

M-Commerce Applications and Perceived Importance - An Empirical Study

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1. Introduction

Mobile-Commerce, or transactions conducted over a wireless communication network, is believed to be the next wave of internet revolution. The emergence of wireless technology and internet is said to bring the ubiquity nature of internet to the fullest. The installed base of mobile phones worldwide has exceeded 1.5 billion -- more than twice the number of PCs. M-Commerce is different from E-commerce in that it is a true "anywhere anytime" network. However, users are limited to limited processing power and input methods of devices. The unique characteristics of M-Commerce present opportunities and challenges to the success of M-Commerce applications.

We believe that the adoption of M-Commerce applications is related to usage behavior of current cellular phone users. This study was conducted to explore the relationship between the two.

2. Literature Review

Senn (2000) has categorized M-Commerce applications to: transaction management (shopping, banking), digital content delivery services (browsing, emailing, text messaging), and telemetry services (user as hand-held device). M-Commerce is restricted in its limited processing capability, memory, small display screen, keyboard, and battery life (Chang and Chen, 2005). Dholakia and Dholakia (2004) defined key dimensions of the emergent M-Business space to include user

experience, different terminals, multi transaction services, enterprise integration, field third-party applications, geographic position, on-the-go flexible configurations, on-the-go flexible services, and flexible location. Varshney and Vetter (2002) has identified emerging mobile commerce applications: mobile financial applications, mobile advertising, mobile inventory management, product location and search, product service management, wireless business re-engineering, and mobile auction, entertainment, and other services.

In summary, the dominating literature in the M-Commerce research focuses on the technical aspects of M-Commerce, and more research in the application area is needed. In recognizing the unique characteristics of M-Commerce, this research seeks to identify key areas of M-Commerce applications, and understand factors that drive their success.

3. Research Model

This research intends to understand M-Commerce applications and their perceived importance among M-Commerce users. In particular, we are interested in learning whether the type of applications and their perceived importance is related to the users' current usage behavior of cellular phone.

We have characterized M-Commerce applications into five categories:

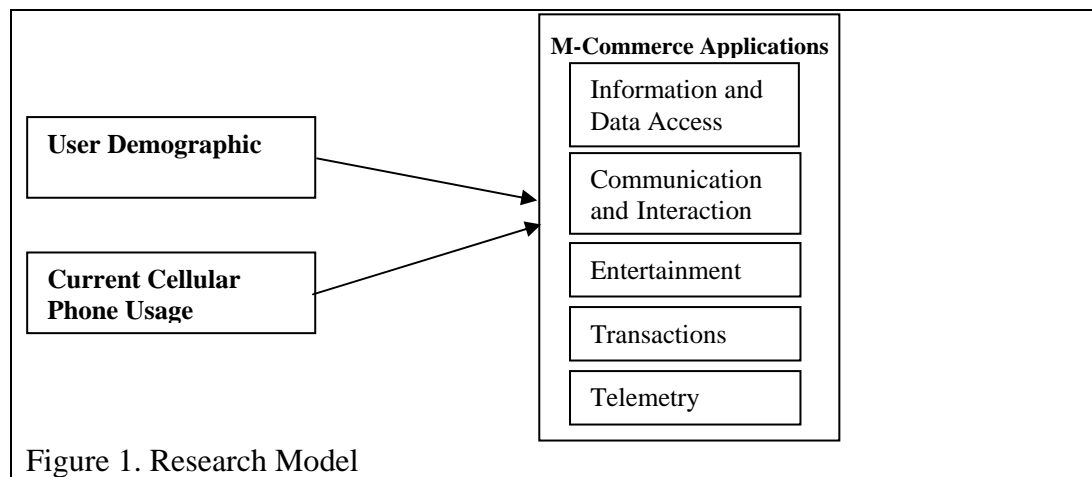


Figure 1. Research Model

1. Information and Data Accessing, which includes browsing of news, directory services, maps, traffic and weather report.

2. Communication and Interaction, includes short messaging, e-mailing, chat room and video conferencing applications.

3. Entertainment, such as music, gaming, video and picture downloads.

4. Transactions functions, such as banking, shopping, auction, mobile wallet, booking and reservations, etc.

5. Telemetry, which is to use the mobile device as a device to communicate with other devices, similar to the functions of a "hand held" device.

4. Research Method and Proposed Results

A survey questionnaire was developed to measure constructs in the research model. The survey was sent to 500 subjects from three countries: Taiwan, United States, and Brazil. Majority of the data collection is completed. The potential contribution of the study is to provide insights to new M-Commerce application development.

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