MINISTRY OF INDUSTRY AND TRADE

VIETNAM E-COMMERCE REPORT **2009**

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MINISTRY OF INDUSTRY AND TRADE

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NOTE

FOREWORD

After 4 years' implementation of the Master Plan on E-commerce Development for the 2006-2010 period approved by the Prime Minister at Decision No. 222/2005/QD-TTg dated 15/09/2009 (Decision 222), Vietnam e-commerce have substantially grown and gradually come into life, contributing to the nation's overall development.

To prepare for the final year's implementation of Decision 222 and establish foundation for constructing Prime Minister's Decision on the Master Plan on E-commerce Development for the next 5-year period 2011-2015, in 2009 the Ministry of Industry and Trade conducted a survey on e-commerce application situation at more than 2000 enterprises nationwide. Based on the survey result, the Ministry of Industry and Trade releases the Vietnam E-commerce Report 2009 with in-depth analysis and assessment of Vietnam businesses' e-commerce status as of 2009. Also, the Report presents assessment of the implementation of some major tasks stipulated by Decision 222, including promulgation and implementation of e-commerce legal and policy framework, online provision of public services, and e-learning; as compared with the previous years' implementation.

We hope this Report, along with the previous reports, will be useful for enterprises, investors, administrative bodies and all viewers that are interested in e-commerce.

On behalf of the Ministry of Industry and Trade, I would like to express sincere thanks to the institutions, businesses, and experts that have supported, collaborated, and provided information for the making of this Report. We look forward to receiving constructive comments to further improve the Report and make it a useful document for policymakers, enterprises, research institutes and interested parties in the future.

Hanoi, February 2010

Asst. Prof. Dr. Le Danh Vinh
Vice Minister of Industry and Trade

OVERVIEW

The global economic crisis greatly affected Vietnam's economy in 2009. Furthermore, natural disasters happening in many regions negatively impacted the economy growth rate and the life of a portion of people. In this situation, the government issued various policies and drastic measures in order to prevent recession, maintain economic growth and ensure social welfare. Enterprises also endeavor to stabilize business and production activities, expand domestic market and seek new international ones. Eventually, Vietnam economy stably developed with the GDP growth rate reached 5.32%. E-commerce also asserted its important role as the tool to help enterprises reduce operation cost and improve competitiveness in the increasingly competitive global market.

Vietnam E-commerce Report 2009 is composed with the view to assess the implementation of e-commerce laws and policies, as well as the status of businesses' e-commerce application in 2009. Furthermore, the report summarizes and analyzes the implementation of important measures stipulated in the Master Plan on E-commerce Development for the 2006-2010 period, including online public service provision and e-learning. On that basis, the report proposes some suggestions for better implementation of e-commerce activities in 2010, establishing the foundation for constructing the Master Plan on E-commerce Development for the 2011-2015 period.

This overview will present the highlights of Vietnam e-commerce in 2009 to help viewers acquire a brief view of e-commerce situation after 4 years' implementation of the Master Plan on E-commerce Development 2006-2010.

I. E-COMMERCE APPLICATION AT ENTERPRISES ACHIEVED ENCOURAGING RESULTS

A survey by the Ministry of Industry and Trade on 2004 enterprises throughout the country in 2009 showed that nearly 100% of enterprises implemented e-commerce application at different scales and levels.

According to the survey, 100% of enterprises are equipped with computers and each enterprise has 25.8 computers on average. 98% of enterprises have access to the Internet, of which 96% have by ADSL or leased line connection. 86% of enterprises use email for business purposes, of which the rates for large enterprises and SMEs are 95% and 78% respectively.

The highlight of e-commerce application in 2009 is the increasing rate of enterprises utilizing e-commerce software for production and business activities. Aside from 92% of businesses using accounting software, enterprises bravely invested and implemented other specialized software such as human resource management (43%), supply chain management (32%), customer relation management (27%) and enterprise resource planning (9%). The implementation of these softwares will help to optimize and improve business efficiencies of enterprises. Besides, most of enterprises have also been aware of and started to use online public services provided by state agencies.

The efficiency of businesses' e-commerce application in 2009 has been obvious. While only 5% of total cost was spent for e-commerce and IT investment, on average 33% of business revenue came from orders via electronic means.

II. E-COMMERCE HAS DEVELOPED NATIONWIDE

After 4 years' implementation of the Master Plan on E-commerce Development 2006-2010, e-commerce development had extended beyond the big cities to spread all over the country.

According to the survey by the Ministry of Industry and Trade in 2009, 53% of surveyed enterprises are located outside Hanoi and Ho Chi Minh City. The statistics show that 100% of businesses are equipped with computers. Most of local enterprises are connected to the Internet, mostly by ADSL. Only about 2% of surveyed businesses use dial-up connection, and 2% have not had Internet connection.

The assignment of staff specialized in e-commerce has been paid more attention by local enterprises. 27% of businesses appointed staff specialized in e-commerce. The issue of customers' data privacy has also gained more interest.

As e-commerce applications in enterprises intensified, the state agencies in localities were increasingly concerned about the issue of state management on e-commerce. With the coordination and guidance of the Ministry of Industry and Trade, 58 out of 63 provinces and cities have approved their own local plans for e-commerce development. Most of provincial industry and trade departments throughout the country have appointed e-commerce specialized staff to implement activities in this field.

Localities have also coordinated closely with the Ministry of Industry and Trade, together with Vietnam Chamber of Commerce and Industry to organize various activities of e-commerce training and awareness raising for businesses, state officials and citizens. Since 2006, the Ministry of Industry and Trade has held about 200 training courses for localities, of which over 90% are for provinces and cities other than Hanoi and Ho Chi Minh City.

With variable levels of economic development across localities, the rapid development of e-commerce application throughout the country shows that businesses and state management agencies in localities have been aware of the importance of e-commerce as a driver of economic development.

III. ONLINE PUBLIC SERVICES CONTINUED TO DEVELOP POSITIVELY

Online public service provision was an important task specified in Decision 222: "By 2010 government agencies must provide all public services online, in which priority are services such as electronic tax filing, electronics customs, electronic import/export procedures, electronic procedures related to investment and business registration, and specialized trade licenses...".

After 4 years' implementation of Decision 222, online public service provision of ministries, ministerial-level agencies, provinces, and cities directly under government have been dramatically improved. Up to now, some trade-related online public services have been provided at level 3 such as electronic certificate of origin (eC/O) issued by the Ministry of Industry and Trade, electronic customs procedure by the Ministry of Finance... At nation-wide scale, 18 provinces have provided online public services at level 3, many of which are related to trade and business such as issuing certificate of business registration, certificate of representative office establishment, certificate of foreign invested enterprise establishment...

In October 2005, the Ministry of Finance initiated the pilot implementation of e-customs procedures through 2 phases: narrow pilot from October 2005 to November 2009 and widened pilot from December 2009 to December 2011. The e-customs procedures was aimed to facilitating export activities of enterprises, step by step reforming customs procedures to conform with the international customs standards, and transforming manual customs procedures to electronic customs procedures. After the narrow pilot phase, the Ministry of Finance has set up and fixed a model of e-customs procedures that operate smoothly at the Customs Departments of Ho Chi Minh City and Hai Phong City, bringing visible economic benefits for businesses and the State through saving time, manpower, and costs. On that basis, since the end of 2009 the Ministry of Finance has expanded the pilot implementation of e-customs procedures to a larger scale.

The Ministry of Industry and Trade led the way in providing online public services supporting trade activities of businesses. Since early 2006, the Ministry of Trade (now the Ministry of Industry and Trade) has launched the electronic certificate of origin system (eCoSys) to manage and issue C/O for export businesses. So far, eCoSys has been implemented nation-wide, all businesses in demand can send C/O application via eCoSys to C/O issuance agencies under the Ministry of Industry and Trade or VCCI without entering any personal contact as before. By the end of November 2009, over 1,200 enterprises had joined eCoSys, and the total number of electronic C/O issued reached over 70,000.

Furthermore, in implementation of Prime Minister's Decision No. 30/QD-TTg dated January 10, 2007 approving the Plan on simplifying administrative procedures in state management areas for the 2007-2010 period, ministries and localities have also been promoting the provision of other online public services. Most of ministries' public services have now been provided online at level 2.

IV. E-LEARNING HAS BEEN FORMED AND DEVELOPED

Although e-learning is a new field, it has developed rapidly. With obvious advantages such as the flexibility in time and studying places, e-learning creates a favorable environment for students, especially staff of organizations who can participate in online courses without any negative impact to their work.

E-learning has been popularly implemented in education insitutions at both college and university level. Many large enterprises and some state agencies initiated the e-learning

application process. Several enterprises providing e-learning services were found to meet the high demand for this modern education method.

According to the survey by the Ministry of Industry and Trade on e-learning applications at universities and colleges, 37 of 62 surveyed institutions have implemented e-learning and 7 are planning to do so. None of the surveyees is uninterested in e-learning. Of the 37 institutions that have implemented e-learning, 9 have done so for more than 3 years, the remaining 28 have less than 3 years' experience in the field. In most institutions, the mode of application is still limited to sharing digitalized research and learning materials on computer networks. Some institutions have introduced learning management software in their e-learning system to manage the online teaching and learning process.

Aside from education institutions, enterprises and state administrative agencies also started to implement e-learning applications, especially big organizations with high demand for improving staff's knowledge and skills, such as the Ministry of Finance, the Ministry of Information and Communications, FPT Group, VNPT, Techcombank Vietnam...

With many advantages that help to supplement the traditional education methods, e-learning is predicted to develop rapidly in the upcoming period.

V. PURCHASING GOODS AND SERVICES VIA INTERNET INCREASINGLY BECAME POPULAR TO A SEGMENT OF CONSUMERS IN BIG CITIES

Along with the recent rapid development of Internet and e-commerce, forms of trading via the Internet gradually developed and became popular to a segment of consumers, especially office workers and students in big cities.

The most popular form of trading via the Internet was the sale and purchase of goods and services on e-commerce websites. So far, many enterprises have sold their goods and services via e-commerce websites, especially enterprises in sectors of aviation, tourism, general supermarket…

By the end of 2009, trading via e-commerce websites has become popular for several categories of goods and services such as flight ticket, electronics goods, mobile phone, computer, books, tourism tour, hotel reservation, perfume, flower… In order to meet consumers' demand, enterprises also applied flexible delivery and payment methods, from online payment, bank transfer to cash on delivery.

Aside from professional e-commerce websites, recently, many social networks also appeared and attracted a hundreds of thousand members. With big numbers of participants, these social networks are becoming a promising potential market for businesses. Many enterprises and individuals have detected the potential and invested in these markets in various forms, including opening sales topics and leased favorable slots for their topics to sell goods or advertise services. Sellers directly communicate with consumers under those topic threads and perform the sale contracts by flexible methods which are suitable for consumers.

In this context of development, online purchase of goods and services is becoming a visible trend and will grow rapidly in the coming time when online payment becomes more popular and familiar with consumers.

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ABBREVIATIONS

ADSL	Asymmetric Digital Subscriber Line
AFACT	Asia Pacific Council for Trade and Electronic Business
AKFTA	ASEAN – Korea Free Trade Area
APEC	Asia - Pacific Economic Cooperation
ATA	Asia - Pacific Trustmark Alliance
ATM	Automatic Teller Machine
B2B	Business to Business
B2C	Business to Consumer
BKIS	Bach Khoa Internet Security
C/O	Certificate of Origin
eC/O	Electronic Certificate of Origin
C2C	Consumer to Consumer
CP	Content Provider
eCoSys	E-Certificate of Origin System
ECVN	Vietnam E-commerce Portal
EDI	Electronic Data Interchange
EDIFACT	Electronic Data Interchange For Administration, Commerce, and Transport
ERP	Enterprise Resources Planning
EVN	Electricity of Vietnam
FTA	Free Trade Area
G2B	Government to Business
GDP	Gross Domestic Product
GO	Game Online
GTA	Global Trustmark Alliance
IATA	International Air Traffic Association

ICANN	Internet Corporation for Assigned Names and Numbers
IP	Internet Protocol
ISP	Internet Service Provider
IXP	Internet Exchange Provider
OECD	Organisation for Economic Co-operation and Development
OSP	Online Service Provider
PAA	Pan – Asian e-Commerce Alliance
PKI	Public Key Infrastructure
PNTR	Permanent Normal Trade Relations
POS	Point of Sales
SEOM	Senior Economic Officials Meeting
UN/CEFACT	United Nations Centre for Trade Facilitation and Electronic Business
UNCITRAL	United Nations Conference on International Trade Law
UNCTAD	United Nations Conference on Trade and Development
VCCI	Vietnam Chamber of Commerce and Industry
VNCERT	Vietnam Computer Emergency Response Team
VNNIC	Vietnam Internet Network Information Center
VNPT	Vietnam Posts and Telecommunications Group
VOV	The Voice of Vietnam
VTC	Vietnam Television Cable
VTV	Vietnam Television
WTO	World Trade Organization
XML	Extensible Markup Language

CHAPTER I

PROMULGATION AND IMPLEMENTATION OF E-COMMERCE LAWS AND POLICIES

I. E-commerce law and policy system

II. Implementation of E-commerce laws and regulations

III. Challenges in the implementation of E-commerce laws

CHAPTER I

PROMULGATION AND IMPLEMENTATION OF E-COMMERCE LAWS AND POLICIES

I. E-COMMERCE LAW AND POLICY SYSTEM

The Electronic Transaction Law (E-transaction Law) was passed by the Eleventh National Assembly during its 8th Session on November 29th 2005 and came into effect on March 1st 2006. Being formulated in accordance with the structure and contents of UNCITRAL's E-commerce Model Law, the E-transaction Law is the cornerstone of the whole e-commerce legal system of Vietnam, which aims to regulate in a comprehensive manner electronic transactions in all range of activities, from administrative and civil transactions to business and commercial ones. The promulgation of the E-transaction Law has opened a new era of Vietnam e-commerce in which electronic transactions are officially recognized by law and begin to develop in all aspects. Vietnam E-commerce Report 2009 dedicates one chapter to summarize the promulgation and implementation of e-commerce laws and policies during the past four years, since the enactment of the E-transaction Law.

1. Policies related to information technology and e-commerce

Within the policy system, the strategies, programs, master plans and sectoral development plans promulgated by the Prime Minister or Head of Ministries play a significant role. They help form the policy framework and macro-orientation for the development of particular socio-economic areas.

The Master Plan on E-commerce Development 2006-2010 approved by Prime Minister's Decision 222/2005/QD-TTg was Vietnam's first long-term and macro plan on e-commerce, which sets the vision, roadmap and overall solutions to promote nation-wide e-commerce application for the 5-year period.

Over the past few years, together with the 2006-2010 Master Plan on E-commerce, the policy framework on e-commerce has been continuously consolidated by various programs and projects of national scale, from Internet and telecommunications infrastructure planning to IT human resource development, or IT application diffusion among state agencies. With the vision to build an information society based on advanced technology infrastructure, these policies helped support and promote the development of e-commerce in Vietnam.

Table I.1: E-commerce related policy framework

Date of Issue	Document Title
29/07/2005	Decision 191/2005/QD-TTg by the Prime Minister promulgating the Program on Assisting Enterprises' ICT Application for International Integration and Development for the period of 2005-2010
09/09/2005	Decision 219/2005/QD-TTg by the Prime Minister promulgating the Information Development Strategy towards 2010
15/09/2005	Decision 222/2005/QD-TTg by the Prime Minister promulgating of the Master Plan on E-commerce Development for the 2006-2010 period
06/10/2005	Decision 246/2005/QD-TTg by the Prime Minister promulgating the Strategy for Vietnam Information and Communications Technology towards 2010 and direction towards 2020
07/02/2006	Decision 32/2006/QD-TTg by the Prime Minister approving the Development Plan of Vietnam Telecommunications and Internet towards 2010
24/05/2006	Decision 112/2006/QD-TTg by the Prime Minister approving the Project on the development of Vietnam banking sector towards 2010 and vision for 2020
06/12/2006	Directive 14/2006/CT-BTM by the Minister of Trade on implementing the Master Plan on E-commerce Development for the 2006-2010 period
29/12/2006	Decision 40/2006/QD-BTM by the Minister of Trade issuing the Master Plan on Application and Development of Information Technology in the Trade Sector towards 2010
29/12/2006	Decision 291/2006/QD-TTg by the Prime Minister promulgating the Project on Non-cash Payment for the 2006-2010 period and direction towards 2020 in Vietnam
12/04/2007	Decision No.51/2007/QD-TTg by the Prime Minister approving the Program on the Development of Vietnam Software Industry towards 2010
23/04/2007	Decision No.55/2007/QD-TTg by the Prime Minister approving the list of priority industries and spearhead industries for the 2007-2010 period, vision towards 2020 and a number of incentive policies for these industries
03/05/2007	Decision No.56/2007/QD-TTg by the Prime Minister approving the Program on Vietnam Digital Content Industry Development towards 2010
28/05/2007	Decision No.75/2007/QD-TTg by the Prime Minister approving the Master Plan on the Development of Vietnam Electronic Industry towards 2010 and Vision for 2020
07/07/2007	Directive No.07/CT-BBCVT of the Ministry of Post and Telecommunications on Strategic Orientation for the Development of Vietnam Information and Communications Technology in the 2011 – 2020 period ("Take-off Strategy")
26/10/2007	Decision No.05/2007/QD-BTTTT by Ministry of Post and Telecommunications approving the Development planning for Vietnam IT human resources towards 2020
24/03/2008	Decision No.43/2008/QD- TTg by the Prime Minister approving the Plan of Information Technology Application in State Agencies
31/03/2009	Decision 48/2009/QD-TTg by the Prime Minister promulgating the Plan on ICT application in Government Agencies for the 2009 - 2010 period
03/04/2009	Decision 50/2009/QD-TTg by the Prime Minister promulgating "Regulations for managing Software industry development program and Vietnam Content industry development program"
01/06/2009	Decision 698/QD-TTg by the Prime Minister promulgating the Master Plan on IT human resource development towards 2015 and direction towards 2020

2. Implementation of the Master Plan on E-commerce Development for the period of 2006-2010 (Decision 222/2005/QD-TTg)

2.1. Awareness raising and training

Upon implementation of Decision 222, e-commerce awareness raising activities have both intensified and expanded. Grand events as well as competitions and award prizes related to e-commerce have been frequently held in social life, such as the E-commerce Gold Cup by the Vietnam Association for Information Processing, the Sao Khue Prize by the Vietnam Software Association, the "Digital Ideas" Program, the Trusted E-commerce Business Ranking Program, and the Vietnam E-commerce Forum (Ecombiz) by the Ministry of Industry and Trade in cooperation with the Vietnam E-commerce Association.

