FACTORS DRIVING THE USE OF MOBILE BANKING AT PT. BANK CENTRAL ASIA (TBK) MANADO

by:
Jessica. L. H. P. Langelo\textsuperscript{1}
Merinda Pandowo\textsuperscript{2}

Faculty of Economics and Business
\textsuperscript{1,2}International Business Administration (IBA) Program
University of Sam Ratulangi Manado

email: \textsuperscript{1}jessica78langelo@gmail.com
\textsuperscript{2}iinpan@yahoo.com

ABSTRACT

Information technology is fundamentally changing the banking industry worldwide. Understanding of how demographic characteristics, social factors, and perceptions and influences consumer attitudes toward mobile banking adoption can allow banks to create solutions and plans to attract consumers to use their mobile banking services, thus enabling them to gain a greater share in the market banking. Especially in the banking market as the current BCA Manado, where rapid development is able to create ease and satisfaction to consumers who use these services. The population are 100 respondents of BCA consumers. The method used in this study is a quantitative method by distributing questionnaires to obtain primary data. The results which explain that there are twelve variables that encourage consumers to use the BCA bank (m-BCA services) which then formed five factors and there are eight factors that had no significant effect on the use of mobile banking services BCA Manado region. Five factors are formed service, trust, promotion, enriching mobile, and function of mobile banking, while eight variables significantly the cost is customer, customer behavior, customer satisfaction, reliability, perceived usefulness, real time to access and perceived ease of use.

Keyword: mobile banking, trust, promotion, enriching mobile, function

INTRODUCTION

Research Background

The world today is driven by what so-called instant lifestyle, and mobile banking service is one of the modern instant ways. The availability of mobile banking service, provided by banking institutions to their customers, has changed the way daily activity such as daily transaction is performed. This is also a new way for a bank to improve customer satisfaction, reduce costs and increase profitability models (Liao and Cheung, 2002). Mobile banking (M-Banking) is banking facilities through mobile communication such as mobile phones with the provision of facilities similar to an ATM. With the M-Banking services, banks are trying to facilitate the access of clients to conduct transactions anywhere and anytime without the need to go to the bank. Almost all banks in Indonesia has been providing m-banking services in the form of SIM toolkit (Menu Service Data) and plain text (manual SMS) or known as SMS banking. SMS Banking is a term referring to services provided by the bank using SMS facility to conduct financial transactions and demand for financial information, such as account balance, and transaction history. The purpose of this study was to determine the factors that encourage customers to use M-Banking services Bank BCA especially Manado.

Research Objective

The purpose of this study is:
To analyze the factors that drive customers in bank BCA Manado to use mobile banking.
THEORETICAL FRAMEWORK

Theories

Information M-banking and Promotion
Mobile banking is a banking facility through mobile communication such as mobile phones with provision of facilities similar to the ATM unless take money cash”. There are two kinds of mobile banking, SMS-banking that is accessed by sending a written message and WAP-form of mobile internet banking service that is accessed via GPRS (internet) connection. Many banks should carry out different marketing strategies for specific consumer groups such as students, public institutions, state-owned enterprises cadres, businessmen and so on. However, for businessmen, it is better to increase the publicity of time-saving and convenient features of mobile banking.

Function Mobile Banking (M-Banking)
M-Banking is now almost everywhere in the world, including Indonesia. With M-Banking, a bank tries to simplify access of its clients in conducting banking transactions. Almost all banks in Indonesia has been providing m-banking facility, either the SIM toolkit (Menu Service Data) as well as plain SMS (SMS Manual) commonly known by SMS banking. Usability, and convenience benefits that can be obtained from the use of mobile banking, are:

a. Easy: To conduct banking transactions we do not need to come directly to the bank, except when register phone number.
b. Practical: Every customer can directly transact any banking via mobile phone time, anytime and anywhere.
c. Safe: M-banking is equipped with maximum protection systems that are Automatic enrollment has been programmed since. In addition to using the pin can be self-selected and registered mobile number, any transactions was also randomized to ensure the safety of its customers.
d. User friendly: M-banking is designed in such a way that is easy to use by anyone course, customers can choose the type of transaction from the menu that has been available without have to memorize the transaction code to do.
e. Cozy: Customers like having an ATM in the palm of the hand, due to various common transactions at ATMs, can now be done through m-banking except cash withdrawals.

