



Research Paper

# Behavior And Satisfaction Of K-Mobile Banking Plus Application: A Case Study In Nakorn Si Thammarat, Thailand

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## Abstract

This study investigates the behavior and satisfaction of users of the KPLUS application, a case study conducted in Nakhon Si Thammarat province. The objectives of the study are to examine customer behavior in conducting transactions through the KPLUS application and to explore the satisfaction of users in Nakhon Si Thammarat province. Additionally, the study aims to understand the relationship between customer satisfaction and their usage behavior of the KPLUS application.

The study found that the majority of the sample users of the application were female, single, aged between 31-40 years old, with a bachelor's degree as their highest level of education. They were either employed or self-employed, with a monthly income ranging from 10,000 to 29,999 baht. The frequency of using the application was found to be more than 6 times per week, primarily for basic transactions. The average duration of each application usage session was 1-3 minutes, with the highest frequency observed between 12:00 PM and 1:00 PM. The application was predominantly used for money transfers between different bank accounts.

The results of the hypothesis testing revealed that the demographic characteristics of the users (age, occupation, income) were related to their usage behavior of the KPLUS application (frequency of usage). The study found that age was not significantly related to the frequency of using the KPLUS application. However, occupation and income were found to have a significant relationship with the usage behavior of the KPLUS application.

Furthermore, users with different usage frequencies of the KPLUS application demonstrated differences in their satisfaction levels regarding the product, price, distribution, and marketing promotion. It was also observed that users who had a usage frequency of more than 6 times per week exhibited the highest level of satisfaction with the KPLUS application, indicating a positive relationship.

Regarding the behavior of the users (frequency of usage) that varied among individuals, there were differences in satisfaction levels regarding the product, price, and marketing promotion.

**Keywords:** application, bank, financial transactions

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## I. Introduction:

The growth of technology and the Internet has played a significant role in daily life and has also influenced people's behaviors in society. In the banking sector, there have been changes in roles and adaptations to technology and digital innovations on mobile devices. This has led banks to make significant adjustments to develop online transaction formats through digital channels. The aim is to provide self-service financial transaction services that are more convenient and efficient. Currently, the population of Thailand is approximately 69.8 million people, with around 57 million internet users, accounting for 83% of the total population (Digital Advertising Association of Thailand, 2020). This has resulted in changes in consumer behavior.

According to the Electronic Transactions Development Agency (ETDA), a public organization, the survey results of internet users' behavior in Thailand in 2021 revealed that Thais spend an average of 12 hours and 5 minutes per day on the internet, an increase from 1 hour and 20 minutes in 2020. The most popular online activities among internet users include messaging, hotel reservations, flight bookings or purchases, and online payment for goods and services. This has led to various trade and investment systems starting to utilize the internet

for greater commercial benefits. Businesses across different sectors have expanded opportunities by incorporating internet-based distribution channels, such as e-commerce, where customers can make online purchases. Additionally, consumers are increasingly opting for internet banking services to conduct financial transactions, resulting in a trend towards conducting financial transactions through electronic devices, such as mobile phones, computers, or tablets. Internet banking services have been developed with advanced technological advancements and have gained widespread popularity.

One case study is the first commercial bank in Thailand to introduce mobile banking services, which has continuously developed its technology to meet the evolving needs of users. As a result, K-Mobile Banking PLUS, known as KPLUS, was developed to cater to the changing lifestyles of bank customers and provide an efficient user experience. Looking towards the future, as Internet usage and mobile banking transactions continue to increase among the Thai population, banks will continue to innovate and develop financial technologies. This will make banking transactions easier, more convenient, comprehensive, and secure, ultimately leading to a cashless society.

Given this context, it is important to study the behaviors and satisfaction of users of the KPLUS application in Nakhon Si Thammarat province. The objective of this research is to understand the behaviors of customers in terms of using the KPLUS application and their level of satisfaction. Additionally, the study aims to explore the relationship between customer satisfaction and their usage behaviors of the KPLUS application.

