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# Implementation of E-banking in Vietnam: Motivations and challenges – Case Company

## A

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ABSTRACT

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The introduction of e-banking services is considered a breakthrough of the banking industry, bringing various benefits to both customers and financial institutions. In this era of modern technology, the implementation of e-banking services plays a significant role in helping financial institutions to remain competitive and adapt to the recent changes of the market.

This study targets the implementation process of e-banking services in Vietnam, with two main objectives. The first goal of this study is to discover the reasons and motivations behind the decision to implement e-banking services. Secondly, the author investigates the implementation process and aims to figure out the challenges involved during the process.

The author utilizes the use of deductive approach, qualitative research method as well as semi-structured interviews in this research on the implementation process of e-banking on the case company. The author studies existing literature and compare with empirical findings in order to discover answers to the research questions.

The research provides readers with the answers to the two research questions posed. The main motivations for the implementation of e-banking services are to enhance the satisfaction level of customers and expand the market. The biggest challenges of the implementation process come from the lack of knowledge and unwillingness of customers as well as the under-developed infrastructure level.

Key words: E-banking, motivations, challenges, Vietnam

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## GLOSSARY

RQ	Research questions
SBV	State Bank of Vietnam
SOCB	State-owned commercial banks
NPL	Non-performing loan
SOE	State-owned enterprise
JSB	Joint-stock bank
WTO	World Trade Organization
FDI	Foreign direct investments
EFTPOS	Electronic fund transfer at point of sale
ATM	Automatic teller machine
PIN	Personal identification number

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# 1 INTRODUCTION

## 1.1 Background of the study

Modern technology and communication technology has been developing with an astonishing swift pace as people advance further into the 21st century. With the Internet as its core, these modern technologies have been widely applied globally, especially in our world of economy. The world we live in has now become an Internet-based world with Information Technology becoming a growing trend. The world's trade has been changing shape rapidly after the introduction of Internet and the World Wide Web, with electronic commerce playing the main role in today's economy. Electronic commerce has left significant impacts on our market and industry structure along its way of developing. Not only does it alter products and services, it also brings numerous changes to consumer behavior and the labor market. (Turban and King 2003, 3.)

As our economy is changing its shape, financial institutions around the world need to step ahead and adapt to the changes. In this era, banks and other financial institutions have applied Internet-based services along with their traditional approaches. Most services and business of financial institutions globally are now accessible online, marking the beginning of an electronic banking era. Electronic banking can be defined as the provision of retail and small-valued banking products and services through electronic means, namely electronic bill payment, fund transferring, depositing, financial advices as well as providing other means of electronic payment such as credit card and debit card. (Sethi and Bhatia 2007, 56.)

As banking services are accessible through the Internet any time, anywhere, financial institutions around the world can expect expansions in their markets as customers are closer within reach. However, that is not the sole benefit that e-banking has brought to the economy, cost-reduction is another aspect to look out for. As a consequence, online banking has been applied worldwide ever since its first establishment in the United States on October 18th 1995. As of today, most domestic banks in Vietnam have followed this step and offered e-banking services

to customers. E-banking has undoubtedly become the main attention of banks and financial institutions internationally.

However, the implementation of e-banking in Vietnam is facing various obstacles along its way. In order to be successful, the introduction of e-banking in Vietnam requires considerable development of the technology infrastructure. As a developing country, the technology infrastructure of Vietnam is still in its developing stage and is still lacking the capability to fully implement e-banking up until today. Furthermore, the legal system, especially when it comes to e-banking, has not been fully completed. The responsibilities and obligations of financial institutions and customers while dealing with e-banking have not been stated out clearly in legal form. In addition, the community's lack of knowledge about the Internet and Internet-based services has hindered the development of electronic banking in Vietnam.

These mentioned issues above have urged the author to research deeply into the situation and study the practices concerning the implementation of e-banking in Vietnam. The author's aim is to provide a general overview of e-banking service and its implementation in Vietnam. On top of that, the author aims to analyze the situation and obstacles occurred during the process of implementing e-banking with the purpose of providing suggestions and solutions for the future success of e-banking.

With these above goals set in mind, the thesis is aimed at target readers such as financial institutions' top managers, Head of Information Technology Department as well as banks' employees. In addition, the thesis can be used as a source reference for students and researchers looking into the same issue.

## 1.2 Thesis objectives and research questions

The main purpose of this thesis is to provide target readers with a general insight on e-banking services, investigate the motivations and challenges during the implementation process in Vietnam as well as attempting to figure out possible solutions to overcome those obstacles. In order to achieve this goal, clearly defining the research questions is one of the most essential steps. Additionally, the

research questions state out the research problems in the starting point as well as keep the thesis in line and stick to the problems during the whole process. (Eriksson and Kovalainen 2008, 27.) Therefore, the author decided to concentrate on two research questions (RQ), including :

- RQ1: Why do financial institutions in Vietnam implement e-banking services ?
- RQ2: What are the challenges occurred during the implementation process of e-banking in Vietnam?

### 1.3 Scope and Limitation

#### **Scope of the research**

At this stage, it is essential to indicate the boundary of the research. The research focuses on the e-banking section of the Vietnamese market. The features included in the research are the situation of the e-banking market in Vietnam, the banking sectors in Vietnam as well as the services offered by e-banking.

Futhermore, the author concentrates on the motivational factors and the challenges arising during the process of implementing e-banking in Vietnam. The author also attempts to provide the selection of innovation process to be employed as well as the explanation of the service developing process.

#### **Limitation of the research**

Since the research focuses solely on the e-banking section, other sections of banking services are not covered. Moreover, due to the limitation in connection, the research was involved with only one case company. Thus, the research results might not be generalized. In addition, because of limited timeline, the testing phase of the service developing process can not be completed. The author proposes possible solutions to the developing process and the suggested solutions can be used for testing in further research.

## 1.4 Theoretical Framework

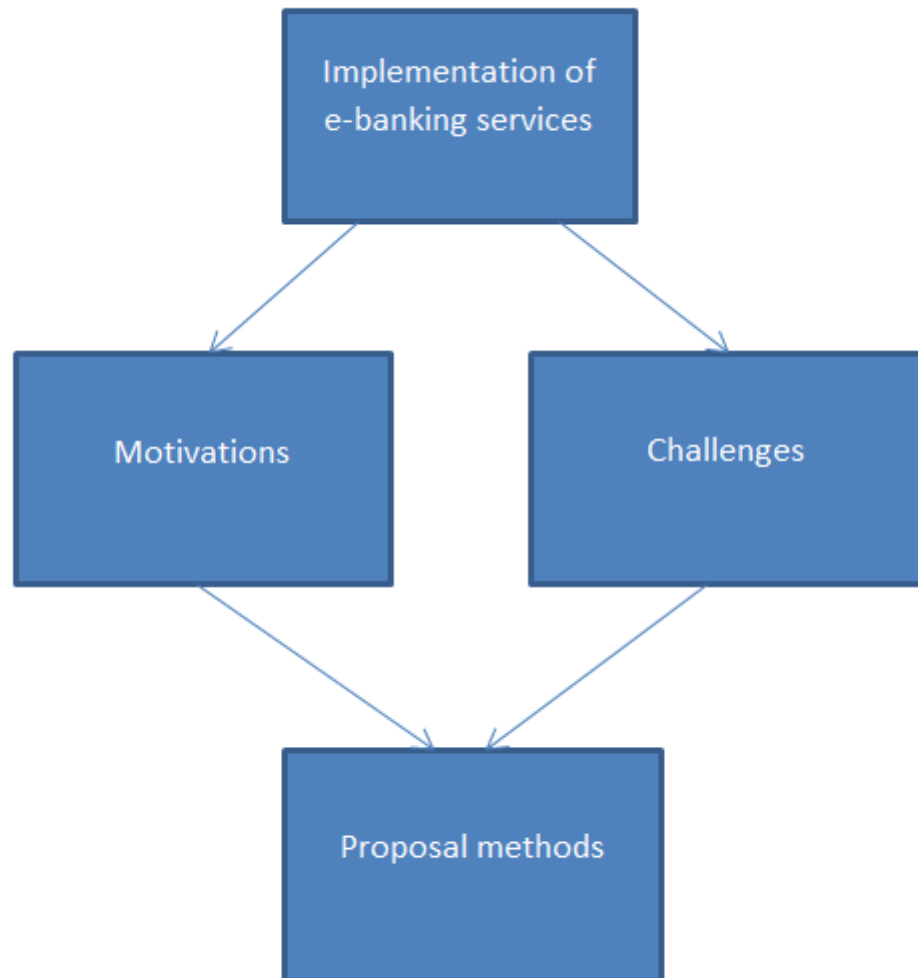


FIGURE 1. Theoretical framework

The theoretical framework starts off with the implementation of e-banking services in Vietnam as its core. From there, it connects to the motivational factors and challenges arising during the implementation process. These two issues are the main components of the research. After analysing those two issues, proposal methods to improve the implementation process of e-banking are generated.

## 1.5 Research method and data collection

### **Research Purpose**

There are three different types of research, each type with an entirely diverse set of goal. The three classifications of research include exploratory, descriptive and explanatory research (Robson 2002, 59). The author analyzes the differences between the purposes of these researches in order to select the proper research, the analysis is demonstrated below :

- Exploratory research is applied in case researchers aim to investigate a unknown or rather unprecedented area of research. Since the aim of exploratory research is to seek new perceptions on a particular phenomena, the research approach used is generally open and flexible. (Robson 2002, 59-60)
- Descriptive research is applied when the purpose of the research is to specify and describe a particular phenomena. The means of research used are generally measuring and evaluating relationships, description. (Robson 2002, 59-60)
- Explanatory research is applied to explain different aspects of a phenomena by examining a particular problem or situation. (Robson 2002, 59-60)

The research purpose of this study is a combination of exploratory, descriptive as well as explanatory approach.

### **Research Approach**

As the study initiated based on the author's background knowledge and a research is conducted afterwards in order to prove the hypothesis, the use of deductive research approach is applied, according to Collins (2010, 42).

There are three typical classifications of research method , namely quantitative research, qualitative research and a mixed approach of both.

Quantitative research focuses on number and statistic. The main method of applying quantitative research is to use numerical measurements of a particular aspect of a phenomena. Quantitative is an objective approach seeking explanatory laws. The purpose of employing quantitative research is to classify a phenomena

by a hypothesis formed by researchers. (Arcidiacono, Di Napoli and Procentese 2009, 166-168.)

Qualitative research is a more subjective approach compared to quantitative approach. While quantitative approach refers to hard data and number, qualitative approach has its focus on characteristics, concepts, meanings of a phenomena. It involves the collection of materials such as case studies, personal experience, observation, in-depth interviews, artifacts. Qualitative research strives for in-depth description that aids the authors to gain better understanding of a phenomena. (Rogelberg 2004, 162-164.)

The author decided to choose qualitative research as the approach to this study as it allows the author to better understand the phenomena and gain knowledge on the processes and participants.

### **Research Strategy**

There are five different research strategies, namely : surveys, histories, archive analysis, experiments and case studies.

Yin (2009, 8-14) suggests determining the ultimate research strategy based on the research questions posed. In case the author is seeking to identify certain aspects of a phenomena with research questions "How" , "Why" and "What" , the use of case studies should be utilized. As a consequence, the author decides to employ case study as chosen research strategy for the qualitative approach.

### **Data Collection**

During the process of obtaining data for this thesis, the author conducted several interviews with financial institution's representatives, Head of IT Department of financial institution and clients of one financial institution in Vietnam. These collected data from qualitative interviews serve as the primary source of data for this thesis.

According to Erikssons and Kovalainen (2008, 80), qualitative interview consists of three distinct types :

- Structured interview : standardized interview, with predefined framework and set of questions in order to guide the meeting.
- Semi-structured interview : also utilize the use of prepared framework and set of questions to guide the conversation, however, additional questions can be raised during the interview depending on the situation.
- Unstructured interview : framework and questions are not prepared in advanced but raised and developed during the actual interview

After considering the options, the author determined the semi-structured interview to be the chosen method. The author attempted to use open-ended questions during the interviews in order to allow the conversation to develop, additional questions are raised when necessary. Open-ended questions are best suited when applying direct interview such as face-to-face interview like the author conducted. (Royse 2007, 183.)

