

## Chapter 2

# Determinants of Goal-Directed Mobile Ticketing Service Adoption Among Internet Users: The Case of Taiwan

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### ABSTRACT

*This study aims to understand the driving factors that influence the attitudes and behavioral intention to adopt mobile ticketing services, a new mobile Internet service in Taiwan applying the Theory of Planned Behavior. Empirical findings suggest that the intention to adopt the mobile ticketing service is significantly affected by the attitude towards the service, as well as the self-efficacy and controllability of adopting the mobile ticketing service. Attitude towards using the mobile ticketing service is significantly influenced by perceived usefulness and perceived monetary value of the service, whereas perceived usefulness is significantly affected by the perceived ease of use of the mobile ticketing service. Implications of this study and directions for future research are discussed.*

### INTRODUCTION

Over the last decade, mobile phones have become extremely popular in Taiwan. In fact, mobile phone subscriptions reached a penetration rate of 100%. Of the various services they offer, mobile voice

service is the most important source of revenue for mobile operators in Taiwan (FIND, 2005). However, competition in the telecommunications market is becoming more intense which leads to a reduction in mobile voice service fees and a decrease in the average revenue per user (ARPU). Further, several mobile technological innovations have also emerged and changed the nature of the

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telecommunications market environment, which in turn has stimulated varying demands in terms of mobile communication services (Buellingen and Woerter, 2004). As new service concepts are developed based on the rapid mobile technology developments (Ahn et al., 2005), a variety of mobile services have therefore been introduced by the telecommunications or mobile operators.

In order to generate additional sources of revenue, mobile operators also provide additional services, such as mobile Internet or mobile data services. Both new forms of technological innovation enable new value creation as they fulfill previously unmet needs (Gilbert and Han, 2005). Further, the popularity of these mobile services has been somewhat overestimated: the majority of mobile phone consumers remain interested in the most basic features, such as voice service or text messaging (Nysveen et al., 2005).

In terms of specifics, within the Taiwan market the usage level of mobile data services remains relatively low as compared to other regions in East Asia. According to the worldwide mobile Internet survey, only 43% of Taiwanese Internet users have signed up for mobile data services, which is low compared to Japan (51%), Hong Kong (55%), and Korea (64%) (FIND, 2005). Moreover, the survey indicates that consumers in Taiwan spend less time and money using the mobile data services than those in Japan, Hong Kong and Korea. Further, 41.4% of Taiwan mobile users who had no previous experience using mobile Internet thought that mobile Internet services were unnecessary for their needs (Liu, 2005).

Although the enormous potential of mobile phones connected to the Internet has been and continues to be hyped, the majority of mobile operators have yet to earn significant profits from mobile data services (Rheingold, 2002). Understanding the usage adoption behavior associated with mobile services is essential for mobile operators and content providers in terms of identifying the driving forces that influence Taiwan mobile phone users' willingness to register

for mobile Internet and mobile data services, as well as critical for companies who would like to include mobile applications in their businesses (Eng, 2006; Kumar and Zahn, 2003).

With the above in mind, the research questions of this research are as follows:

1. What are the driving forces of goal-directed mobile Internet services among Internet users?
2. How does the Theory of Planned Behavior explain and predict the adoption behavior of a goal-directed mobile Internet service: mobile ticketing?

The remainder of this study is organized as follows: Section 2 discusses the mobile Internet services and its development in Taiwan. Section 3 presents the theoretical background and hypotheses development of the proposed model, while the research methodology is described in Section 4. Section 5 provides the results of our empirical study. Finally, discussions and conclusions of this study are discussed in the last section.

## **MOBILE INTERNET SERVICES**

According to the definition adopted by the Worldwide Mobile Internet Survey (WMIS), mobile Internet service, also referred to as mobile data service (MDS), is one kind of information service that transmits information or data via mobile telephone and by wireless technologies. MDS is also defined as "an assortment of data communication services that can be accessed using a mobile phone over a wide geographic area via a mobile telephone network" (Hong et al., 2005). This definition excludes devices that can be used in a stationary mode such as notebook computers and personal digital assistants, among others.

Generally speaking, mobile Internet services can be grouped into four broad categories:

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