Service M-Banking
Service is an intangible commodity. Service provision is often an related to economic activity where the buyer does not generally, except by exclusive contract, obtain exclusive ownership of the thing purchased. By composing and orchestrating the appropriate level of resources, skill, ingenuity, and experience for effecting specific benefits for service consumers, service providers participate. Its service is about:

a. security or password
b. 24hours
c. faster transfer
d. anywhere and anytime

Related Variable Marketing
Marketing with information and promotion are related, one of the most important contributing factors for adoption or acceptance of any innovative financial service or product is the creation of awareness among consumers for the service or product. In this context, assert that consumers go through a process of knowledge, conviction, decision, and confirmation before they are ready to adopt and use a product or service.

Low transaction and Service M-Banking
Low transaction fees: Another factor that would stand in the way of consumer adoption of M-banking is the cost factor. In M-banking two types of costs are involved. First, the normal costs associated with SMS
access fees and connection charges and secondly the bank fees and charges. These two types of costs shape the perception of the customers

**Functions of mobile banking**

The functions of mobile banking are single and obvious advantages are not enough. The main functions of mobile banking include account management, remittance, foreign exchange, mobile shopping, mobile payment, mobile phone stocks and so on. The service of shopping and booking tickets by mobile payment is still developing fast. Only as a substitute for online banking, the mobile banking needs to be diversified to meet consumer’s demands.

**Subjective Norms and information and promotion**

Subjective norm is believed to influence intention to use because people may choose to perform behavior, even if they are not themselves favorable toward the behavior or the consequences (Venkatesh and Davis, 2000). What other individuals or groups will think, agree or disagree about the decision of a person to perform a given behavior and how important these other individuals or groups play a vital role for the decision maker. So sometime people may be seek advice from others before them making any decisions. Subjective norms will have a positive effect on behavioral intention of mobile banking.

**Technology Acceptance Model**

Similar to TPB, TAM is also introduced as an extension of TRA. However, rather than being a generic model for individual behavior in social environment, TAM has a clear focus on technology acceptance behavior of computer users. The main purpose of TAM is to examine how external factors such as system characteristics, documentation, and training affect internal beliefs, attitudes, and intentions. TAM postulates that two beliefs, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), are important determinants of technology acceptance.

**Perceived Ease of Use and Service M-banking**

Perceived Ease Of Use and Function M-banking are related. Extensive research has provided evidence that perceived ease of use had a significant effect on usage intention, it is an important predictor. Perceived ease of use can be an important determinant, perhaps even more than perceived usefulness, of information system success when process-oriented issues are at the forefront of users’ minds.

**Perceived Usefulness and Service M-banking**

Perceived usefulness had been confirmed that can be important in influencing intention and use by the extensive research in the past. There is also extensive empirical evidence that supports the significant effect of perceived usefulness on behavioral intention. Based on prior research, in this study hypothesized the following. Perceived usefulness will have a positive effect on attitudes towards the use of mobile banking. Perceived usefulness will have a positive effect on behavioral intention of mobile banking.

**The consumer cost and Service M-banking**

The consumer cost of mobile banking is so high. The research from iResearch Company shows that 60.5% of mobile banking users believe that the cost is too high. First of all, once you want to use the mobile banking service, you should have a mobile phone with the function of surfing the internet. In order to use mobile banking service, the user should have a mobile phone such as CDMA phone, which will undoubtedly increase the user cost.