E-commerce training for state officials and enterprises has been implemented via various forms such as workshops, seminars, and practical training courses. From 2006 to 2009, the Ministry of Industry and Trade have coordinated with provincial industry and trade departments and the Vietnam Chamber of Commerce and Industry (VCCI) to organize about 200 training courses on state management on e-commerce as well as e-commerce application skills for state officials and enterprises across the country.

Full-time education on e-commerce stayed as highlight of attention for education and training institutions. The 2008 national survey on e-commerce education at universities and colleges by the Ministry of Industry and Trade revealed that out of 108 educational institutions, 49 have taught e-commerce (30 universities and 19 colleges). Of these 49, two have founded e-commerce department and 11 have established e-commerce course module. Several universities have made plan to further investment on e-commerce training, with the view to perfect teaching materials and technology infrastructure for e-commerce training, closely attach training with business practice and society's demands.

2.2. Legislation and law enforcement in e-commerce

By the end of 2009, the legal framework for e-commerce in Vietnam had been fundamentally established with the backbone being legal texts under the E-transaction Law and the Information Technology Law (refer to Part II for details).

2.3. Online public services

By the end of 2009, most of the Ministries and 60 out of 63 provincial-level people's committees have had websites to interact with citizens and organizations in society. Most of these websites bring online basic public services such as provision of information on the government body's functions and activities, publication of legal regulations and administrative procedures, and establishment of online contacts with citizens and organizations.

Some local governments like Ho Chi Minh City, Dong Nai, Lao Cai have provided online public services related to trade and business such as issuing certificates of business registration, investment certificates, certificates of representative office establishment, tax registration, seal registration...

Ministries and sectors are actively accelerating the implementation of online public services that are crucial for trade activities, such as electronic customs procedures, electronic C/O (certificate of origin), electronic tax filing and submission, and e-commerce application in government procurement (further details are provided in Chapter II).

2.4. Development of e-commerce support technologies

2.4.1. Promulgation of standards related to e-commerce
During the two years 2008-2009, the Ministry of Information and Communications issued several standards related to IT and e-commerce for use in data integration, information accession, data description, and standard index for IT application in government agencies. The Ministry of Industry and Trade publicized the National technical standards on electronic data interchange for use in C/O issuance. Also, many businesses in the banking-finance sector have established and applied several standards for information exchange, card payment, international money transfer, interbank payment and system integration (e.g. XML, ISO 8583, SWIFT…).

2.4.2. Electronic payment
In recent years, electronic payment in Vietnam developed vigorously. At the national level, the State Bank of Vietnam officially launched the operation of the Interbank Payment System phase II on November 18th 2008. Since Quarter 2 of 2009, the Interbank Payment System phase II has been operational nationwide.

Card payment services also saw rapid growth. By the end of 2009, 45 banking institutions have issued more than 21 million payment cards with card revenue in domestic currency totaling VND 25,000 billion and in foreign currency registering USD 2 billion. The whole banking system has more than 9,500 ATM and 33,000 POS devices. Currently the State Bank of Vietnam is perfecting the legal foundation for promoting the development of new payment tools and services. The systems of the two biggest card payment alliances, namely Banknetvn and Smartlink with more than 90% of the national card market, have been interconnected. In the upcoming time, the system of VNBC and ANZ will be connected with Banknetvn-Smartlink to form a single, integrated card payment system. Most of electronic payment services in Vietnam were developed on the platform of core banking technology transferred from overseas.

The vigorous development of new, modern payment tools have facilitated fast and easy payment for goods and services by consumers, via the Internet, ATM, POS, mobile phones..., which in turn promoted the development of e-commerce.

2.4.3. Electronic business network in some large-scale economic sectors
In Vietnam, businesses in large-scale economic sectors are investing heavily on technology innovation with the view to improve productivity and quality, thus increase production and business efficiency. Many leading corporations and enterprises in key sectors such as electricity, telecommunications, oil and gas, steel, textile and garment… are now underway of developing business models using electronic means (electronic business network).

2.5. International cooperation on e-commerce

International cooperation on e-commerce plays an important role in supporting domestic e-commerce development and integration with the world's e-commerce, contributing to trade growth and raising competitiveness of enterprises.

Concerning multilateral cooperation, in 2009, Vietnam continued active participation in e-commerce activities within APEC, ASEAN, UNCITRAL, UN/CEFACT…, especially in issues related to paperless trading, data privacy, eCO issuing, Trusmark, trade facilitation, application of electronic data interchange standards. In the framework of APEC, in July 2009, the VECITA organized the international workshop on Privacy Capacity Building with active participation of experts on data privacy from state management agencies and great groups of several APEC economies such as the US, Australia, the Philippines…

Regarding bilateral cooperation, Vietnam has been actively promoting cooperative activities with countries and territories having strong e-commerce development such as the US, China, South Korea, Taiwan, Japan… In November 2009, Vietnam E-commerce and IT Agency (VECITA) of the Ministry of Industry and Trade in coordination with the Commerce and Information Policy Bureau of the Japan Ministry of Economy, Trade and Industry organized the international workshop on the environment and policy on the two countries' e-commerce, simultaneously; create a mechanism of regular discussion of e-commerce legislation between the two agencies.

The Ministry of Industry and Trade has also been actively supporting enterprises, associations in participating in international organization on e-commerce such as the Pan - Asian E-commerce Alliance (PAA), the Asia – Pacific Trustmark Alliance (ATA). In 2008, the Vietnam E-commerce Development Center (Ecomviet) became an official member of the ATA.

2.6. Organization of Decision 222 implementation

The Master Plan on E-commerce Development for the period of 2006-2010 has set the roadmap and overall solutions to promote e-commerce application at the national level. Implementing this roadmap, provinces and cities have made plans on e-commerce development in their localities. By the end of 2009, all provinces and cities under Central Government have established their own local plans for e-commerce development, of which 58 provinces and cities have had their plans approved and brought to implementation.

Various localities have actively coordinated with the Ministry of Industry and Trade in organizing activities to implement the solutions set out in their local e-commerce development plans, which mainly focus on awareness raising and training of e-commerce for state management agencies and enterprises, and assisting enterprises in adopting e-commerce.

Apart from electronic taxation, electronic customs, and electronic payment, many other projects prescribed by the Master Plan are now implemented by relevant ministries and sectors, including: 1) Project "Online provision of public services in the trade sector phase 1", 2) Project "Awareness raising and training of e-commerce for the business community", 3) Project "Establishment of electronic business network for some large scale enterprises", 4) Project "Application of e-commerce in government procurement" with the pilot project "Establishment of electronic procurement system in Vietnam".

3. Legal system for e-commerce

The current legal system governing electronic transaction in Vietnam is constructed around two pillars, namely the Law on Electronic Transactions 2005 and the Law on Information Technology 2006. The former laid the legal foundation for electronic transactions by recognizing the legal effects of data messages and giving detailed regulation for electronic signatures – the element to ensure the reliability of data messages. The Law on Electronic Transactions mainly regulates electronic transactions in state agencies and business, commerce, and civil relationships. On the other hand, the Law on Information Technology is composed of basic provisions on the application and development of information technology and measures to develop the infrastructure for these activities. Combined together, these two laws regulate almost all elements related to the use of information technology and e-commerce in socio-economic activities in Vietnam.

Table I.2: The core legal framework for electronic transactions in Vietnam

Laws		
29/11/2005	Law on Electronic Transactions	
29/06/2006	Law on Information Technology	
Decrees to provide guidance on law		**Overriding text**
09/06/2006	Decree No.57/2006/ND-CP by the Government on E-commerce	E-transaction Law
15/02/2007	Decree No.26/2007/ND-CP by the Government guiding the implementation of the E-transaction Law on digital signature and C/A services	E-transaction Law
23/02/2007	Decree No.27/2007/ND-CP by the Government on electronic transactions in financial activities	E-transaction Law
08/03/2007	Decree No.35/2007/ND-CP by the Government on electronic transactions in banking activities	E-transaction Law
10/04/2007	Decree No.64/2007/ND-CP by the Government on information technology application in Government agencies	E-transaction Law and IT Law
13/08/2008	Decree No.90/2008/ND-CP by the Government on anti-spam	E-transaction Law and IT Law
28/08/2008	Decree No.97/2008/ND-CP by the Government on the management, provision and use of Internet services and electronic information on the Internet	IT Law
Decrees to handle violations		**Overriding text**
10/04/2007	Decree 63/2007/ND-CP by the Government on administrative sanctions for violations in information technology	IT Law
16/01/2008	Decree No 06/2008/ND-CP by the Government on administrative fines in commercial activities	Trade Law
20/03/2009	Decree No.28/2009/ND-CP by the Government on sanctioning of administrative violations in the management, provision and use of Internet	IT Law

Circulars guiding the implementation of some provisions in decrees	Overriding text
21/07/2008 Circular No.09/2008/TT-BCT by the Ministry of Industry and Trade guiding the E-commerce Decree regarding information supply and contract conclusion on e-commerce websites	Decree on E-commerce
15/09/2008 Circular No.78/2008/TT-BTC by the Ministry of Finance guiding the implementation of Decree No.27/2007/ND-CP of 23 February 2007 on e-transactions in financial activities	Decree on e-transaction in finance
12/11/2008 Circular 05/2008/TT-BTTTT by the Ministry of Information and Communications guiding some articles of Decree 97/2008/ND-CP dated 28/08/2008 on managing, providing, and using Internet services and electronic information on the Internet	Decree on Internet
18/12/2008 Circular 07/2008/TT-BTTTT by the Ministry of Information and Communications guiding the provision of information on personal blogs	Decree on Internet
24/12/2008 Circular 09/2008/TT-BTTTT by the Ministry of Information and Communications guiding the management and use of Internet resources	Decree on Internet
24/12/2008 Circular 10/2008/TT-BTTTT by the Ministry of Information and Communications stipulating the settlement of disputes over Vietnam national domain names ".vn"	Decree on Internet
30/12/2008 Circular 12/2008/TT-BTTTT by the Ministry of Information and Communications guiding the implementation of several contents of Decree 90/2008/ND-CP on anti-spam	Anti-spam Decree
02/03/2009 Circular 03/2009/TT-BTTTT by the Ministry of Information and Communications stipulating management registration numbers and template of certificate of management registration number for email, SMS and IM advertisement service providers	Anti-spam Decree
16/03/2009 Circular 50/2009/TT-BTC by the Ministry of Finance guiding the conduct of electronic transactions on stock markets	Decree on e-transaction in finance
31/07/2009 Circular 26/2009/TT-BTTTT by the Ministry of Information and Communications stipulating the provision of information on and assurance of access to government agencies' websites	Decree on IT application in Gov. agencies
14/12/2009 Circular 37/2009/TT-BTTTT by the Ministry of Information and Communications stipulating procedures and required documents for the registration, licensing, and recognition of digital signature certification authorities	Decree on digital signature and CA service

Following the promulgation of E-transaction Law and IT Law, seven guiding decrees were issued from 2006 till 2008, establishing the core legal framework for IT and e-commerce application in Vietnam. Of these seven decrees, three decrees guiding the implementation of the E-Transaction Law in the trade, banking, and finance sectors focus on the legal aspects of "data message" in some particular application areas. The remaining four decrees address the general issues of IT infrastructure and environment for electronic transactions in the whole society, namely digital signatures, spam, IT application in government agencies, and Internet services and electronic information on the Internet. Six of the seven decrees – with regulations on e-commerce, electronic transactions in finance, Internet services and information on the Internet, anti-spam, digital signatures and CA services, and IT applications in Government agencies – have been detailed by circulars issued during 2008 and 2009 (Table I.2)

Aside from legal texts under the E-transaction Law and IT Law, the legal framework for e-commerce has been rounded by a series of bylaws that stipulate particular aspects of the electronic transaction environment, either from the infrastructure side or the application side. Albeit narrower scope of regulation, those bylaws help complete and improve the effects of the whole policy-legal system for electronic transactions, guiding the implementation of e-commerce regulations on all areas of social activities.

Table I.3: Other texts related to e-commerce and information technology

Date of Issue	Document Title
18/01/2006	Decision No.04/2006/QD-NHNN of the State Bank promulgating the Regulation on safety and confidentiality of the information technology system in the banking sector
23/03/2006	Directive No.10/2006/CT-TTg of the Prime Minister on reducing paperwork of state administrative agencies
28/04/2006	Decision No.13/2006/QD-BBCVT of the Ministry of Post and Telecommunications on the functions, tasks, authority and organizational structure of the Vietnam Computer Emergency Response Team (VNCERT)
01/06/2006	Joint-circular No.60/2006/TTLT-BVHTT-BBCVT-BCA by the Ministry of Culture and Information, Ministry of Post and Telecommunications and Ministry of Public Security on the management of online games
29/06/2006	Circular No.03/2006/TT-BBCVT by the Ministry of Post and Telecommunications on administrative handling of violations and settlement of complaints and denunciations over the management, provision and use of internet services

17/07/2006	Decision of the Prime Minister No.169/2006 QD-TTg on ICT investment and expenditure of the State-budgeted bodies
31/07/2006	Decision No 35/2006/QD-NHNN of the State Bank promulgating rules on principles of risk management in electronic banking
04/10/2006	Decision No.223/2006/QD-TTg of the Prime Minister amending regulations on investment and procurement of IT products using the state budget
22/02/2007	Directive No.04/2007/CT-TTg of the Prime Minister on enhancing the protection of copyright over computer programs
23/02/2007	Directive No.03/2007/CT-BBCVT of the Ministry of Post and Telecommunications on enhancing information security on the Internet
22/03/2007	Decision No.18/2007/QD-BTC of the Ministry of Finance on the printing, issuance, use and management of electronic air tickets
05/04/2007	Decision No.05/2007/QD-BBCVT by the Ministry of Post and Telecommunications issuing regulations on customer claim feedback and guidelines on dispute settlement between suppliers of post, delivery, telecommunications and Internet services and service users
15/05/2007	Decision No.20/2007/QD-NHNN of the State Bank promulgating the regulation on issuance, payment, use of bank cards and provision of bank card operation support services
19/06/2007	Decision No.20 2007 QD-BBCVT of the Ministry of Post and Telecommunications promulgating the model regulation on certification of digital signatures
22/06/2007	Decision No.52/2007/QD-BTC of the Ministry of Finance promulgating the regulation on pilot e-customs procedures
25/06/2007	Decision No.706/2007/QD-BNV of the Ministry of Home Affairs on the establishment the Vietnamese e-commerce association
03/07/2007	Decision No.32/2007/QD-NHNN of the State Bank on balance limits of anonymous prepaid cards
30/07/2007	Decision No.18/2007/QD-BTM of the Ministry of Trade issuing the regulation on granting electronic certificates of origin
24/08/2007	Directive 20/2007/CT-TTg on the payment of state budget-financed salaries through bank accounts

25/09/2007	Decision No.1699/QD-TCHQ of the General Department of Vietnam Customs promulgating the process of electronic customs procedures
26/10/2007	Decision No.05/2007/QD-BTTTT of the Ministry of Information and Communications on planning and developing Vietnamese IT human resources towards 2020
21/02/2008	Decision No.04/2008/QD-NHNN of the State Bank promulgating the regulation on the provision, management and use of digital signatures, digital certificates and the use of digital signature-certification services provided by the State Bank
09/04/2008	Decision No.19/2008/QD-BTTTT of the Ministry of Information and Communications promulgating regulation on the application of information technology standards in state agencies
09/04/2008	Decision No.20/2008/QD-BTTTT of the Ministry of Information and Communications stipulating the directory of standards for information technology application in state agencies
22/05/2008	Official Letter No.1594/BTTTT-UDCNTT guiding the establishment of plans for information technology application in state agencies.
26/05/2008	Joint Circular No.43/2008/TTLT-BTC-BTTTT by the Ministry of Finance and the Ministry of Information and Communications on the management and use funding for information technology application in state agencies.
13/06/2008	Decision No.891/QD-BTTTT of the Ministry of Information and Communications on the function, mission, power and structure of the National Center for Digital Signature Certification
08/07/2008	Directive No.05/2008/CT-BTTTT of the Ministry of Information and Communications on promoting the development of information technology industry in Vietnam
17/09/2008	Official Letter No.2967/BTTTT-Ttra on tightened prevention of online game hacking and deceitful messaging
15/10/2008	Decision No.37/2008/QD-BCT of the Ministry of Industry and Trade promulgating the directory of statistical indicators for e-commerce
29/10/2008	Decision No.144/2008/QD-TTg of the Prime Minister promulgating the Plan for national statistics survey
31/10/2008	Decision No.40/2008/QD-BCT of the Ministry of Industry and Trade on the management and use of digital signatures, digital certificates, and digital signature certification services

17/10/2008	Official letter No.3364/BTTTT-ƯDCNTT on guidelines for determining the value of software in state procurement
14/04/2009	Official letter No.578/HQHN-NV by Hanoi Customs Department on customs procedures for software imported over the Internet
21/05/2009	Decision No.2420/QD-BCT by the Ministry of Industry and Trade stipulating Plan for providing online public services under the Ministry's authority
10/06/2009	Decision No.594/QD-TCT by the General Department of Taxation promulgating Regulations on ICT application in activities of the tax sector
29/07/2009	Decision No.1830/QD-BTC by the Ministry of Finance on the pilot project of « tax-payer filing tax declaration over the Internet »
30/07/2009	Directive No.04/CT-BTTT by the Ministry of Information and Communications on intensifying inspection, supervision, and prevention of spam over the mobile telephone networks
31/07/2009	Decision No.884/QD-TCT by the General Department of Taxation promulgating Procedures for tax payers' submitting tax declaration over the Internet and managing online tax registration
12/08/2009	Decision No.103/2009/QD-TTg by the Prime Minister amending several articles of Decision No.149/2005/QD-TTg on pilot implementation of electronic customs procedures
25/11/2009	Circular No.222/2009/TT-BTC by the Ministry of Finance guiding pilot implementation of electronic customs procedures
14/12/2009	Cross-sector circular No.235/2009/TTLT/BTC-BGTVT-BTTTT by the Ministry of Finance, Ministry of Transport and Ministry of Information and Communications guiding the provision and exchange of customs information and tax payers' information among the sectors of customs, taxation, transportation, and Communications

II. IMPLEMENTATION OF E-COMMERCE LAWS AND REGULATIONS

1. Management, provision, use of Internet services and electronic information on the Internet

In the ICT and e-commerce areas, the management, provision and use of Internet services as well as information on the Internet were among the very first issues to be regulated, as that was the foundation for various applications of electronic transactions in the society. The first legal text on this issue was Decree 21/CP "stipulating temporary provisions for monitoring the

Internet" promulgated in March 1997, with a rather cautious approach of "development to follow management capacity" that set the initial legal basis for introducing the Internet to Vietnam.[1] Four years later, Decree 55/2001/ND-CP on the management, provision and use of Internet services boldly reversed the initial management norm with a new approach: "management to follow development practices", opening an era of vigorous growth of the Internet in Vietnam.