The interview questions were prepared in advance by the author based on the research questions posed and are categorized into two main sections. The first category concentrated on participating financial institution's decision of implementing e-banking services and clients' decision for using and not using e-banking services , based on the first research question. The second category was based on the second research question, aiming to find out the obstacles that financial institutions in Vietnam have to face during the implementation process of e-banking services.

The selection of interview participants is crucial to the research, it is done purposely after evaluating the participants' relations and importances to the implementation process of e-banking services. The chosen interview participants consist of representatives of bank, Head of IT Department, as well as long-time bank users. As a consequence, the author was able to acquire in-depth knowledge and data, which is appropriate to the research.

The interviews are conducted face-to-face with participants. During each interview, the use of audio recording and notes is applied to enhance the value of collected data.

## Data Analysis

The process of analysing qualitative data includes five distinct steps :

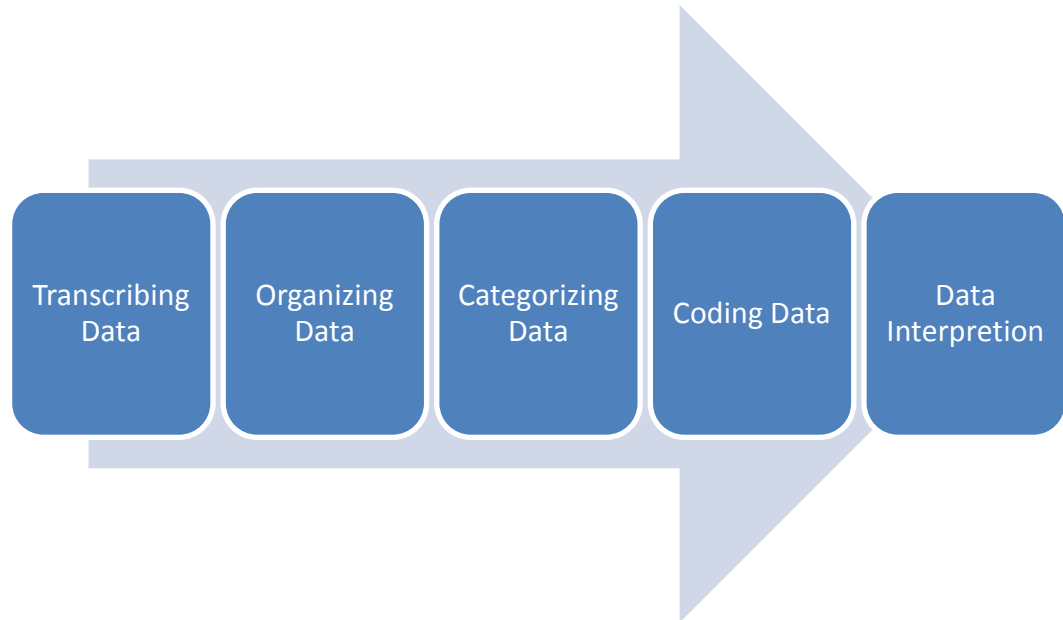


FIGURE 2. Analysing qualitative data

The first step of analyzing qualitative data is transcribing data, meaning to reproduce the conversations made during the interviews in written form as interview transcripts. The author employed the use of audio recording and note-taking in order to maximize the efficiency of transcribing data. Secondly, the interview transcripts is organized into a manageable form, leaving out unnecessary details. The transcripts were made shorter without losing any of its original meaning, making the main issues visible. In the third step, the collected data was classified into predefined categories. The author selected those categories based on the literature review and the issues raised during the interview. During the coding data step, the sorted data from the previous steps is condensed into smaller units with the same code in each category. The codes identify the relations between the research purpose and predefined categories. The aim of coding data is to avoid data repetition and overlapping. Last but not least, the author interpreted the collected data and put into words. (De Hoyos and Barnes 2012, .)

## 1.6 Thesis structure

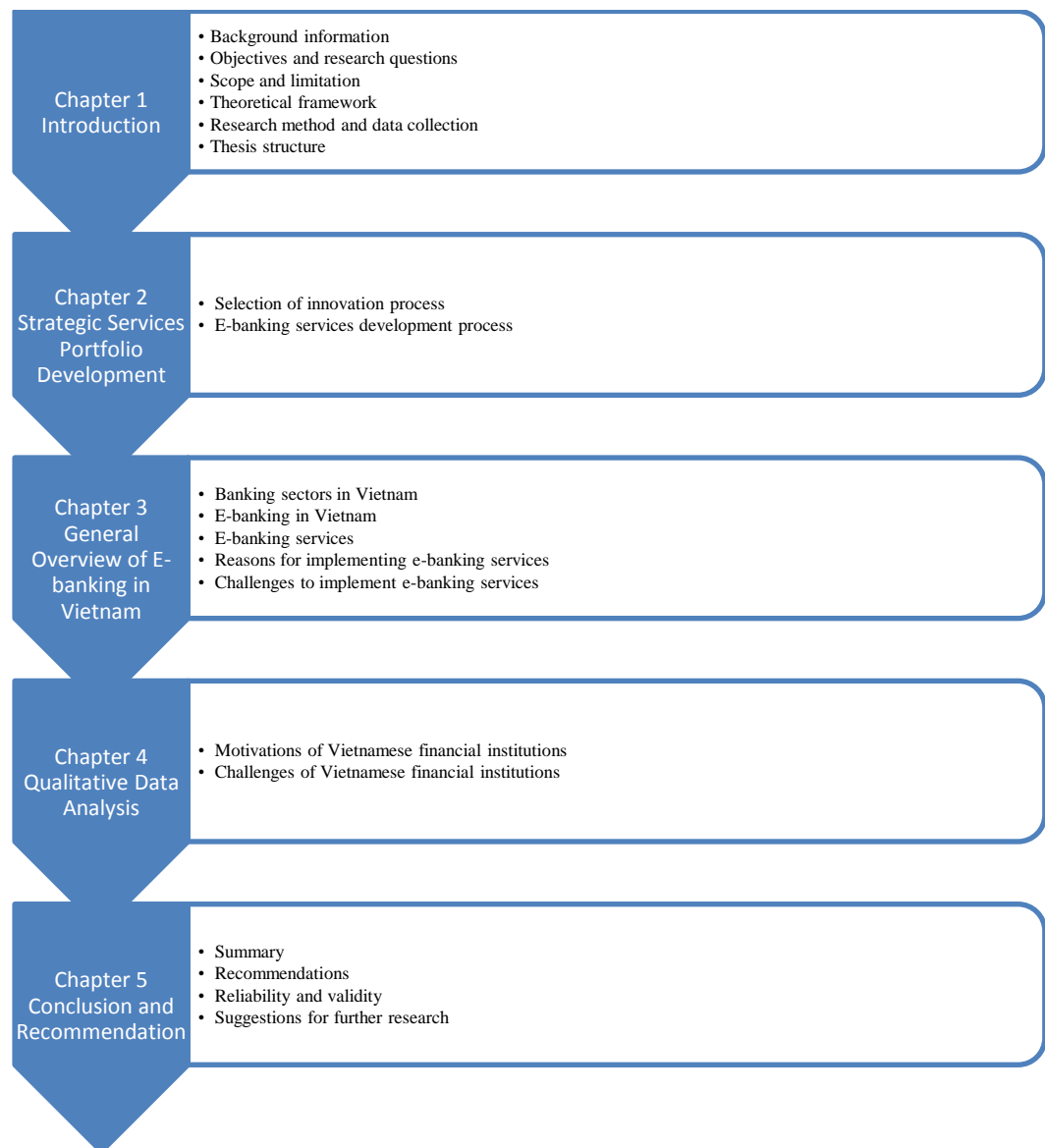


FIGURE 3. Thesis Structure

The thesis begins with chapter 1 Introduction. In this chapter, the background information, research objectives and research questions, the scope and limitation of the research, the theoretical framework, the research method applied and the data collection process as well as the thesis structure are covered. The information covered in this chapter serves as the guideline for the whole research.

Chapter 2 and 3 of the thesis cover the literature review part of the research.

Chapter 2 explains the selection of innovation process to be applied for e-banking

services and illustrates the developing process while chapter 3 provides readers with information concerning banking sectors in Vietnam, the situation of e-banking in Vietnam, the e-banking services available as well as the motivations and challenges while implementing online banking.

Chapter 4 provides the data collected during the process of researching. In-depth interviews with financial institutions' representatives are transcribed and put into words in order to further explain the motivations and challenges of implementing e-banking services. This chapter presents the empirical part of the research.

In chapter 5, the author presents the answers to the two research questions posed as well as propose solutions for financial institutions in Vietnam. The author also indicates the limitations of the research and suggests further research.

Finally, the author provides a summary of the study in chapter 6 and conclude the thesis.

## 2 STRATEGIC SERVICE PORTFOLIO DEVELOPMENT

### 2.1 Selection of innovation process

In this era, innovation is an indispensable approach for corporations in order to survive and become competitive in the domestic as well as global market.

Innovation allows companies to boost their growth rate through constant evolution and continuous development of products and services. Furthermore, it provides companies with opportunities to leave their impacts on market trends and the direction of the industry. Therefore, it is essential for financial institutions globally to put efforts into developing e-banking service as this lately implemented service has not reached its full potential yet.

The table below illustrates different types of innovation . The author selects appropriate innovations for the development of e-banking services based on the information given in this table.

TABLE 1. A typology of innovations (Trott 2012, 17)

<b>Type of Innovation</b>	<b>Example</b>
Product innovation	The development of a new or improved product
Process innovation	The development of a new manufacturing process such as Pilkington's float glass process
Organisational innovation	A new venture division; a new internal communication system; introduction of a new accounting procedure
Management innovation	Total quality management systems; business process re-engineering
Production innovation	Quality circles; just-in-time manufacturing system, new production planning software
Commercial/marketing	New financing arrangements; new sales

innovation	approach, e.g. direct marketing
Service innovation	Internet-based financial services

Since the nature of banking is the service industry, the author decides not to apply product as well as production innovation in this case. Due to the essence of banking, the employment of service innovation is preferred. Table 2 below demonstrates the important drivers of e-banking services and the ranking that IT managers and senior managers of financial institutions have given to them.

TABLE 2. Online banking drivers (Aladwani 2001, 218)

Driver	Rating of IT manager	Rating of senior manager	Overall rank
Providing faster services to customers	1	1	1
Providing easier services to customers	2	2	2
Providing more reliable service to customers	3	3	3
Improving the competitive position	4	5	4
Improving bank's images	6	7	5
Meeting customer demands for the service	5	9	6
Creating new market	7	4	7
Reducing operational costs	8	6	8

Reducing administrative costs	9	8	9
Reducing workforce	10	10	10

The rankings given in Table 2 have pointed out the main emphasis of financial institutions on refining services in order to satisfy customer demands. Thus, applying service innovation is essential to bank's growth and competitiveness.

Furthermore, e-banking is the latest delivery channel for financial institutions. Since it is an electronic delivery channel, e-banking delivers information at a much higher pace than traditional banking. As e-banking is an Internet-based service, it is not limited geographically. As a result, e-banking is able to distribute information to a wider range of customers. Financial institutions can utilize e-banking as a tool to promote new services as well as offers, campaigns to customers worldwide. Therefore, the author decides to select commercial/marketing innovation as the next development applied to e-banking services.

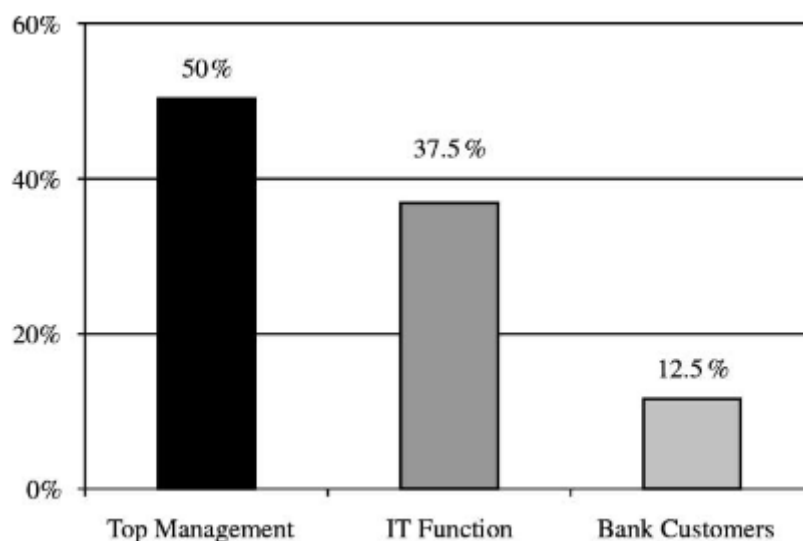


FIGURE 4. The idea of introducing online banking (Aladwani 2001, 217)

Figure 4 indicates the origins of introducing e-banking services. As the figure presents, 50 percent of the idea originates from Senior managers of banks; the IT function contributes to 37.5 percent of the idea while only 12.5 percent came from bank customers. This shows the awareness of senior managers and IT function of the importance of e-banking in this technology-driven era while customers underestimate or are unaware of the significance of online banking. This information further urges the author to employ the commercial/marketing innovation in order to deliver e-banking to a wider range of customers.