**Enriching mobile**

Enriching mobile banking’s functions. Currently, domestic mobile banking’s functions, which are mainly concentrated in account management, transferring and payment services, have no obvious advantages when compared with internet bank, ATM and bank counter. But in foreign country, mobile banking has been used as credit cards widely (Gu & Lee, 2009).
Perceived privacy
Privacy has long been defined as the right of a person to be left alone and to be able to have control over the flow and disclosure of information about him or herself. The Federal Trade Commission (FTC) has been evaluating the online marketplace and has identified privacy as a key issue that Internet marketers need to recognize and address.

Customer satisfaction and Service M-banking
The emergence of customer satisfaction at financial institutions has been widely studied and focus on customer satisfaction is the primary goal of any organization, especially banks. Full understanding of this issue is important for researchers and officials (Taleghani et al, 2011) Customer satisfaction is defined as a customer’s overall evaluation of the performance of an offering to date. Customer satisfaction is not an absolute scenario, but very much depends on interactions, feedback, praise, and complaints.

Flexible virtual banking
Financial institutions have spent a great deal of time and money developing online banking functionality to allow customers an easy and convenient way to manage their money. A customer can check balance by logging into banks website through a user name and password. In this way he can enquirer balance, status of cheques, perform funds transfers, order drafts, request issue of cheques books etc.

Enhancing security
Enhancing the security of mobile banking to reduce consumer perception of risk The promotion of mobile banking requires the establishment of security mechanisms to allay people’s fears on safety. Security mechanisms should be supervised and enhanced by technology and banks. The basic structure of mobile banking include host operating system, mobile banking front-end systems, firewalls and security proxy server.

Perception of risk
Perception of risk is the major internal factor that has important influence on the using of mobile banking for consumers Consumer behavior intention depends on consumer perception, stratum and personality. Clearly, people have certain knowledge of mobile banking, but their intention for the use of mobile banking is not obvious.

Consumer behavior with Information and Service M-banking
Consumer behavior is the study of individuals, groups, or organizations and the processes they use to select, secure, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society. It blends elements from psychology social and anthropology and economics.

Any time and Any where banking facility and Service M-banking
Mobile banking users say that convenience is the most important factor, mobile banking lets them access their accounts from anywhere and at any time.

Real time access to information and Service M-banking
The banks started m-banking initially with simple functions such as real time access to information about interest rates, checking account balances and computing loan eligibility. Then, the services are extended to online bill payment, transfer of funds between accounts and cash management services for corporate.

Reliability and Service M-banking
Indicate that in Thailand, the three most important dimensions of quality in Internet banking are: reliability, serviceability, and durability. Reliability involves consistency of performance and dependability which means that the banking firm performs the services right the first time and honours its promises (Khan, 2007). Reliability involves accuracy in billing and information, keeping records correctly, performing the service at the designate time. Reliability is associated with the technical functioning of the internet banking site.
Trust
In a survey conducted by the mobile Banking Association, member institutions rated security as the most important issue of mobile banking. There is a dual requirement to protect customers’ privacy and protect against fraud.

Faster transfer and Service M-banking
Another important factor that contributes the framework of the perception is the faster transfer of fund. The fundamental advantage of the internet banking is the transfer of the information about the money’s worth to any place at any time with a message.

Previous Research
Mobile banking is a form of banking transaction carried out via a mobile phone. Mobile banking allows bank customers to check their account balances, perform credit card transaction as well as provide information. It is a fact that mobile banking is still in its infancy and relatively alien to Malaysians. Hence, there is a possibility that mobile banking remains unknown to and underutilized by bank customers. There is a need, therefore, to understand the extent of acceptance of mobile banking by customers and to examine the factors affecting intentions to use it for financial transaction.

| Marketing (X1), Low transaction (X2), Function of mobile banking (X3), Subjective norms (X4), TAM (X5), Perceived ease of use(X6), Perceived usefulness (X7), The consumer cost (X8), Enriching mobile (X9), Perceived privacy (X10), Customer satisfaction (X11), Flexible virtual (X12), Enhancing security (X13), Perception of risk (X14), Customer behavior (X15), Anytime anywhere (X16), Real time to access information (X17), Reliability (X18), Believe (X19), Faster transfer (X20). |

Confirmatory Factor Analysis

Figure 1. Conceptual Framework
Source: Literature Review 2013

RESEARCH METHOD

Type of Research
Type of this research is exploratory research. Exploratory research is a type of research conducted for a problem that has not been clearly defined. Exploratory research helps determine the best research design, data collection method and selection of subjects and sometimes it even concludes that the problem does not exist.