Table I.4: Relevant regulations on the management of the Internet

Date of issue	Document title
05/03/1997	Decree No.21/CP by the Government stipulating temporary provisions for monitoring the Internet
23/08/2001	Decree No.55/2001/ND-CP by the Government on the management, provision and use of Internet services
20/11/2001	Circular No.04/2001/TT-TCBD by the General Department of Post on the management, provision and use of Internet connection service, Internet access service, and Internet-based services in post and telecommunications
10/10/2002	Decision No.27/2002/QD-VHTT of the Ministry of Culture and Information on managing and licensing of websites and information provision on the Internet
29/01/2004	Decision No.71/2004/QD-BCA of the Ministry of Public Security on ensuring security in the management, provision and use of Internet services in Vietnam
14/07/2005	Cross-sector Circular No.02/2005/TTLT-BCVT-VHTT-CA-KHDT of the Ministry of Post and Telecommunications, Ministry of Culture and Information, Ministry of Public Security, and Ministry of Planning and Investment on managing Internet agents
11/08/2005	Decision No.27/2005/QD-BCVT of Ministry of Post and Telecommunications stipulating Regulations on the management and use of Internet resources
01/06/2006	Cross-sector Circular 60/2006/TTLT-BVHTT-BBCVT-BCA of the Ministry of Culture and Information, Ministry of Post and Telecommunications, Ministry of Public Security on the management of online games
28/08/2008	Decree No.97/2008/ND-CP by the Government on the management, provision and use of Internet services and electronic information on the Internet
12/11/2008	Circular No.05/2008/TT-BTTTT by the Ministry of Information and Communications guiding some articles of Decree No.97/2008/ND-CP by the Government on the management, provision and use of Internet services and electronic information on the Internet

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[1] On 19 November 1997, the Global Internet Connection Ceremony was held at the headquarter of the General Department of Post (now Ministry of Information and Communications).

18/12/2008	Circular No.07/2008/TT-BTTTT by the Ministry of Information and Communications guiding the provisions related to information provision on personal blogs stipulated in Decree No.97/2008/ND-CP by the Government on the management, provision and use of Internet services and electronic information on the Internet
24/12/2008	Circular No.09/2008/TT-BTTTT by the Ministry of Information and Communications guiding the management and use of Internet resources
24/12/2008	Circular No.10/2008/TT-BTTTT by the Ministry of Information and Communications stipulating settlement of disputes related to national domain names ".vn"

In 2008, Decree No. 97/2008/ND-CP on the management, provision and use of Internet services and electronic information on the Internet was issued to replace Decree No. 55/2001/ND-CP, earmarking a big progress with the sense to create a more favorable environment for e-commerce development in Vietnam. The biggest improvement is downsizing previous licensing requirements of all websites to a limited group of websites, including only electronic newspapers, general information websites and online social networks.

Box I.1: Principles of monitoring electronic information as stipulated by Decree 97/2008/ND-CP

Article 19. Principles of management, provision and use of electronic information

1. The establishment of websites, the provision, transmission, storage and use of electronic information on the Internet must comply with the laws on information technology, intellectual property, press, publication, protection of state secrets, copyright and advertisement and regulations on management of electronic information on the Internet.

2. Press agencies that have been granted electronic newspaper operation licenses under the press law may establish websites for use for press activities.

3. Organizations and enterprises that wish to establish general websites shall obtain a license from the Ministry of Information and Communications.

4. Enterprises that wish to establish websites to provide online social services shall make registration with the Ministry of Information and Communications.

5. Organizations and enterprises establishing websites and using the Internet to provide Internet-based specialized application services shall comply with the provisions of specialized laws and relevant provisions of this Decree.

6. Organizations, enterprises and individuals other than those prescribed in Clauses 2, 3, 4 and 5 of this Article are not required to obtain licenses and make registration when establishing websites but shall comply with the provisions of this Decree and relevant regulations on management of electronic information on the Internet.

Another major improvement of Decree No. 97/2008/ND-CP is the narrowing of the so-called "Internet services" which is under the control of the Ministry of Information and Communications. Previously, Decree 55/2001/ND-CP defined them broadly as Internet access, Internet connection and Internet application services. Internet application service is a service, which uses Internet to provide its users with various applications or services, covering: post, telecommunications, information, culture, trade, banking, finance, healthcare, education, training, technical support and other services on Internet. According to this definition, it can be understood that all applications based on the Internet are Internet services. However, Decree 97/2008/ND-CP has narrowed down the scope of Internet services to cover only Internet access service, Internet connection service and Internet-based telecommunications service.[2] Besides, the function of state management over the Internet was also decentralized to various agencies: "Concerned ministries and branches shall coordinate with the Ministry of Information and Communications in submitting to the Government for promulgation or promulgate according to their competence, guide the implementation of, and manage the provision and use of Internet-based specialized application services in the domains under their state management function."

According to the statistics released by the Ministry of Information and Communications, by the end of 2009, 71 enterprises have been licensed to provide Internet services, of which 7 were granted IXP licenses (for providing Internet connection service) and 39 granted ISP licenses (for providing Internet access service). However, from September 2008, the Ministry of Information and Communications started to issue a single license, namely license for providing Internet services, for newly registered Internet enterprises or those who wish to extend their licenses. Organizations and enterprises implementing specialized applications on the Internet or establishing websites to support their specialized activities no longer have to apply for OSP license (for providing online services). The environment for e-commerce therefore has become less regulated and more competitive. Also, with step-by-step removal of license barriers, the ICT infrastructure in general has become more competent, creating a strong momentum for the development of Internet-based services, as well as e-commerce applications in Vietnam.

2. Digital signature and digital signature certification services

The most frequent concerns of business and consumers when conducting e-commerce transactions are: 1) How to verify the partner's identification and bind their responsibilities when a whole transaction is initiated and conducted in the electronic environment; 2) What requirements to impose on electronic communications exchanged during the transaction process to ensure their legal effects as evidence for dispute settlement? With the ability of "confirming the person signing data messages and confirming his acceptance for the data messages signed, simultaneously confirming the integrity of the data messages' content", the digital signature is an effective measure and legally recognized to solve these issues.

In Vietnam, The Law on E-Transaction and the Decree on Digital Signature and Digital Signature Certification Services established the legal framework for applying the digital signature in every administrative, economic and civil transaction. In the process of implementing digital signature

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2   *Internet-based telecommunications services are value-added telecommunications services provided via the Internet equipment network, for example Voice over Internet Protocol.*

certificate services, the guiding documents of the Ministry of Information and Communications also offer relatively specific provisions on the model regulation on certification of digital signatures and the list of standards compulsorily applicable to digital signatures and digital signature certification services.

Box I.2: Legal framework for Digital Signature and Digital Signature Certification Services

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The legal framework for Digital Signature and Digital Signature Certification Services includes:

- The Law on E-Transaction

- Decree No.26/2007/ND-CP on Digital Signature and Digital Signature Certification Services

- Decision No.20/2007/QD-BBCVT promulgating the model regulation on certification of digital signatures

- Decision No.59/2008/QD-BTTTT promulgating the list of standards compulsorily applicable to digital signatures and digital signature certification services

- Circular No. 37/2009/TT-BTTTT prescribing dossiers and procedures for licensing, registration and accreditation of institutional provider of digital signature certification services.

In June 2008, the National Center for Digital Signature Certification, under the Information Technology Application Department was established according to Decision No. 891/QD-BTTTT by the Ministry of Information and Communications. Functioning as a state management agency on digital signature certificate services, the Center takes responsibility for evaluation and licensing organizations providing digital signature certification services in Vietnam and for coordination of joint activities of the system.

During the two years 2008-2009, along with improving the organization, the National Center for Digital Signature Certification drafted and promulgated some specific regulations on implementing digital signature certification services, such as the Model regulation on certification of digital signatures and Directory of standards for digital signature and digital signature certification services. Moreover, the Center also received the registration from some public certification services providers, preparing for the establishment of national digital signature certification services system, satisfying the transaction demands of the whole society.

Box I.3: The deployment situation of digital signature certification services in Vietnam

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I. Organizations studying and implementing digital signature certification services

State agencies:

- Ministry of Information and Communications - the National Center for Digital Signature Certification

- Ministry of Finance – e-Tax and e-Custom systems

- The State Bank of Vietnam

- Ministry of Industry and Trade – eCoSys

- Ministry of Science and Technology

- Ministry of Planning and Investment – Online bidding system

Enterprises:

- Vietnam Posts and Communications Group – VNPT

- NacenComm Technologies JSC (www.nacencomm.com.vn)

- Viettel Telecom JSC

- FPT Information System Corporation (FIS Corp.)

- Bach Khoa Internetwok Security (BKIS)

II. Organizations applying to deploy digital signature certification services

- VNPT – license granted

- Nacencomm – application in process

2.1. Establishment of the public key infrastructure for the national certification system

Public Key Infrastructure (PKI) is a set of organizational - technological solutions and hardware - software tools to deploy digital signatures application. At present, Vietnam is yet to have a solid and uniform PKI model. The PKI model of Vietnam was just outlined with basic features in Decree No. 26/2007/ND-CP of the Government dated 05/02/2007 providing detailed regulations on the implementation of the E-transaction Law regarding digital signatures and digital signature certification services.

Box I.4: PKI model in accordance with Decree No.26/2007/ND-CP

PKI model as described in Articale 4 of Decree No.26/2007/ND-CP comprises:

- Public CAs being institutions providing digital signature certification services to bodies, organizations and individuals for use in public activities. The operations of public digital certification service providers are activities for business purposes.

- Specialized CAs being institutions providing digital signature certification services to bodies, organizations and individuals whose operation or working purpose is of the same nature and who are associated with each other by operational charters or legal instruments stipulating a common organizational structure, associated form or common activity. The operations of specialized digital certification service providers are not activities for business purposes but are activities servicing internal transaction requirements.

- The National Root CA being the institution providing digital signature certification services to public digital certification service providers.

Item 4, Article 6 of Decree No.26/2007/ND-CP regulates: The Cipher Committee of the Government shall establish specialized digital certification service providers and maintain their operation servicing activities of political bodies.

According to the above regulations, Vietnam's PKI Model could be divided into 2 main branches:

- The first branch comprises public CAs:
    o The National Root CA established and maintained by the Ministry of Information and Communications;
    o Public CAs certificated by the National Root CA.
- The second branch comprises specialized CAs:
    o The Block to serve agencies of political system: set up and maintained by the Cipher Committee of the Government and Ministry of Home Affairs;
    o The Block not to serve agencies of political system: set up by organizations to serve internal transaction requirements.

Figure I.1: The model of National PKI system
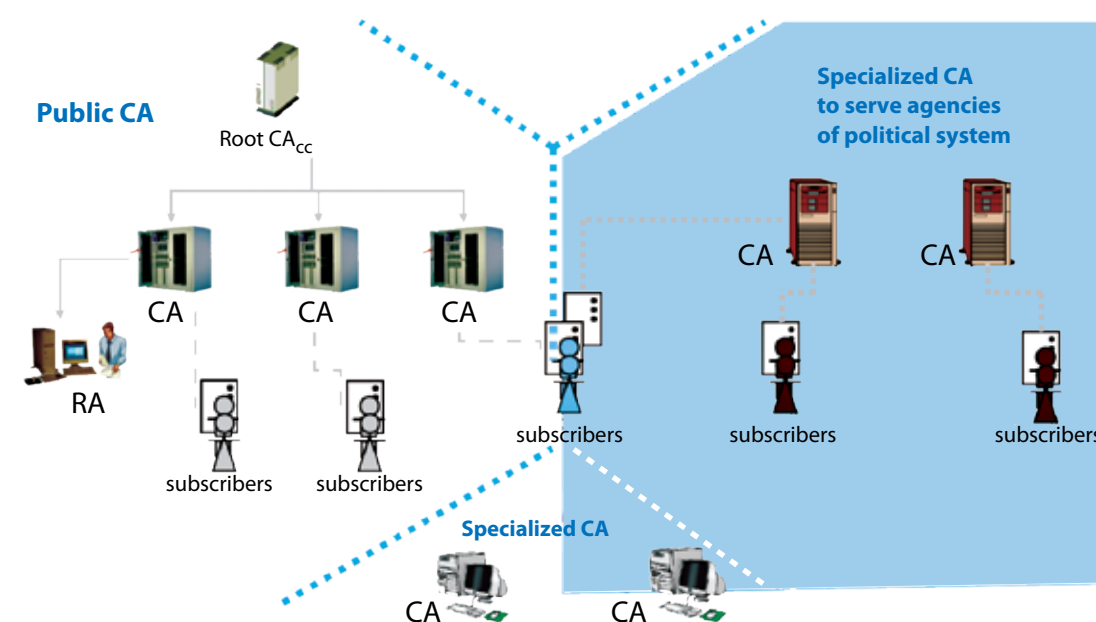
Decree No. 26/2007/ND-CP did not touch upon the interaction between CA branches, therefore, at present the 3 above-mentioned blocks could not be connected together. As the result, their users could not interact with each other. This will be an obstacle to the development of e-commerce and e-Government in the future when PKI becomes popular in Vietnam.

Being divided into 2 blocks as above is another difficulty of specialized CAs. The vague relationship between two blocks leads to difficulties in selecting suitable methods to implement specialized CA. Many other important components of PKI, such as Registration Authority (RA), Validation Authority (VA) and Time Stamping Authority (TSA) also have not been mentioned in legal normative documents yet.

2.2. Implementation of digital signatures in state agencies

In accordance with the Law on Information Technology, ministries, industries and provincial people's committees need to implement online public services on their websites. According to the guidance of the Ministry of Information and Communications, public services could be divided into 4 levels, in which public services level 3 and level 4 require user authentication. Therefore, authentication technologies should be deployed on the websites to improve the quality of public services. The lack of an authentication mechanism would limit the benefits of online public services to organizations, enterprises and citizens. In 2007 and 2009, the Ministry of Information and Communications received application for specialized CA registration from Ho Chi Minh City and the State Bank. At present, the Ministry of Finance, the Ministry of Industry and Trade, the Ministry of Planning and Investment, and the Ministry of Science and Technology are studying to deploy specialized digital signature certification services in order to serve ministries' administrative management and online public services.

2.3. Licensing of public CA service

To support important IT application projects relating to electronic transactions, Ministry of Information and Communications have licensed VNPT to provide public digital signature certification services (license No. 1293/GP-BTTTT dated 15/9/2009). The term of license to provide public CA is 5 years. Since public CA is a new kind of service which affecting social security, so the term of public CA license should be limited in order to timely adjust the inadequacies in the management. The 5-year term is enough for related technologies to change and for Government to supplement appropriate requirements.

To ensure digital signature certification services are provided in accordance with the law, after being licensed by the Ministry of Information and Communications, public CA providers must register with the National Center for Digital Signature Certification to be granted the digital certificates. In the process of granting certificates, the National Center for Digital Signature Certification will directly inspect the operation of organizations' CA systems in order to match with specifications registered, and then coordinate with public CA providers to review the information inspection plans to avoid the risks in the process of digital certificate application and fraudulent subscriber exclusion.

At present, some enterprises have been preparing dossiers requesting the Ministry of Information and Communications to grant public CA services license, including NacenComm Technologies JSC, Viettel Telecom Corporation and Bach Khoa Internet Security (BKIS).

3. Advertisement and prevention of spam via electronic mail and message

On August 13th 2008, Decree No. 90/2008/ND-CP of the Government on anti-spam was issued to stipulate the anti-spam regulations in the Law of Information Technology. On December 30th 2008, the Ministry of Information and Communications had Circular No. 12/2008/TT-BTTTT guiding some contents of Decree No. 90/2008/ND-CP. After that, Circular No. 03/2009/TT-BTTTT was issued on March 2nd 2009 providing detailed regulations on the registration ID and registration ID certification form for providers of email and message advertisement services.

In 2009, Vietnam Computer Emergency Rescue Team (VNCERT) under the Ministry of Information and Communications - the agency presiding the implementation of the Anti-spam Decree - have set up contact points to provide advices and feedbacks to businesses and consumers on the prevention of spam. A website on anti-spam has been built and launched in early February 2009 at *http://antispam.vncert.gov.vn* to publicize information on anti-spam activities and provide guidelines for different groups on their responsibilities of spam prevention.

3.1. General regulation framework of anti-spam

Decree No. 90/2008/ND-CP on anti-spam was formulated on two major standpoints: protecting users against email and electronic message spam (referred to as spam) and creating a legal framework for email, SMS and IM advertising.

Spam, as defined by the Decree on anti-spam, are emails or messages sent to recipients who do not wish to or are not responsible for receiving as prescribed by law. Decree 90/2008/ND-CP make strict stipulations for acts related to spam dispersal and responsibilities of providers of Internet access services (formerly known as ISPs), e-mail service providers, the messaging service providers (telecommunications businesses)... for preventing spam.

The Decree distinguishes two types of spam: 1) electronic mail and messages for the purpose of fraud, harassment or dispersal of computer viruses, harmful software; 2) advertising electronic mails and messages that violate the regulations on advertising electronic mails and messages. Therefore, in order to not be classified as spam, advertising emails and messages ought to meet very strict requirements on the form, content and mode of sending.

Box I.5: Principles of sending advertising electronic mails and text messages

Requirements on advertising electronic mails
1. The subject matter must match the content, and the advertising content must comply with the advertisement law.
2. An advertising electronic mail must be marked under Article 10 of this Decree.
3. There must be information on the advertiser.
4. In case of using an advertisement service, there must be additional information on the advertisement service provider .
5. There must be an opt-out function

Requirements on advertising text messages
1. An advertising text message must be marked under Article 14 of this Decree.
2. In case of using the advertisement service, there must be additional information on the advertisement service provider.
3. There must be an opt-out function

Principles of sending advertising electronic mails and text messages:
1. Organizations and individuals, except advertisement service providers, may only send advertising electronic mails or text messages after obtaining prior consent of recipients;
2. Advertisement service providers may only send advertising electronic mails or text messages until recipients opt out of further advertising electronic mails or text messages;
3. Within 24 hours after receiving an opt-out request, an advertiser or advertisement service provider shall stop sending advertising electronic mails or text message that have been opted out of by recipients, except in force majeure cases.

Principles of sending advertising electronic mails and text messages by advertisement service providers:
1. Advertisement service providers may only send advertising electronic mails or text messages from systems with technical information already registered with the Ministry of Information and Communication.
2. Electronic mail advertisement service providers may not send more than 5 advertising electronic mails to a single electronic mail address within 24 hours, unless otherwise agreed upon with recipients.
3. Text message advertisement service providers may not send more than 5 advertising text messages to a telephone number within 24 hours and may only send them from 7:00 hrs. to 22:00 hrs., unless otherwise agreed upon by recipients.

