

Gender Difference in the Motivations of Mobile Internet Usage

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INTRODUCTION

The rapid pace of adoption of Web-enabled mobile handsets in worldwide markets has become an increasingly important issue for information systems professionals. A recent survey indicates that the number of global mobile Internet adopters is expected to reach nearly 600 million by 2008 (Ipsos-Insight, 2004; Probe Group, 2004), while the number of Internet-connected mobile phones will exceed the number of Internet-connected PCs by 2005 (*The Economist*, 2001). Such drastic convergence of the Internet and the mobile handset has been led by Asian and Scandinavian countries, where penetration has been especially meteoric. For example, roughly 70 million people in Japan, or 55% of the population, have signed up for mobile Internet access, in comparison to 12% in the United States (Faiola, 2004; Greenspan, 2003). Consequently, mobile phones or *Keitai* have been converted into devices for surfing the Internet, and by 2004 monthly mobile spending per consumer exceeded 35 euro.

Much of this success can be traced back to 1999, when NTT DoCoMo introduced the “i-mode” service. i-mode is a mobile service offering continuous Internet access based on packet-switching technology (Barnes & Huff, 2003). Through an i-mode handset, users can access a main micro-browser, which offers such typical services as e-mail, data search, instant messaging, Internet, and “i-menu.” The “i-menu” acts as a mobile portal that leads to approximately 4,100 official and 50,000 unofficial sites (NTT DoCoMo 2003). Many such mobile portal sites can thus be considered as a pull-type advertising platform, where consumers can satisfy diverse information needs.

Several researchers have attempted to conceptualize the success of i-mode in comparison to WAP (Baldi & Thaung 2002) and in the light of the technology acceptance model (TAM) (Barnes & Huff 2003). Okazaki (2004) examined factors influencing consumer adoption of the i-mode pull-type advertising platform. However, there is a dearth of empirical research in this area, and especially in developing a model that captures the specific dimensions of mobile Internet adoption. In this respect, this study aims to propose a measurement scale of consumer perceptions of mobile portal sites.

The present study adopts, as its principal framework, the attitudinal model suggested by Dabholkar (1994). This includes “ease of use,” “fun,” and “performance” as important determinants of attitude. These are often referred to as “ease

of use,” “usefulness,” and “enjoyment” in, for example, the TAM proposed by Davis (1986; Davis, Bagozzi, & Warshaw, 1989, 1992). The relevant literature suggests that dimensions similar to “ease of use” and “fun” are important antecedents of new technology adoption. For example, Shih (2004) and Szymanski and Hise (2000) found “perceived ease of use” and “convenient,” respectively, as important antecedents of online behavior. Likewise, Moon and Kim (2001) found “perceived playfulness” to be a factor influencing WWW usage behavior, similar to the “fun” dimension. However, unlike earlier studies of m-commerce adoption, this study drops the third dimension of the TAM, “usefulness,” in favor of “performance,” because the former is appropriate only for tangible products, but not relevant for technology-based services (Dabholkar & Bagozzi, 2002). In contrast, “performance” represents a dimension that encompasses the reliability and accuracy of the technology-based service, as perceived by the consumer (Dabholkar, 1994). These three dimensions capture customer perceptions, which would initiate the attitude-intention-behavior causal chain (Davis, 1986).

BACKGROUND

Prior Theories on Technology Adoption

The technology acceptance model has been used to explain online user behavior (Featherman & Pavlous, 2002; Moon & Kim, 2001). Originally, TAM was based on Ajzen and Fishbein’s (1980) theory of reasoned action (TRA), which is concerned with the determinants of consciously intended behaviors. TRA has been described as one of the most widely studied models in social psychology (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). According to TRA, “a person’s performance of a specified behavior is determined by his or her behavioral intention (BI) to perform the behavior, and BI is jointly determined by the person’s attitude (A) and subjective norm (SN) concerning the behavior in question (Figure 1), with relative weights typically estimated by regression: $BI = A + SN$ ” (Davis et al., 1989). Here, BI refers to the degree of strength of one’s intention to perform a specified behavior, while A is defined as an evaluative effect regarding performing the target behavior. SN is meant to be “the person’s perception that most people who are important to

Figure 1. Theory of reasoned action (TRA)