## **II. Literature Review**

### **Consumer behavior:**

Consumer behavior refers to the actions, decisions, and processes undertaken by individuals or groups in relation to the selection, purchase, use, and disposal of products and services. Several researchers have provided their insights into the meaning of consumer behavior:

Thanakrit Wantamail (2011) describes consumer behavior as encompassing activities such as information search, purchasing, usage, evaluation, ideation, and product/service disposal.

Chuchai Smithikrai (2011) focuses on the decision-making actions of individuals, including selecting, purchasing, using, and disposing of products or services, all of which are aimed at meeting personal needs and desires.

Panisa Meechinda (2010) explores the process by which individuals or groups select, purchase, use, and manage products or services after consumption to fulfill their specific needs within a certain timeframe.

### **Satisfaction:**

Wanchai Kaewsirikomol (2007) defines satisfaction as the feeling or state of being satisfied that individuals experience towards a business establishment based on their interactions or experiences with that particular place, as defined in Chaplin's psychological dictionary (Chaplin, 1968).

### **Marketing Mix (4 P's):**

Kotler (1997) describes the marketing mix as a set of marketing tools and strategies designed to motivate customers to purchase products or services and to ensure customer satisfaction. The marketing mix consists of four variables, known as the 4 P's: product, price, place (distribution channels), and promotion.

The components of marketing refer to controllable marketing variables that companies use collectively to satisfy the target audience in various aspects. These components include product, price, place (channel distribution), and promotion.

### **Technology Acceptance Model (TAM):**

Davis, F.D. (1985) proposed the Technology Acceptance Model (TAM), a renowned theory that is widely accepted as a measure of the success of technology usage. It was an extension of the Theory of Reasoned Action (TRA) by Icek Ajzen and Morris Fishbein (1975), with the objective of studying the factors that motivate and interest individuals in accepting and using information technology. There are two key variables in the model: 1) Perceived Ease of Use (PEoU), which refers to the user's expectation of the system's ease of use, and 2) Perceived Usefulness (PU), which indicates the perceived enhancement of user efficiency when using the system. Additionally, the technology acceptance and innovation theory has discovered that users' beliefs regarding the ease of use and benefits of information technology contribute to the formation of interest, acceptance, and usage behavior. The relationship between the factors proposed in the technology acceptance and innovation theory can be represented in the form of a model, as shown in the figure (referenced in Annie Ng Chen San and Choy Johnn Yee, 2013).

Based on the study of relevant concepts, theories, and research, the researcher has conducted a literature review. The researcher has considered various factors based on the concepts and theories and has made improvements and defined research hypotheses as follows:

Hypothesis 1: Demographic factors are related to the usage behavior of the KPLUS application.

Hypothesis 2: Different demographic factors are related to satisfaction towards the marketing mix factors, including product factors, price factors, distribution channel factors, and promotion factors.

### **III. Research Methodology**

#### **Population and Sample**

The population of this research study focuses on studying the behavior and satisfaction of users of the KPLUS application in Nakhon Si Thammarat province. The population studied in this research consists of customers of a bank who are considered as the case study and have used the KPLUS application in Nakhon Si Thammarat province. The total population size is 400 individuals. Since the population size is large and the exact number of the population is unknown, the sample size can be calculated using the formula developed by W.G. Cochran (1953), with a confidence level of 95% and an acceptable margin of error of 0.05.

#### **Data Collection Method**

This research study utilizes a survey method to investigate the behavior and satisfaction of users of the KPLUS application in the case study bank in Nakhon Si Thammarat province. The data collection process involves the following steps:

1. Primary Data Source: Data is collected through a survey using a questionnaire. A total of 400 questionnaires are administered. The process involves the researcher designing the questionnaire, preparing the questionnaire, presenting it to the advisor and the graduate program committee of the Innovation and Business Development Management program, conducting data collection using the questionnaire, and verifying the accuracy of the collected data.

2. Secondary Data Source: Data is gathered from various documentary sources to support the questionnaire development process. These sources include journals, articles, internet sources, academic books, theses, dissertations, and relevant reports.