3.2. Monitoring of advertising e-mails and messages

Regarding the sending of advertising emails and messages, Decree No. 90/2008/ND-CP specified two groups of subject: the advertisement service provider and self-advertiser. The difference between the two groups is the latter one can only send advertisements upon prior consent of the recipient (OPT-IN), while the former is entitled to send advertisements without prior consent of the recipient (OPT-OUT). This model has encouraged the formation of a group of professional advertisement service providers. However, advertisement service providers must obtain registration ID from the Ministry of Information and Communications before providing services, and operate under close supervision of relevant State management agencies.

Box I.6: Conditions for providing email and message advertisement service

Electronic mail advertisement service providers:
1. Having a website with a Vietnam- based server used for sending advertising electronic mails and using the Vietnamese nation domain name ".vn";
2. Having a system for receiving and processing recipients' opt-out requests;
3. Processing a management registration number issued by the Ministry of Information and Communication.

Text messaging service providers:
1. Using subscription numbers which are issued by a Vietnamese text messaging service provider for sending advertising text messages;
2. Having a system for receiving and processing recipient's opt-out requests;
3. Possessing a management registration number issued by the Ministry of Information and Communication.

Internet-based text messaging service providers:
1. Having a website with the Vietnamese nation domain name ".vn" and Vietnam-based servers for sending text messages;
2. Possessing a management registration number issued by the Ministry of Information Communication.

The issuance of registration IDs is based on assessment of the businesses' operation activities and its technical systems. Registration IDs are only granted when businesses fully meet the criteria stipulated in the Anti-spam Decree. By the end of 2009, 47 businesses have been granted registration IDs for providing advertisement services via emails, SMS and Internet messaging.

3.3. Implementation of anti-spam measures

In 2009, anti-spam activities focused on preventing spam via mobile telephone networks, mainly through coordination between state management agencies and telecommunications businesses.

3.3.1. Action by mobile telecommunications businesses

Based on the guidance of VNCERT in Official Letter 76/VNCERT, from May 1st to June 30th 2009, mobile phone companies have deployed a series of anti-spam measures, including:

- Labeling advertisement messages; providing network subscribers with the ability to refuse advertising messages from the mobile phone company;

- Sending advertisements to subscribers to seek their consent to receive advertising messages from the mobile phone company, and storing full data of subscribers' reject or consent from the date of May 1st 2009;

- Sending messages informing network subscribers of their rights to refuse advertisement messages;

- Implementing awareness raising measures such as sending messages or posting notice on the website to inform subscribers of the forms of promotion that the businesses conduct, publicizing the fees charged on messages sent to three and four-digit numbers, specifying the contact points to receive spam reports and instructions to report spam;

- Establishing focal points to coordinate with state agencies in handling spam.

In addition to the above measures, businesses also implemented many other activities to prevent spam such as setting up hotlines to receive spam report from subscribers; revoking service numbers of content providers who dispersed spam; sending official letters to content providers to request compliance with anti-spam regulations; supplementing anti-spam provisions into contracts with content providers; developing tools to support subscribers to prevent spam...

3.3.2. Actions by content providers (CP)

Beside cooperation with mobile telecommunications businesses, in 2009 the Ministry of Information and Communications was conducting a number of propaganda activities with content providers, who were a major source of spam dispersal. The common way to send spam of content providers is to buy prepaid SIM for sending bulk messages, advertising the services that each CP provides. Due to lots of shortcomings in the present mechanism for managing prepaid SIMs, as well as lack of a well-defined regulation framework for the operation of content providers, spams sent by this way are hard to control. VNCERT's survey in 3/2009 of content providers' spam practice showed the following results:

Figure I.2: Results of survey on content providers of their spam practice

- Regularly sent spam
- Occasionally sent spam
- Never sent spam

2.6%
36.9%
60.5%

- Be aware of harmful effect of sending spam
- Not yet

10.5%
89.5%

65.8%
47.4%
36.8%
26.3%

| Other CPs sent spam | Increasing profit | Offsetting the loss from promotion cost sharing | Others |

- Reasons for sending spam
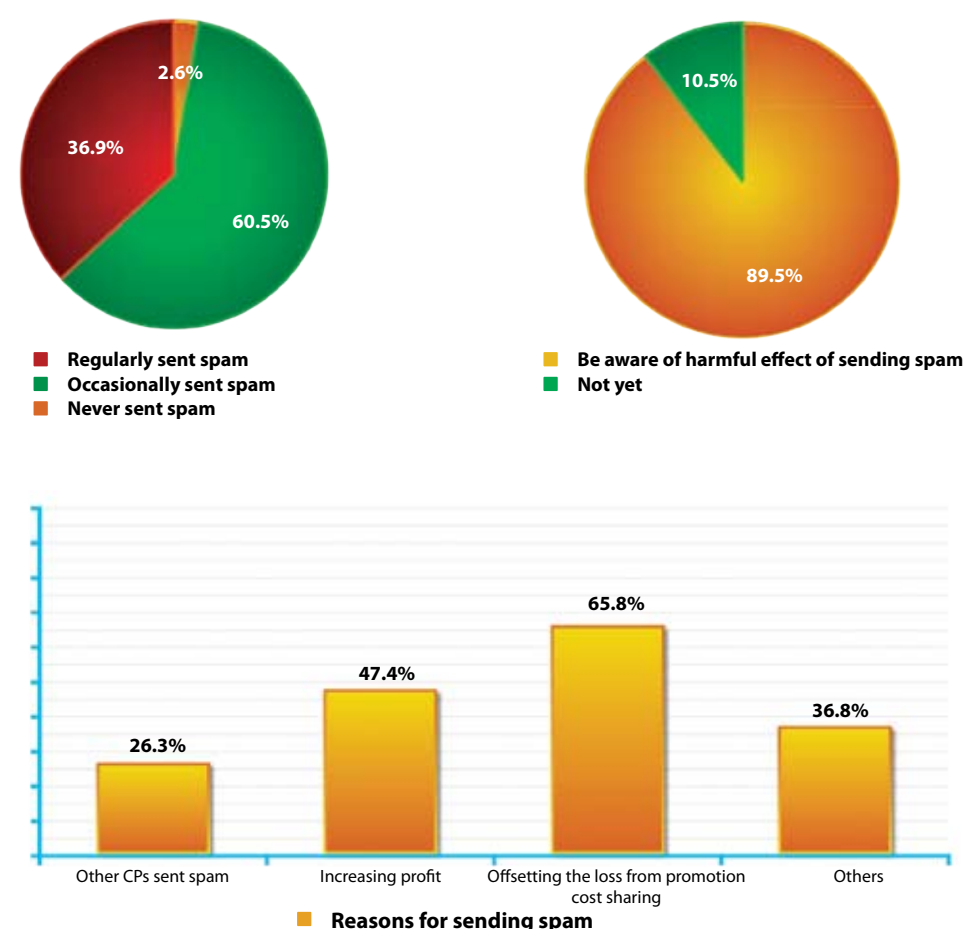
Survey results show that most content providers used to send spam, although most are aware of the practice's harmful effects. Apart from the purpose of increasing profits, many CP sent spam to offset the loss that occurred in the form of promotion cost sharing with mobile telecommunications businesses.[3]

According to figures provided by the mobile telecommunications service providers, Vietnam now has about 150 CP that own 4-digit commercial numbers.[4] Currently these CP not only provide services on their own but also lease the number to other businesses (sub-CP) for exploitation. Several first-tiers CPs have been sanctioned with heavy fines for losing control over their sub CPs that led to spam being dispersed from the mobile numbers they owned.

3.3.3. Handling of violations

In 2009, the Inspectorate of Ministry of Information and Communications has sanctioned six businesses for sending spam with penalties ranging from VND 10 to 40 million and warning 20 other enterprises for violation of anti-spam regulations.

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3   Some mobile telecommunications companies impose a self-developed formula to make CPs share the cost promotion, under which revenue per month from the service CPs provide over their mobile networks will be deducted a certain amount to share the promotion cost that the mobile companies incur to attract new subscribers to their networks.

4   Data compiled from websites of the three largest mobile telecommunications companies: Viettel, Vinaphone and Mobifone: http://www.vietteltelecom.vn/; http://vinaphone.com.vn/; http://mobifone.com.vn.

With the implementation of comprehensive measures to implement anti-spam regulations, the spam volume in 2009 has decreased significantly. To better address this problem, next year the monitoring, inspection, handling of violations and awareness raising activities will be accelerated.

4. Information provision and contract conclusion on e-commerce websites

On July 21st 2008, Minister of Industry and Trade promulgated Circulars No. 09/2008/TT-BCT guiding the implementation of the E-commerce Decree on information provision and contract conclusion on e-commerce websites. It is the legal text that directly regulates the business activities of e-commerce websites in Vietnam, related to the interests of businesses and consumers participating in e-commerce transactions.

Box I.7: Circular 09/2008/TT-BCT on information provision and contract conclusion on e-commerce websites

Along with the improvements of the infrastructures and legal environment over the past three years, applications of e-commerce in companies are increasingly widespread, especially those based on the Internet. The number of e-commerce websites has increased rapidly. Due to the distinctive features of the Internet, the processes of and conditions for transactions on these websites are very different from conventional ones, especially in the contract-conclusion step. Nevertheless, such transactions were yet to be covered by regulations of the current legal system. Transactions on websites have been done spontaneously and there was no legal basis on which disputes can be settled.

In this context, drafting a document guiding the process of concluding contracts on e-commerce websites is particularly necessary, with the view to set up common principles and standards for websites' operation, enhance the transparency of e-commerce transactions, protect and balance the interests of different parties in the transactions.

Performing the function of state management over e-commerce, the Ministry of Industry and Trade has drafted and promulgated Circular No. 09/2008/TT-BCT dated 21/07/2008 guiding the provision of information and conclusion of contract on e-commerce websites. The Circular was stipulated on the following premises:

- The Circular only covers issues pertaining to the practice of contracting on e-commerce websites. General matters of contract performance is regulated by universal laws on contracts (as business activities of enterprises are governed by general laws on commerce).

- The Circular is confined to regulating business-to-consumer (B2C) contracting on e-commerce websites. Consumer-to-consumer contracting are civil transactions and thus, not subject to the Circular's prescription.

- The Circular's objective is to ensure balance of interests among contracting parties on e-commerce websites. Customers often are in disadvantageous position when it comes to accessing information and setting terms and conditions of contracts. Therefore, the Circular provides a common framework of regulations on the information needed to provide and the contracting process to follow on e-commerce websites, with the view to ensure basic interests for consumer. Whereas, enterprises are the party to set the terms of contracts, thus can specify provisions and take relevant measures to protect themselves in doing transactions with consumers over the website.

Based on distinctive features of the network environment, the Circular specifies an exemplary contracting process on an e-commerce website. On this ground, the scope of liability of each party to a transaction is clearly defined, and the asymmetric nature between buyers and sellers could be largely reduced.

Besides provisions on the contracting process, the Circular also stipulates in details the provision of information on e-commerce websites to protect the rights of customers. Accordingly, sellers have to provide at least the following details on their website: company name, address, email address, telephone number and business registration number, and comply with some basic principles of protecting customers' personal information. Additionally, they also have to provide sufficiently and clearly information relevant to the transactions on their websites, such as item description, price, delivery methods, payment methods, and other transaction terms.

To bring the provisions of Circular 09/2008/TT-BCT to life, during 2008 and 2009, the Vietnam E-Commerce and IT Agency (VECITA) has implemented a series of activities to promote and ensure the compliance with the Circular among e-commerce businesses in Vietnam. In the first phase of implementation, the chosen approach was to focus on the awareness raising activities that target a selected group of e-commerce websites. The experience drawn from this phase would be the basis for implementing compliance measures in the next phase, with broader target and stronger enforcement effects.

- In late 2008 VECITA held workshops to introduce the contents of Circular to selected e-commerce businesses in Hanoi and Ho Chi Minh City.

- In November 2008, VECITA conducted a survey of 50 e-commerce websites on their compliance with Circular No.09/2008/TT-BCT and sent Official Letter No. 395/TMDT-PC to remind website owners to comply with the provisions of the Circular.

- In February 2009, the review of the above 50 websites showed that 8 websites had made revisions and changes in accordance with recommendations of Official Letter No.395/TMDT-PC, 37 had not made any progress, and 5 had temporarily ceased operation. Based on these results, VECITA collaborated with the Inspectorate of the Ministry of Information and Communications and Market Control Department held one workshop in Hanoi (March 2009) and one in Ho Chi Minh City (May 2009) to remind websites to comply with the Circular and answer questions of businesses during the implementation process.

- In July 2009, VECITA conducted a third review of the above websites and organized visits to website owners in Hanoi and Ho Chi Minh City to discuss difficulties and problems that deterred their compliance with the Circular. As the result of these efforts, by the end of 2009, 50% of websites had fully complied with the Circular's provisions, the remained websites also showed progress in updating the lacked information.

According to the plan, in 2010 VECITA together with the Inspectorate of the Ministry of Information and Communications and the Market Control Department is going to officially inspect businesses on their compliance with Circular 09/2008/TT-BCT.

5. Virtual property

The development of e-commerce has spurred many new issues, from technology to property issues. Domain name and virtual property in online games are two emerging topics in the past years, abreast with the development of e-commerce in Vietnam.

5.1. The settlement of domain name disputes

Domain name associated with websites is becoming a more and more integral component of the trademark and image of enterprises. International domain names for common use such as .com, .net, .org, .info belong to the commercial domain name group which is sold through agents appointed by the International Corporation for Assigned Names and Numbers (ICANN) or other second-tier agents. National domain names with country codes such as .jp (Japan), .fr (France)… are registered in accordance with such nations' regulations. Vietnam Internet Network Information Center (VNNIC) is commissioned to manage Vietnamese national domain names "vn". By December 2009, the total number of assigned "vn" domain names was approximately 125,000.[5]

While international domain names are considered goods to be widely sold in many ways and at various prices upon the market demand, the domain name ".vn" is regarded as a part of the national information resources, protected by law and managed under a relatively rigid registration – allocation mechanism. The person who registers a domain name "vn" is protected by laws and provided with technical assistance by domain name registries as well as VNNIC to ensure that his domain name would be appropriated. At present, Vietnam has sanction measures against domain name violations mentioned in the Decree No. 63/2007/ND-CP and the Decree No. 28/2009/ND-CP by the Government.

With the steady growth of the number of e-commerce websites in recent years, disputes over domain names, especially those related to trademarks and commercial names have increased both in number and complication level. In this context, there is urgent need for an efficient dispute settlement mechanism besides the existing administrative complaints procedure of which VNNIC is the focal point.

Box I.8: Regulations related to domain name in some laws

Item 3 Article 68 of the Law on Information Technology stated: "Organizations and individuals that register to use Vietnamese national domain names ending in ".vn" shall be responsible before law for their use purposes and the accuracy of registered information and ensure that the registration and use of Vietnamese national domain names ending in ".vn" do not infringe upon the legitimate rights and interests of other organizations or individuals, which are available before the date of registration."

According to Point d Article 1 Article 130 of the Law on Intellectual Property, the act of *registering or possessing the right to use or using domain names identical with, or confusingly similar to protected trade names or marks of others, or geographical indications without having the right to use, for the purpose of possessing domain names, benefiting from or prejudicing reputation and popularity of respective marks, trade names or geographical indications* is considered to an act of unfair competition.

In December 2008, the Ministry of Information and Communications (MIC) promulgated the Circular No. 10/2008/TT-BTTTT, providing for the settlement of disputes over Vietnamese national domain name "vn". Being formulated in close observation of INCANN's "Uniform Domain Name Dispute Resolution Policy", the Circular is the ground for arbitrator organizations and tribunals while settling civil or commercial disputes associated with domain names under the national domain name "vn". The Circular sets the most general principles for dispute settlement, including conditions for initiating a lawsuit over a domain name dispute, grounds for defining "acts of using a domain name with a malicious intent", and "proofs of lawful rights and interests related to the domain name". The Circular also defines different ways of settling domain name disputes and responsibilities of concerned parties.

Applying the verdict of courts and arbitrators for domain name disputes is a big change to the management mechanism for this important Internet resource. By reducing administrative intervention and raising the role of social institutions, the regulation will help to establish a fair and transparent mechanism for domain name allocation, create a healthy competition environment in the internet realm and contribute to e-commerce development in Vietnam.

5.2. Virtual property in online games

In recent times, in Vietnam and in the world, a new kind of entertainment, namely online games – has appeared. Online games have a great community spirit, uses advanced technology and quickly dominates the entertainment market with a very high rate of the yearly turnover growth.

According to figures provided by MIC,[6] up to February 2009, there have been 15 enterprises providing 25 online games in Vietnam market. It is estimated that the online game services turnover of Vietnam market in 2008 is about 80 million USD (approximately 287 billion VND) with 3700 laborers, contributing a tax amount of 287 billion VND for the state budget. The turnover of online game services in 2010 is expected to reach at least 85 million USD.

On June 1st 2006, the Ministry of Culture and Information, Ministry of Posts and Telecommunications, and Ministry of Public Security issued the Joint Circular No. 60/2006/TTLT-BVHTT-BBCVT-BCA on online games management. The Circular defines conditions for provision of online games services and responsibilities of related parties, putting forward measures of management of online games players. In the Circular, providers of online games services are required to apply technical measures to limit the playing time online games. However, due to the complication of virtual property in online games, Circular yet has specific regulations on trading and exchange of virtual property.

"Virtual property" is a term used by mass media to refer to images, objects, characters, equipments ... in online games, being the topic of public attention. However, at present, there are not any legal regulations on defining what virtual property is and whether products created in games are considered to be a kind of property or not. The Circular No. 60/2006/TTLT-BVHTT-BBCVT-BCA mentioned "valuable properties", referring to products existing in games, created

by service providers and users which can be online games in the playing time. However, the Circular's regulations in which enterprises are not allowed to create properties in games with purposes of business and benefits have been not abided by game providers.[7]

Box I.9: Virtual property – A "hot" transaction market

It is estimated that the average value of virtual property transactions per day is about VND 4 billion. Some companies and online supermarkets have been opened to deal with virtual properties trading. The turnover of these companies reaches hundreds of millions VND. However, it's the modality of direct trading between enterprises and game players which really develops. Many game players themselves spend a fair amount of money buying these virtual properties. A player could spend several hundreds of millions or billions of Vietnam dongs buying many virtual properties not only for himself but also for other members of his guild in the game. On the other hand, specific virtual properties are extremely valuable, eventually more than other real properties. For example, on Feb 14th 2009, in the auction of virtual property organized by M4G, a player spent 265 million VND buying a virtual ring in the game "Vo Lam Truyen Ky" issued by Vinagame. Also in this auction, there were 24 products sold with the total money of 930 million VND. Although there is yet an official data of the total value of virtual property transactions at present, through the above examples, it can be affirmed that this is a new economic area which brings remarkable benefits.

Source: http://gamethu.vnexpress.net.

Although the scale and value of virtual property transactions is greater and greater, at present, there are not any legal regulations on recognition or protection of virtual property. State management agencies are yet reach a common opinion and approach to this issue.

