Mobile Commerce Adoption: A Novel Buyer-User-Service Payer Metric

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ABSTRACT

Existing technology adoption models do not explicitly differentiate between the buyer and user of technology, seemingly assuming that the users and the buyers are the same. This article reports on an investigation into cell phone/mobile phone use, with samples from China and the UK, the results of which show that the assumption that technology users can be automatically classed as the purchasers, is flawed. Further, there seem to be three distinct stakeholders, the user, the initial purchaser and the service payer and the relation between these stakeholders can be complex. The article presents a metric that captures six distinct relationships between the user, buyer and service payer which can be used to distinguish between different adoption groups. The article also presents an enhanced TAM that captures some of the complexity of the user-buyer-service payer relationship in the adoption process for mobile technologies. The metric and enhanced TAM may be applied to other consumable technologies and working environments.

INTRODUCTION

Mobile commerce is resulting from the convergence of two of the fastest growing industries the Internet and mobile communications markets (Lord, 2004). The distinction between electronic commerce and mobile commerce is becoming blurred as the capabilities of the mobile devices become more sophisticated. Mobile access to the Internet is expanding significantly in breadth and depth of use (Ishii, 2004). In addition mobile commerce offers extra functionality to existing electronic commerce such as location and localization services (Junglas & Watson, 2008) and personal mobile support (Adams et al., 2003). Urbaczewski et al. (2003) argue that we need new methods, tools and ways of thinking to take full advantage of mobility and its potential. Mobile technologies offer much potential in developing business and social activity, developing new structures and value chains (Anckar & D’Incau, 2002). From a strategic perspective, mobile technologies are fueling significant changes in business and working practices. “M-business is likely to have a tremendous impact on organizations, as wireless technologies and applications begin to change the existing processes, strategies, structures, roles of individuals, and even cultures of organizations” (Barnes, 2003, p2). Some
argue that the first decade of the 21st century will be the decade of mobile computing and mobile commerce (Urbaczewski et al., 2003). In a longer timeframe mobility and mobile computing are likely to play an increasingly significant role in personal, social and working life (Brooks 2008; Constantiou et al., 2007; Ling, 2004). Investigating mobile technology adoption are fertile areas of investigation for technology developers, marketing managers and researchers. Technology adoption refers to the stage in which a technology is selected for use by an individual or an organization (Carr, 2005).

This article explores the use of mobile technologies from a stratified sample of users from a city in China (Beijing) and a city in the UK (Portsmouth). The theoretical foundation drew upon Davis’ Technology Adoption Model (Davis, 1989; Barnes, 2003; Kleijnen, 2003). One attribute being investigated was ‘perceived cost’ as this is identified as one of the main influences on people using technology (Kleijnen et al., 2003). The research consisted of a large survey supported with qualitative data from focus group sessions.

When conducting the research and analyzing the resultant datasets it became clear that understanding technology adoption requires researchers to separate the user from the payer, both for the initial purchaser and the ongoing service bills. However, existing theories of technology adoption, such as Davis’ (1989) Technology Adoption Models (TAM) and extensions (Barnes, 2003; Kleijnen, 2003; and others) do not distinguish between the users, the initial purchasers and the service payers of mobile technologies, and consequently do not capture the complex relationship between these stakeholders in the technology adoption process. This seems a major gap in the technology adoption literature.

The rest of the article is structures as follows: First the article examines the literature and then examines the theoretical tools for researching technology adoption. The article then describes the research design and develops six user-buyer-service payer relationships which can be used to better understand adoption of mobile technologies. The article also develops an extension to TAM to explicitly capture the different stakeholders (user, buyer, service payer) and discusses issues in applying the extension.

LITERATURE REVIEW

There has been continued trend over the last decade or so towards using mobile technologies in the workplace (e.g. Anckar & D’Incau, 2002; Barnes, 2003; Damsgaard & Gao, 2004; Fitch & Adams, 2006). Adoption and use statistics covering the mobile phone typically show impressive near exponential growth. For instance, according to GSM World, the trade association representing GSM mobile phone operators, “GSM is the fastest growing communications technology of all time. … The billionth GSM user was connected in Q1 2004 - just a dozen years after the commercial launch of the first GSM networks [and] The second billionth GSM user was connected in Q2 2006 - just two and a half years after the first billion” (GSM World, 2007a) and estimates the total number of mobile phone subscribers globally (GSM variety and others) to be 2.8Bn in the first quarter of 2007 (GSM World, 2007b).

The cell phone is becoming increasingly important as a technology in both the breadth and depth of how it is used, from business and social perspectives. There is consequently a need to understand technology adoption and use of cell phones in this global context. As Constantiou et al. (2007) argue “in the roadmaps of future research on mobile market there are repeated calls for investigating factors that predict or explain adoption, acceptance, and use of mobile services” (Constantiou et al., 2007, p51). As Damsgaard and Gao (2004, p170) identify, to date there has been considerable research effort to explain the adoption of mobile telecommunications by users, of which the major analytical tools used are Rogers’ Diffusion of Innovation (DoI) (Rogers 1995), the Theory of Reasoned Action (TRA) (Ajzen, 1991) and
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Pauline Ratnasingam (2003). *Inter-Organizational Trust for Business to Business E-Commerce* (pp. 22-70).

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