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Electronic Payment System of Thailand: Mobile Banking Market Competition

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Introduction

Many banks in Thailand are currently launching mobile banking services to capture the benefits of wireless connectivity. They view the mobile-enabled commerce as a strategic opportunity to offer new experiences of banking services to their customers. Under the competitive landscape of mobile commerce (m-commerce), Thai banks compete to use mobile phones as a new delivery channel to get closer to customers. This chapter explores the electronic payment system of Thailand with a focus on the mobile banking system and strategies of competition. The discussion is using the Managing Migration Paths Model¹ to support an analysis of the competitive landscape for mobile banking.

¹ Hamel Gary and Prahalad C.K., *Competing for the future*, (Harvard Business School Press, Boston, MA, 1994).

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Following the introductory discussion, the second section reviews the long-term adoption of telephony and the mobile banking innovation system of Thailand. The third section analyses the competitive landscape and strategies in competing for the future of mobile banking in Thailand using the Managing Migration Paths Model. The last section concludes with the implications of Thailand's readiness in moving towards an m-money economy.

Long Term Adoption of Telephony: The Case of Thailand

The payment system in Thailand can be divided into two major systems: physical payment (cash and cheque payment) and e-payment (Automatic Teller Machine or ATM, credit cards, Electronic Fund Transfer at the Point-of-Sale or EFTPOS, smart cards, Internet banking and mobile banking). E-payments are set to have a huge growth potential whereby mobile banking can be seen as an approach for providing financial services through the use of ICT. Figure 23.1 provides an overview of the mobile banking innovation system in Thailand. The payment landscape is comprised of commercial banks, foreign bank branches and specialized financial institutions, all of them regulated by the Bank of Thailand (BOT). The banking industry is closely linked with the ICT industry since the functionalities of mobile banking innovations hinge on the strategic alliances between banks and mobile phone companies. Major players in the Thai mobile communication market (having the largest mobile networks) are Advanced Info Service Public Company Limited (AIS), Total Access Communication Public Company Limited (DTAC) and Truemove (mobile phone operator of True Corporation). The diffusion of mobile banking innovations (S-curve of the innovation life cycle) is based on the ICT technology to enable 3G services.

According to a survey by the International Telecommunication Union (ITU) in 2014, Thailand's Internet use is the highest, climbing from the 105th rank in 2013 to 71st. In the Network Readiness Index (NRI) by the World Economic Forum, Thailand was ranked 67th in terms of ICT competitiveness as it climbed up from 74th in 2013. The fast paced ranking shows the high growth of ICT development in Thailand.²

²International Telecommunication Union (ITU) *Measuring the Information Society Report*, (International Telecommunication Union, Geneva Switzerland, 2014).

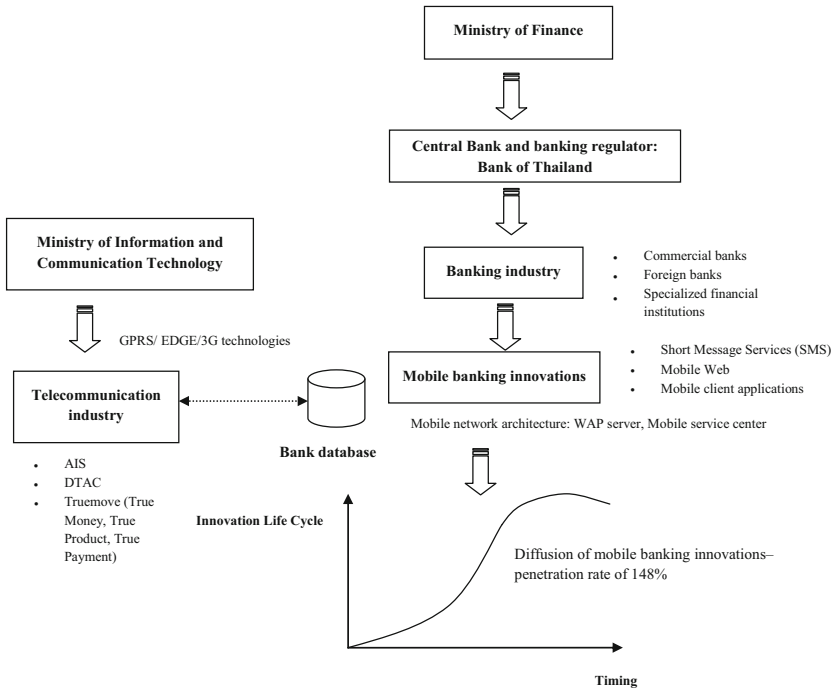


Fig. 23.1 Mobile banking innovation system in Thailand (Source: Author's own design)