Place and Time of Research
This study was conducted of bank BCA center Manado North Sulawesi August - September 2013

Population and Sample
Population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate (Sekaran and Bougie, 2011:262). This population that is mainly observed in this research is customers bank BCA Manado who used SMS banking the mobile banking service. The sample that used is 100 respondents where the measurement of sample is done by multiplying 5 with the number of variable that exist in this research (Maholtra, 1993). The number of variable factors that exist in this research amounted to 20 factors x 5 = 100 respondents.
Data Collection Method

Data can be obtained from primary data and secondary data. Primary Data is information collected for a current research problem or opportunity. Primary data is firsthand data that has not been published yet and is more reliable and authentic. Secondary Data is information previously collected for some other problem or issues (Hair, 2010). This research spread questionnaires to collect primary data.

Operational definition and measurement of research variable

Definition of research variable

a. Easy for use and use friendliness: Ease of use is another important determinant for the customer preferring the mobile banking.

b. Faster transfer: Another important factor that contributes the framework of the perception is the faster transfer of fund. The fundamental advantage of the internet banking is the transfer of the information about the money’s worth to any place at any time with a message.

c. Real time access to information: The banks started i-banking initially with simple functions such as real time access to information about interest rates, checking account balances and computing loan eligibility. Then, the services are extended to online bill payment, transfer of funds between accounts and cash management services for corporate.

d. Time factor: Liu and Arnett in their study identified time factor as one of the prime factor that in Internet banking service quality feature for the customers. Saving time is an importance factor which influences the customers prefers to.

e. Real time access to information: The banks started m-banking initially with simple functions such as real time access to information about interest rates, checking account balances and computing loan eligibility. Then, the services are extended to online bill payment, transfer of funds between accounts and cash management services for corporate.

f. Flexible virtual banking system: Financial institutions have spent a great deal of time and money developing online banking functionality to allow customer an easy and convenient way to manage their money.

g. Any time and anywhere banking facility: mobile banking users say that convenience is the most important factor, mobile banking lets them access their accounts from anywhere and at any time.

h. Perceived privacy: one number have a one customer and privacy account.

i. Customer satisfaction: The emergence of customer satisfaction at financial institutions has been widely studied and focus on customer satisfaction is the primary goal of any organization, especially bank.

j. Security: In a survey conducted by the mobile Banking Association, member institutions rated security as the most important issue of mobile banking. There is a dual requirement to protect customers’ privacy and protect against fraud.

k. 24 hours service: the people need a service 24 hours for make the transaction Fast and on time.

l. Reasonable cost for mobile banking: the bank would provide one or two free transaction a week using mobile banking and of charge extra 100-150 cent rupiah or more.

m. Perceived security: mobile banking is a trust-based system, which means the theft of customers’ personal identity information can cause customers to lose their confidence and trust in the system and their bank. In addition, mobile banking fraud or deception can negatively affect customers’ opinions on the internet banking safety and security provided by the banks.

n. Marketing Exposure Factor: One of the most important contributing factors for adoption or acceptance of any innovative financial service or product is the creation of awareness among consumers for the service or product. In this context, assert that consumers go through a process of knowledge, conviction, decision, and confirmation before they are ready to adopt and use a product or service.

o. Mobile skills factor: Any new technology is usually picked up by the early adopters who have Internet access and knowledge about the facilities such as those provided by a bank on the Internet.

p. Reliability: is the ability of a person or system to perform and maintain its functions in routine circumstances, as well as hostile or unexpected circumstances.

q. Serviceability: is the measure of and the set of the features that support the ease and speed of which corrective maintenance and preventive maintenance can be conducted on a system.

r. Durability: is the length of time an object or assembly will provide its intended function over an anticipated range of operating conditions.
s. Information on m-banking: The important factor that consumers consider before adopting is the amount of information they have about mobile banking
t. Perceived risk: perception of risk among individuals has been proved in technology adoption literature as an important element in acquiring new technology or services.
u. Perceived usefulness: has positive significant relationship towards mobile banking adoption.

