Adoption of Mobile Commerce: The Impact of End User Satisfaction on System Acceptance

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ABSTRACT

Although voluntary individual usage behavior of information system and technology is well studied in the literature, further theoretical development is needed to account for the specific characteristics of the mobile commerce. This study presents an extended technology acceptance and satisfaction model presented by Wixom and Todd (2005) that integrates technology acceptance and technology satisfaction into unified model to investigate what determines user mobile commerce acceptance and usage. The contributions of this paper are to extend and adapt the user satisfaction and technology acceptance model in an empirical study of 503 mobile commerce users, shedding light on the significance and relative importance of specific acceptance and satisfaction factors. This study validates the user satisfaction and technology acceptance model in business to customer mobile commerce context. The implication of this study to both researchers and practitioners is discussed.

Keywords: *Information Quality, Information System Success, Mobile Commerce, System Quality, Technology Acceptance, User Satisfaction*

INTRODUCTION

The convergence of wireless telecommunications and the Internet provides many exciting possibilities and predictions for the growth of Mobile Commerce (MC). The penetration of these technologies in the developed world has already evoked changes in our daily lives - how we work, live, learn, and so on (Barnes, 2002). This rapid development is also promoting MC as a significant application for both enterprises and consumers (Wu & Wang, 2005). MC can be viewed as a subset of Electronic Commerce (EC) and refers to any transaction with monetary value that is conducted via a mobile network. When users conduct EC such as e-banking or purchase products, they do not need to use a personal computer system; rather, they can simply use some mobile handheld devices such as Personal Digital Assistants (PDA) and

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smart mobile phones to conduct various EC activities (Ngai & Gunasekaran, 2007; Yang, 2005). According to the MC statistics, The ABI research predicts that in 2015, $119 billion worth of goods and services will be purchased via a mobile phone (ABI Research, 2011). Mobile Commerce Daily has also predicted that the mobile payments market for digital and physical goods, money transfers and near field communications transactions which have already reached $170 billion in 2010 is expected to quadruple by 2014, reaching $630 billion in value, although still only accounting for around 5 percent of total EC retail sales (Daily Mobile Commerce, 2011).

MC known with its mobility and broad reach is a technological frontier and is an attractive area for research because of its relative novelty, rapid growth, and potential applications (Ngai & Gunasekaran, 2007). Although some authors and research firms believe that the demand for MC services will skyrocket and substantially extend current operations in EC in the future, unfortunately, many attempts in MC have so far failed to meet expectations, which have significantly slowed down the linkage between MC and Internet-based EC (Liang & Wei, 2004). Moreover, although there is a general notion in which mobile technologies can be applied in business, very little has been done in understanding how to improve business processes, what the implications of mobile technologies are, or what critical factors affect the success or failure of mobile technology applications (Liang et al., 2007). Therefore, it is extremely important to understand customer MC perceptions and acceptance since insufficient user acceptance has long been an obstacle to the successful adoption of new Information Systems (IS) and Information Technologies (IT).

The technology acceptance research is a rich and mature field in IS research, yet its application in the MC context is in its early stages of development. It is very important to understand why promising technologies such as MC fail and what factors contribute to their acceptance and relevant success. However, to date, there is a lack of research on how users will accept to use MC in their daily business activities (Wu & Wang, 2005). Therefore, and given the specific characteristics of MC such as consumer privacy weaknesses and issues (Wei et al., 2006), we believe that research are needed to be robust enough to capture most, if not all, of the MC acceptance particularities. Accordingly, this study attempts to address these knowledge gaps by answering the following research questions:

RQ1: Whether and how well user mobile commerce acceptance and usage can be predicted through incorporation of satisfaction constructs into technology acceptance model;

RQ2: What are the determinants of satisfaction with mobile commerce at different levels?

RQ3: How the value of quality MC can be transformed to higher MC usage through the mediating roles of behavioral beliefs and attitude?

LITERATURE REVIEW

Many different definitions of MC have been provided in the prior literature (Turel & Yuan, 2006), but these usually refer to EC activities via mobile devices such as mobile phones and PDA (Liang et al., 2007). In this research, MC refers to any transactions, either direct or indirect, with a monetary value implemented via a wireless telecommunication network (Wu, 2005). Prior IS literature suggests that user acceptance of and satisfaction with IS/IT are the common and appropriate measures of a new system adoption and usage success, which have been widely accepted by researchers (Al-Gahtani et al., 2007; Al-Gahtani & King, 1999; Davis, 1993; Venkatesh et al., 2003; Wixom & Todd, 2005). Accordingly, MC acceptance and satisfaction with MC are posited to be the apt surrogate measures of MC success. Consistent with prior literature, we define MC to be in the context of business-to-consumer MC that involves engaging in transactions on a wireless

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