An unavoidable risk of implementing e-banking is the operational risk. The main concern of e-banking operating system is the security issues. Since providing e-banking services is not the initial purpose of the Internet, online banking is facing with various threats concerning security issues. In order to overcome this threat, constant maintenance and development of the system have to be employed. As a result a considerable amount of human resource is required. Furthermore, the personnel working on security issues must be competent and well-trained. (Schaechter 2002, 16-17.) This information encourages the author to put the organisational innovation process into action. Carefully designed human resource plan with clearly defined objectives and training time for each department would yield better results in the operating process of e-banking.

To summarize the selection of innovation process, the author decides to adopt the use of service innovation, commercial/marketing innovation and organisational innovation as possible solutions to improve e-banking quality with the aim of acquiring more customers.

## 2.2 E-banking services development process

Since its introduction in 1982 by Booz, Allen & Hamilton, the sequential service development models or stage-gate models have been used in most service developing processes. The model divides the developing process into smaller sequential stages to be commenced in turn. The stages involved in this model include product development strategy, idea generation, screening and evolution, business analysis, development, testing and commercialisation. (Trott 2012, 502.)

Figure 5 illustrates the stages and sub-stages of sequential service development models.

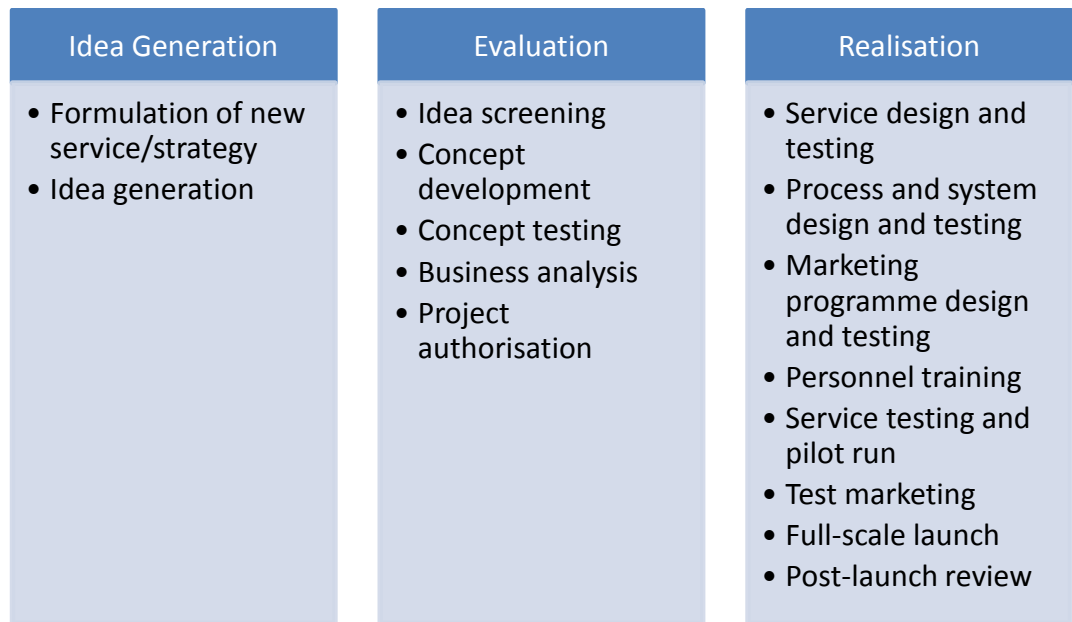


FIGURE 5. The service innovation process – a sequential model (Trott 2012, 502)

Figure 6 below indicates the success/failure rating when executing stage-gate models

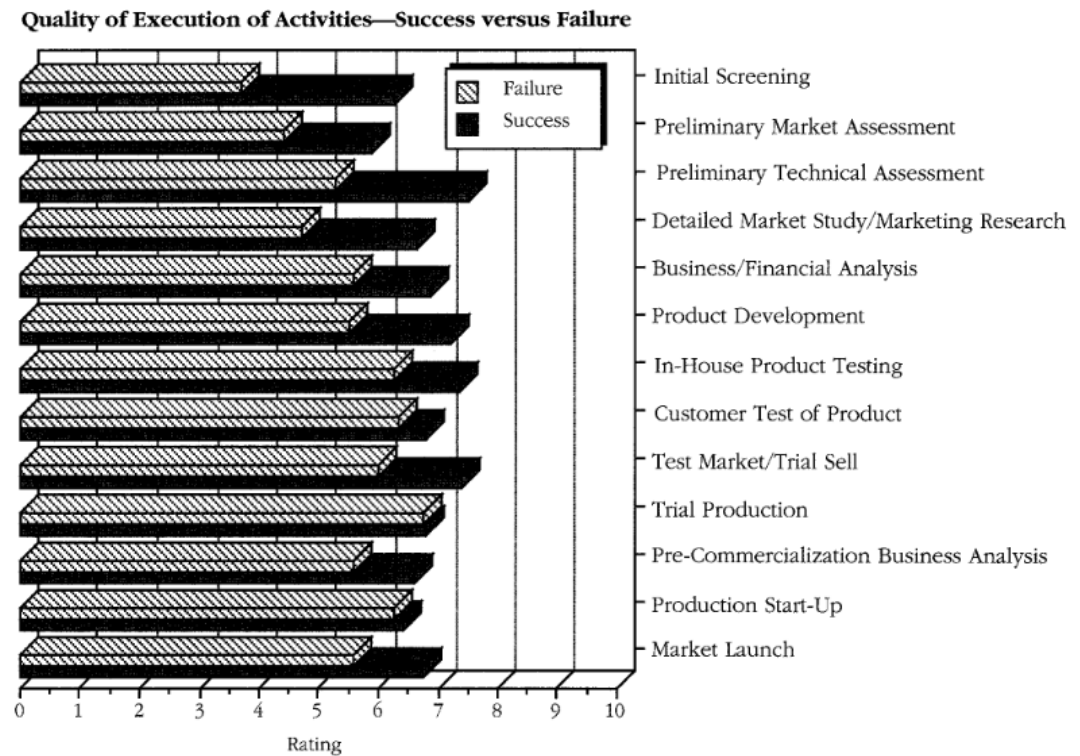


FIGURE 6. Quality of execution of activities – Success versus failure (Cooper 1990, 47)

According to the ratings shown in the figure, the success rate of executing stage-gate model is higher than the failure rate. Furthermore, the stage-gate model provides the working team with a visible road map of the process. Therefore, the team members are able to gain a broader view of the process and aware of where the project stands. Moreover the proposed model provides team members with a clearly-defined set of objectives. As a result, the team can expect to head the right direction and realize the desired objectives. (Cooper 1990, 51.) After considering the characteristics of the stage-gate model, the author decides to apply it as the suggested model for e-banking service development process for financial institutions in Vietnam.

### 3 GENERAL OVERVIEW OF E-BANKING SERVICES IN VIETNAM

#### 3.1 Banking sectors in Vietnam

In this part, the author aims to provide readers with a general overview of the banking industry in Vietnam.

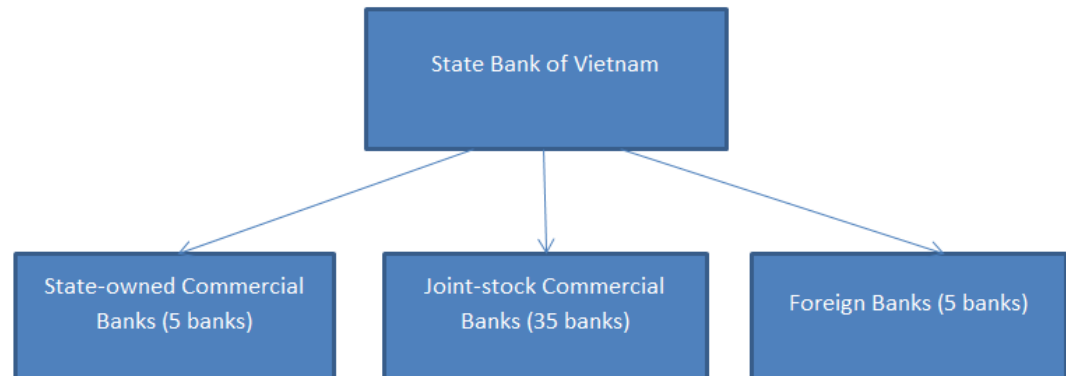


FIGURE 7. Vietnamese bank classification

As shown in the above figure, Vietnam's banking sector includes five state-owned commercial banks, thirty-five joint-stock commercial banks as well as five foreign-owned banks (Leung 2009, 47).

In the first reform of Vietnamese financial sector in the late 80s, the creation of the State Bank of Vietnam (SBV) was essential and acted as the first milestone to the development of Vietnamese banking sector. The SBV is operated with the support from the government and its responsibility is to manage monetary policies and regulate the banking system in Vietnam. (Tran 2008, 81.)

In advance to the reform between 1988-1990, the state-owned commercial banks (SOCB) were departments of SBV, with each department focusing on one particular section of the Vietnamese economy. After forming independent financial institutions, the SOCBs are still the dominating forces of the banking sector and are heavily related to the SBV.

TABLE 3. SOCBs before 1988 and current situation (Tran 2008, 82)

<b>Before 1988</b>	<b>Current situation</b>
Export and trade department of SBV	Bank for Foreign Trade (Vietcombank)
Industrial department of SBV	Industrial and Commercial Bank (Incombank)
Infrastructure department of SBV	Bank of Investment and Development (BIDV)
Agriculture department of SBV	Agriculture and Rural Development Bank (VBARD)
A newcomer specialising in finance for housing projects	Mekong Housing Bank (MHB)

According to Table 4, even though the market share of SOCBs has dropped in the recent years from the high point of 80.5 percent in term of deposit in 2002 and 75 percent in term of loans in 2004, the SOCBs still hold over half of the Vietnamese banking sector assets. The establishment of joint-stock banks (JSBs) and certain limitations of SOCBs are the main reasons for the recent changes in the banking sector.

The SOCBs are loaded with non-performing loans (NPLs) after the Asian financial crisis as SOCBs are the main source of lending of state-owned enterprises (SOEs). Since the financial crisis in Asia, the policy lending from SOCBs to SOEs has been halted in order to cut down the stock of NPLs. However, SOCBs are still biased towards lending for SOEs rather than private corporations due to certain regulations. The SOCBs are not allowed to provide unsecured loans for private corporations without two consecutive years with profit, meaning it is not possible for start-up corporations to borrow from SOCBs. In addition, using land as collateral for secured lending from SOCBs is a prolematic process as there are numerous difficulties in accessing land-use and ownership in Vietnam. (Leung 2009, 47.)

On the other hand, JSBs are on the rise with continuous rise in market share from 2002 until recent years. The different characteristics of JSBs compared to SOCBs are the key points behind this recent rise. JSBs are mostly founded in the 90s and are not administrated directly by the government. Therefore, JSBs do not have to face the issue of lending from SOEs and thus do not suffer from the high stock of NPLs after the financial crisis in Asia. Furthermore, JSBs are more flexible and adaptable, with a wide range of banking services offered to both state-owned and private enterprises. Even though JSBs still holds certain shortcomings such as low capital base, under-developed IT infrastructure as well as weak management chain; the flexibility of JSBs has allowed them to secure a large number of customers and obtain a continuously rising share in Vietnamese banking sector.