Box I.10: Experts' opinions about virtual property

According to a representative from the Ministry of Justice, from the perspective of regulations of the Civil Code, "virtual property" is not a property due to the lack of sufficient characteristics of an object or property rights.

The MIC gives the opinion: owning virtual property in games is the top element attracting players and trading of products in games is popular in the black market. Many products are auctioned with the price of tens of millions VND, and this is the key to the arising of negative activities in games such as hacking, swindling, contradictions among players, social disorder and insecurity. Therefore, at present, although products in games are yet recognized as properties by law, in fact, there are trading and transaction activities of these products. Then, a question is raised: whether the existence of properties in games should be recognized as a kind of "virtual property" or not and if the answer is "yes", at what level they should be recognized.

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6   Figure announced at Workshop "Development of online game services in Vietnam: Real situation and issues of the management work" organized by MIC in Ho Chi Minh City on Feb 20, 2009.

7   Article 9 Item 5 Circular 60 stipulates "Enterprises providing online game services are not allowed to create valuable properties in games with the purposes of business and benefits and to edit information of properties and value of players".

According to the MOIT's representative, virtual products in game online are properties and can be bought, sold, transferred as stipulated in the Civil Code, Commercial Law and other legal texts. Besides products in online games, virtual property includes domain names, email accounts, online accounts and other resources in the internet zone. Due to the complication of issuance of legal texts on virtual property trading, there is a need of time for studying potential social impacts of these regulations, simultaneously for considering the feasibility of regulation implementation after issuance as well as building capacity for the bodies of supervision, trial and dispute resolution.

Source: Documents announced at the Workshop ""Development of online game services in Vietnam: Real situation and issues of the management work" organized by MIC in Ho Chi Minh City on 20 Feb 2009.

On the other hand, approaches to the issue of online games providing companies also vary. While some providers such as FPT Telecom, VASC … say that they have recognized the right of trading and exchange of properties in games since 2006, some other providers, for example, VinaGame give an opposite view: "Virtual property is a stretch of codes in games, it belongs to games, the providers only buy the copyright for issuing games, they do not buy codes. Therefore, virtual property cannot be recognized as a kind of property and protected".

Online games is an e-commerce model with the potential of quick development in the time to come. Because of the technical complication, supervision and arbitration of disputes related to trading and transfer of virtual property in online games is still difficult. On the other hand, trading of virtual properties in online games in particular and virtual property in general is a complicated issue and under controversy worldwide and there is almost no country promulgating legal texts governing the issue yet. Therefore, promulgating regulation on management of virtual property transactions also needs to be studied and implemented carefully to ensure the feasibility while implemented in reality.

6. Safety and security in transactions and violation handling

According to the MOIT's survey in 2009 on the e-commerce application among enterprises nationwide, safety and security in electronic transactions ranks 3rd among the top obstacles to the e-commerce development in Vietnam. This result shows realities in recent years exactly, when acts of swindling and crime in the internet zone tends to increase, giving a remarkably negative impacts on the confidence of consumers and enterprises towards this new business method. There are various kinds of crimes: swindling in online transactions, ATM forgery, virus dispersion, password stealing, destruction of database of websites of individual and enterprises …

Figure I.3: VNISA's statistics of kinds of Internet attacks
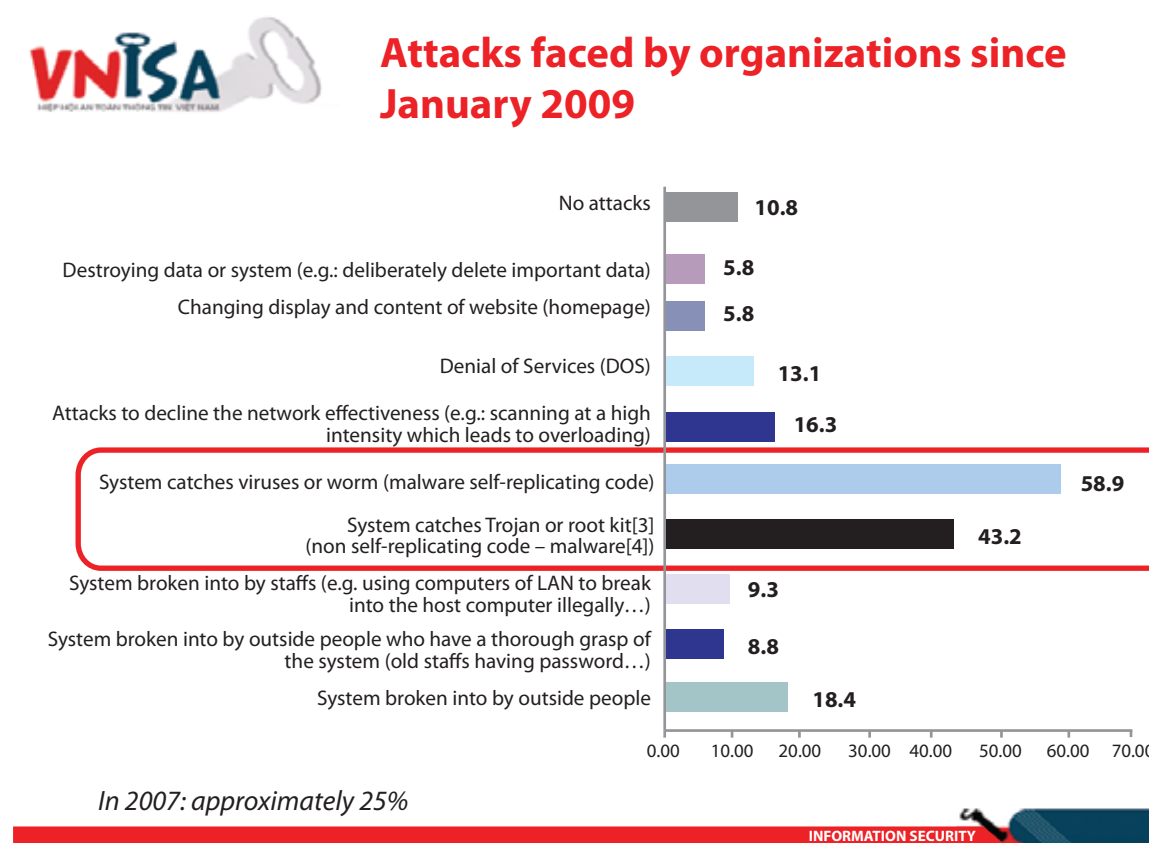
Source: Results of the VNISA's survey, announced at the Workshop "Information security in Vietnam" in Hanoi on Nov 24, 2009.

In 2009, the Vietnam Information Security Association conducted a survey of 500 organizations to assess the awareness of information security. Questions of the survey focused on the ability of threat acknowledgement and measures of protection against attacks over organizations' information system in the internet zone. The figures collected show that the common awareness of information security of enterprises is not good, proved as follows:

- Having low acknowledgement of attacks, unaware of the driving-fore for attacks (35% of the organizations being asked eventually do not know whether their organization's system is attacked or not);

- Being capable of determining the seriousness of consequences when attacked (over 70% of the ones being asked cannot estimate the financial damage when their organization's system is attacked);

- Mostly not having the process of respond to attacks, not having the regulation on information security (approximately 75% revealed they neither have nor know this process);

- Mostly informing internally when having breakdown.

Beside enterprises' low awareness and weak preventive capacity, another reason for the increase in the number of internet crimes in the past time is the weak deterrent effects of current sanctions on violations of laws and regulations. At present, the heaviest level of penalties for most of

high-tech criminals is administrative penalties such as warning, informing the management agency, fining with the amount not equivalent to the action's seriousness.

The 'fact poses an urgent need for state management agencies that they have to promptly complete the legal framework and raise the penalty levels to establish an organized and healthy e-commerce environment in Vietnam. Up to late 2009, penalties towards acts of criminals in the internet zone mainly base on the following legal texts:

- Law on Electronic Transactions 2005;
- Criminal Code 1999;
- Decree No. 97/2008/ND-CP on the management, provision and use of internet services and electronic information on the internet;
- Decision No. 71/2004/QD-BCA Decision No 71/2005/QD-BCA by the Ministry of Public Security for assuring the safety and security for the management, provision and use of internet in Vietnam.

However, these above legal texts just partly provide assistance for condemnation, not for the defining of penalty frame for criminal acts within the internet zone. Therefore, investigation agencies still face difficulties in dealing with criminals even the criminal agents and acts have been already defined.

The National Assembly approved the Law on amendment and supplementation of some articles of the Criminal Code on Jun 19th, 2009 (came into effect on Jan 1st, 2010) marks a great advance in the efforts of state management agencies in order to establish a more complete, strict and clear sanction framework for acts of high-tech crime, contributing to the build-up of a safe, healthy environment for electronic transactions in general and for e-commerce in particular. In the new Law, regulations on Information Technology crimes at Article 224, 225 and 226 of the Criminal Code are amended and supplemented in the orientation of enlarging the governing scope from the environment of computer network to the telecommunications network, Internet and digital devices. The Law also concretizes and raised the penalty frame towards acts of crime, including dispersing viruses, obstructing or disturbing operation of networks of computers, communications and digital devices, uploading or using information illegally in the network of computers, telecommunications and digital devices. The penalty framework for all the above acts are raised, including administrative and criminal penalties (the heaviest level of fining as provided by old regulations which was 100 million VND is now increased to 200 million VND, the penalty of 12 years' imprisonment replaces the old level of 7 years). Acts of crimes are also concretized and the seriousness of which is classified so that suitable penalties would be applied.

Especially, that the Law on amendment and supplementation of the Criminal Code adds some acts of crime specifically such as "Doing business, exchanging, offering, editing, changing or publicizing legal private information of other agencies, organizations, individuals in the network of computers, telecommunications; internet without the consent of the information owner", shows the interest of law enforcement agencies in data privacy within the internet zone, in the context that electronic transactions are expanding to every aspects of life and giving impacts on each individual of the social community.

Beside the improvement of old regulations, the new Law also supplements two new information criminals, namely "Illegally accessing the computer network, telecommunications network, the internet or digital devices of others" and "Using the computer network, telecommunications network, internet or digital devices to perform acts of properties appropriation", in order to deal with some kinds of the most popular criminals in the past time, especially the act of stealing others' money through ATMs.

Box I.11
Two new articles related to high-tech crimes in the Law on Amendment and Supplementation of Some Articles of the Criminal Code

Supplement of Article 226a as follows:

"Article 226a. Crimes of Illegally accessing computer networks, telecomunication networks, the Internet or other digital devices of other people

1. Anyone who intentionally ignore the warning, break accessing code and firewall, use the administrator's rights, or in other ways access the computer network, telecommunications network, internet or digital devices of others to get the control right; intervene the functions and operation of digital devices; steal, change, spoil, forge or using services illegally shall be subject to financial penalty of VND 20 to 200 million or imprisonment from 1 to 5 years.

2. For the following circumstances, the sentence shall be raised to 3 to 7 years' imprisonment: a) Organized crimes; b) Crimes by corruption of one's position and powers; c) Yield of substantial illegal benefits; d) Causing severe consequences; e) Serious recommit of crimes.

3. For the following circumstances, the sentence shall be raised to 5 to 12 years' imprisonment:
a) To act against the database system of state secret; the information system for national security and defence;
b) To act against the national information infrastructure; the information system for the National Electric Grid operation; the information system of finance and banking, the traffic control information system;
c) To commit crimes that result in very or extremely great illegal benefits;
d) To cause highly or extremely severe consequences;.

4. The person who commits crimes may also be subject to additional penalty of VND 5 to 50 million; forbidden to undertake a position, to practise a profession or take a given work form 1 to 5 years."

Supplement of Article 226b as follows:

"Article 226b. Crime of using computer networks, telecommunicatiions networks, the Internet or digital devices to perform acts of properties appropriation

1. Anyone who uses computer networks, telecommunications networks, the Internet or digital devices to perform one of the following acts will be subject to financial penalty of VND 10 to 100 million or imprisonment of 1 to 5 years:
a) To use account or banking card information of other agenices, organizations, individuals to appropriate their properties or to forge banking cards to appropriate properties of the card owner or pay for goods, services;

b) To access accounts of agencies, organizations, individuals in order to appropriate their properties;

c) To swindle in e-commerce, currency business, mobilization of credit and capital, buying, selling and paying stocks in the internet zone in order to appropriate properties of agencies, organizations, individuals;

d) To perform other acts in order to appropriate properties of agencies, organizations, individuals.

2. For the following circumstances, the sentence shall be raised to 3 to 7 years' imprisonment: a) Organized crimes; b) Multiple recommit of crimes; c) Peform acts professionally; d) Appropriate properties worth from VND 50 to under 200 million; e) Cause severe consequences; e) Serious recommit of crimes.

3. For the following circumstances, the sentence shall be raised to 7 to 15 years' imprisonment:

a) Appropriate properties worth from VND 200 to under 500 million;

b) Cause highly severe consequences.

4. For the following circumstances, the sentence shall be raised to 12 to 20 years or life imprisonment:

a) Appropriate properties worth over VND 500 million;

b) Cause extremely severe consequences.

5. The person who commits crimes may also be subject to additional penalty of VND 5 to 100 million; confiscated a part or the whole properties; forbidden to undertake a position, to practise a profession or to take a given work form 1 to 5 years.

New regulations of the Law on amendment and supplementation of some articles of the Criminal Code express the society's great concerns about the most common kinds of criminals in the past time. However, that information technology and technology is the area of quick development and incessant changes leads to the birth of many new kinds of criminals which are yet governed by the current legal system. Therefore, there are still many things to study to add in the next basic and comprehensive amendment of the Criminal Code.

III. CHALLENGES IN THE IMPLEMENTATION OF E-COMMERCE LAWS

1. Slow realization of many legal texts

Since the National Assembly approved the Law on Electronic Transactions 2005 and the Law on Information Technology 2006, in the term 2006-2008, the Government, ministries and branches promulgated many legal texts related to e-commerce, in order to bring regulations of these laws into real life. It can be said that up to late 2008, the legal framework of e-commerce has been basically shaped.

However, because e-commerce is a new area with rapid change and development, the detailing of regulations on electronic transactions and other e-commerce related activities, such as digital signature, electronic invoice, and dispute handling… is still slow, limiting the development of this area.

Additionally, for various reasons, the implementation of promulgated legal texts has many shortcomings. Enterprises have not made adequate compliance with the state regulations, for example, regulations on anti-spam, information supply and contract conclusion on e-commerce websites...

2. Shortcomings of the propaganda and popularization of e-commerce

In the passing time, state management agencies and mass media agencies have made many efforts in the propaganda and popularization of e-commerce and gained encouraging results. The awareness of e-commerce of enterprises and people has been clearly improved. In details, the number of enterprises applying e-commerce increases with every passing day, online shopping has become more and more popular in big cities...

However, these activities mainly focused on encouragement for e-commerce application; e-commerce laws popularization has not been attached special importance to. Educational activities of legal regulations on e-commerce are rarely organized. After promulgating a legal text, the agency presiding over drafting usually holds one or two meeting only to introduce to a few people so this legal text's popularity is very low. At present, there isn't yet an effective coordination mechanism in education of laws among related parties such as state management agencies, mass media agencies, training organizations...

3. Low awareness and compliance of citizens

One of the important reasons for ineffective implementation of legal regulations on e-commerce is that people and enterprises have yet taken much care of related regulations. This leads to low awareness of law implementation.

In the past time, state management agencies have implemented many measures to bring legal texts to people and enterprises such as organizing workshops, conferences to guide directly; popularizing on radio, television; providing the content of legal texts and related information on websites of specific industry management .... However, these activities are not very effective. Despite of being introduced well, many regulations (such as the Circular guiding the E-commerce Decree on information provision and contract conclusion on e-commerce websites of the MOIT, Circular guiding the Anti-spam Decree of the MIC) are not strictly implemented although they bring practical benefits to subjects by whom they are complied with.

4. Weak monitor and enforcement mechanism

Because e-commerce activities are conducted by electronic means, supervision over the implementation of legal texts in this area is a big challenge to state management agencies. Besides limited resources, low frequency and low effectiveness of inspection activities, an online supervision mechanism for transactions in the cyberspace is still lacking.

Moreover, sanctions over violations in the field of e-commerce are still lenient, weaken their deterrence effects and fail to induce good compliance throughout the society.

5. Lacking mechanism for dispute settlement

An efficient mechanism for e-commerce dispute handling should be one of the priorities for state management agencies in the time to come. In fact, most of Vietnamese consumers are still reluctant of partaking e-commerce transactions. Establishing a mechanism of dispute handling will help create consumers' confidence in online shopping, electronic payment… that positively contribute to the development of e-commerce in Vietnam.

CHAPTER II

ONLINE PUBLIC SERVICE PROVISION

I. Overview

II. The online provision of public services related to business activities at ministries, ministerial-level agencies and provinces

III. Administrative procedures simplification project for state management for the period 2007-2010

IV. The national single window

CHAPTER II

ONLINE PUBLIC SERVICE PROVISION

I. OVERVIEW

1. Public services

Public services are services related to law enforcement, facilitating activities of enterprises and citizens, helping to set up legal framework for its citizens to exercise their legal rights. Public service is a mean of government to manage and serve its citizens and organizations. Therefore, providing public services is a distinctive characteristic of state administrative agencies.

In 2009, Vietnam has made great efforts to improve management process and enhance quality of public services by applying Information Technology (IT). Up to now, all ministries, ministerial-level agencies and provinces have disclosed all the public services under their management.

2. Online public services

Online public service is the application of computer network environment on providing parts or entire of public service, including information about service process, form, receiving and handling dossier, notifying the result of handling dossier and documents related to the service. Providing public service online would reduce paperwork, shorten time for handling public services and build up a more transparent and efficient system of government agencies. The Decision No. 222/2005/QD-TTg promulgated by the Prime Minister dated September 15th, 2005 on approving the Master Plan on E-commerce Development for the 2006-2010 period set the target "By 2010, administrative agencies have to provide public services online, the priority is given to the following public services: electronic tax filling, electronic customs, electronic export and import procedures, services relating to investment and business registration, issuing specialized trade licenses…". Implementing the Prime Minister's direction, administrative agencies have been actively speeding up online public service provision. By the end of 2009, 20 out of 22 ministries have disclosed the entire procedure of every public service under their management on their websites.

According to the classification of Ministry of Information and Communications, public services are provided online at four levels:

- Level 1: Provide entire or most of information about public service process and procedures; required supporting documentation; handling steps; processing time; service fee.
- Level 2: Meet the criterion of level 1and allow users to download forms to print out or fill in. The dossiers can be submitted through mail or directly at dossier handling agencies.
- Level 3: Meet the criterion of level 2 and allow users to fill in forms, dossiers online and submit them online to dossier handling agencies. The transactions during the process of handling dossier are conducted online. However, the payment of service fee and the delivery of service results are made by direct contact with the service providing agencies.