The Thai mobile market moved towards 3G networks in 2013 and now mobile operators are committing to 4G. The mobile penetration of Thailand in 2014 was 146 % and increased to 148 % in the first Quarter of 2015 (Fig. 23.2). The same source reported that, in line with the high penetration rate, the use of smartphones had the largest share in the Thai market (the market share of feature phones and smartphones was 44 % and 56 % respectively). Figures from the National Broadcasting and Telecommunication Commission also showed the subscriber market share of the three major mobile network operators in Thailand in 2014 as being AIS 46.20 %, DTAC 29.20 %, Truemove 24.60 %, respectively.

With the high mobile penetration rate (148 % in Quarter 1 of 2015) and 98.9 million phone subscribers (compared to the fixed-line subscribers of only 5.6 million), banks see mobile commerce (m-commerce) as an opportunity to compete in the digital era. Many banks in Thailand use mobile

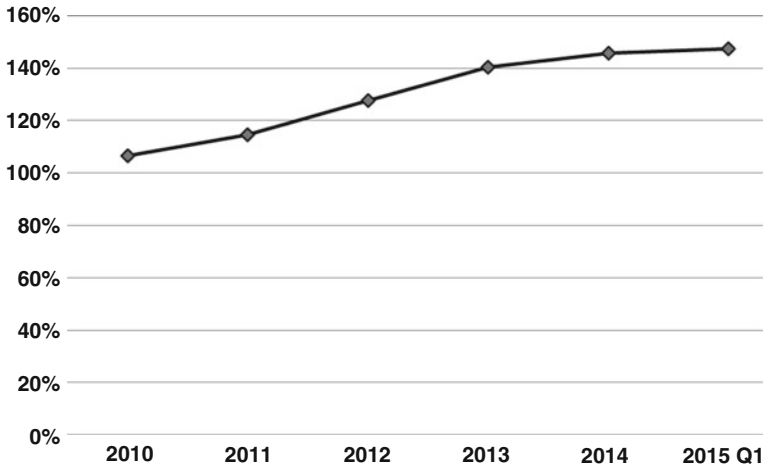


Fig. 23.2 Mobile penetration rates in Thailand, years 2010–2015 (Source: National Broadcasting and Telecommunication Commission)

phones as strategic tools to offer value-added financial services to their customers. There are seven banks competing to provide mobile banking services in Thailand: Kasikorn Bank, Thai Military Bank, Siam Commercial Bank, Bank of Ayudhya, Standard Chartered Bank, Krung Thai Bank and Bangkok Bank. Strategically, banks see the mobile phone as a new delivery channel for establishing close relationships with customers in order to cross-sell banking products/services and aim to achieve long term profits.

Competing for the Future of Mobile Banking in Thailand

Competing in the Future with the Managing Migration Paths Model

Hamel and Prahalad (1994) propose the Managing Migration Paths model to show how firms could create future markets and technology by entering into strategic alliances. The model stresses the importance of collaboration as they argue that collaborative innovation is less risky

and increases probability of success due to direct contact with customers. According to the same source, it is unlikely that any single firm would have sufficient capability to compete in all domains of competition in a complex economic environment. They argue that the use of collaborative strategy would reduce the risk of competitive innovation, reduce the absolute size of risks and capital involved and is necessary for the delivery of value to customers.