TABLE 4. Percentage of banking sector market (Leung 2009, 47)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>Deposit market share</b>									
SOCBs	78.4	80.8	80.5	79.5	78.1	78.6	70.0	58.0	NA
JSBs	11.3	9.2	10.1	11.2	13.2	14.3	22.0	29.0	NA
Foreign banks	10.3	10.0	9.4	9.3	9.7	7.1	8.0	13.0	NA
<b>Lending market share</b>									
SOCBs	72	73	74	73	75	68	63	54	50
JSBs	11	13	15	15	14	16	27	38	50
Foreign banks	17	14	12	13	12	16	10	8	

Last but not least, foreign-owned banks and joint-venture banks contribute to a small section of Vietnamese banking sector. This is a result of the biased legal

system in Vietnam, which favors domestic banks and financial institutions. Numerous restrictions and limitations are set on foreign and joint-venture banks, one of which does not allow foreign banks to set up local subsidiaries. Therefore, foreign banks can only operate through bank branches and representatives office. Nevertheless, the Vietnamese government are taking actions to remove the limitations on foreign banks as it is a entry requirement for Vietnam to join the WTO. (Tran 2008, 103.) As a result, foreign financial institutions can expect to expand their markets in Vietnam in the upcoming years.

### 3.2 Analysis of Vietnamese banking sector

#### 3.2.1 Political-legal factors

##### **Political system**

With the Communist Party of Vietnam as the only political party in the country, the Vietnamese political system has high level of stability compared to other countries in the region. This is the cutting edge of Vietnam to raise its competitiveness. The government is focusing on improving political stability as well as developing the Vietnamese economy. (Tran 2008, 22.)

The recent changes in the leadership of the government of Vietnam in 2006 have opened up a new chapter for the economy of the country as the new President and Prime Minister promised to drive the country towards a market-oriented approach. (Tran 2008, 23.)

##### **Effect of membership of WTO**

Vietnam joined the World Trade Organization (WTO) in 2007 as the 150<sup>th</sup> member. The entry of Vietnam into WTO has brought along many benefits to the economy. In order to be accepted into WTO, Vietnam is obliged to set up trade relations and trade agreements with foreign countries. Up until today, Vietnam has successfully established trade relations with 165 foreign countries and 72 bilateral trade agreements, including the recent trade agreement with the USA. (Do, 2.)

The entry requirements into WTO indicate that Vietnam has to remove the barrier that has kept foreign financial institutions from fully entering the domestic market (Tran 2008, 103). The Vietnamese government is working towards creating a fair competitiveness environment for all firms regardless of the origins. (Do, 4.) As a result, this has opened up new opportunities for foreign banks to further implement as well as enhance the efficiency of e-banking services in Vietnam.

### **The reform of Vietnam**

The reform of Vietnam starting in 1979 consists of three major stages. In the first stage of “agrarian and industrial reform”, the government of Vietnam has adjusted the legal system and allowed the private ownership of land and businesses. This marked the beginning of private enterprises and corporations, though it still remained in the initial stage. The second stage of the reform process is the “Doi Moi policy”. The main features of this stage include the removal or reduction of trade barriers and limitations, the foundation of private or family-owned businesses as well as utilizing resource allocation and efficiency. Furthermore, as Vietnam was heavily based on agriculture before the reform, the aim of the “Doi Moi policy” was to separate the agricultural, industrial and trade sectors into distinct sectors with with clearly defined responsibilities and objectives. The last stage of the reform is the introduction of macro-economics institutions. Before 1989, Vietnam suffered heavily from hyperinflation rates and speculative pricing. The aim of the last stage of the reform process is to avoid these threats and figure out the “real market prices”. (Tran 2008, 21.)

#### 3.2.2 Economic factors

##### **GDP growth rate**

While analyzing economic factors, one of the most important factors to consider is the GDP of the analyzed country. Figure 8 illustrates the GDP growth rate in Vietnam in the period of 2006-2013.



FIGURE 8. Vietnam GDP growth rate (TradingEconomics 2014)

Vietnam is a developing country with continuously rising GDP over the year. In the period between 2000 and 2013, Vietnam has managed to secure an average GDP growth rate of 6.2 percent. The GDP growth rate reached its highest point at 8.46 percent in 2008 and the record low point is 3.14 percent in the second quarter of 2009. According to CIA World Factbook, the estimated GDP real growth rate of Vietnam in the year 2013 stands at 5.3%, which ranks 50<sup>th</sup> in the global scale. Even though the GDP growth rate has been fluctuated recently, with the global recession affecting every country, it is safe to say that Vietnam has maintained a decent growth rate during this period.

### **Unemployment rate**

According to CIA World Factbook, Vietnam has one of the lowest unemployment rates in the world. With the estimated unemployment rate of 1.3% in the year 2013, Vietnam ranks 7<sup>th</sup> worldwide. According to Figure, after reaching the high point of 2.9% in the first quarter of 2010, Vietnam has managed to continuously cut down the unemployment rate over the year to the current level of 1.3%.

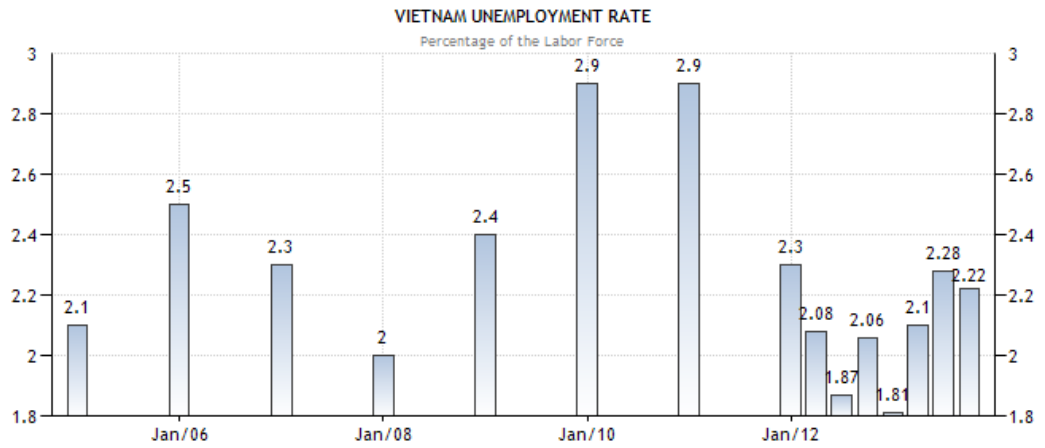


FIGURE 9. Vietnam unemployment rate (TradingEconomics 2014)

**Inflation**

Vietnam is suffering from the high inflation rate, according to CIA World Factbook, the estimated inflation rate in 2013 stood at 6.8%. In the global ranking of inflation rate in the year 2013, Vietnam ranks 184<sup>th</sup> and stands on the bottom part of the chart. This is a result of the rapid growth of the economy of Vietnam. However, Vietnam is showing positive signs as the inflation rate has been reduced to a low point of 4.39% in the first quarter of 2014. This significant improvement is a result of the measures taken by the SBV, such as increasing the interest rate to 15% as well as tightening lending policies.

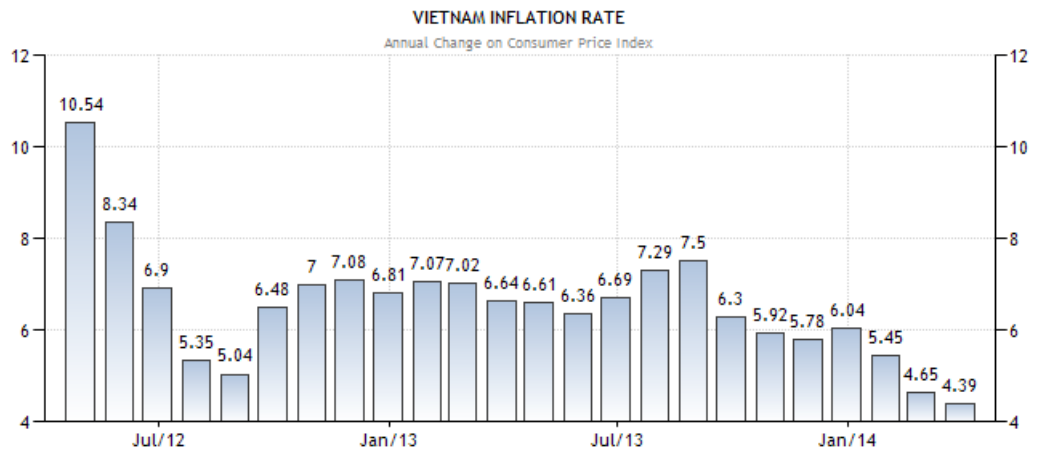


FIGURE 10. Vietnam inflation rate (TradingEconomics 2014)

### Foreign direct investments

Vietnam has become a more and more attractive destination for foreign investments; the number of foreign-invested projects has increased significantly in the period between 2000 and 2012. The Ministry of Planning and Investment's Foreign Investment Agency's stated an increase of 36 percent or US\$22.34 billion in Foreign Direct Investment (FDI) registered in the year 2013 (Vietnam News 2014).

According to Vietnam Report 2012, the number of projects on Finance, banking and insurance stands at 76 with the total registered capital of over US\$1.3 billion. This small number compared to other sectors is a result of the limitations and regulations set on foreign banks and financial institutions by the SBV (Tran 2008, 103). However, with the entry of Vietnam into WTO and the limitations removal in process, the number of foreign projects on banking is expected to increase drastically in the coming years.

Year	Number of projects	Registered capital (Mill. USD)	Implementation capital (Mill. USD)
2000	391	2838	2413
2001	555	3142	2450
2002	808	2998	2591
2003	791	3191	2650
2004	811	4547	2852
2005	970	6839	3308
2006	987	12004	4100

2007	1544	21347	8030
2008	1557	71726	11500
2009	1208	23107	10000
2010	1237	19886	11000
2011	1594	15618	11000
2012	1837	16348	10460

TABLE 5. Vietnam FDI (VietnamReport 2012)

### 3.2.3 Socio-cultural factors

#### **Demographic factors**

Vietnam is a highly populated country with the total population of over 93 million and the average age of 29.2 as of 2013. The age structure of Vietnam is a pyramid with approximately 80% of the population under the age of 40, while the number of citizens over the age of 65 accounts for only 5.6% (CIA World Factbook 2014). The constant wars and conflicts in the country before 1975 are the main reasons for the loss of people, resulting in the low share of old citizens in Vietnam. The majority of Vietnamese population is in the working age range (age 15-59), thus, Vietnam can expect to enjoy an abundance of young workforce.

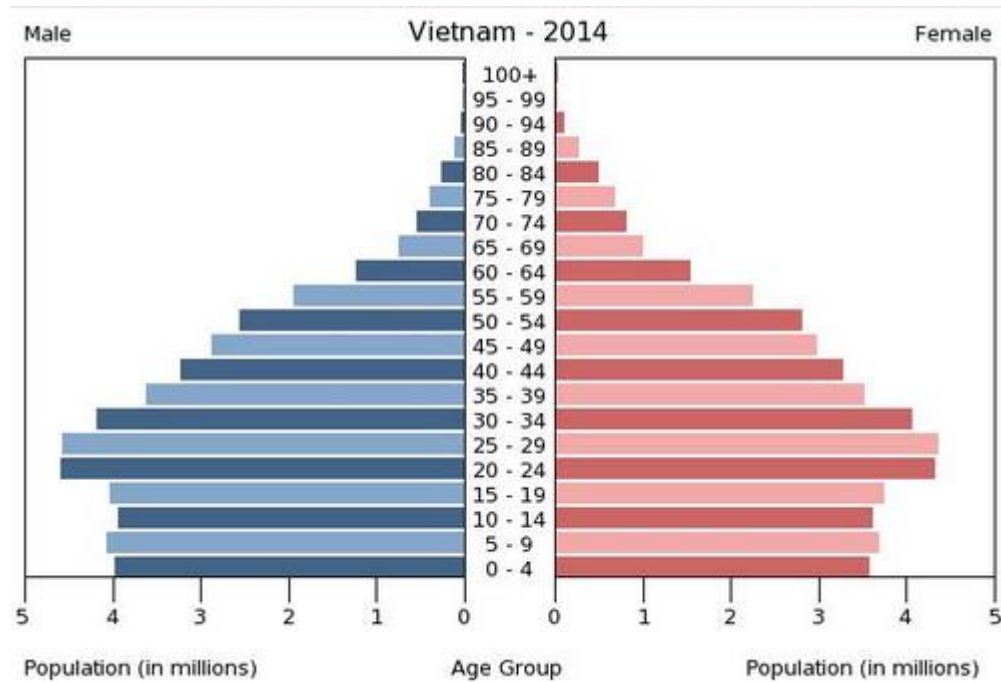


FIGURE 11. Vietnam population pyramid (CIA World Factbook 2014)

### Level of education

With a strong focus on literacy and education, Vietnam has managed to reach a literacy rate of 93.4% in 2013 (CIA World Factbook 2014). The education system in Vietnam consists of a wide range of primary schools, secondary schools, high schools, universities and colleges, both publicly and privately owned. The official study language is Vietnamese, however, English is widely taught in majority of education institutions as the language of business. Furthermore, other languages such as French, German and Japanese are in the study programme of certain schools. The young generation of Vietnam is expected to enjoy easier communication with foreign investors and businesses as the level of English and foreign language of this generation is considerably higher than the previous generation.