- Level 4: Meet the criterion of level 3 and allow users to pay service fee online, the result of service can be delivered online or by mail.

3. The situation of public service provision at ministries, ministerial-level agencies and provinces

3.1 Computerizing state management activities - the foundation of online public services

Computerizing state management activities is the foundation to provide public service online. Up to now, ministries, ministerial-level agencies and provinces have made great efforts to promote IT application on management and execution of work. IT infrastructure has been greatly improved, 100% of ministries, ministerial-level agencies have been equipped with computers. Up to August 27th, 2009, the majority of ministries, ministerial-level agencies, People's Committees of provinces and cities directly under Government already had e-mail system. The percentage of officials having email address is relatively high. The average percentage at ministries, ministerial-level agencies and provinces, cities directly under government (to the level of departments, and People's committee of districts) is 80% and 45% respectively. Many state agencies have been equipped with software related to document management and execution; for ministries, ministerial-level agencies, this percentage reaches 90%; for provinces, cities directly under government, this percentage is 39%. The percentage of ministries, ministerial-level agencies, People's committee of provinces and cities directly under government having local area network (LAN) accounts for about 85%.[8] Some ministries, ministerial-level agencies have database connected to local such as Ministry of Industry and Trade, State Bank, Ministry of Transport, tax departments, custom departments, treasury departments... Ministries, ministerial-level agencies have paid attention to establish, apply and develop technical standard such as XML standard, international standard related to electronic data exchange (EDIFACT, SWIFT, ISO...).

Up to now, ministries, ministerial-level agencies have put many efforts to build and upgrade their website to interact with citizens and organizations in society. By the end of October 2009, 20 out of 22 ministries and 60 out of 63 People's committee of provinces, cities directly under government have established and operated the website with basic information below:

- Introduction of organization, functions, responsibilities, power of the agency and the departments under this agency.
- Information about the activities of the agency.
- Propagation of legal documents.
- Information about public services including: Process, procedure of handling services, name of person in charge in each handling step, deadline for handling the services.
- Email address
- Information about the projects, investments, bidding, public procurement.
- Measures to gather feedbacks, contributions of citizens, organizations.[9]

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[8]   Document No.35/BC-BTTTT date 27 August, 2009 of Ministry of Information and Communications about Summary report on situation of information technology application in state agencies.

[9]   The provinces which have not established website are Hoa Binh, Ninh Binh, Dac Nong.

Figure II.1: The situation of establishing website of ministries, ministerial-level agencies and provinces, cities directly under government
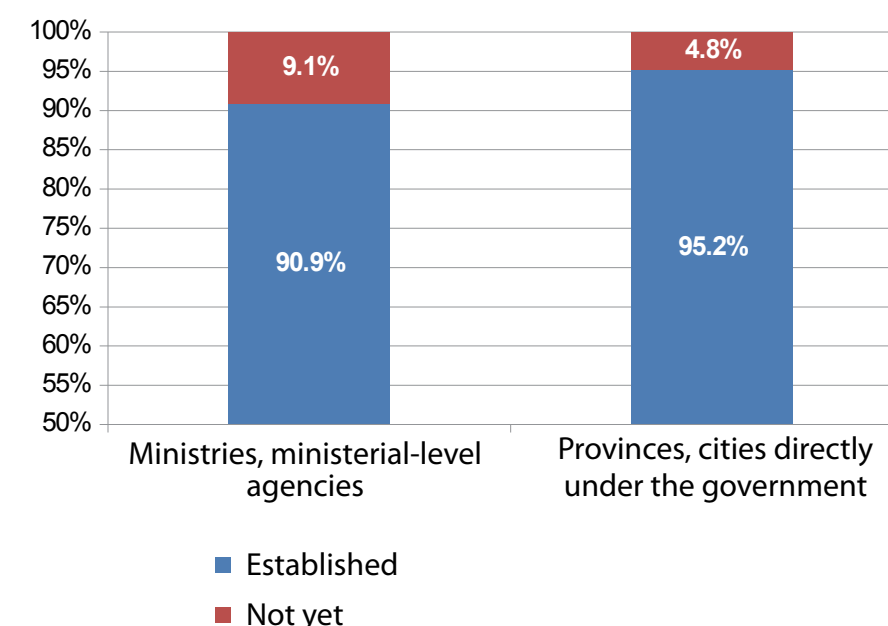
In order to evaluate the effectiveness of state agencies' websites, since 2008, the Ministry of Information and Communications have surveyed, assessed, ranked the websites of ministries, ministerial-level agencies and People's Committees of provinces, cities directly under government. In 2009, the evaluation focus on two major sectors, namely information provision and online public service provision on the website. The criteria to evaluate information provision is updated, supplemented pursuant to Information Technology Law and Circular No. 26/2009/TT-BTTTT dated July 31st, 2009 of the Ministry of Information and Communications stipulating the provision of information on and assurance of access to government agencies' websites.

Table II.1: Ranking information provision on websites of ministries, ministerial-level agencies

No.	Address of website	Raking & Grade in 2009	Ranking in 2008
1	www.moet.gov.vn (Ministry of Education and Training)	1 (79)	2
2	www.moit.gov.vn (Ministry of Industry and Trade)	2 (73)	10
3	www.moc.gov.vn (Ministry of Construction)	2 (73)	11
4	www.agroviet.gov.vn (Ministry of agriculture and Rural Development)	4 (72)	3
5	www.mic.gov.vn (Ministry of Information and Communications)	5 (69)	6
6	www.mof.gov.vn (Ministry of Finance)	6 (68)	1
7	www.mpi.gov.vn (Ministry of Planning and Development)	7 (66)	7

8	www.moj.gov.vn (Ministry of Justice)	8 (65)	4
9	www.mt.gov.vn (Ministry of Transport)	9 (61)	4
10	www.molisa.gov.vn (Ministry of Labor, War invalids and Social Affairs)	10 (60)	8
11	www.most.gov.vn (Ministry of Science and Technology)	11 (58)	11
12	www.moha.gov.vn (Ministry of Home Affairs)	11 (58)	14
13	www.sbv.gov.vn (The State Bank of Viet Nam)	13 (57)	13
14	www.cema.gov.vn (Committee for Ethnic Affairs)	13 (57)	18
15	www.mofa.gov.vn (Ministry of Foreign Affairs	15 (55)	16
16	www.monre.gov.vn (Ministry of Natural Recourses and Environment)	16 (52)	8
17	www.cinet.gov.vn (Ministry of Culture, Sports and Tourism)	17 (43)	19
18	www.moh.gov.vn (Ministry of Health)	17 (43)	15
19	www.thanhtra.gov.vn (Government Inspectorate)	19 (36)	16

* The number in parenthesis is the grade evaluating information provision on website (maximum grade is 81).

Source: Ministry of Information and Communications.

3.2 Online public service provision

In 2009, online public service provision of ministries, ministerial-level agencies, provinces, cities directly under government has been dramatically improved. Up to now, most of ministries, ministerial-level agencies, provinces, cities directly under government have provided public services under their management online at level 2. Accessing their websites, enterprises are able to look up information related to public services, including: detail information about the process, procedure, dossier, officials in charge, handling officials, dossier processing time... In addition, enterprises are able to download forms, legal documents from the websites.

The online provision of public services at level 3 have been carried out quite noticeably, especially at provinces (in 2008: 6 provinces, cities providing 30 public services online at level 3; in 2009: 18 provinces, cities providing 254 public services online at level 3). Many of these services related to business activities such as issuing certificate of business registration, certificate of representative office establishment, certificate of foreign invested enterprise establishment... Besides the provinces, some ministries, ministerial-level agencies have provided public services related to business activities online at level 3 such as electronic certificate of origin issued by the Ministry of Industry and Trade, electronic customs procedure by the Ministry of Finance... However, the number of public services provided online at level 3 in nation-wide scale is relatively low in comparative with the total number of public services.

Table II.2: The number of online public services of each province

No.	Province	2009					2008		
		Total	Level 1	Level 2	Level 3	Other public services	Level 1	Level 2	Level 3
1	Ho Chi Minh City	3841	2491	1335	15		104	74	8
2	Hanoi	2262	690	1562	10		348	115	1
3	Quang Tri	2150	808	1342			2	13	
4	Quang Ninh	2118		2111	6	1			
5	Ha Tinh	1827		1824	3		10		
6	Thua Thien Hue	1701	785	908	1	7	112	215	
7	Dong Thap	1670		1649		21	301	13	
8	Can Tho	1665	960	705			48	11	
9	Nghe An	1660	716	944			22	9	
10	Gia Lai	1635		1635			4	2	
11	Phu Tho	1616	536	985	21	74	1		
12	Soc Trang	1611		1611					
13	Binh Phuoc	1595	1547		38	10	27		
14	Thanh Hoa	1584		1584			100		
15	Kon Tum	1563	672	891			19	3	
16	Quang Binh	1504	624	864	16		109	135	7
17	Tien Giang	1451	229	1222			49	4	
18	Ha Nam	1447		1439	8		49		
19	Hai Phong	1431		1431					
20	Thai Binh	1426	1426				8	4	
21	Yen Bai	1396	564	832					
22	Lam Dong	1374	465	909			6	10	
23	Nam Dinh	1368		1368					
24	Ca Mau	1253	1222	31			2	3	
25	Binh Thuan	1231	245	974	6	6	1		
26	Bac Giang	1190	477	713			29	25	
27	Lao Cai	1154	547	567	38	2		1	2

28	Dong Nai	1153	373	773	5		22	2	
29	Quang Ngai	1111	531	580			3		1
30	Tra Vinh	1081		1080		1	1		
31	Ninh Thuan	1039		1039			216		
32	Lang Son	1025	843	167	8	7	1	2	
33	Hau Giang	381	157	220	4		194	102	4
34	Kien Giang	376		375		1	2		
35	Vinh Phuc	296		280	11	5			2
36	Long An	282	119	160			2	2	
37	Binh Dinh	235	104	131			120		
38	Ba Ria - Vung Tau	211	190	21			176	13	
39	Hai Duong	198	66	132			110	10	
40	Dien Bien	129	22	95		12			
41	Lai Chau	118	21	97					
42	Bac Lieu	104		103		1	4		
43	Dak Lak	84	61	15	8				2
44	Khanh Hoa	84	82	2			94	2	
45	Ben Tre	66	8	55		3	1	1	
46	Da Nang	47	1	3	35	8	5		
47	An Giang	21			21				
48	Tuyen Quang	5	5						
49	Phu Yen	2	2				1		
50	Bac Ninh	-					3		
51	Binh Duong	-					7		
52	Hung Yen	-					1	2	
53	Quang Nam	-					14	3	
54	Tay Ninh	-					3		

* Symbol '-' in column Total indicating that this province has no statistics. In 2009, 18 provinces provided public services online at level 3 (in 2008, 6 provinces provided public services online at level 3). The provinces providing most public services at level 3 are Binh Phuoc and Lao Cai (38 services).

Source: Ministry of Information and Communications.

So far, there is no level 4 public service provided online. The reason is that the provision of online public services at level 4 meets many challenges such as: database is not unified, centralized and reliable; the level of IT skill of citizens and enterprises are various, the compliance with the provisions of law of citizens and enterprises are not high…

II. THE ONLINE PROVISION OF PUBLIC SERVICES RELATED TO BUSINESS ACTIVITIES AT MINISTRIES, MINISTERIAL-LEVEL AGENCIES AND PROVINCES

1. Ministry of Industry and Trade

On December 29th, 2008, The Minister of Industry and Trade (MOIT) signed Decision No. 49/2008/QD-BCT promulgating the Regulations on providing online public services under its management. This decision defines the contents, principles, roadmap and process to provide online public services under MOIT's management.

The Ministry of Industry and Trade has provided online all the public services under its management at level 2 on its website at http://dvc.moit.gov.vn. This website provides enterprises with all information related to public service provision such as processes, procedures, forms and related legal documents.

In May 2009, MOIT promulgated Decision No. 2420/QD-BCT defining the roadmap to implement the online provision of its 49 public services at level 2, 3 and 4, in which the priority is given to the public services which have profound impacts on business activities of enterprises, contributing to accelerate administrative reform and build up e-Government. MOIT assigns Vietnam e-Commerce and Technology Agency (VECITA) the responsibility to preside over and cooperate with related agencies to implement online provision of public services according to the approved roadmap.

Besides providing online electronic certificate of origin (eC/O) and automatic import license at level 3, VECITA has also cooperated with related agencies to actively experience online provision at level 3 of the following public services:

-   Issuing license of industrial explosives usage.
-   Procedures for notification of economic concentration.
-   Issuing certificate of eligibility for tobacco raw material processing.
-   Issuing certificate of confirmation of dangerous chemical declaration.

According to the plan, these public services will officially be provided online at level 3 in the beginning of 2010.

1.1. Electronic certificate of origin system (EcoSys)

C/O – Certificate of Origin is one of the important documents in enterprise's export dossier to verify the country producing goods. This will determine whether the import goods are eligible

for preferential tariff in accordance with trade agreement among the countries or imposed anti-dumping duty, countervailing duty, quotas or other safeguard measures by the importing countries. In addition, the verification of origin of goods also requires imported, exported goods to satisfy the requirement of labeling regulations. These are important elements in international trading; therefore, applying for C/O is one of the priority concerns of enterprises. Previously, C/O applying procedure was done manually so it did not meet the demands of enterprises. Enterprises had to come to C/O issuing agency's office to submit C/O dossier which was accepted only in administrative hours. If the dossier did not meet the requirements of C/O issuing agencies, enterprises would have to come back to supplement, correct the error of the dossier. Therefore, the customs clearance was lengthened which caused bad effects on efficiency of enterprises' business activities, especially of the small, remote enterprises.

Figure II.2: The model of eCoSys
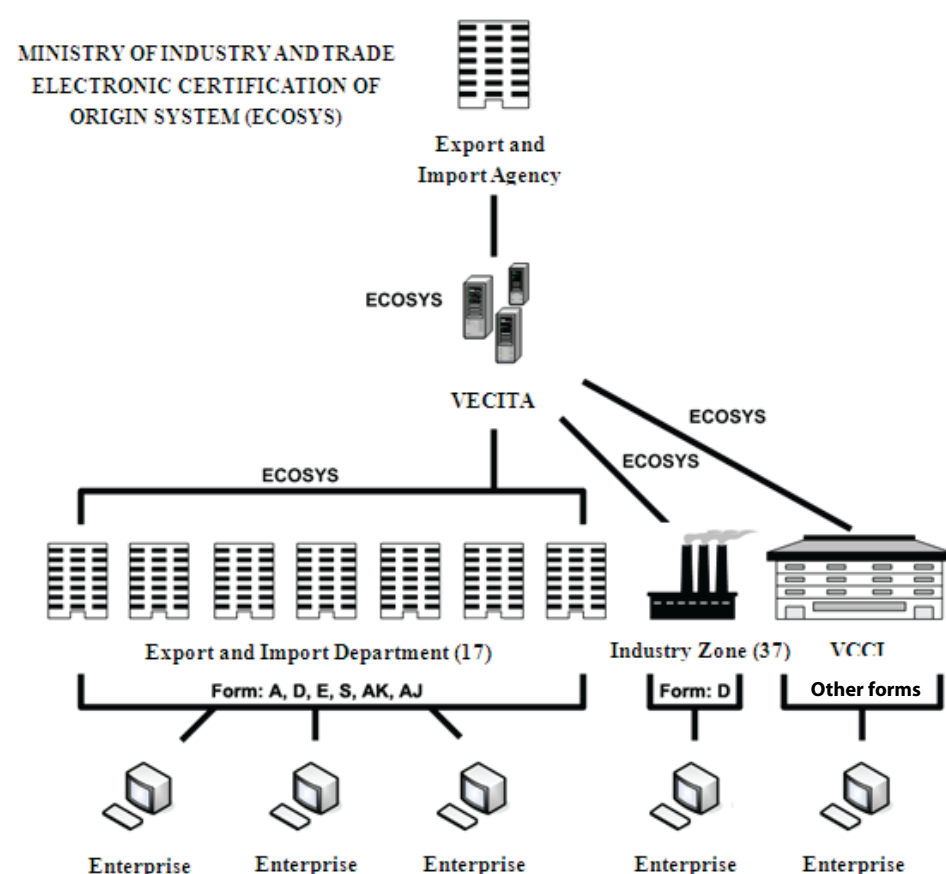
In order to create favorable conditions for enterprises to apply for C/O and enhance C/O management of administrative agencies, on March 21st, 2006, Minister of Trade promulgated Decision No. 0519/QD-BTM on implementing the project on management and issuance of electronic certificate of origin system (eCoSys). eCoSys allows enterprises to submit online C/O application at any convenient place having computer connected to Internet. eCoSys minimizes the travelling time of enterprises, especially in the case of error dossier.

Issuing electronic C/O is very beneficial to enterprises. With the clear, simple and convenient applying process, enterprises are able to complete the application process quickly and are independent of time and place. Besides, eCoSys helps enterprises to manage, store and make statistics on C/O data easily. Moreover, eCoSys helps government officials obtain accurate and timely statistics on export goods, supporting trade policy making. Up to the end of November 2009, there have been over 1,200 enterprises joining eCoSys. Among them, there are over 800 enterprises frequently applying for electronic C/O. The average number of electronic C/O issued daily is 600 and the total issued electronic C/O reached over 70,000.

Additionally, eCoSys also provides important legal documents on C/O regulations. Enterprises could look up legal documents on C/O, address of C/O issuing agencies. The important information related to C/O is regularly updated.

In the future, eCoSys will connect to the e-customs system and the systems of issuing electronic C/O of foreign countries to build up an end-to-end system to issue C/O online. The whole procedure from submitting dossier to issuing electronic C/O will be conducted online and can be completed in a few minutes. The technologies to guarantee the security of the systems such as Public Key Infrastructure (PKI), watermark, micro-print… will be integrated into eCoSys. Import enterprises, banks, forwarder and relevant organizations can access the system to download and check the authentication of electronic C/O at any convenient time and place. Only by entering electronic C/O code, the detail of electronic C/O will be presented. If enterprises want to get C/O in paper form, they can have it printed and the authentication of printed C/O is still guaranteed.