This research, the variable will be measured using Likert-scale. Likert-scale is an ordinal scale format that asks respondents to indicate the extent to which they agree or disagree with a series of mental belief of behavioral belief statement about a given object (Hair et al., 2010:162). Likert-format items were presented with 5 point scales, where 1 = "strongly disagree," 2 = "disagree," 3 = "neither disagree nor agree," 4 = "agree," and 5 = "strongly agree".

Data Analysis Method
Validity is the extent to which the conclusions drawn from an experiment are true (Hair, 2010). By testing the validity, researcher can decide the scale measuring what it is meant to be measured. Measures of Sampling Adequacy (MSA) in Anti-image Correlation is used to measured validity test. If MSA in “Anti-image Correlation” is more than 0.5 then the data is valid. Reliability indicates the extent to which it is without bias (error free) and hence ensure consistent measurement across time and across various items in the instrument (Sekaran and Bougie 2011:161). To be reliable Cronbach’s Alpha must be more than or equal with 0.7, then the measurement is consistency and reliable.

Factor Analysis Model
Factor analysis is a multivariate statistical technique that addresses itself to the study of interrelationships among a total set of observed variables. Factor analysis addresses the possibility and the power of a relationship between factors that have been elected with a problem that want to be analyzed. Factor analysis is used when a researcher want to find out the root of the problem or factors at first where other analysis tools can not be able to analyze it. This study uses confirmatory factor analysis approach (CFA) because it’s analyzing the factors that have possibility to drive online shopping based on previous theories and research. Factor analysis usually proceeds in four steps, correlation matrix, factor extraction, factor rotation and make final decision about the number of underlying factors (Khelifa 2009:13).

RESULT AND DISCUSSION

The results that obtained in validity test of this research is valid where the result value from every variable or MSA in anti-image correlation is more than 0.5. Anti-image correlation value in marketing variable is 0.735, Anti-image correlation value in low transaction design variable is 0.809, Anti-image correlation value in function of mobile variable is 0.814, Anti-image correlation value in subjective norms variable is 0.700, Anti-image correlation value in technology accepted mobile variable is 0.856, Anti-image correlation value in perceived ease of use variable is 0.848, Anti-image correlation value in perceived usefulness variable is 0.883, Anti-image correlation value in customer costs variable is 0.795, Anti-image correlation value in enriching mobile variable is 0.848, Anti-image correlation value in perceived privacy variable is 0.777, Anti-image correlation value in customer satisfaction variable is 0.804, Anti-image correlation value in flexible virtual variable is 0.803, Anti-image correlation value in enhancing security variable is 0.687, Anti-image correlation value in perception of risk variable is 0.800, Anti-image correlation value in customer behavior variable is 0.868, Anti-image correlation value in anytime and anywhere variable is 0.836, Anti-image correlation value in real time to access information variable is 0.799, Anti-image correlation value in reliability variable is 0.696, Anti-image correlation value in believe variable is 0.700, Anti-image correlation value in faster transfer variabl
### Result of Factors Analysis

