In the last decade, the retail sector has witnessed disruption with the development in mobile technologies and emergence of digital platforms. Leading players in the retail industry have started offering shopping experience through mobile phone with an intention to connect with and service the customers using technology-mediated mobile services (Hung et al., 2012). According to Ko et al. (2009) mobile shopping is defined as "the use of the wireless Internet service for shopping activities via a mobile device." As a subset of m-commerce, mobile shopping has gained increased acceptance among consumers with retail innovations. According to Retailers Association of India, one of the significant retail innovations that led to the growth of mobile shopping had been "cash on delivery" or popularly known as COD, wherein the customer pays in cash on the receipt of product from the retailer through their logistic partner. Industry reports indicate that COD is the preferred method of payment by Indian consumers with more than 75% of the orders placed with a leading Indian e-tailer (Flipkart) in 2015 were COD. Mobile shopping is a self service delivery channel which offers tremendous benefits to consumers including ubiquitous connectivity and contextual offer (Lee, 2005) and can enhance customer agility by alleviating spatial and temporal constraints (Krotov et al., 2015).

2.2. Adoption models

Mobile shopping can be viewed as technical innovation and therefore a wide array of theories including Diffusion of Innovation Theory (Rogers, 1983); Technology acceptance model (Davis, 1989); Decomposed theory of planned behavior (Taylor and Todd, 1995); Extended technology acceptance model (Venkatesh and Davis, 2000); Unified theory of user acceptance of technology (Venkatesh et al., 2003) and Extended Unified theory of user acceptance of technology (Venkatesh et al., 2012) can be used to explain the intention to adopt mobile shopping. Extant research while studying mobile shopping adoption or online purchase behavior have used Technology Acceptance Model (Agrebi and Jallais, 2015), Unified Theory of Acceptance and Use of Technology (UTAUT) model (Celik, 2016; Faqih, 2013; Yang, 2010; Yang and Forney, 2013), Diffusion of Innovation Theory (Chung and Holdsworth, 2012; Zendehdel, Paim and Osman, 2015), Theory of Planned Behavior (Yang, 2012), Push-Pull-Mooring Model (Lai, Debbarma and Ulhas, 2012) and IS/IT Adoption theory (Faqih, 2016).

The major determinants of mobile shopping adoption are perceived enjoyment (Agrebi and Jallais, 2015; San-Martín et al., 2015; Yang, 2012), perceived usefulness (Aldás-Manzano et al., 2009; Lu and Yu-Jen Su, 2009; Yang, 2010) and convenient access (Chiang and Dholakia, 2003; Holmes, Byrne and Rowley, 2013; Wang et al., 2015). In the context of online shopping, Rohm and Swaminathan (2004) observed that variety seeking consumers prefer online channels as wider product choice of the retailer has been positively associated with higher basket values (Mallapragada et al., 2016). Consumers who are high on price-saving orientation are also expected to shop through non-traditional retail formats (Escobar-Rodríguez and Carvajal-Trujillo, 2013).

2.3. Resistance to mobile shopping

These innovation diffusion models focus on the determinants of adoption and ignore the factors that lead to consumer resistance to innovation. In their seminal work Ram and Sheth (1989) proposed two core resistance constructs i.e. functional and psychological barriers which are further categorized as usage barrier, value barrier, risk barrier, tradition barrier and image barrier. Extant research studying barriers towards adoption of online shopping have used innovation resistance theory and have observed that tradition barrier (Lian and Yen, 2013, 2014), risk barrier (Lian, 2015) and value barrier are significant factors influencing non adoption of new formats of retailing.

Holmes et al. (2013) in their study observed that consumers are more positive towards shopping through websites as compared to mobile phones and prefer mobile phone in the information search process as compared to actual purchase. Extant research has observed that consumer anxiety (Celik, 2016), privacy and security concerns (Lai et al., 2012; Thakur and Srivastava, 2013; Wu and Wang, 2004) negatively influence the adoption of online shopping. Another factor that has hindered the growth of mobile shopping is the adoption of mobile payments by the consumers.

2.4. Behavioral reasoning theory

Extant research has independently studied mobile shopping adoption in terms of its determinants and barriers, there is, however no study that examines both of these in one single framework. Studies in the area of social psychology (Westaby et al., 2010) state that the factors of adoption and barriers to adoption might not be logical opposites of each other. Westaby (2005b) proposed Behavioral Reasoning Theory, which can be used to test the relative influence of adoption and resistance factors in a single framework. This theory has been applied to understand innovation adoption (Chatzidakis and Lee, 2013; Claudy et al., 2015; Claudy, Peterson and O'Driscoll, 2013; Westaby et al., 2010) and the findings support that determinants for adoption and barriers can be studied in a single framework.

According to this theory, context-specific reasons serve as important linkage between people's belief, global motives, intention and behavior (Westaby, 2005b) which is consistent with theory of explanation-based decision making (Pennington and Hastie, 1988) and reasons theory (Westaby & Fishbein, 1996). Reasons are defined as "specific subjective factors people use to explain their anticipated behavior and can be conceptualized as anticipated reasons, concurrent reasons and post hoc reasons" (Westaby, 2005b, p. 100) and are conceptually distinct from beliefs. Individuals look for reasons to make sense of the world as well as justify their own behavior. Westaby (2005b) theorized reasons under two broad dimensions – 'reasons for' and 'reasons against' performing a behavior. The 'reasons for' and 'reasons against' performing the behavior is conceptually distinct and has been conceptualized as "to subsume pro/com, benefit/cost, and facilitator / constraint" (Westaby, 2005a p. 570).

Claudy et al. (2015) while applying this framework in context of a service innovation (car sharing) observed that the reasons for adoption included convenience and flexibility as compared to reasons against which included safety and availability. Similarly Westaby et al. (2010) applied BRT to explain leadership decision making and observed that 'reasons for' and 'reasons against' employing teens were not merely logical opposites of each other. We next discuss the conceptual framework and formulation of hypothesis.

3. Conceptual framework and hypothesis

The Behavioral Reasoning Theory postulates that intentions predict behavior, where global motives (e.g. attitude) predict intention [H1]. Reasons (for and against) predict global motives (e.g. attitude) [H2a, H2b] and also influence intentions [H3a, H3b] (Westaby, 2005b). Further reasons do not exist in isolation from beliefs and values and hence are presumed to be result of beliefs and values [H4a, H4b]. There is direct linkage between beliefs and global motives (e.g. attitude) [H5].

3.1. Attitudes and Adoption Intentions

According to meta analytic study by Armitage and Conner (2001), intentions contribute to 27% variance in behavior. Similarly Sheeran