Figure II.3: Future model of eCoSys
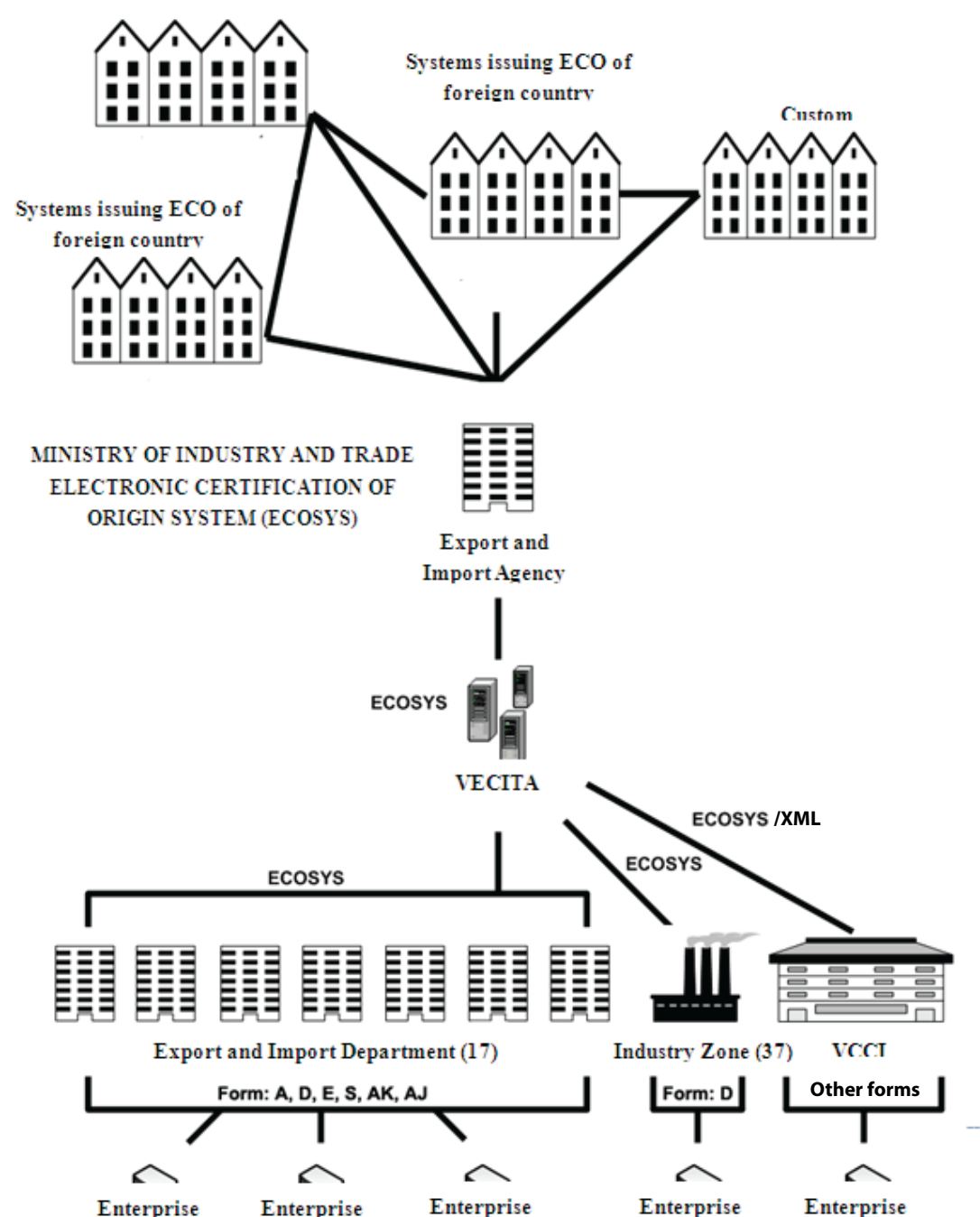
1.2. The system of issuing automatic import license

The system of issuing automatic import license is implemented under the Decision No. 24/2008/QD-BCT dated August 01st, 2008 of the Ministry of Industry and Trade on application of system to issue automatic license for some import goods. Through the system, the enterprises are provided information about the procedure to apply for license and observe the state of handling documents. Besides, the system helps MOIT quickly obtain update statistics on quantity, categorization, and value of import goods… By the end of 2009, the system has issued automatic licenses for over 4,000 export and import enterprises and input 40,000 import dossiers.

MOIT is upgrading and improving the system of issuing automatic import license to better meet the demands of enterprises and administrative agencies.

2. Ministry of Finance

The information about 840 public services of Ministry of Finance has been presented on the website of the Ministry of Finance at http://www.mof.gov.vn. Currently, the Ministry of Finance is experimentally providing 02 public services which are very important to business activities of enterprises at level 3, namely e-customs procedures and electronic tax filing and submission through Internet.

2.1. E-customs procedures

In order to facilitate export activities of enterprises, to reform customs procedure step by step in the orientation towards conformance with the modern customs standards, to shift from manual customs procedures to electronic customs procedures, on June 20th 2005, the Prime Minister promulgated the Decision No. 149/2005/QD-TTg assigning Ministry of Finance to preside over the pilot implementation of e-customs procedures.

Figure II.4: Customs Clearance Diagram
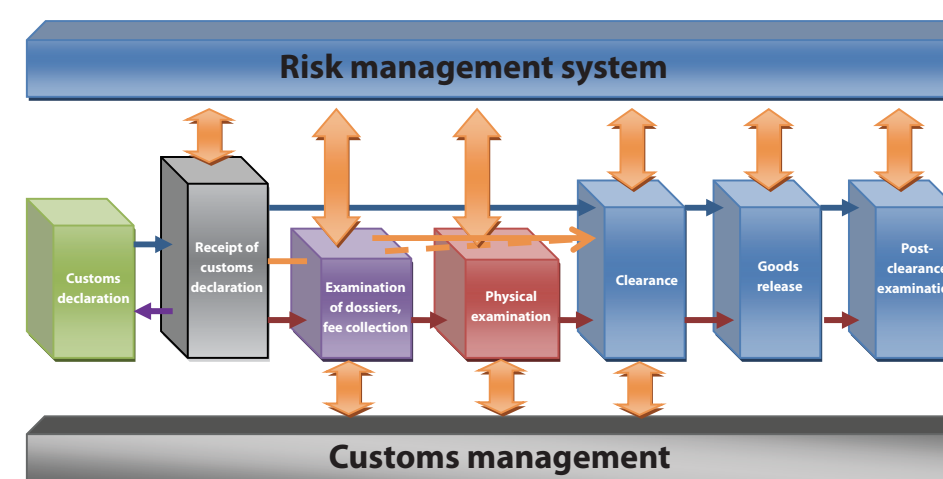
Ministry of Finance carried out the pilot implementation of e-customs procedures through 2 phases:

- Phase I: (from 10/2005 to 11/2009): narrow pilot implementation pursuant to Decision No. 149/2005/QD-TTg dated June 20, 2005 on pilot implementation of e-customs procedures.

- Phase II: (From 11/2009 to 11/2009): widen pilot implementation pursuant to Decision No. 103/2009/QD-TTg date August 12, 2009 of the Prime Minister amending and supplementing a number of articles of the Prime Minister's Decision No. 149/2005/QD-TTg dated June 20, 2005 on pilot implementation of e-customs procedures.

In phase I, the pilot implementation of e-customs procedures was carried out at the Customs Departments of Ho Chi Minh City and Hai Phong City. Enterprises were chosen to join e-custom procedures based on their good compliance with customs law; large turnover of import and export goods, voluntary participation and their participation was approved by customs authorities. In this phase, e-customs procedures were applied for 03 categories of imported and exported goods (sale, processing, manufacturing for export) and 01 management regime (imported or exported goods transferred from/to border gate).

The content of e-custom in stage 1 includes:

- Declare and receive information through electronic means: the entire process of filing, receiving and responding to customs declaration information are carried out through a intermediary value-added service provider that facilitate data message transfer (C-VAN).

- Data message based customs dossiers: customs declaration is in electronic form which has the same legal effects as in paper form, other documents are transformed from paper to electronic data and filed with customs authorities (in compliance with the Law on Electronic Transactions).

- Automated processing of customs declared information: Check the validity, the conformance to standard of information. Already checked, notified goods policy for 47/63 of classified goods under specific managements of ministry, ministerial-level agencies which are standardized according to HS code; checked, compared information on electronic declaration with the one on the paper documents of customs dossier which had been transferred to electronic form such as: certificate of origin, license, commercial invoice… Checked and compared declared information with the requirement of each customs management regime such as the management regime of processing goods, import goods for manufacturing to export.

The Customs Departments of Ho Chi Minh City and Hai Phong City applied the management method based on risk management techniques to assess the level of conformance of enterprises and classify goods basing the criteria of risk management and the conformance of dossier instead of checking each import, export transaction.

Figure II.5: Diagram of e-customs procedures
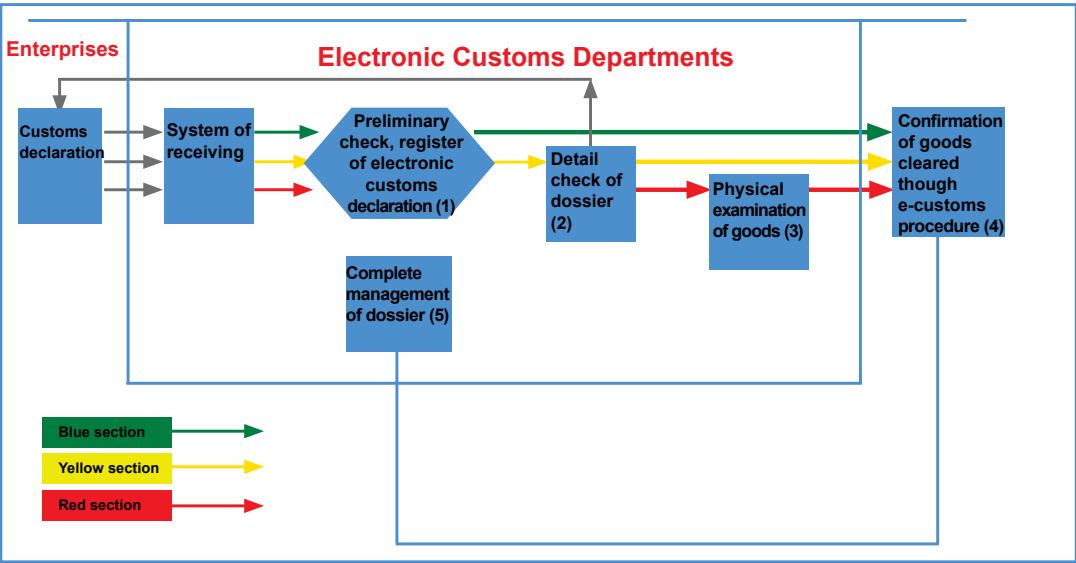
At the end of phase I, the implementation of e-customs procedures basically achieved the objectives such as shortening customs clearance, reducing paper documents as well as costs of enterprise. The enterprises joining e-customs procedures and proportion turnover of export goods cleared through e-customs procedures increased quite dramatically in the past years. The Ministry of Finance set up and formed the model of e-customs procedures operating smoothly at the Customs Departments of Ho Chi Minh City and Hai Phong City, bringing obvious economic benefits for enterprises and government from saving times, manpower, and costs.

Table II.3: The statistics of e-customs procedures

Criteria	Hai Phong			Ho Chi Minh City		
	2007	2008	6/2009	2007	2008	6/2009
The total of enterprises joining e-customs procedures	73	171	372	172	267	297
The total of electronic customs declarations	5,146	9,509	7,576	31,224	33,011	10,896
Export, import turnover (million USD)	462.16	837.62	492.44	2,983	4,310	1,465
% enterprises carrying e-customs procedures / the ones carrying traditional customs procedure at local	0.94%	1.84%	1.65%	0.89%	1.23%	1.87%
% electronic customs declarations/ total customs declarations of the entire customs department	1.71%	2.53%	6.38%	2.58%	2.53%	2.86%
% turnover of goods clearing through e-customs/turnover of goods processed by the entire customs department	3.65%	4.54%	10.95%	7.30%	8.32%	9.86%

Source: Information Technology and Statistics Agency and the Electronic Customs Department of Ho Chi Minh City.

Despite of the encouraging results as mentioned above, the pilot implementation of e-customs procedures in the phase I did not met the requirements because of the remaining drawbacks such as:

- The model of e-customs procedures was just set up and operated independently at one electronic customs sub-department, without connection and integration with the entire processing data system of the whole customs department. Therefore, the coordination among customs sub-departments is challenging and hard to meet the demands when the enterprises and goods joining e-customs procedures are increasing in the pilot implementation.

- The automation of system processing electronic customs data was not applied at every phase in the goods clearance decision-making process. The participation of customs officials in examination of good policy, goods classification, tax calculation, tax rebate … was still required.

- Only the documents under the management of customs department were transformed to electronic form. Other documents under the management of other ministries, ministerial-level agencies such as certificate of origin, payment vouchers of the Treasury (tax vouchers), Certificate of Quality Control (sanitary and phytosanitary certificates, certificate of food safety and hygiene) were yet transformed to electronic form.
- The restriction on the number of enterprises joining e-customs procedures contributed to achieve good results of pilot implementation but it did not cause the spreading effects on business community. Therefore, e-customs procedures did not acquire high supports and adequate evaluation.
- E-customs procedures did not meet the demands of the majority of enterprises because it was only applied for 03 types of customs procedures and 01 customs management regime.

The above drawbacks will be solved by the Customs in the phase II of pilot implementation of e-customs procedures to build a complete, effective system.

Basing on the implementation results of phase I, since December 2009, the Ministry of Finance has carried out the pilot implementation of e-customs procedures in large scale. In phase II, e-customs procedures will be implemented at the customs departments of Ho Chi Minh City, Hanoi, Hai Phong, Da Nang, Dong Nai, Binh Duong, Lang Son, Quang Ninh, Ba Ria - Vung Tau, Quang Ngai and of other customs departments as the proposal of the Minister of Finance.

In phase II, the participation in e-customs procedures will be widened to every enterprise and exported and imported goods of the following categories:

- Imported, exported goods under the categories, regimes 1) Imported, exported goods under purchase and sale contracts; 2) Imported, exported goods for the performance of processing contracts with foreign traders; 3) Imported and exported goods in the form of imported raw materials for the production of goods for export; 4) Imported and exported goods of export-processing enterprises 4) Goods traded in the form of temporary import for re-export.
- The Imported and exported goods related to these above categories, regimes: 1) Goods brought in or taken out of bonded warehouse; 2) Goods of temporarily imported for re-exported;3) Goods imported or exported on the spot; 4) Goods imported or exported for the execution of investment projects; 5) Goods exported but be returned 6) Goods imported but have to be exported return.
- Imported or exported goods transported from/to border gate.
- Customs process of exported, imported of enterprises granted special priority.

2.2. The system of tax declaration and dossier submission via Internet

On July 29th, 2009 Ministry of Finance promulgated the Decision No. 1830/QD-BTC guiding the pilot implementation of tax payer submitting tax declaration dossier via Internet. Implementing this decision, the General Department of Taxation has carried out the pilot project Submission tax declaration dossier via Internet to modernize the process of tax collection through electronic means. The objective of the project is to create favorable conditions for tax payers to submit tax

declaration, reduce the overload in receiving tax declarations for departments of taxation, major sub-departments of taxation, saving expenditure and man power in documents storage.

To submit tax dossier through Internet, tax payers have to meet the following requirements:
- Being organizations, enterprises in operation.
- Applying software HTKK version 2.1.0i for tax declaration.
- Having valid digital signature certificate.
- Having constant email addresses.
- Having computer connected to Internet with the following characteristics:
  o Processor: Pentium IV - Speed 2GHz.
  o 1GB Ram.
  o Optical drive.
  o Internet Explorer 7.0 or 8.0.

Figure II.6: The procedure to participate in system of tax declaration and dossier submission via Internet
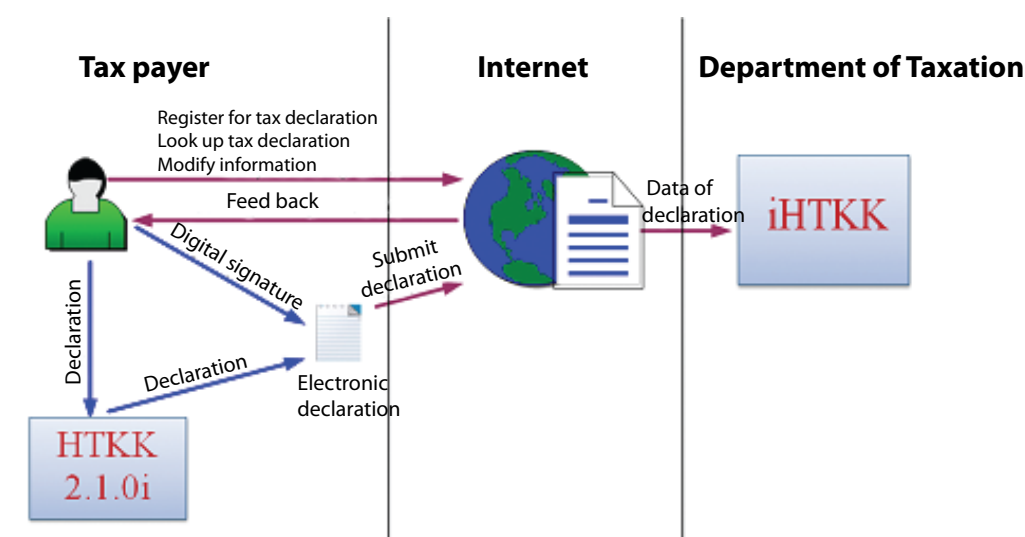
To submit tax dossier via Internet, tax payers have to register with the department of taxation. After successful registration, tax payers will receive email from department of taxation notifying the grant of account to use the system. Tax payers will make tax declaration using HTKK 2.1.0i and convert the declaration into PDF file. To send the declaration via Internet, tax payers log on the website http://kekhaithue.gdt.gov.vn using their accounts and passwords. After signing digitally on tax declaration, tax payers will be able to send it via Internet. After the tax payers complete the submission of tax returns via Internet, the system will automatically send back the notice acknowledging "tax declaration submission" to the tax payers through email system of department of taxation. Tax payers are able to look up for declaration through this website.

The pilot implementation of project Submission tax declaration dossier via Internet is carried out through three phases. In phase I, the pilot implementation is carried out at Department of taxation of Ho Chi Minh City with around 300 enterprises. In the phase II, the implementation is carried out with enterprises of Hanoi and Ho Chi Minh City. In the phase III, the project will be widened to the enterprises in Hai Phong, Binh Duong, Dong Nai. Afterwards, the systems will be implemented in nationwide scale.

3. Ministry of Planning and Investment

There are 503 public services under the management of the Ministry of Planning and Investment. There are 257 public services in the sector of enterprise establishment, 52 ones in the sector of cooperative operations, 78 ones in the sector of foreign investment in Vietnam, 10 ones in the sector of investment procedures from Vietnam to foreign countries, 92 ones in the sector of bidding procedure, 14 ones in the sector of official development assistance ODA.

Implementing the Decision 222, with the aim to simplify bidding administrative procedures, to enhance the transparency, and to reduce administrative expenses of the government in public procurements, the Ministry of Planning and Investment assigned the Public Procurement Agency implement the project "E-commerce application on government procurement".