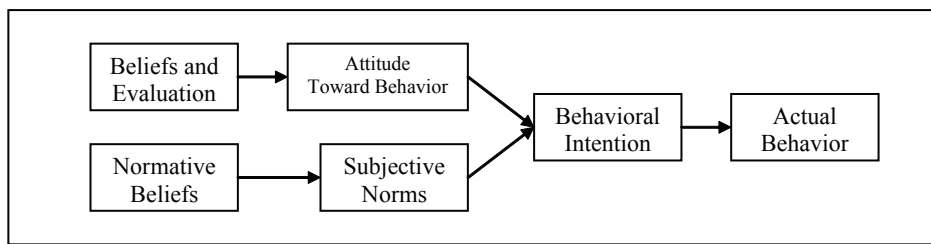
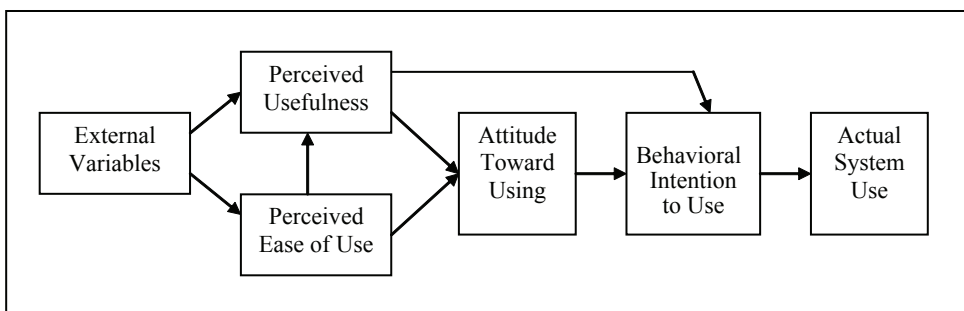


Figure 2. Technology acceptance model (TAM)



him think he should or should not perform the behavior in question” (Fishbein & Ajzen, 1975).

TAM extends TRA with attempts to explain the antecedents of computer-usage behavior. TAM comprises five fundamental salient beliefs: perceived ease of use, perceived usefulness, attitudes toward use, intention to use, and actual use. Perceived usefulness is defined as “the degree to which a person believes that using a particular system would enhance his or her job performance,” while perceived ease of use is “the degree to which a person believes that using a particular system would be free of effort” (Davis et al., 1989). Although they are not the only variables of interest in explaining user behavior, perceived ease of use and perceived usefulness have been proven empirically to be key determinants of behavior in a wide range of academic disciplines, such as the learning process of a computer language, evaluation of information reports, and adoption of alternative communication technologies, among others. However, TAM excludes the “influence of social and personal control factors on behavior” (Taylor & Todd, 1995). Consequently, Ajzen and Fishbein (1980) proposed another extension of TRA, the theory of planned behavior (TPB), to account for those conditions in which individuals may not have complete control over their own behavior (Taylor & Todd, 1995).

A key objective of TAM is “to assess the value of IT to an organization and to understand the determinants of that value” (Taylor & Todd, 1995). Hence, much IT research has aimed to enhance companies’ effective IT resource management.

However, TAM has been expanded to emerging new forms of IT, such as the wired as well as the wireless Internet.

In a pioneering study, Moon and Kim (2001) conducted empirical research on extending TAM to the World Wide Web context. They constructed an extension of TAM based on an individual’s intrinsic motivation theory, and found that “perceived playfulness” had a positive effect on individuals’ attitudes toward using the WWW and their behavioral intentions to use the WWW. Furthermore, TAM has been applied to explain the adoption of telecommunication technology, such as telework (Hun, Ku, & Chang, 2003), mobile devices (Kwon & Chidambaram, 2000), and m-commerce services (Pedersen & Ling, 2003). Generally, these studies suggest certain modifications of the original TAM in order to include social influence and behavioral control variables (Pedersen & Ling, 2003). In the following section, we explore the possible extension of TAM to m-commerce adoption.

Gender Differences in Mobile Internet Adoption

Gender has frequently been used as part of the social and the cultural meanings associated with developing marketing strategy via advertising messages, and in market segmentation strategy in particular, because it is easily: (1) identifiable, (2) accessible, (3) measurable, (4) responsive to marketing mix, (5) sufficiently large, and (6) profitable (Darley & Smith, 1995). However, although there has been much research on

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