In addition, they argued that in competing for the future, companies need to create their own futures, envision new markets, and reinvent themselves. The characteristics of the Managing Migration Paths model are:

- (i) Creating and managing coalitions
- (ii) Learning and experimentation in the market
- (iii) Building global brand and distribution
- (iv) Setting standards and influencing regulation
- (v) Investing in core competencies

The term 'mobile banking' refers to a channel through which customers interact with a bank through non-voice applications such as text- or WAP-based banking services using a mobile device, such as a mobile phone or personal digital assistant (PDA).³ Mobile banking can be seen as an evolutionary step of money remittances to improve the payment system. Mobile commerce (m-commerce) represents the growth opportunity for the players in the financial services industry to extend financial services through mobile devices and wireless communication technologies.^{4,5}

In the mobile banking industry, collaboration can be seen as a means to create value networks and ensure adoption. Mobile banking services involve complexities and difficulties that require capabilities that are beyond the power of a single firm to provide.⁶ The advancement in infor-

³Hochle Hartmut and Lehmann Hans, "Exploring the state-of-the art of mobile banking literature", (7th Global Mobility Roundtable Conference, Proceedings published by University of Auckland, Auckland, New Zealand, November 23–25, 2008).

⁴Jenkins Beth, *Developing Mobile money ecosystems*, (IFC and the Harvard Kennedy School, 2008).

⁵Laukkanen Tommi, 'Measuring mobile banking customers' channel attribute preferences in service consumption, *International Journal of Mobile Communications*, Vol. 5, 2 (2007): 123–138.

⁶Wonglimpiyarat Jarunee, 'Does complexity affect the speed of innovation?', *Technovation*, Vol. 25 (2005): 865–882.

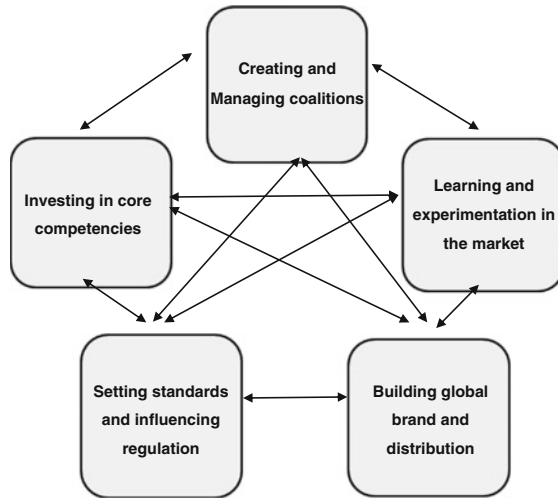
mation and communications technology (ICT) presents a new opportunity to improve banking capacity in response to a volatile economic environment and changing competitive conditions. The mobile banking innovation requires an extended network across several industries to allow multifunctional capabilities. The analyses of the Thai mobile banking system in the next section highlight the importance of collaboration across the industries to enable the development of the mobile wallet in financial services.

Analysis of Competitive Landscape and Strategies of Competition in the Thai Mobile Banking Market

In Thailand, the increasing competition forces banks to seek strategic alliances (network collaboration) to offer innovative solutions in the payment market. It is argued that the progress of mobile banking along the innovation life cycle needs network linkages between banking and telecommunication industries. The analysis of competing for the future of mobile banking in Thailand based on the Managing Migration Paths Model (Hamel and Prahalad 1994), shown in Fig. 23.3.

The analysis of the competitive landscape in the Thai mobile banking is shown in Tables 23.1 and 23.2. They present a study focused on the leading banks: Bangkok Bank, Kasikorn Bank, Siam Commercial Bank, Krung Thai Bank and Bank of Ayudhya. These five banks had the highest growth performance in the Thai banking industry in 2014.

In clearing a path towards a future of mobile banking in Thailand, banks enter into strategic alliances to provide value-added services to their customers. Kasikorn Bank is the most aggressive in expanding its mobile banking market. By partnering with DTAC, Kasikorn Bank can develop ATM SIM for mobile payment transactions, using a secure platform for financial transactions. Kasikorn Bank also collaborates with Advanced Info Service Public Company Limited (AIS), Samart i-Mobile, HTC Corporation (HTC) and Telephone Organization of Thailand (TOT) to offer K-Mobile Banking Plus. The use of collaborative strategy according to Hamel and Prahalad's



1. Creating and managing coalitions

- Collaboration between the ICT and banking industries to offer a secure technology platform for electronic financial transactions through the mobile networks (using the Global System for Mobile (GSM) and the 3rd Generation Partnership Project communication technologies)
- Coalitions across the industries to support solutions in mobile payment (encouraging the migration of services to the ICT infrastructure to expand broadband mobile services/banking applications)

2. Learning and experimentation in the market

- Mobile operators and banks learn to provide particular benefits to the customers in terms of accessibility to banking services at all times, cost-saving, convenience to transfer and manage their accounts.