In addition, the Vietnamese government has taken measures to improve the quality of teaching and studying. Training courses are provided to teachers and school staffs, scholarships are given to students with outstanding results at schools. Furthermore, the education level in remote area is being focused on with the aim of increasing the literacy rate. (Tran 2008, 27.)

### 3.2.4 Technological factors

#### Information technology in banking services

Information technology has a vital role in banking services, especially e-banking services. The success of implementing and improving e-banking services relies heavily on the level of information technology infrastructure.

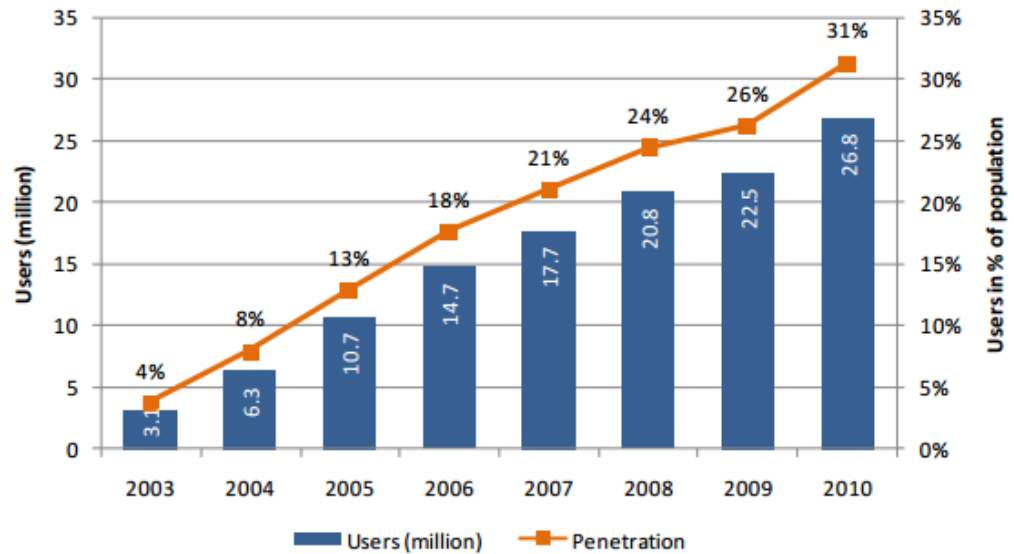


FIGURE 12. Internet users in Vietnam 2004-2010 (Cimigo Net Citizens 2011)

The internet was first introduced in Vietnam in the year 1997, which was considerably late compared to other countries in the region (Ketel, et al. 2010, 78). However, since the introduction of Internet, the number of Internet users and Internet penetration rate of Vietnam has been growing with a rapid pace. As of 2010, the total number of Internet users in Vietnam has reached 26.8 million and a penetration rate of 31% was achieved. During this ten-year period, the figures keep rising year over year without any fluctuation.

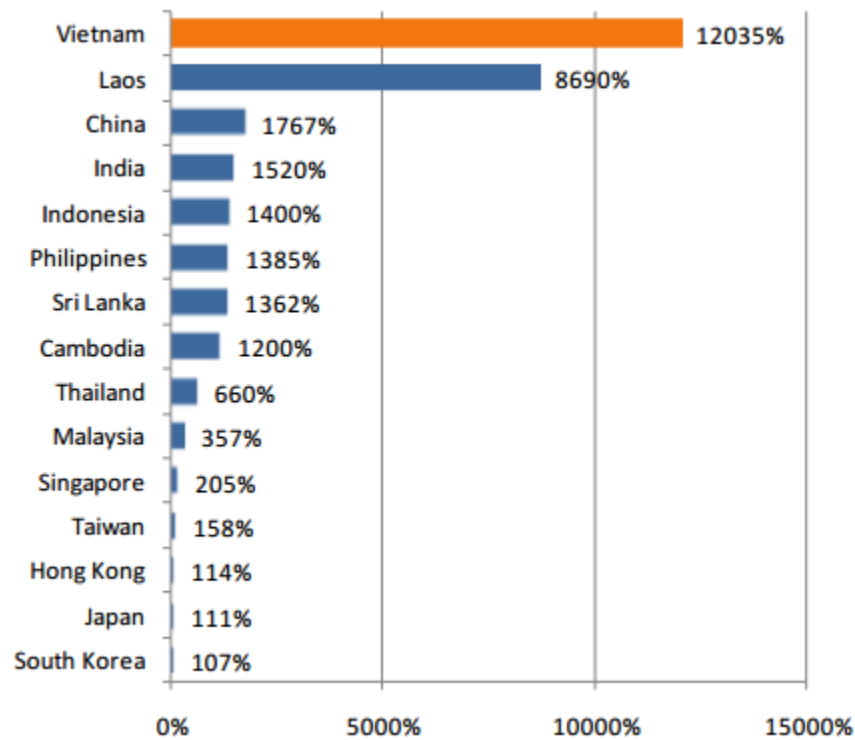


FIGURE 13. Internet users' growth in 2000-2010 in selected Asian countries (Cimigo Net Citizens 2011)

According to Figure 13, the growth rate of internet users in Vietnam is extremely high compared to other regional neighbours. This is a golden opportunity for internet-based services to penetrate the Vietnamese market. Banks and financial institutions can expect to benefit from the growth of Internet penetration and should take this chance to further improve the quality of e-banking services and expand their markets.

### 3.3 E-banking services in general

In this part the author intends to provide readers with a general overview of the services that e-banking has to offer. Most people mistakes the term "e-banking" for the use of Internet banking only. However, the range of services of e-banking is broader than that. The author selects some of the most important e-banking services and provide their definitions as well as the benefits that they provide.

#### **Electronic Fund Transfer at Point Of Sale (EFTPOS)**

EFTPOS is applied when purchases are made by customers at physical point of sale. At point of sales, such as supermarket or gas station, customers make their purchases with the use of payment cards, namely debit cards and credit cards. Everytime a purchase is made, payment card would have to go through a card reader. A card reader is able to process the coded information on the back of every payment card and then send the information of card owner to a Processing Centre. During the whole process, the card information is coded to ensure safety of transaction. Afterward the information is sent to the corresponding bank of the card owner in order to check the following information :

- Card number
- Card expiry date
- Total amount of money to be paid
- Balance in the account of card owner
- ID of merchant
- Card reader identification number

After the process is completed and the payment card is deemed to be valid, a coded certificate is sent from the card owner's bank to the merchant through the Processing Centre, thus allowing the transaction to go through. (Sethi and Bhatia 2007, 60.)

### **Automatic Teller Machine (ATM)**

As the name implies, ATM allows clients to withdraw money from their accounts without the help of any bank employee. An ATM is able to recognize a client through his Personal Identification Number (PIN). In order to avoid risk in case payment card is lost or owner's PIN is exposed, card owner and his bank are able to set and adjust the limit of the amount of money withdrawn each day, depending on the remaining balance of the account. In Vietnam, each bank provides its own ATMs. Clients benefit from using ATMs provided by their banks, having to pay no fee when withdrawing while a small fee has to be paid in case ATM of other banks is used. Withdrawing money straight from ATM is not its only function; additional functions of ATM includes checking remaining balance, checking

transactions made in recent months, print out small bank statement straight from the ATM. (Sethi and Bhatia 2007, 56.)

### **Telephone Banking**

Definition of Telephone Banking:

Telephone Banking is a service provided by banks or other financial institutions which allows clients to make financial transactions either through landline or mobile phones. Users are able to check their balances, transfer money from account to account only with the use of their phones. As most banks offer Telephone Banking on a 24 hour basis, clients are now becoming less and less dependant on bank branches. Thus, Telephone Banking has helped increase banking effectiveness and reduce the amount of time spent visiting bank branches and Automated Teller Machine. (Sethi and Bhatia 2007, 60.)

Services offered by Telephone Banking:

- Check information concerning bank accounts of clients, such as remaining balance and recent transactions.
- Transfer money from account to account.
- Paying monthly bills.
- Request Standing Orders and Direct Debits. By using this function of Telephone Banking, clients are ensured to pay their recurring bills in due time without having to remember all the dates.
- Request to reissue PIN.
- Request personal loan.
- Order foreign currencies or traveler cheques.
- Transfer money abroad.
- Order bank drafts.
- Changing contact information, address.

### **Internet Banking**

Definition of Internet Banking

Internet Banking allows clients to handle financial transactions through a secured website operated by their corresponding banks. Clients are offered access to banks' online facility on a 24 hour basis regardless of where they are as long as they have access to the Internet. The implementation of Internet Banking has significantly boosted the efficiency of banking services in general, reduced the dependency of clients on bank branches and ATM.

Clients are obliged to complete registration process with their financial institutions before being able to use Internet Banking service. A client must set his own password for the purpose of customer verification and safety reason. Every client is provided with a unique customer number in the process. Accessing online banking service requires a client to go to his bank's website and log in using the given customer number and password. Additional security processes have been set up by some financial institutions to guarantee safety for clients. However, these processes differ from bank to bank without any standard set. (Sethi and Bhatia 2007, 58.)

#### Services offered by Internet Banking

- Checking current balance, available balance, interest rate.
- Checking recent transactions.
- Transferring money from account to account.
- Paying bills
- Downloading information and data straight from website to use with finance management softwares such as Quicken.
- Getting monthly bank statement straight from website.
- Editing contact information and address.

#### **Credit Card**

##### Definition of Credit Card

A credit card accommodates user with a line of credit, allowing card owners to pay for goods and services based on the issuing bank's guarantee to pay for them. At the time a client first applies for a credit card, he is obliged to deposit a certain amount of money. The limit of credit allowed monthly is set based on the

deposited sum of the cardholder. For the most part, the limit of credit matches with the deposited amount of money. Concerning long-time users of credit card, financial institutions analyze their paying manner during the course of time to determine the limit of credit for each client. On a monthly basis, a credit card owner receives a statement indicating the transactions made by that particular card, and the total amount to be paid. A cardholder is compelled to pay a minimum pre-defined portion of the amount owed before a certain due date. It is also possible for cardholders to pay the total amount owed if they wish to. In case the billed amount is not paid in full, the unpaid balance will be charged with interest. Additionally, if the cardholder fails to pay the minimum payment by the due date set, an extra fee or penalty is imposed. With the purpose of avoiding this situation, some financial institutions can schedule automatic payment to be deducted from client's account as long as the available balance is sufficient. (Manzoor 2010, 267.)

#### Benefits of Credit Card

- Credit card users are able to make purchase without visiting stores or point of sale.
- Credit card users become less dependent on cash, thus, avoiding the risk of money being lost or stolen. In case credit card is lost, client can inform the issuing bank and request to lock the card and disallow further transactions.
- Merchants can expect a boost in sale figure as credit card holders are able to purchase goods and services in advance without any immediate charge.
- With the use of credit card, the amount of cash kept in merchants' stores is lessened. As a result, possible risk of money being stolen or robbed is minimized.
- Merchants are compelled to pay a portion of every units of goods sold to issuing financial institutions. However, these costs are added to the selling price of goods and services. Thus, merchants benefits from the increased selling figure without paying any actual fee.
- List of lost or stolen credit cards are updated regularly into a computer system, merchants are able to access this system to check the validity of the credit card used.

### 3.4 Reasons for implementing e-banking services

#### 3.4.1 Clients' motivations

##### **Increase accessibility of banking services**

The use of e-banking services greatly enhances clients' accessibility to banking services. Instead of having to visit bank branches to get access to banking services, clients are able to access to most of banking features through the Internet. Clients gain more control over their financial situation as well as become less dependant on financial institutions' opening hours and locations. Services such as checking remaining balance, interest rate, transferring funds, bill payment, purchasing travellers' cheques, request loan, request and edit Letter of Credit have been made available 24/7 for e-banking users; thus inspiring clients to employ e-banking services as it utilizes banking services efficiency with the use of only one electronic device connected to the Internet needed. (Kaptan and Choubey 2003, 146.)