### **IV. Research Findings**

The sample group of KPLUS application users in Nakhon Si Thammarat province consisted of 400 individuals, including both males and females. The majority of the sample group were female, single, aged between 31-40 years old, with a bachelor's degree as their highest level of education. They were mostly employed on a contractual or freelance basis, with a monthly income ranging from 10,000 to 29,999 baht. The frequency of using the KPLUS application was high, with more than 6 transactions per week, and the average duration of app usage per session was 1-3 minutes during the time period of 12:00 PM to 1:00 PM.

The research findings revealed that the sample group primarily used the KPLUS application for transferring money between bank accounts, both within the same bank and across different banks, with an average rating of 4.18 (high). The second most frequent usage was checking balances and transaction history, with an average rating of 4.15 (high). Making payments for online purchases had an average rating of 3.88 (high), while paying utility bills had an average rating of 3.76 (high). Topping up mobile phone credit had an average rating of 3.66 (high), while utilizing services such as Grab, Foodpanda, and Lineman for top-up purposes had an average rating of 3.50 (high). Availing various privileges from Grab, Foodpanda, and Lineman had an average rating of 3.48 (moderate). Searching for branch locations or ATMs had an average rating of 3.29 (moderate), and applying for loans had an average rating of 3.10 (moderate). Finally, investing in various funds had an average rating of 2.92 (moderate).

In addition, the research findings revealed that the sample group had a high level of satisfaction with the KPLUS application in terms of product-related aspects. The average rating for convenience and speed in financial transactions using the KPLUS application was 4.65 (highest satisfaction). In terms of pricing, the KPLUS application was highly satisfying as it provided good value for the benefits received. It was considered cost-effective due to the savings on service fees. In terms of distribution channels, using the KPLUS application for financial transactions was the most time-saving option compared to visiting Kasikorn Bank branches or ATMs. Regarding marketing promotion, the satisfaction level was also very high, with an average rating of 4.60 (highest satisfaction). The promotion of the KPLUS application created a modern and leading image in delivering services through mobile banking channels.

### **V. Research Discussion**

The research study examined the behavior and satisfaction of KPLUS application users in Nakhon Si Thammarat Province, focusing on a case study involving 400 individuals of both genders. The majority of the sample group consisted of females who were single, aged between 31 and 40 years old, and held a bachelor's

degree. They were either employed or self-employed, with a monthly income ranging from 10,000 to 29,999 Baht. The study found that this sample group had a high frequency of using the KPLUS application, with more than 6 transactions per week. The average duration of each app usage session was 1-3 minutes, mainly during the time frame of 12:00 PM to 1:00 PM.

The study results revealed that the sample group predominantly used the KPLUS application for fund transfers between bank accounts, including different banks, with an average satisfaction rating of 4.18 (highly satisfied). The next highest satisfaction rating was for inquiring about account balances and transactions, with an average rating of 4.15 (highly satisfied). The satisfaction rating for online payment transactions, such as buying and selling goods, was 3.88 (highly satisfied). Paying utility bills had an average satisfaction rating of 3.76 (highly satisfied), while topping up phone credit received an average satisfaction rating of 3.66 (highly satisfied). Using the KPLUS application for services like Grab top-up, Foodpanda, and Lineman had an average satisfaction rating of 3.50 (highly satisfied), while accessing exclusive privileges from Grab, Foodpanda, and Lineman had an average satisfaction rating of 3.48 (moderately satisfied). The satisfaction rating for searching branch locations or ATMs was 3.29 (moderately satisfied), and applying for loans had an average satisfaction rating of 3.10 (moderately satisfied). Lastly, the satisfaction rating for purchasing various funds was 2.92 (moderately satisfied).

In addition, the study found that the sample group expressed the highest satisfaction with the KPLUS application in terms of its features, with an average rating of 4.65 (highly satisfied). This indicates that the KPLUS application is convenient and efficient for financial transactions. In terms of pricing, the sample group also expressed the highest level of satisfaction, with an average rating of 4.65 (highly satisfied). They perceived the KPLUS application as cost-effective when compared to the benefits received, as it helped them save on service fees. The distribution channels for the KPLUS application, such as using it for financial transactions instead of physically visiting Kasikorn Bank branches or ATMs, received the second-highest satisfaction rating, with an average rating of 4.60 (highly satisfied). Finally, the marketing promotion efforts for the KPLUS application were highly satisfactory, with an average rating of 4.60 (highly satisfied). The promotional activities helped create a modern and leading image for the bank's service delivery through mobile banking channels.

