Adoption of Mobile Commerce Technology: An Involvement of Trust and Risk Concerns

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ABSTRACT

This research extended the Technology Acceptance Model (TAM) with perceived trust and perceived risks (security and privacy concerns) constructs to identify the impact of these factors on Jordanian users' intentions to adopt mobile commerce (m-commerce). An empirical test was used utilizing 132 responses from students in two public universities in Jordan. Results indicated that perceived trust, perceived usefulness, and perceived ease of use are major influencers of mobile commerce adoption. On the other hand, perceived risk factors (security and privacy concerns) were not significant in this relation. Discussion, conclusion and future work are stated at the end of this paper.

Keywords: Ease of Use, Intention to Use, Mobile Commerce, Privacy, Risk, Security, Technology Acceptance Model, Technology Adoption, Trust, Usefulness

1. INTRODUCTION

Rapid advances in telecommunication technologies and the emergence of wireless technologies offer great opportunities for organizations to conduct their businesses using mobile commerce (m-commerce). There are millions of users around the world using the Internet as a medium for doing online transactions (Cho, Kwon & Lee, 2007). Also, due to the richness, flexibility and mobility features of m-commerce, different types of organizations are looking for this technology as a new innovative channel that will help them provide products and services to consumers in a very convenient way (Luo, Li, Zhang & Shim, 2010). The supportive legal environment is opening greater chances for the spread of electronic commerce applications, where governments and regulatory bodies are collaborating to ensure e-commerce’s law, policy and regulations enforce consumers’ protection (Johar & Awalluddin, 2011).

Mobile commerce is an e-commerce application that is done in a wireless environment, especially the Internet (Abdelkarim & Nasereddin, 2010). As a subset of electronic commerce, m-commerce also refers to electronic transactions conducted through mobile devices (Xin, Mao & Liu, 2010). M-commerce will enable consumers to do online transactions...
using mobile devices and access unlimited types of personalized services anytime and from anywhere without location restrictions (Sreenivasan & Noor, 2010). On the other hand, due to the personalization features of m-commerce, organizations will be able to provide customized services and products to consumers based on their preferences, location, and time; thus will help organizations gain customers’ satisfaction and loyalty. Such advantage is central to the success of any organization. Another organizational advantage is being able to reach a lot of consumers around the globe overcoming geographic restrictions. For exploiting the promised benefits of m-commerce, there are a number of issues and potential concerns raised by this technology that should be considered by the parties involved in adopting such business innovation; major issues include security, privacy and trust (Alam & Yasin, 2010).

Users’ acceptance of new technology is considered a fundamental key to the successful, efficient, continuous utilization, and growth of m-commerce (Qingfei, Shaobo & Gang, 2008). The Technology Acceptance Model (TAM) as introduced by Davis (1989) with perceived ease of use and perceived usefulness as key constructs that predict user’s intention to accept or reject new technological innovations. This paper will extend the TAM to include perceived trust, perceived risks (security and privacy concerns) and identify the impact of these factors on Jordanian users’ intentions to use m-commerce.

2. LITERATURE REVIEW

Factors that affect user’s acceptance or resistance of new IT initiatives are the focus of recent research in the area of e-commerce and m-commerce. It’s important to explore the factors that predict user’s acceptance and usage of these technologies for better understandability and management of these technologies (Cho et al., 2007).

Many studies identified the factors that influence user’s behavioral intention to accept and use m-commerce applications; many of these studies stressed the importance of trust, perceived risk, security, privacy, perceived ease of use, and perceived usefulness as critical determinants that have significant impact on users’ behavioral intention to adopt m-commerce applications and services (Serenko & Bontis, 2004; Wu & Wang, 2005; Merisavo et al., 2007; Chen, 2008; Sun, Cao & You, 2010; Sreenivasan & Noor, 2010; Zhou, 2011). In the following sections this paper will review the literature related to these factors.

2.1. Mobile Commerce Adoption

The Technology Acceptance Model (TAM), proposed by Davis (1989) with two basic constructs that determine user’s intention to use new technology; these two constructs are perceived ease of use and perceived usefulness.

In m-commerce, ease of use perception is an important factor for the successful m-commerce adoption due to the physical limitation in mobile devices such as screen size and resolution, and keypad size. Such limitations make mobile devices difficult to use for conducting online transactions (Siau & Shen, 2003). To be appealing to customers organizations must design services that are easy to use (Johar & Awalluddin, 2011).

Perceived usefulness also has been found as an important factor that predicts the adoption of m-commerce. Perceived usefulness will influence user’s tendencies towards m-commerce; users should perceive the usefulness and revenue that they will get from using the technology (Sadia, 2011). Research on using mobile devices in general confirmed such conclusions as perceived usefulness ranked highest, followed by ease of use when using SMS services (Sulaiman & Zolait, 2010).

Different factors are considered as important determinants of m-commerce acceptance and adoption like: trust, perceived risk, privacy,
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