Understanding consumer intention to use mobile services

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ABSTRACT

Given the fast growth of mobile technology services in some countries and the relatively slow growth in others, it is important to understand the factors that contribute to the adoption of these applications in Australia. Drawing from the Technology Acceptance Model, Domestication Research, and Uses and Gratification Research, this study develops a model for consumers' intentions to use mobile services (m-services). The main drivers of consumers' intentions to use m-services are *satisfaction* along with *perceived usefulness*. In addition, this study shows that *perceived ease of use* is a strong predictor of *perceived usefulness*. This study found that *perceived usefulness*, *perceived ease of use*, and *perceived enjoyment* positively affect satisfaction with m-services while *perceived cost* has a negative effect. On a different note, it was proven that *perceived image* does not have a significant impact on customers' satisfaction with m-services. Overall findings of this study provide some contribution to the growing body of research in the area of m-services and provide some assistance to practitioners in formulating better strategies to retain current m-service users.

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1. Introduction

Mobile phones are one of the most widely embraced technological devices in the consumer market. Almost everywhere we go we can see people using mobile phones, not only for making general phone/video calls or using Short Message Services (SMS) but also playing mobile games, downloading music, accessing the Internet and much more. Such advanced mobile applications are generally labelled mobile services (m-services). In this study, an adapted definition of m-services derived from Benou and Bitos (2008) has been utilised. That is, m-services are any application service accessible from mobile phones via wireless and mobile communication networks. M-services incorporate a range of applications. It includes applications that focus on allowing users to seek pleasures (e.g., ringtone downloads), perform financial transactions (e.g., mobile banking), or even search for information (e.g., news alerts, mobile maps). Many individuals would consider that mobile service providers could access plenty of benefits from offering such advanced mobile services to their consumers. However, the mobile industry in Australia has not yet seen the growth that was anticipated (Bhatti, 2007). A recent report released by the Australian Interactive Media Industry Association's study (2009) (Mackay and Weidlich, 2009) highlighted that the use of some m-commerce services has only increased between 12% and 18% amongst survey respondents between 2008 and 2009. In an endeavour to understand this unexpected growth pattern in Australia, it is imperative to understand the driving factors behind Australian consumers' intentions to use m-services.

Despite the staggering growth patterns in Australia, the use of m-services worldwide has become increasingly popular, thereby influencing a number of researchers to conduct research into this area. Past researchers have explored the implications of mobile commerce for markets and marketing (Balasubraman et al., 2002) investigated value creation in mobile commerce (Anckar and Incau, 2003) and developed business models for mobile commerce (Yuan and Zhang, 2003). Some researchers have also focused on the adoption of mobile commerce services (Bruner and Kumar, 2005; Haddon, 2001; Kargin et al., 2009; Kim et al., 2007; Lu et al., 2008; Nysveen et al., 2005; Pagani, 2004; Pedersen and Ling, 2002; Pedersen, 2005; Rao and Troshani, 2007). However, there is a dearth of research that focuses on customers' satisfaction with and intention to use m-services. As such, this study aims to contribute to this research gap by suggesting and empirically testing a model that formally investigates the relationship between the factors that determine technology usage and concomitantly satisfaction and intention to continue to use m-services. The proposed model is distinct from existing adoption models as it focuses on the post-adoption context and it incorporates both the accelerating and inhibiting factors of m-services usage. Exploring these issues is crucial as it not only provides a better understanding of the behaviours of mobile consumers but it can also assist practitioners in better formulating their marketing strategies to better promote their product offerings.

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The remainder of this paper is organised as follows. Firstly, several theoretical frameworks which explore the adoption of an innovation are presented, followed by the conceptual framework and hypotheses. The research methodology and results of this study are then provided. The final section summarises the findings, outlines the managerial implications, and discusses the limitations and areas of this study that are open for future research.

2. Literature review

While a large number of innovation adoption models exist, this study focuses on three theoretical perspectives, namely the Technology Acceptance Model, Domestication Research, and Uses and Gratification Research. These theories are considered the most relevant and applicable for explaining post-adoption behaviour in the context of m-services. A brief explanation on each of these theories is provided below.