##### **Cost-saving**

E-banking services are offered to clients at a lower fee than most traditional banking services. Financial institutions are able to provide extra banking services without opening new branches or offices. As a consequence, financial institutions' operating fees are kept at a minimum level. This allows financial institutions to offer a lower fee as well as possible higher interest rates for e-banking services users. In addition, as all financial transactions are made using personal electronic devices, clients can expect to save considerable paperwork fees compared to traditional banking services. This paperwork fee is generally small for a single use; however, the added value for a certain period of time can be substantial, especially for clients such as big corporation and business. (Chavan 2013, 22.)

TABLE 6. Cost of banking transactions (Hawkins and Mihaljek 2001, 4)

	USDC	BAH	GSBCG

Physical Branch	1,07	1,07	1,06
Phone	0,52	0,54	0,55
ATM	0,27	0,27	0,32
PC-based Dial-up	0,11	0,02	0,14
Internet	0,01	0,01	0,02

### **Time-saving**

With the implementation of e-banking services, clients are able to save noticeable amount of time compared to making physical financial transactions at bank branches or offices. Financial transactions can be done anytime from anywhere without having to wait in a long queue and the processing time is greatly reduced compared to the processing time in bank offices. Time-saving is an enormous benefit that e-banking brings to clients, especially big corporations as the amount of financial transactions made each day is considerably high. In a hectic era where everyone is occupied with busy working schedule, the introduction and implementation of e-banking services has a significant role in reducing wasted time spent doing traditional banking services. (Padmalatha 2011, 480.)

### **Safety**

E-banking services allow users to be less dependent on the use of cash. E-banking users can use plastic money instead of carrying a large amount of cash. In addition, thanks to the introduction of EFTPOS, merchants no longer have to keep a huge sum of money in store. Consequently, e-banking services have helped prevent the loss of money as well as reduce the risk of money being stolen. In case credit card is lost, the issuing bank can take immediate action to block all further transactions on that particular card, thus prevent possible loss of money. Furthermore, for merchants, the risk of receiving counterfeit money is minimized with the use of e-money. Even though the e-banking system is not entirely safe;

the convenience of using plastic money and electronic fund transfer is still considerable to customers. (Bank Bazaar 2014)

### **Increase financial management ability**

Clients of e-banking services can expect a much better record keeping as all financial activities made are recorded in the system of financial institutions. For traditional banking services users, bank statements are sent monthly by mail and the waiting time is relatively long. Thus the information contained is always out of date by the time the statement is received and the clients might find it difficult to find out about their financial stands in time. Furthermore, paper bank statements and bills are likely to get lost over a period of time, making it impossible for clients to keep track of their financial situations. On the other hand, online statements are sent and received immediately for e-banking users. Hence the information contained is up-to-date and clients have access to their financial stands anytime they desire. Better record keeping is an essential feature of e-banking, especially for big corporation with huge amount of transactions made everyday. (Chavan 2013, 22.)

#### 3.4.2 Financial institutions' motivations

##### **Cost-saving**

As mentioned before, financial institutions are able to offer e-banking services without setting up new branch or office. Furthermore, bank statements and bills are now sent to clients through the Internet, without the use of actual paper. The use of online statement and bill payment has significantly cut down the total expense of financial institutions. As a result, it allows banks to offer services to a wider range of clients, with lower fee compared to the traditional approach. (Kodabagil 2007, 6.)

##### **Market transparency**

The introduction of the Internet and online banking has boosted the availability of information dramatically. Financial institutions are able to gather information

from customers and competitors in a timely manner. Therefore, as soon as new products and innovative services are launched by competitors, banks can expect to gather information and are able to come up with new product ranges to compete. The use of online banking reduces financial institutions' risks of being left behind by competitors and speed up the process of product standardization and commoditization. (Kodabagil 2007, 5.)

### **Cross-selling**

The wide range of information that online banking has brought to financial institutions is a key factor for banks to define future strategies. In the process of analyzing the information, financial institutions can expect to get a hold of the most recent banking trends of customers as well as their preferences. This means that banks are aware of customers' wants and needs and can react to recent changes whenever needed. Furthermore, as the Internet and online banking reduce geographic limitations, banks have the opportunity to promote and offer more products and services to the hands of customers. Financial institutions have realized that banking no longer consists of only traditional services such as loans, deposits, transactions payment but additional services and package such as financial advices, insurance, housing finance can be offered to customers through the channel of online banking also. (Kodabagil 2007, 5-6.)

## 3.5 Challenges in implementing e-banking services

### **Authorization**

The first challenge that every financial institution has to face before launching e-banking services is to get the authorization. Issuing authorization for e-banking services often requires some certain principles. In some certain regions, a financial institution must maintain a physical presence in order to be able to offer e-banking services to customers. The level of security for the services intended to be offered must be appropriate since the use of e-banking services requires the Internet and various risks and security issues are being addressed. Therefore, the risks and security must be analyzed and banks must provide appropriate policies and procedures to deal with these issues. Furthermore, a well-designed business plan

must be done by banks in advance, which states clearly the goals and objectives of banks. (Schaechter 2002, 8-9.)

### **Operational risk**

The use of the internet to apply e-banking services has brought along not only benefits but also various risks and security issues for financial institutions. In order to avoid these risks and security issues, banks must change their operating system accordingly as well as supervise and analyze their procedures closely. The areas that a bank has to cover consist of security, data confidentiality, data and system integrity, system availability and outsourcing. (Schaechter 2002, 15.)

In order to ease the issues of security, the measures that a bank has to take involve the use of hardware and software, the administrative procedures as well as personnel management. The personnel responsible for operating the e-banking systems and websites must be trained appropriately and have a wide range of knowledge concerning security practices. These principles must be met in order to properly run an e-banking system, including a well-configured firewall, strong encryption and authentication, tight password policies, back-up and recovery as well as virus scanning process. (Schaechter 2002, 16.)

Furthermore, confidentiality of information must be ensured, with no unauthorized access allowed. The integrity of system and data means that the information must be kept accurate and reliable throughout the process of being transmitted between banks, customers and external service providers. Another key factor of running e-banking services is the availability of service. In order to maximize the use of e-banking services, the systems must be kept running all the time on a 24-hour basis, with fast response time and dependable performance. Therefore, financial institutions need to focus on capacity planning to deal with the increased transaction volumes as well as the new technologies applied. (Schaechter 2002, 16-17.)

### **Reputational risk**

The implementation of e-banking services has considerably increased the reputational risks of financial institutions. In an e-banking environment where

personal contact is limited and the market is transparent, products and services are quickly copied by competitors; brand names are the only features to distinguish between financial institutions. Whether the brand name of a bank stands out or not depends entirely on the performance of its e-banking system. In case a bank falls short of delivering secured services in a timely manner and proves to be consistent, the reputation of that bank is at risk and has a chance of being seriously damaged. Furthermore, financial institutions with a damaged reputation are expected to face difficulties in expanding their markets and attracting customers. (Schaechter 2002, 17.)

### **Legal risk**

Operating a financial institution always carries certain legal risks, especially when e-banking services are applied. As mentioned previously, online banking has helped reduce geographic limitations between banks and customers. As a result, financial institutions can further their reaches to customers, even in foreign countries. However, in order to expand the market to foreign countries, banks are obliged to be well-prepared and have sufficient resources to deal with local laws. Some key issues that banks must take notice consist of customer protection laws and confidentiality of information. Furthermore, the legislation of the targeted country and the home country might conflict and thus create confusion for financial institutions in term of which legislation to apply. Additionally, certain areas of laws concerning e-banking services are unclear as the legal system is not yet developed enough to comply with the implementation of e-banking. (Schaechter 2002, 18.)

### **Consumer education and protection**

In order to avoid unwanted security issues while dealing with e-banking services, the work of only financial institutions is insufficient. The way customers use and utilize e-banking services also has a significant impact on the security issues. In case customers misuse features of e-banking or are not aware of the importance of security and precautions, serious complications might arise. Consequently, during the registering process, it is essential for financial institutions to provide clear

instructions and guidelines concerning the essence of security issues and privacy policies for new customers. (Schaechter 2002, 22.)

## 4 QUALITATIVE DATA ANALYSIS

### 4.1 Case company overview

Company A is a commercial joint-stock bank founded in the year 1996 with its headquarter based in Hanoi, Vietnam. By the year 2011, company A has become one of the leading joint-stock banks in the Vietnamese market with total assets of approximately VND 100,000 billion. The bank currently has 4,300 employee working at nearly 160 branches and transaction offices throughout key cities and areas in Vietnam. Company A has gained various achievements and awards during its 18 years of operation and ranked 3rd among 500 biggest private enterprises in Vietnam in terms of revenue as voted by Vietnamnet.

Being one of the pioneers in reforming business activities, company A always takes its customers as the focus and its service quality and innovative solutions as the business motto. Therefore, company A has been enhancing its efficiency in the use of capital and management capacity and continuing to focus on the development of retail banking networks and new products through diversifying distribution channels in order to provide financial solution packages to focused customer groups, and simultaneously improving the service quality to better serve customers.

### 4.2 Motivation of Vietnamese financial institutions

#### 4.2.1 Customers

##### **Increase accessibility of banking services**

The first and foremost advantage of e-banking services is the increased accessibility compared to traditional bank services. The use of e-banking services eliminates the wasted time visiting bank branches and the waiting time to get the transactions done. In a populated country like Vietnam where the amount of bank users is abundant, this feature of e-banking has an essential role in appealing and gaining more customers. E-banking users are able to access their accounts and

conduct financial transactions regardless of time and place, with no physical contact needed. The convenience that e-banking brings to its users is noteworthy as numerous bank users have a busy study, working life and might find it difficult to arrange time to visit bank branches every time they want to make a transaction. In addition, most traditional bank services are available through e-banking channel also, which further enhance the convenience and accessibility of e-banking services.

*“As a user of both traditional bank services and e-banking services, I have experienced the advantages and disadvantages of them. I personally prefer e-banking services since it brings me the comfort of accessing my account and make transactions as I please, not according to opening hours of banks.”*

*(An e-banking user – Company A)*

## **Safety**

Prior to the introduction of e-banking services in Vietnam, people rely entirely on the use of cash. Even up until now when e-banking services have been implemented, cash is still the dominant force and the main method of making transactions. However, e-banking services such as plastic money and Internet banking have helped customers become less and less reliant on cash. Dealing with transactions by cash, with face-to-face contact is the traditional approach of Vietnamese people. This method of transaction requires no extra fee and less paperwork compared to transactions conducted in bank branches. However, cash is physical object and the risk of it being stolen or lost during the process still exists.

E-banking users rely on the use of electronic cards while purchasing goods and services from merchants, and on Internet banking while conducting financial transactions such as paying bills, transferring money. Either way, the risk of losing money while using e-banking services is limited compared to the use of cash. Even merchants are free of the risk of losing money thanks to the application of the EFTPOS system in their stores. Furthermore, in case cash is stolen or lost, the damage is permanent and can not be recovered. On the other hand, in case

electronic card is stolen or lost, or unauthorized access to e-banking user's account is detected, the issuing financial institution can take measures to block all further transactions from that account.

*“In Vietnam where the risk of getting robbed or stolen is high, I always feel threatened while carrying a considerable amount of cash. The use of credit card has freed me of this worry and offers me a safer payment method.”*

*(An e-banking user – Company A)*

### **Increase financial management ability**

In comparison to traditional banking services, e-banking services allows users to have a much better record keeping as all financial transactions conducted are recorded in the system of financial institutions. E-banking users have direct access to their bank statements as well as electronic bills, receipts in a timely manner after they become available. This advantage is appealing for personal customers who want to be aware of their financial stands on a regular basis or want to keep records of all the transactions made during a certain period. It is also an essential feature of e-banking that corporations and businesses strive for as it might help them significantly improve their record keepings. Since the amount of transactions made by corporations is noticeably higher than that of personal customers, having all the transactions kept in the record of financial institutions reduces the risk of information getting lost in the process. Furthermore, as e-banking provides record keeping by electronic means, with no involvement of paper bank statements or bills, the risk of documents getting lost over time is eliminated.