3. Building global brand and distribution

- Mobile phones provide universal access/coverage to payment transactions
- Building competencies in the distribution capacity (mobile phone as a new service delivery channel)

4. Setting standards and influencing regulation

- IMT 2000 3G standards (International Telecommunication Union and International Mobile Telecommunications)
- General Packet Radio Service (GPRS), Enhanced Data Rates for Global Evolution (EDGE), Wideband CDMA (WCDMA), High Speed Downlink Packet Access (HSDPA), High Speed Uplink Packet Access (HSUPA), Long Term Evolution (LTE)
- The functionalities of mobile banking based on advanced wireless network of 3G and 4G wireless technology standards
- High bandwidth technology to enable real time financial transactions and other applications such as video streaming, video conferencing, TV broadcasting.
- Policy and regulatory framework to support mobile banking services

5. Investing in core competencies

Investing in mobile banking and broadband ICT infrastructure to allow mobile users to perform banking transactions through the use of mobile phones.

Fig. 23.3 Managing migration paths model and the future of mobile banking competition in Thailand (Source: author's design)

Table 23.1 Summary the competitive landscape in the Thai mobile banking, 2014

Bank	Bangkok Bank	Kasikorn Bank	Siam Commercial Bank	Krung Thai Bank	Bank of Ayudhya
Year of establishment	1944	1945	1907	1966	1945
Mobile banking services	BBL Mobile iBanking	K-Mobile Banking Plus, K-Mobile Banking SMS, K-Mobile Banking ATM SIM	SCB Mobile Banking	KTB Online@Mobile	Krungsri Mobile Banking

Network collaboration (Managing Migration Model)	Business partner with AIS, DTAC, True, Hutch and international partner of Brookfield to support Bangkok Bank's mobile banking capabilities	Business partner with DTAC to develop ATM SIM for mobile banking services	Business partner with AIS to provide EDGE/GPRS services	Business partner with Samart, i-Mobile, TOT, HTC and Microsoft to provide 3G ready services and extend service channels for the bank customers	Business partner with AIS, DTAC and Truemove as well as Cisco to provide audio, video and web conferencing capabilities	Business partner with AIS, DTAC and True Move network providers to provide GPRS/EDGE/3G mobile banking services
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Source: Author's own design based on the Thailand Commercial Banking Report

Table 23.2 SWOT analysis of the competitive landscape in the Thai mobile banking, 2014

Bank	Bangkok Bank	Kasikorn Bank	Siam Commercial Bank	Krung Thai Bank	Bank of Ayudhya
Strengths (S)	Strong corporate and retail customer base across Asia One of the region's strongest brand names Largest commercial bank in Thailand and one of the largest regional banks in Southeast Asia	First bank to launch mobile banking services and thus build customers' confidence and credibility Strong corporate and retail customer base and strong brand in Thailand	Extensive branch network Links to Thailand's powerful royal family WAP services can be used in all operating system platforms	Government-backed, state enterprise bank Thailand's largest retail bank	Strong brand and wide branch network
Weaknesses (W)	Slowing loans and deposits growth as the economic climate worsened	K-Mobile Banking ATM SIM could not serve all customer groups	Late entry in the mobile banking market	No international presence and dependence only on the Thai market	Relatively high NPL exposure

