

# A Study of Mobile Payment (M-Payment) Services Adoption in Thailand

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## INTRODUCTION

The mobile phone has become a common and empowering communication tool, with approximately 6 billion mobile devices currently in use worldwide (ITU, 2011). The rapid development of handheld and mobile technology has created opportunities to use such devices beyond the instant communication purposes for which they were originally designed. Mobile commerce (m-commerce) has become an important channel in today's wireless society, allowing people to purchase and pay for products with their mobile devices (Zhang & Dodgson, 2007). The advent of m-payments as a service is a key driver behind m-commerce (Holden, 2012). M-payment activity continues to increase, with the value of transactions conducted through handheld devices predicted to reach \$670 billion globally by 2015 (Wilcox, 2011). With such anticipated growth, the entities associated with providing m-payment services, such as telecommunication companies, banks, and payment service providers, need to understand the determinants underpinning the adoption decisions of consumers to ensure that they can meet demand (Chen, 2008; Kim, Mirusmonov, & Lee, 2010).

There is a growing body of literature associated with m-payment adoption. However, relatively little research has focussed on Thailand, which has a low uptake rate of m-payment services despite a high rate of mobile device adoption (Bank of Thailand, 2012). To address this gap in the research, an examination of the adoption of m-payment services amongst a cohort of early-adopting Thai consumers was conducted. The

research sought to identify the factors that are most likely to influence adoption. It assumes that adoption of m-payment services is desirable and will have a positive impact on the various entities associated with the increasing uptake of this mobile transaction.

This article presents the findings of this research study, providing some background, a review of the literature relating to m-payment in Thailand and an understanding of user adoption models. The methodology and findings are then discussed, concluding with considerations for further research.

## BACKGROUND

The retail services sector is reliant on the efficient application of financial payment systems that benefit retailers, financial institutions and customers. Indeed, enhancements to the retail payment system through innovative use of technology have been shown to be important for consumers where such payment systems are to meet the growing expectations of consumers (Chenault, 2009). Notably, it is argued that financial payment system improvements through technological innovation can be an important contributor to a country's economic development (Weichert, 2008). Balakrishnan (2009) indicates that cash-based payment systems in developing economies are associated with up to seven per cent of a country's gross domestic product (GDP). Furthermore, by shifting from a paper-based payment system, to an electronic payment system, can equate to saving a full one per cent of the GDP.

Therefore, electronic payment innovation should be a strategic priority for all stakeholders in the financial payment industry at all levels of operation.

M-payment is a recent form of payment innovation that has emerged as a result of the widespread adoption of wireless technology, as reflected in the rapid uptake of mobile devices (Zhang & Dodgson, 2007). M-payment refers to the use of a mobile device, such as a mobile phone or a personal digital assistant (PDA), to electronically transfer funds from one party (payer) to another (receiver), either directly or via an intermediary (Mallat & Tuunainen, 2008; Zhang & Dodgson, 2007). An efficient m-payment system can create a significant multiplier effect across a financial value chain, potentially creating more jobs for a country's economy. Arguably, with the recent transformation to a mobile-enabled world, m-payments will become an important lynchpin in economic activities and growth for countries where this technology is a common mode of payment (Weichert, 2008). Consequently, as already indicated, the advent of m-payment services highlights the importance of understanding factors influencing user adoption, particularly in countries that may have high mobile device use, but are lagging in the adoption of important value-added services such as m-payments (Mallat, 2007)—a situation encountered in Thailand.

## LITERATURE REVIEW

### M-Payment Services in Thailand

In Thailand, m-payment services have evolved steadily with the emergence of advanced technology and efficient electronic payment systems. Interestingly, the 2008-2009 global economic crisis contributed to the rise of electronic payment systems as banks began to pay more attention to cost reduction through channels involving less handling and processing costs than cash or cheque transactions (Bank of Thailand, 2013).

The overall utilisation of electronic payment systems in Thailand has seen consistent growth. In 2012 the total transaction volume of electronic payments from banks and non-banks accounted for 1.06 billion transactions, a 14 per cent increase on figures for the previous year (Bank of Thailand, 2013). However, Figure 1 illustrates that the main electronic payment

transactions conducted were through ATMs, debit/credit cards and the Internet, not mobile phones.

The growth of mobile phone subscriptions in Thailand shows that these devices have become important and ubiquitous among Thai consumers. In 2012, the total number of mobile phone subscribers stood at 78.83 million users, or 122.29 per cent of the total population (Bank of Thailand, 2013). This was an increase of 470,000 users or 0.6 per cent from the previous year. Most mobile phones purchased by Thai consumers today are buddled with multifunction features that could be used to conduct m-payment transactions. For this reason, various resources have been invested in the development of an advance m-payment infrastructure in the Thai market. However, as highlighted in Figure 1, this new mode of payment has not been widely adopted by people despite a relatively high use of mobile phones (Bank of Thailand, 2013; Kaveevivitchai, 2012). A Report by the Bank of Thailand (2013) indicates that m-payment services are still the least preferred method for payment among Thai consumers when compared to card-based and Internet-based payment systems. Likewise, a survey by the Thai National Statistical Office (2013) notes that only 0.6 per cent of the 44.1 million Thai mobile phone users conduct financial transactions using a mobile device. It is unclear why Thai consumers lack enthusiasm or have a low intention to adopt m-payment service, given the proven advantages and superior benefits of this service in providing consumer convenience and flexibility.

Several studies have reported that consumer attitude plays an important role in the decision to adopt new payment systems, especially electronic payment systems. For instance, D' Silva (2009) suggests that it takes time for consumers to change their behaviour or habits when it comes to adopting a new payment type. Moreover, once consumers become accustomed to a particular payment method, such as the traditional paper-based monetary system, they are reluctant to alter their payment type (Weichert, 2008). Schuh and Stavins (2009) agree with Weichert (2008) about this particular issue and emphasise that consumer attitudes toward personal financial management and consumer behaviour are deeply rooted and difficult to alter. In particular, with mobile-based payment technologies, a sophisticated payment application requires consumers to change their behaviour in payment activities (Zhang & Dodgson, 2007).

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