*“We are confident with our record keeping system. All the conducted transactions are recorded in our system with perfect precision. Customers can expect to keep better tracks of their financial situations, especially big corporations with high demand for a competent record keeping.”*

*(Head of IT Department – Company A)*

#### 4.2.2 Financial institutions

##### **Cost-saving**

With the help of e-banking services, financial institutions are able to expand their markets and attract more customers without the need to set up new branch or office. Internet-only banks with no physical office can be opened and operated thanks to e-banking. E-banking services have also helped banks to widen their geographic scope as the nature of e-banking involves the use of the Internet. Financial institutions can expect to enjoy increase in transaction volume and the amount of users. Furthermore, since transactions made through e-banking channel do not involve the use of paperwork, the cost of paper is greatly reduced. In the long run, in case the transaction volume is high enough, financial institutions can expect to save a considerable amount of money for paperwork.

*“E-banking services have allowed our bank to serve more and more customers without investing on new office. Considering the costs of initial investment and maintenance of the operating system, we expect to benefit from the cost-saving feature of e-banking in the long term.”*

*(A Senior Manager – Company A)*

##### **Market transparency**

In an era of modern technology, with the usage of the Internet becoming more and more widespread, the availability of information has been elevated to a new level. Information concerning customer demands or current trends can be quickly gathered. Financial institutions are able to react to the changes in customer demands in a timely manner thanks to the ease of information-gathering that e-banking provides. Additionally, information from competitors such as newly launched product ranges or services can be obtained as soon as the launch date commences. Therefore, financial institutions have enough time to react and develop their own ranges of products and services to compete, without the risk of being left behind by competitors. It is safe to say that e-banking is an important factor in improving financial institution's competitiveness.

*“Obtaining information from customers and other financial institutions has never been easier. With the help of e-banking services, we are able to quickly adapt to new changes in the market and stay competitive all the time.”*

*(A Senior Manager – Company A)*

### **Cross-selling**

Many financial institutions have realized the importance and the benefits that e-banking holds in this era and tried to utilize them. In most banks, e-banking does not only serve the original purposes of making financial transactions, transferring money, paying bills, loans and deposits. Since e-banking is an electronic channel, the information provide through this channel can be spread out easily. Therefore various banks are using e-banking as an online distribution channel. Moreover, with the ease of obtaining information from customers, financial institutions have clear pictures of customer preferences as well as their demands and needs. Thus, they can come up with additional products and services that meet the desires of customers and put them on their e-banking channels. Additional services such as providing financial advices, housing finance, insurance are now available through the websites of most financial institutions/

*“We have realized the outstanding ability of e-banking to provide information to our customers and utilized it by offering our additional products and services using e-banking as the distribution channel.”*

*(A Customer Service employee – Company A)*

### **Global integration**

Implementing e-banking services is an essential step in the process of global integration of financial institutions. In advance to the introduction of e-banking services, financial institutions had to face various obstacles in the integration process. In order to expand to foreign market, setting up branches in the targeting country is crucial. However, setting up offices and branches in foreign countries is a costly process and requires authorization from the target's country government.

The use of e-banking services has created a golden opportunity for financial institutions to realize their objectives and simplify the global integration process. As the Internet eliminates any geographic limitations, e-banking is able to reach the hand of customers in even foreign countries. Therefore, financial institutions can penetrate foreign markets without the need to set up their offices in the target countries.

*“Even though expanding our market to foreign countries is not currently our primary objective, the important role of e-banking in our global integration process is undeniable. In the future we are looking forward to utilizing e-banking as a stepping stone to enter foreign markets.”*

*(A Senior Manager – Company A)*

In addition, e-banking can also serve the purpose of promoting financial institutions’ brand names. In an environment where there are limited contacts between customers and financial institutions and the level of product standardization is high, brand name is the only tool to distinguish one financial institution from others. In case a financial institution can provide secured, stable and high-quality e-banking services on a regular basis to customers; it can expect to attract more customers and have its brand name stand out from other competitors.

*“We are working hard to keep up the quality of our e-banking services and serve customers as good as we can in order to build up our brand name. As our product range does not differ from our competitors, maintaining a good level of service and a stand out brand name is crucial.”*

*(A Customer Service employee – Company A)*

### 4.3 Challenges of Vietnamese financial institutions

#### 4.3.1 Customers

##### **Customers’ conflict in expectation and reality**

In Vietnam, the usual sight in every banks and financial institutions is the long queuing line and the long waiting time to complete a transaction really hinders the working life of corporation as well as social life of customers. The introduction of e-banking with the benefit of significantly reducing the waiting time for each transaction is aiming to satisfy customers with hectic working life. As a matter of fact, this advantage of e-banking has attracted numerous customers and is the key factor in the decision-making process of customers for registering for e-banking services.

*“When using the traditional bank service, I have to face with the long waiting time and the processing time and with an existing busy schedule, having more wasted time adds more stress to my working life. The reason for me to register for e-banking services is to utilize the fast transactions and have the convenience of making financial transactions as I see fit.”*

*(An e-banking users – company A)*

However, most customers do not only strive for a service with fast transaction time, they also look forward to having ease of access and ease of registering. The conflict lies in the registering process and the actual use of e-banking services. Since e-banking services are based on the Internet, physical contact is limited and customer authorization is a deciding factor in the safety of e-banking usage. Therefore, in the process of registering for e-banking services, every customer has to go through an authorization phase and have their profile checked. For personal customer, the representation of personal ID, passport or driving license is required. Bank statements of existing customers applying for e-banking services are checked before getting approval to ensure credibilities. Corporations and organizations are obliged to provide annual reports and companies' regulations and policies to financial institutions for the same reason. Furthermore, the actual usage of e-banking services requires various activities such as setting up password, accessing bank's website, getting familiar with the interface and features of the website. As a result, even though many new and existing customers are aware and attracted to the introduction of e-banking services, most of them are

hindered by the complicated registering process and only few have actually registered for online banking.

*“When offered the information concerning e-banking services, many of our customers are tempted, however unwilling to register for it since they are unfamiliar with the authorization process and not ready to adapt to a new kind of service.”*

*(A customer service employee – Company A)*

### **Customer preference**

An outstanding characteristic of e-banking services is the low transaction fee compared to traditional bank services. Hawkins and Mihaljek (2001, 4) has proven this point by providing the reduced transaction costs of e-banking compared to other forms of bank services. Nevertheless, in the Vietnamese market, the cost-saving feature is not the driving force behind the decisions of customers to register for e-banking services. In the foreign market where customers are highly familiar with the usage online banking and the total numbers and frequency of transactions made are considerably high, the theories apply perfectly as customers have to pay relatively small fees in regard to the amount of transactions they make. However, as for the Vietnamese market, the amount of active users and transactions made are considerably lower. Therefore, customers can not expect to fully utilize the cost-saving feature of e-banking services. In addition, most customers still prefer the use of cash over online banking as it has been the main method of transaction for a long period and no fee is required while dealing by cash. As a developing country, Vietnam still lacks in infrastructure to fully develop e-banking. E-banking services are available at most of financial institutions domestically; however, the option of paying by e-banking means is not always available as many merchants have not implemented the EFTPOS system yet. Since customers can not fully enjoy the convenience of using e-banking and would still need to carry cash along, they find the service excessive and unnecessary.

*“I find e-banking services appealing in terms of fast transactions and reducing processing time, however, the*

*monthly fee keeps me from registering for the services as I do not need to make transactions daily or even weekly. Additionally, I am more familiar with face-to-face contact and the use of cash.”*

*(A non e-banking user – company A)*

### **Lack of knowledge**

The introduction of e-banking has brought a whole new dimension to traditional banking. However, as a new service with new interface and method of approach, customers are required to adapt to an entirely new environment. In order to use e-banking services, customers are compelled to fully understand these new features such as setting up password, accessing the issuing bank’s website, customer verification, making transactions through the website as well as many other features. For the young generation, the adapting process is less complicated since this group of customer is more familiar with the use of the Internet and has a high internet penetration rate. The old generation suffers from lack of knowledge and faces difficulties in the process of adapting to e-banking services.

*“Even though I am aware of the benefits that e-banking would bring to me, I am unfamiliar with the use of the Internet in general, so I am afraid I might find it difficult to use this Internet-based service.”*

*(A non-banking user – Company A)*

Figure 14 illustrates the internet usage by age in Vietnam. From the figure, the remarkable penetration rates of Internet of users aged 15-24 and 25-34 are noticed, while the penetration rate of users aged 35 and above is significantly lower.

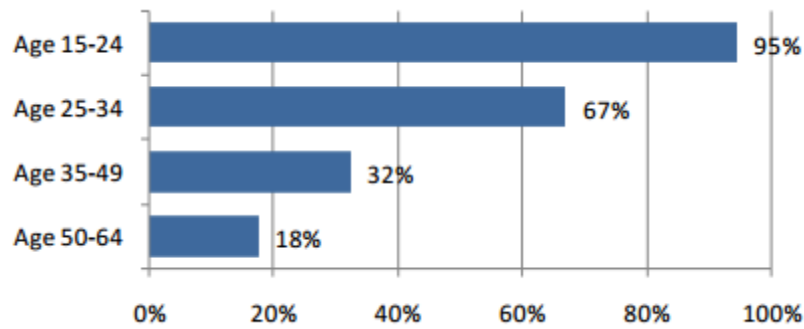


FIGURE 14. Internet usage by age in Vietnam (Cimigo NetCitizens)

Furthermore, the risk of customers not fully understanding the security precautions and misusing e-banking services is noteworthy and serious security issues might arise in case of misuse. Customers need to be prepared and guided by issuing banks prior to actual usage of e-banking in order to avoid unwanted security problems. Regardless of the security issues involved with e-banking, most customers prefer simple, fixed password instead of advanced matrix password with constantly changing password with each use of e-banking. The customers' demands conflicts with the current trend of e-banking security. As a result, financial institutions in Vietnam can not expect to satisfy customers' needs and utilize advanced security methods at the same time.

*“During the implementation process of e-banking in our bank, we have considered to apply the matrix password in order to heighten the security level. However, most customers desire a fixed and easy-to-remember password. The customer knowledge and willingness to adapt to new services and features must be improved in order for us to be able to apply the most secured and advanced security methods.”*

*(Head of IT Department – Company A)*

#### 4.3.2 Financial institutions

##### **Operational risk**

In order to be successful in implementing e-banking services, a bank has to put the level of security as the top priorities. As an Internet-based service, the use of e-

banking contains various hidden threats such as the threat of viruses being spread, hackers as well as leak of information. In an era of technology, these threats might spread widely in a short time and leave serious damages on both financial institutions and customers.

*“Providing e-banking services always carries various risks, if the security level is insufficient, serious damages can be done. Prior to the implementation of e-banking services, we had to analyze the risks carefully and come up with strategies to heighten our security level.”*

*(Head of IT Department – Company A)*

These threats require serious attentions from financial institutions and most institutions find the needs for a change in administrative procedures as well as an extension of workforce. The Human resource department must ensure that the personnel involved in the process of operating and maintaining the e-banking system is competent and well-trained in security practices area. Since the nature of e-banking limits physical contacts and allows users to access on a 24-hour basis, the system must be kept running all the time with a reliable performance as well as fast response time. Furthermore, some problems require immediate attention of financial institutions, such as lost of electronic cards, customer’s account being hacked and stolen; this puts more and more pressures on the operating system of banks. Finally, the implementation of e-banking has boosted the volume of transactions and lead to possible shortage of personnel to deal with the increasing amount of customers. The capacity planning process is vital while implementing e-banking services, as poor capacity planning might lead to serious shortage of personnel and personnel with inadequate level of knowledge concerning security issues.

*“In order to deal with the risks of running e-banking services, our IT department always has to be ready in case problem arises. Our staff has gone through extensive training to ensure the security level of our e-banking services is kept in high standard.”*

*(Head of IT Department – Company A)*

*“We are aiming to fully utilize the benefits that e-banking brings to customers, providing customers with services of high security level and a fast-response time on a 24-hour basis. However, we are facing challenges from the excessive needs of qualified personnel to deal with this task.”*

*(A Senior Manager – Company A)*

### **A non-profitable service**

One of the driving factors for financial institutions in Vietnam to implement e-banking service is the benefit of cost-reduction that it brings along. The theory of e-banking services reducing costs for banks proves to be right in foreign markets where customers are used to modern technologies in general and online banking particularly. In those markets, e-banking has been implemented, developed and widely accepted by customers. Many customers make financial transactions through e-banking channel on a daily or weekly basis, thus the volume of transactions is considerably high and keep on rising. The huge amount of transactions made over time has helped foreign banks to save noticeable amounts of money even with the initial investment and the cost to maintain e-banking services taken into account. Nevertheless, in the Vietnamese market, the penetration rate of online banking is relatively low due to various reasons such as lack of knowledge, preference of cash. Even though the volume of transactions is increased compared to traditional banking, it is still sufficient compared to the initial investment on the operating system, cost of maintenance, cost of training staff as well as the increased wages paid due to the extension of workforce needed.