2.1. Technology Acceptance Model

The Technology Acceptance Model (TAM) proposed by Davis and Bagozzi (Bagozzi et al., 1992) seems to be the most widely accepted innovation adoption model. This model has been replicated in numerous studies aiming to explore factors affecting individuals' new technology usage intentions (Venkatesh and Davis, 2000). Derived from the Theory of Reasoned Action (Fishbein and Ajzen, 1975) the TAM includes five constructs: perceived usefulness, perceived ease of use, attitude towards use, intention to use, and actual use. This model proposes that (1) perceived usefulness and perceived ease of use have a direct impact on attitude towards using an innovation, while perceived ease of use has a direct influence on perceived usefulness; (2) perceived usefulness alone directly affects intention to use an innovation; (3) attitude towards using an innovation has a direct impact on intention to use such an innovation; and (4) intention to use has a direct influence on actual system use. As this model has gone through extensive validation from many replication studies, researchers have found some limitations that need to be overcome (Rao and Troshani, 2007). Some researchers have extended the original model by adding additional constructs that they felt were more relevant to their studies (e.g., Bhatti, 2007; Gefen et al., 2003; Klopping and McKinney, 2004; McCoy et al., 2005; Nysveen et al., 2005; Sendecka, 2006; Teo et al., 1999; Venkatesh and Davis, 2000). While others have dropped the link between perceived usefulness and perceived ease of use as this relationship has proven to be the least significant (Chen et al., 2004).

2.2. Domestication Research

Domestication Research examines how a new technology is accepted into an individual's everyday life (Pedersen and Ling, 2002; Rao and Troshani, 2007). More specifically, it examines what technology means to an individual and what role it plays in their life (Haddon, 2001). Domestication Research has been employed in a range of studies to investigate how various technologies are accepted into an individual's everyday life. For example, Skog (2002) investigated the importance of mobile phones in the everyday life of Norwegian teenagers. The study found that mobile phones serve as a symbolic and stylistic object. In other words, the design of mobile phones is considered important to their owners because it affects how others view them in society. Another study by Grinter and Eldridge (2001) found that mobile phones serve as a vehicle for hypercoordination. That is, the mobile device can be used by individuals to continuously remain in contact with their peers to coordinate and revise their plans. Given the fact that mobile phones play different roles in everyone's lives, it is crucial to consider Domestication Research when investigating m-services usage intention because the line between using mobile phones for fundamental functions (e.g., making/receiving calls) and for pleasure (e.g., downloading ringtones) is often blurred. Use of Domestication Research in this study allowed for an investigation into the effect of non-utilitarian factors on m-services, which is deemed to be relevant and important in the context of m-services.

2.3. Uses and Gratification Research

Uses and Gratification Research initially emerged in the 1940s when interest in exploring individuals' engagement in various forms of media behaviour started to increase (Jin et al., 2002). Whilst early Uses and Gratification Research focused on mass communication media, current Uses and Gratification Research has been extended to investigate a wide range of technology – from household telephones to mobile phones. This theory postulates that active users seek gratifications in media and technology use based on their individual motivations (Lin, 1996). Different consumers have different motivations for using a particular technology. Previous studies have suggested many underlying motives, both utilitarian and non-utilitarian, for media use, including: ease of use, usefulness, information seeking, relaxation, entertainment, social interaction, escape, companionship, time consumption, status, and other function related motives (Höflich and Rössler, 2001; Leung and Wei, 2000). Examination of these different motivations can help clarify the links between personal characteristics, such as those related to emotional and psychological factors and different uses of technology. Thus, this theory provides a useful theoretical framework for better understanding the underlying motivation of consumers' intentions to use m-services.

3. Conceptual framework

Drawing from the three theoretical perspectives mentioned above, a conceptual model of consumers' intentions to use mobile services was developed. As can be seen from Fig. 1, the proposed model extends the original TAM by including three additional constructs: *perceived enjoyment*, *perceived image*, and *perceived cost* to reflect the influence of both Domestication Research and Uses and Gratification Research on m-services usage intention. Furthermore, the construct "satisfaction" was deemed to be a better substitute for the construct "attitude towards use" for measuring holistic customer experience because the model focuses on post-adoption behaviour.
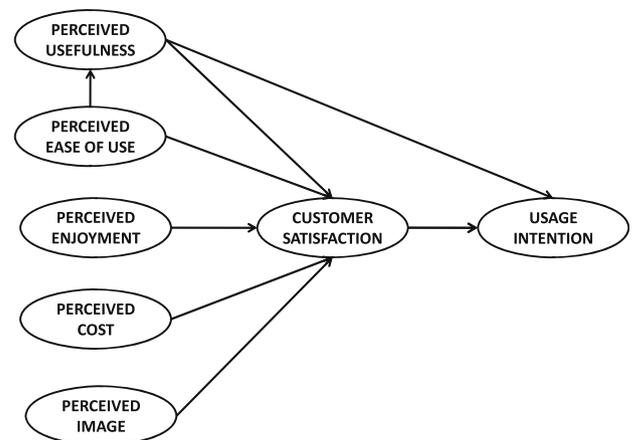

Fig. 1. A conceptual model of consumers' intentions to use m-services.