

## Chapter 56

# Relationships Between Individuals' Convergence Readiness and Performance in Using Mobile Phones

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### ABSTRACT

*Due to the emerging trend of digital convergence, the uses of self-service technologies (SSTs) on mobile devices are pervasive worldwide. However, most studies have devoted their efforts to the adoption of new technologies, few studies and business practices paid attention to the evaluation and consequences of mobile user behaviors, such as the uses of a mobile phone for information, communication and self-related services. Hence, this study developed a model by integrating technology readiness and individual performance to assess the individuals' level of readiness and various behavioral patterns in the use of mobile phones. The results show the perceptions of optimism and innovativeness are effective indicators that explain individuals' performance and usage behaviors in the use of mobile phones. The behavioral patterns of using various self-service technologies on mobile phones are segmented and have hierarchical effects. The research implications are valuable to IS implementation and service marketing in the domain of digital convergence.*

### INTRODUCTION

Owing to the emergence of converged technologies, a greater number of services and applications are being delivered through mobile networks and received by individual users. According to a forecast by International Data Corporation in 2014, smartphone vendors will ship a combined 1.3 billion units in 2015, representing a growth rate of 27.7% from the one billion units shipped in 2013. Hence, in the next 5 years, a considerable volume of smartphones with powerful computing and ubiquitous service

DOI: 10.4018/978-1-5225-5201-7.ch056

capabilities is expected to be bought and used by consumers. Meanwhile, a greater number of online services and content now can be viewed on different mobile devices such as tablets or wearable devices (Phalen & Ducey, 2012). Although the impact of convergence on users is ubiquitous, it brings new challenges and opportunities (Y.-L. Liu, 2013). A lack of guidelines pertaining to cross-media user behavior creates challenges for marketers to promote convergent products and services (S. J. Kim, 2014). For instance, based on the assumptions of substitution and complementarity, consumers may prefer a dedicated product to a converged product (Han, Chung, & Sohn, 2009; Y. Kim, Lee, & Koh, 2005). In contrast, new technology products such as smartphones and IPTVs incorporate multiple technologies and are well accepted by large groups of users (T.-C. Lin, Wu, Hsu, & Chou, 2012; Shin, 2007b). Hence, the marketers should be capable of foreseeing the emerging demand and consequences of user behavior from the bottom-up approach (Rangone & Turconi, 2003).

The diversity of media user behavior has been described as the consequences of digital convergence among user interaction, mobile devices and online service delivery (Chang, 2007; D. Lee, Son, Yoo, & Lee, 2011; Shin, 2007b; Yoffie, 1997). In the domain of service marketing, the use of various self-service technologies (SSTs) is being promoted to reduce labor cost and provide services without employee interference (Curran & Meuter, 2005; Curran, Meuter, & Surprenant, 2003; Meuter, Ostrom, Roundtree, & Bitner, 2000). Meanwhile, various self-service technologies can now be accessed by people on an all-in-one device such as a smartphone and satisfy their needs from multiple media (Bayus, Kim, & Shocker, 2000; Enoch & Johnson, 2010; Phalen & Ducey, 2012). Although the uses of mobile phone are pervasive in some countries, the perceptions of technological complexity and multiple utilities have impeded people's continued intention to use mobile data services (MDS) (Se-Joon Hong & Tam, 2006). Based on this convergence phenomenon, prior studies have concluded with inconsistent results by excluding the technology interactions and the consequences of user behavior which should be unveiled beyond the decision of technology adoption (Burton-Jones & Straub, 2006; Sun & Bhattacharjee, 2014). Hence, the purposes of this study is (1) to identify the user behavior in the domain of technology convergence, (2) to examine the user characteristics in the uses of mobile phone for multiple purposes, (3) to investigate factors that explain the use of SST in the uses of mobile phone as a converged device.

## **LITERATURE REVIEW**

### **Technology Convergence and SST**

The emergence of the Internet has transformed traditional services into e-services bundled with interactive content and delivered over electronic networks (Tsikriktis, 2004). Through a decade of evolution, online services have been made accessible to users via mobile networks and various mobile devices. Convergence devices, such as mobile phones have been defined as devices that combine the service capabilities of various technologies in a single device for users' convenience (Bayus et al., 2000; Hur, Yoo, & Chung, 2012a; Shin, 2007b). A new mobile device with embedded technologies is capable of substituting functionalities of other digital devices, such as e-mail, mp3 music, digital photography, and Internet. To put convergence into commercial use, market vendors and telecom providers continue to lure mobile phone users to upgrade their handsets in order to receive benefits and experience new

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