*“From the beginning, we aimed to reduce our operating costs in the long run. However, up until this point, we haven’t achieved this target yet. The main reasons are the high costs of setting up and maintaining the operating system, yet the amount of e-banking users is rather limited.”*

*(A Senior Manager – Company A)*

### 4.3.3 Other factors

#### **Infrastructure level**

Even though Vietnam is developing with a rapid pace in many areas, the infrastructure level of Vietnam is still far behind the developed countries. The Internet service provided in Vietnam is still lacking in term of stability as well as connection speed. These short-comings seriously affect the use of e-banking services of customers. Customers often experience disrupted services with the unstable Internet connection. The efforts that financial institutions put into maintaining a dependable operating system are insufficient with an under-developed infrastructure level. In order to maximize the benefits of e-banking services, the infrastructure level must be improved and this is a challenge that would only be overcome with the support from the Vietnamese government.

*“The unstable Internet connection speed often interrupts my e-banking session. It is also hard to access my e-banking account on the move and it reduces the convenience of using e-banking services significantly.”*

*(An e-banking user – Company A)*

In addition, in under-developed area of Vietnam, the limitation of infrastructure has led to the lack of merchants with EFTPOS system set up in their stores. As a result, consumers continue to rely heavily on the use of cash as the option of paying by e-banking means is not always available.

*“Many stores, restaurants do not provide the option of paying by credit card or debit card. Therefore I choose to stick with cash as it serves all purposes and can be used everywhere.”*

*(A non e-banking user – Company A)*

#### **Money laundering**

E-banking, especially internet banking, can often be misused for money laundering. The characteristics of having no physical contact with bank

representatives and reduce geographic limitations do not only bring benefits to e-banking services but also pose certain risks. Once the register process is done and the account is opened, it is impossible for issuing financial institutions to identify whether transactions are made by the nominal holder of the account and the place where the transactions are taking place. Thus, financial criminals can take advantage of this characteristic of e-banking. “Dirty money” obtained from illegal sources such as gambling, insider trading, tax evasion can be easily transferred abroad with the use of e-banking. Various financial institutions have issued advanced regulations and guidelines on customer authorization and verification to avoid money laundering; however, monitoring online transactions requires more time and efforts. It is close to impossible to detect activities of money laundering in a timely manner so that banks can intercept and suspend the illegal activities.

*“One of the toughest challenges to tackle while providing e-banking services is the risk of money laundering. Financial criminals take advantage of the lack of physical contact to conduct transactions of illegal money. This illegal activity is impossible to be detected and suspended without the support from the SBV as well as the Internet Service Provider.”*

*(A senior manager – Company A)*

## 5 CONCLUSION AND RECOMMENDATION

### 5.1 Research outcomes

This thesis aims at providing readers the study of the implementation process of e-banking services in Vietnam . The study focuses on the reasons for Vietnamese financial institutions for implementing e-banking services as well as the challenges that they have to face during the process. Two research questions were raised and answered by the analysis of one company in Vietnam. In this chapter the author aims to answer the two research questions and summarize the research.

#### 5.1.1 Research question 1 : Why do financial institutions in Vietnam implement e-banking services ?

The author discovered two main motivations behind the decision to implement e-banking services in Vietnam. The first main motivation is to enhance the customer satisfaction level by offering them an entirely new channel of banking services with various advantages compared to the traditional approach. In this case study, customers of company A suffered from the traditional bank services as it takes time to visit bank branches, waiting in the queue and processing time and it really hinders their schedules. The introduction of e-banking services has offered them a mean to access their bank account regardless of time and place. Through this channel, customers are able to do most services that financial institution provides. Customers have more flexibility and can enjoy the convenience brought by e-banking services. In addition, company A aimed to heighten customer's safety as they provide customers with new payment methods instead of the traditional way of dealing by cash. In Vietnam where burglary and robbery still exist, customers of company A sometimes feel threatened while carrying a big amount of cash. E-banking has offered the option to pay with electronic card at stores where EFTPOS are available and transfer money from account to account, paying bills. E-banking has reduced the reliance of customers on cash and their risks of getting money stolen or robbed. Furthermore, e-banking has allowed customers of company A to gain more control over their financial stands as it provides a much better record keeping.

The other main motivation comes from the company itself. As e-banking is the current trend in the banking industry, company A feels the need to implement it in order to raise their competitiveness. The implementation of e-banking also brings various benefits to the company. Company A intended to adopt e-banking with the purpose of expanding their markets and attracting more customers without having to set up new offices or branches. In the long run company A expects to enjoy the cost-saving characteristic of e-banking when their total transaction volume hits a certain level. E-banking and the use of the Internet also allow company A to obtain more up-to-date information from their customers as well as competitors. As a result, company A can react faster to the changes in the market or come up with new product ranges to compete with other financial institutions. Moreover, e-banking can also serve as a distribution channel for company A. Company A can utilize e-banking to provide customers with information concerning their other products and services. Last but not least, company A sees the chance to improve their global integration process with the implementation of e-banking. The adoption of e-banking is their first step in reaching customers in foreign markets and future expansion.

#### 5.1.2 Research question 2 : What are the challenges arised during the implementation process of e-banking services in Vietnam ?

During the implementation process of e-banking, company A had to face numerous challenges. The author recognized three main sources of challenges that have hindered the adoption process. The first source of challenges comes from the customers of company A. Most customers are tempted by the benefits that e-banking services can bring to them. However, they also expect to have ease of access and registering. The complicated authorization and register process has made them unwilling to apply for the service. Additionally, even though e-banking has offered customers new payment method, for many customers the use of cash is still preferred. Since the amount and frequency of transactions that customers make are considerably low, they find the use of e-banking unnecessary. Compared to the traditional use of cash where no extra fee is involved, the low-cost e-banking services are still considered costly. Furthermore, company A

suffered from the lack of knowledge of many customers. Customers find it difficult to get familiar with e-banking services as it includes entirely new interface and features. Company A also faces the risk of security arising from misuse of e-banking services from customers. Advanced security application such as matrix password can not be applied due to the demand of customers for an easy access to their e-banking accounts.

Secondly, company A has to face challenges from inside the company itself. The use of e-banking services involves various risks concerning security issues. Therefore, company A must ensure the quality level of their personnel and provide appropriate training programme to heighten their knowledge of security practices. In addition, in order to fully utilize the benefit of increased accessibility of e-banking, the services must be available on a 24-hour basis. In order to keep the services running with stability and fast-response time, the number of staff involved is increased. Company A is obliged to prepare a good capacity planning for e-banking services to be running smoothly. Furthermore, company A has not been able to enjoy from the cost-saving characteristic of e-banking as the amount of e-banking users and the transaction volume are relatively low.

Lastly, company A suffers from the under-developed infrastructure level of Vietnam. The slow and unstable internet connection seriously hinders the use of e-banking. Customers of company A have experienced difficulties in accessing their accounts and making transactions due to the unstable internet connection. The under-developed infrastructure level also leads to the lack of EFTPOS system in certain stores, keeping the customers from fully enjoying the benefits of e-banking as the use of cash is still necessary. Finally, the risk of money laundering is an obstacle that every financial institution has to face while running e-banking services. Financial criminals can take advantage of the limited physical contact of e-banking to transfer illegal money from account to account. The process of detecting and suspending money laundering activities is complicated and requires the support from other parties.

## 5.2 Suggestions for financial institutions in Vietnam

From the outcomes of the research, the author realized the difficulties of financial institutions in Vietnam in the implementation process of e-banking. Most of the challenges can not be overcome by the efforts of financial institutions alone. The support from the government and customers are required for the success of e-banking. However, the author still develops some suggestions for financial institutions.

The author recognized the main challenge for financial institutions involves the lack of knowledge and unwillingness of customers. Therefore, financial institutions are advised to develop plans to further promote the benefits of e-banking to customers, with the aim of increasing their awareness and knowledge concerning this new service. Furthermore, in order to cope with the lack of knowledge of customers, financial institutions should provide easy-to-follow guidelines and instructions to customers prior to the register process.

In addition, financial institutions should focus on improving the quality of e-banking services. The security and stability level of e-banking services should be the top priorities for financial institutions. In order to achieve this objectives, financial institutions are advised to provide appropriate training programme for their personnel. Moreover, capacity planning must be well-prepared by financial institutions to avoid lack of personnel in case problems arise. Vietnamese financial institutions can also co-operate with foreign banks in order to learn from their experiences with e-banking services.

## 5.3 Limitations and further research

The author detected two main limitations of the research. First and foremost, the research involves the study of only one case financial institution. Thus, the research outcomes might not be generalized to apply to the whole banking industry of Vietnam. Secondly, the research focuses solely on the implementation of e-banking services, other areas of banking services are not covered in this study. Notwithstanding the limitations, the outcomes of the thesis still guarantee the validity and reliability of the research. The motivations for implementing e-

banking services prove to be similar to the existing research in the literature review of this thesis. The challenges arising during the implementation process differ from the existing findings at some point due to the lack of knowledge of customers and the under-developed infrastructure of Vietnam. However, these challenges are shared by every financial institutions in Vietnam as well. Thus, the research outcomes are still applicable.

The study of the implementation process of e-banking services in Vietnam has suggested further study concerning this issue. The author has discovered the motivations and challenges of the implementation process, however, the solutions to overcome the challenges are not covered in this study. The outcomes of this study can be used as reference for further research on figuring out the solutions for financial institutions in Vietnam.

## 6 SUMMARY

This thesis focuses on the implementation process of e-banking services in Vietnam with the aim of discovering the motivations of financial institutions as well as the obstacles occurred during the process. The thesis is divided into two main parts, namely literature review and empirical study.

In the literature review part, the author collected information and theories from existing source and used as guidelines for the thesis. Firstly, the author proposed the innovation process as well as the developing model with the purpose of improving the quality of e-banking services. Subsequently, the author collected information concerning the banking sectors of Vietnam and conduct an analysis of the banking industry. The chosen analysis method is PEST analysis which covers political-legal, economic, socio-cultural and technological factors. The author also provided readers with a general overview of the services that e-banking provides. Finally, based on existing literature, the author indicated the motivations and challenges in theories.

The empirical part involves the study of one case company in the field of e-banking services. Through semi-structured interviews with representatives and customers of the case company, the author analysed the collected data and concluded the study with the actual motivations and challenges of the implementation process. The author realized the similarities in the motivational factors of the literature review and the empirical study. On the other hand, the actual challenges arising during the implementation process differs significantly to the theories. This is due to the difference in the developing level of Vietnam as well as the level of knowledge of Vietnamese customers.

The author concluded the thesis by giving answers to the two research questions posed as well as suggesting solutions to financial institutions in Vietnam. Suggestions for further research and the limitations of the study are also provided.

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## APPENDICES

### APPENDIX 1

#### **Semi-structured interview guide questions for representatives of company A**

Interviewee's name :

Position :

#### **General information**

1. Would you tell briefly about your company ?

#### **Motivational factors**

2. Where does the idea of implementing e-banking services come from?

3. Who are involved in the decision making process?

4. What are your company's motivations in implementing e-banking services?

5. What are the benefits that e-banking services has brought to your company?

#### **Challenges**

6. What is the result of the implementation process?

7. What were the challenges during the implementation process?

## APPENDIX 2

### **Semi-structured guide questions for customers of company A**

Interviewee's name :

Position :

Company :

#### **General information**

1. How long have you been using services of company A?
2. Can you tell me your opinion on the traditional banking services provided by company A?

#### **Motivational factors**

3. Are you an user of e-banking services of company A?
  - a/ If yes, what are the reasons behind your decision?
  - b/ If no, what are the reasons behind your decision ? Do you intend to reconsider in the future ?
4. What are the benefits that e-banking has brought to you ?

#### **Challenges**

5. What are the short-comings of e-banking services ?
6. Have you experienced any difficulties while using e-banking services?