#### Table 1. Formed Factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variable</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anytime and anywhere</td>
<td>0.557</td>
</tr>
<tr>
<td></td>
<td>Faster transfer</td>
<td>0.779</td>
</tr>
<tr>
<td></td>
<td>Low transaction</td>
<td>0.717</td>
</tr>
<tr>
<td>2</td>
<td>Enhancing security</td>
<td>0.813</td>
</tr>
<tr>
<td></td>
<td>Perceived privacy</td>
<td>0.552</td>
</tr>
<tr>
<td></td>
<td>Perception of risk</td>
<td>0.691</td>
</tr>
<tr>
<td>3</td>
<td>Believe</td>
<td>0.581</td>
</tr>
<tr>
<td></td>
<td>Subjective norms</td>
<td>0.784</td>
</tr>
<tr>
<td></td>
<td>Marketing</td>
<td>0.758</td>
</tr>
<tr>
<td>4</td>
<td>Enriching mobile</td>
<td>0.567</td>
</tr>
<tr>
<td>5</td>
<td>Function of mobile banking</td>
<td>0.667</td>
</tr>
<tr>
<td></td>
<td>Flexible virtual</td>
<td>0.646</td>
</tr>
</tbody>
</table>

*Source: Data analysis result 2013*

Factor loading above means that the variables are important and influencing people to use mobile banking. The higher the value of factor loading, the stronger the relationship between the variable and the factor formed. In the first factor which consists of five variables, faster transfer has the highest factor loading, that means faster transfer is the strongest variable in factor one. Enhancing security is the most important variable in the second factor with factor loading of 0.813. In the third factor, subjective norms is the most important variable in the third factors with factors loading of 0.784, enriching mobile has the strongest relationship with factor formed. And function of mobile banking is the most important factor in fifth factor with factor loading of 0.667.

### Discussion

#### Service Factors

Customer is formed of three variables consisting of anytime and anywhere, real time to access and low transaction. According to (Venkantaesh and Zhang, 2010) service is one the key factors in determining success or failure of m-banking. The value of customer relationship management has become apparent in this competitive era of technological innovation. Trust is the backbone of any business. The level of risk involved varies with the nature of the product offering.

#### Trust

M-banking believed the advanced security solutions and technologies in cyber space were capable of protecting inter-operations and electronic transactions. Factors formed the three variables that consist of enhancing security, perceived privacy, and perception of risk. Trust is used in the research showed that trust in the Internet is likely to influence the adoption of e-government services.

#### Promotion

There are many elements of internal factors such as stratum, attitude, personality, self-concept, generations. The individual's attitude means the good or bad evaluation, emotional feelings and behavior intention, which is someone’s long-held concept of understanding toward certain things or ideas (Lu, Yang & Zhang, 2005). Factors The consumer behavior directly affects the promotion of mobile banking. According to the three-factor theory which is one of the consumer behavior theories, the influencing factors of the use of mobile banking include external environmental factors, internal factors and marketing factors.

#### Enriching mobile

These factors consists of only one variable, namely overtime duty. Enriching mobile has an impact on customers bank to use m-banking services both positive and negative impact. Currently, domestic mobile banking’s functions, which are mainly concentrated in account management, transferring and payment services,
have no obvious advantages when compared with internet bank, ATM and bank counter. But in foreign country, mobile banking has been used as credit cards widely (Gu & Lee, 2009).

Function of mobile banking
These factors consists of only two variable its about function of mobile banking and flexible virtual, why the name this factor function of mobile banking because flexible virtual including in function of mobile banking. Function of mobile banking have a big impact on customers to use mobile banking because customer need a function to make customer using of mobile banking.

CONCLUSION AND RECOMMENDATION

Conclusion
The five factors that drive people in Manado use mobile banking (customer bank BCA) are service quality, trust, promotion, enriching mobile and function of mobile banking. There are seven variables that do not significantly influence customer in Manado to use mobile banking shop, they variables are perceived usefulness, technology accepted mobile, customer cost, customer satisfaction, customer behavior, reliability, and faster transfer.

Recommendation
There are a few things that need to be considered for further research. For future research can use qualitative methods to better expose the factors that affect the company's more dominant through the interview directly with the customer or the like, is also able to use quantitative methods to provide more factors again that drive customer to using mobile banking service within the company. Customers with service that is able to increase the number of customers that even more and keep giving incentive much longer for the company and can not be separated also provide incentive.

REFERENCES