According to the study, the sample group had a high level of satisfaction with the use of the KPLUS application. This is a result of the current transition to the digital society, where everything is rapidly changing and advancing. This has resulted in a continuous growth of mobile banking service usage in Thailand, with statistics showing a total of 67,710,451 accounts divided among different banks. As the competition in the market increases, banks have sufficient funds to invest and develop technology, resulting in mobile banking applications having minimal differences. Therefore, the strong image of a bank is crucial in creating differentiation and customer confidence in the service, as demonstrated by the case study of the bank that developed and implemented the KPLUS application to support the changing consumer behavior in financial transactions.

## **VI. Recommendations**

According to the study, the sample group of KPLUS application users consists mostly of single women, aged 31-40, with a freelance or self-employed occupation, holding a bachelor's degree, and having an average monthly income of 10,000 - 29,999 Baht. This group represents the largest user base, but there is a low usage of loan application compared to their income. Therefore, the bank in the case study and marketing communication professionals should focus on marketing communication strategies, aligning products with customers' needs, and being mindful of banking criteria to maximize benefits for both customers and the bank. This will stimulate interest and increase the usage of the KPLUS application, leading to higher satisfaction levels.

Regarding the usage patterns, the study found that the majority of customers use the application for basic financial transactions, such as interbank transfers, which are highly popular due to their simplicity and various methods available, such as transferring funds using phone numbers or scanning QR codes of the destination account. This convenience is a key strength that makes such services popular. Therefore, the bank in the case study should further develop and enhance secure and diversified methods of fund transfers. Additionally, promoting the benefits of interbank transfers, such as lower fees, can encourage users to utilize the application more frequently.

Concerning the KPLUS application, although it enjoys widespread popularity, there is an increasing concern about security measures and the risks associated with conducting online banking transactions. The awareness of improved convenience provided by digital banking has led to a trend of increased internet banking usage. Therefore, efforts should be made to encourage customers to shift towards conducting financial transactions in the form of internet banking by providing a more trustworthy and secure system.

The Technology Adoption Model (TAM) suggests that perceived benefits, security, and reliable security systems affect attitudes, the bank's image, and customers' decision-making regarding the usage of the application. For example, customers may need to enter their Personal Identification Number (PIN) for authentication to establish their identity. If the system is secure, users will have confidence in using the service, resulting in increased efficiency and a variety of services, such as interbank transfers, transfers to different banks, transfers

via PromptPay, or international transfers. Additionally, services like payment for goods and services, loan repayments, fund trading, and self-approval for credit should be offered. The quality of the KPLUS application's service should be accurate and reliable, and users should be able to verify it.

In terms of distribution channels, the focus should be on the ability to access services anywhere, anytime, using technology freely according to customer needs. This includes the ability to perform financial transactions independently or use video calls to directly contact bank representatives, following the principles of the Technology Adoption Model (TAM) by Davis (1985) referenced in Singha, Chawisuk, and Sunantha (2013). They state that perceived ease of use (PEOU) of a user-friendly system influences behavior and attitudes towards using internet banking.

Regarding marketing promotion, it should aim to create awareness and positive attitudes towards the bank. Emphasize free transactions and consistently advertise the services of the KPLUS application through various media channels, such as television, radio, and social media. These efforts can effectively stimulate awareness, attitudes, and decision-making behaviors in choosing to use the service.

In terms of service delivery system, it is important for the system to have simple, fast, and user-friendly processes that are designed to be convenient and easy for customers to use. The KPLUS application should be able to connect through GPRS, EDGE, 3G, 4G, or Wi-Fi on mobile phones. This can enhance customer awareness and encourage more usage behaviors of the KPLUS application. It is often a critical factor in achieving success and increasing the user base for electronic financial transactions.

Regarding user qualifications, the KPLUS application is available for users aged 12 and above, which is a significant advantage of the product. It provides an opportunity for children to have their own accounts and use the KPLUS application for convenient daily transactions. Therefore, continuous development of the KPLUS application is necessary to align with technology and spending behaviors of the younger generation.

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