Opportunities (O)	Well placed for expansion into China, where the bank has cultural and historic ties	The first to market and so could build trust and credibility in the mobile banking system. Aggressive collaboration with mobile phone providers supports strong profit growth	The bank's main revenue is from mutual fund selling and so increases customer convenience via mobile use	Rapidly expanding branch network	New focus on profitability
Threats (T)	Growing competition in domestic market and from overseas (particularly from non-bank financial institutions) Political uncertainty in Thailand	Growing competition in domestic market and from overseas (particularly from non-bank financial institutions) Political uncertainty in Thailand	Growing competition in domestic market and from overseas (particularly from non-bank financial institutions) Political uncertainty in Thailand	Growing competition in domestic market and from overseas (particularly from non-bank financial institutions) Political uncertainty in Thailand	Growing competition in domestic market and from overseas (particularly from non-bank financial institutions) Political uncertainty in Thailand

Source: Author's own design based on the Thailand Commercial Banking Report

Managing Migration Paths model has helped turn Kasikorn Bank to be the leader of digital banking in Thailand with the highest account numbers of 7 million or 38 % of the total market share in 2014.

The use of strategic alliances underlying the competitive banking landscape aims at upgrading the core banking system and expanding the e-banking channels. This is evident in the case of Bangkok Bank's collaboration with Brookfield, Fiserv's Mobile Money service, to support its mobile banking capabilities; strategic alliances of Siam Commercial Bank, Krung Thai Bank and Bank of Ayudhya with AIS, DTAC and True Move to build a secure banking platform and enable short messaging service (SMS), wireless application protocol (WAP) and downloadable mobile applications.

Conclusions

This chapter discusses the electronic payment system of Thailand with a focus on the development of the mobile banking system and strategies of competition. The analyses and discussions of the competitive landscape of mobile banking innovations in Thailand based on Hamel and Prahalad (1994)'s Managing Migration Paths Model have shown the importance of strategic alliances between the banking and ICT industry to offer electronic and mobile payments (e-payments and m-payments). Currently, Thailand has a high mobile penetration in addition to a strong retail network, reflecting the country's readiness for m-banking opportunities. With the mobile penetration rate at 148 % in Quarter 1 of 2015, banks compete to use mobile phones as a new delivery channel in offering financial services to their customers in the digital era.

At present, there are problems regarding interoperability issues and lack of common technology standards in the mobile banking system. The move towards the m-money economy needs common technology standards for mobile banking to achieve technical and data content compatibility for multifunctional capabilities. The development of standards and security for mobile transactions would help support interoperability among multiple mobile ecosystems. Furthermore, in transitioning from cash to electronic money, Thailand needs risk-based regulations

on m-money (a mobile money regulatory framework) to support the mobile banking innovations. Given that the e-payment system is a key contributor to economic growth, the analyses in this chapter have shown that e-payment systems have become increasingly prominent in the Thai economy. This study provides useful lessons and implications for practitioners to support the potential of the mobile banking take-ups (diffusion of mobile banking innovation) in the future of digital banking.

Further Reading

- Ernst & Young. (2016). Mobile banking: Financial services meet the electronic wallet. <http://kw.wharton.upenn.edu/ey-global-banking/mobile-banking/>. Accessed 12 Jan 2016.
- Gianni, F., & Pier Luigi, P. (2015). An analysis of features and tendencies in mobile banking apps. *Procedia Computer Science*, 56, 26–33.
- Yue, Z. M., & Mark, D. (2007). *High-tech entrepreneurship in Asia: Innovation, industry and institutional dynamics in mobile payments*. Cheltenham: Edward Elgar.

Bibliography

- Hamel, G., & Prahalad, C. K. (1994). *Competing for the future*. Boston: Harvard Business School Press.
- Hoehle, H., & Lehmann, H. (2008, November 23–25). Exploring the state-of-the-art of mobile banking literature, 7th Global Mobility Roundtable Conference, Proceedings published by University of Auckland, Auckland, New Zealand.
- International Telecommunication Union (ITU). (2014). *Measuring the information society report*. Geneva: International Telecommunication Union.
- Jenkins, B. (2008). *Developing mobile money ecosystems*. Cambridge, MA: IFC and the Harvard Kennedy School.
- Laukkanen, T. (2007). 'Measuring mobile banking customers' channel attribute preferences in service consumption. *International Journal of Mobile Communications*, 5, 2.
- Wonglimpiyarat, J. (2005). Does complexity affect the speed of innovation?. *Technovation*, 25, 865–882.