Government procurements attract high attentions of enterprises. Presenting openly information about bidding invitation of Government in website will create a healthy competition environment for public procurement activities. The objective of the project is to set up complete, central bidding system over the Internet, including: bidding procedure, legal foundation, software and IT infrastructure to serve online bidding. The IT infrastructure consists of network, database, and interface portal, digital signature certification system with high level of security.

The project is implemented through two major phases:

- Phase I (from 2008 to 2010): Pilot implementation of online bidding system in three big organizations, namely VNPT, EVN and Hanoi People's committee.
- Phase II (from 2010 to 2015): Completion and implementation of the system on the large scale.

To set up the foundation for the project "E-commerce application on government procurement", since the beginning of 2009 the Public Procurement Agency of the Ministry of Planning and Investment has cooperated with the Korea International Cooperation Agency (KOICA) to implement the project Establishment of electronic pilot procurement system (EPPS). This is an important project providing technical assistance to set up a core system of e-bidding system and operate the system experimentally. During the implementation, the Ministry of Planning and Investment and the participating organizations will draw experiences and decide on the direction for the system's development in a comprehensive way.

On September 4th, 2009, the Public Procurement Agency and the Korea International Cooperation Agency performed a handover of electronic pilot procurement system (EPPS). On the technical aspect, EPPS allow to fulfill online the tasks such as shortlist of bidding dossiers, released bidding dossiers, submission of bidding dossiers, and petition for bidding results, announcement of bidding results... The system guarantees the confidentiality, integrity and non-repudiation of the bidding information thank to the application of digital signature. The digital signature also guarantees the legal effect of electronic documents and bidding results. EPPS automatically performs the bidding process; therefore, both bidding inviters and bidder are unable to interfere in the process. This system allows the bidders to access to bidding information at any time and place, create a favorable conditions for bidding participation.

Figure II.7: The model of electronic bidding system
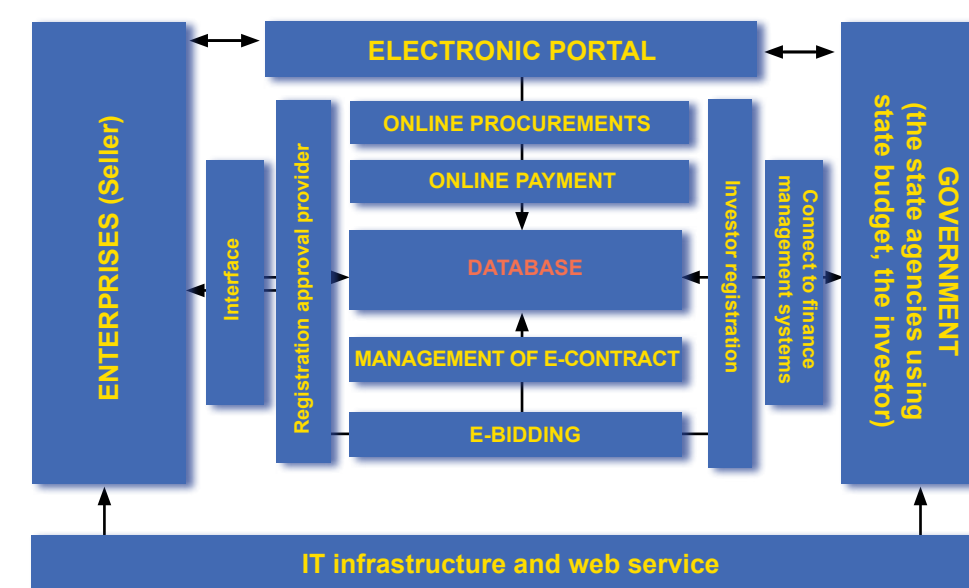
The main participants in the e-bidding system are sellers - that supply goods and services; buyers - that use government budget for public procurement; and the system operators.

In the first phase, EPPS system is implemented in three big organizations, namely VNPT, EVN and Hanoi People's committee.

After successful implementation, EPPS system will be supplemented other functions like e-shopping, e-contracting, e-payment. Step by step, the application of the system will be expanded to state management and administrative agencies, state-owned enterprises.

The electronic bidding system is beneficial to all participants. Presenting openly information about government procurement on website will assist government in attracting more suppliers. Therefore, government has more chances to purchase goods of high quality with low price. Moreover, it enables government to reduce the costs and manpower used for public procurement, while monitoring the procurement in a more professional way. This system also enhances the equality and increased the chance for suppliers to access government procurement market.

4. Ho Chi Minh City

Ho Chi Minh City is one of the leading localities in providing online public services. 75 websites of departments, branches, districts and other state management agencies are integrated into the website of Ho Chi Minh People's Committee at *http://www.hochiminhcity.gov.vn*. This website operates with Vietnamese and English languages. It provides information not only on economic, cultural, social realms under the management of organizations under Ho Chi Minh City People's Committee but also the information of entire processes of public services provision at departments, branches, districts, guiding the citizens to carry out public services.

Ho Chi Minh City puts great efforts in setting up and implementing the application of software on management of administrative activities of departments, branches, districts, communes. The software is a tool to examine administrative dossiers processed by officials, identify which dossiers in late process, the reasons of late process… with the aim to increase the quality of public services provision.

Ho Chi Minh City also speeds up the database connection among administrative agencies to save costs, shorten time for handling administrative dossiers, and contribute to overcome the drawbacks of voluminous, unscientific paper document storage. The People Committee of District 1 is an outstanding department in database connection. For example, with the database connection between its Sub-Department of Taxation, and the Economic Division, the People Committee of District 1 is able to reduce time for granting tax code to the average of 30 minutes for handling each dossier (before, the duration for handling the document was from 12 days to 13 days) and the citizens have to come to administrative agency only one time.[10]

There are around 48% of provinces, cities under the central government is implementing the model of single window, single inter-window with the aim to avoid duplicate information, save manpower, shorten time for processing administrative documents.[11] One of the outstanding models is the electronic single window of Ho Chi Minh City, operated by the Information and Communications Department at *http://motcua.ict-hcm.gov.vn*. This system allows citizens to check the status of their applications online. Information about the status of dossiers in process is automatically saved and uploaded in the "Electronic single window" system from the systems of four Departments (Department of Information and Communications, Department of Zoning and Architecture, Department of Natural Resources and Environment, Department of Construction) and 19 out of 24 districts, communes. Citizens only need to enter the identification code on their receipt to the website or dial number 1900.545.444 to obtain this information. Thanks to open, transparent and accurate data provided by the system, authorities and competent agencies have been able to examine and manage public service provision more efficiently. Moreover, this system is a useful tool for citizens to observe and supervise administrative agencies' performance.

One of the public services provided online at the level 3 by Ho Chi Minh City is business registration for the type of private enterprises. This service is provided on the website of the Department of Planning and Investment at the address: *http//www.dpi.hochiminhcity.gov.vn*. Using this service, businessmen will be guided to prepare the dossier for business registration as provision by the Law on Enterprises. After the dossier is completed, businessmen only have to click the button "Registration", their dossier will be sent online to the Department of Planning and Investment. In the maximum time of two working days, businessmen will receive the result of their handling dossier through the section "Result" or email (if any). If the dossier is approved, the Department of Planning and Investment will set a date for businessmen to come to its Business Registration Division to complete the registration procedures on the spot and get the business registration certificate within one hour. If the dossier is not approved, the answer will state the reason clearly and guide businessmen to complete the dossier.

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10   Source: Report of Home Affair Department on administrative reform and application of IT at Ho Chi Minh Ho Chi Minh City at National conference on Vietnam e-government 2009.
11   Source: Report of Information and Technology Application Agency, Ministry of Information and Communications on the situation of implementation IT in state agencies at National conference on Vietnam e-government 2009.

III. ADMINISTRATIVE PROCEDURES SIMPLIFICATION PROJECT FOR STATE MANAGEMENT FOR THE PERIOD 2007-2010

1. Administrative procedures

Administrative procedures are necessary to operate the economy and they reflect the transactions between citizens and the state agencies. A public administration operating effectively and transparently is an elements contributing to the national development. The more skilful the state management is the more streamlined administrative procedures are. The stronger of regulation on each step of administrative procedures is, the better administrative procedures support citizens to fulfill their citizenship.

Currently, an administrative procedure can be regulated in a variety of documents: the document of the National Assembly designated the name, the decree of the Government regulates on the order and the manner of processing, the circulars regulates the dossier, application form and the provinces possibly concretize by other legal documents. This circumstance makes it difficult for citizens to implement administrative procedures.

2. Administrative procedures simplification project for state management for the period 2007-2010

On January 10th, 2007, the Prime Minister promulgated Decision No. 30/QD-TTg approving the Administrative procedures simplification project for state management for the period 2007-2010 (Project 30). The objective of the project is to simplify administrative procedures in the fields of state management to guarantee its unification, comprehensiveness, simplicity, transparency; facilitate citizens, organizations and enterprises in access, consultation and implementation of administrative procedures; enhance the effectiveness and efficiency of state management; promote socio-economic development; and contribute to preventing and combating corruption and wastefulness.

Project 30 has been carried out at the entire administrative system and had the participation of all administrative agencies from central to local, including more than 10,000 units at commune-level, about 700 units at district-level, 1300 departments, branches at provincial-level, 400 units of departments, agencies under the management of ministries, ministerial-level agencies.[12]

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12   Source: *http://baodientu.chinhphu.vn/Home/Buoc-dot-pha-trong-tien-trinh-cai-cach-TTHC/20098/21873.vgp*.

Box II.1: Implementation phases of Project 30

Project 30 is implemented in three phases:

Phase 1: from the beginning to mid 2009
Reckon administrative procedures at all level of state agencies.

Phase 2: from mid 2009 to mid 2010
Review administrative procedures and related requirements/regulations on the criteria of legality, rationale and necessity; review proposals on simplification of administrative procedures.

Phase 3: in 2010
Implement plans of administrative procedures simplification and publicize the national databases on administrative procedures on the Internet for citizens' access.

Source: http://www.thutuchanhchinh.vn/index.php/introduction?id=4

Project 30 is a breakthrough in administrative reform so far. In Project 30, the overall approach from top to bottom is applied as follows:

- Reckon all administrative procedures.
- Review administrative procedures through consultation with all concerned parties and independently review by a taskforce group.
- Abolish or simplify the administrative procedures which do not meet the requirements after reviewing.
- Set up database of all current administrative procedures. This database will provide the entire information about all administrative procedures related to activities of business and citizens.

The implementation of the Project 30 reflects the high determination of the Government and governmental agencies at all level to reform administrative procedures. All ministries, ministerial-level agencies and provinces positively reckon, review administrative procedures under their management. Until now, all the ministries, ministerial-level agencies, local agencies have publicly published all administrative procedures under their management and jurisdiction for people to know, access, observe, and carry out administrative procedures. Most ministries, ministerial-level agencies have publicly posted all administrative procedures, including detailed information about processes, procedures, names of responsible officials, needed documents, duration of handling dossier... on their websites.

To improve the effectiveness of the administrative procedures reform, the Prime Minister has directed the governmental agencies to apply the quality management system according to the standard of TCVN ISO 9001:2008 in handling administrative procedures. This standard is applied in ministries, ministerial-level agencies, People's Committees of provinces, districts; the divisions under People's Committees of provinces and districts. Project 30 will make a list of administrative procedures which are applied 9001:2008 quality management system. The

ministries, ministerial-level agencies, agencies of government are responsible for setting up and applying quality management system for all activities related to handling administrative procedures under their management. The Ministry of Science and Technology is responsible for set up the framework model of quality management system for each type of administrative agencies at locality. People's Committees at provincial and district level and their agencies are responsible for building and applying quality management system according to the framework model by the Ministry of Science and Technology.

3. National database of administrative procedures

On October 26th 2009, the national database of administrative procedures of Vietnam was officially launched over the Internet at http://csdl.thutuchanhchinh.vn. This event shows the compliance with the Decision No. 1699/QD-TTg on establishing the national database of administrative procedures promulgated by the Prime Minister on October 20th 2009. This is the first time Vietnam has gathered, established the national database about the administrative procedures at four levels of governmental agencies with more than 5,700 administrative procedures, over 9,000 legal documents and more than 100,000 forms of administrative procedures.[13] The objective of this national database is to provide a unique address for citizen and businesses to look up and learn about every administrative procedure under the jurisdiction of the ministries, ministerial-level agencies, and local administrative agencies throughout the country. With this result, citizens, enterprises and the entire society have an important tool to access the useful and transparent information of state administration; reduce time and costs in carrying activities of business and daily life.

The public disclosure of every administrative procedure is a great success. However, the more meaningful action is to review the existing administrative procedures to detect the unnecessary, unreasonable and unlawful ones to eliminate, simplify in order to make them easy to understand, implement and reduce costs and risks for citizens and businesses.

IV. THE NATIONAL SINGLE WINDOW

1. Overview

In the world, many initiatives of a single window have been successfully applied and popularized in various countries and territories such as the United Stated, EU, Japan, South Korea, Taiwan, Singapore, Canada and Australia. Single window system facilitates smooth data flow, shares data, avoids repeated requirements of data and reduces paperwork to speed up circulation of goods, reduces time and costs for businesses and enhances economic efficiency for the entire society. The United Nations Centre for Trade Facilitation and Electronic Business defined single window as follows "A Single Window is defined as a facility that allows parties involve in trade and logistics to lodge standardized information and documents with a single entry point to fulfill all export, import and transit-related regulatory requirements. If information is in electronic forms then it needs only be submitted once".[14]

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13   http://thutuchanhchinh.vn/index.php/news/detail/156.
14   Recommendation No.33 on establishment of a Single Window and Guidelines for the establishment of a Single Window.

2. The ASEAN Single Window

On December 9th 2005, in the 11th ASEAN Summit meeting held in Kuala Lumpur, Malaysia, ASEAN's Economic Ministers on behalf of their governments signed the Agreement to Establish and Implement the ASEAN Single Window. On December 20th 2006, in the 10th ASEAN Finance Ministers Meeting held in Cambodia, Finance Ministers of member states, on behalf of their governments, signed the Protocol on the Establishment and Implementation of the ASEAN Single Window. The Agreement and Protocol have been approved by the Government of Vietnam in the Official Letter No. 1621/TTg-QHQT dated October 30th 2007. According to that, Vietnam shall establish the national single window and be ready to integrate into the ASEAN Single Window in 2012.

On September 16th 2008, the Prime Minister promulgated the Decision No. 1263/QD-TTg on the Establishment of the National Steering Committee on ASEAN Single Window of the period 2008-2012. This Committee will assist the Government to direct the implementation of ASEAN Single Window and National Single Window under the Agreement and the Protocol on the Establishment and Implement of the ASEAN Single Window.

3. The National Single Window

In order to participate in the ASEAN Single Window, Vietnam has to successfully establish the National Single Window. In the National Single Window, there are major interconnected components in logistics and international trade such as: The Customs Departments being responsible for clearance and release of goods and conveyances in import, export, or transit transactions; governmental agencies to manage logistics and international trade; financial and banking institutions, insurance agencies; logistics and forwarding communities; businesses operating in export and import field; and ASEAN member states and global trading partners.

Box II.2: Features of the NSW mechanism of Vietnam

The VNSW is an integrated system that allows:

1) Parties involved in export, import, export and transmit goods submit/send standardized data and information to a single point.

2) Governmental agencies process data and information and make decision based on consistent and unified processes; decide and send the decision to the system pursuance to an agreement on provision and exchange information between governmental agencies.

3) The Customs makes final decision on clearance and release of goods, conveyances basing on decisions of related governmental agencies which are timely transmitted through the system pursuance to the regulation on service provision of governmental agencies.

Source: The Master plan on implementation of National Single Window for the period 2008-2010 approved in the Decision No. 2599/QD-BCDASW on October 21st 2009 by the National Steering Committee.

Currently, as prescribed by law, for goods clearance, depending on specific cases enterprises have to submit customs dossier consisting of license, certificate, permit issued by twelve related ministries, which are export license, import license, certificate of origin, inspection note or notification of inspection exemption of the food safety agency for import and export goods are in the category of goods that must be examined for quality, safety and sanitary and phytosanitary conditions; and certification of goods imported for national defense or security... Of the above ministries and agencies, three ministries that issue most licenses, certificates, permits closely associated to international trade activities are the Ministry of Industry and Trade, the Ministry of Agriculture and Rural Development and the Ministry of Transport.

The successful establishment of National Single Window will allow the parties involving in import and export activities of goods to send standardized information to a single point. Governmental agencies will be able to process the data and make decision based on consistent and unified processes, and send this decision through the system based on agreement on provision and exchange information among agencies in a timely manner.

Figure II.8: The operation model of NSW mechanism
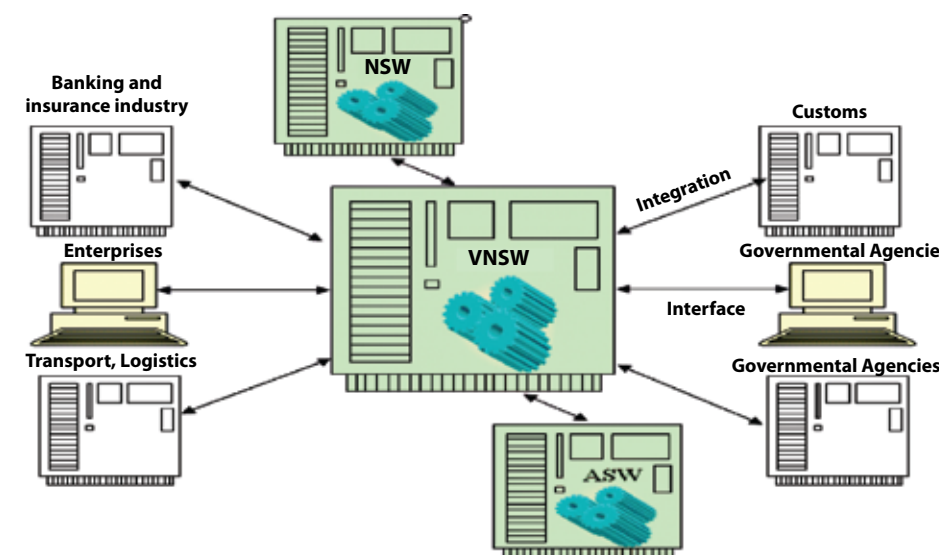
According to the schedule, the Ministry of Industry and Trade together with the General Department of Vietnam Customs and the Ministry of Transport are the first three agencies carrying out the pilot implementation of the National Single Window to establish the foundation for ASEAN Single Window's participation. The following elements are necessary to establish the National Single Window successfully:

- Resolute political determination of government leaders.
- Well-conditioned legal environment.
- IT and communications infrastructure strong enough to implement e-commerce and e-transactions.
- Powerful financial resource.
- Effective propagation strategy.

Besides the obligation to participate in the establishment and implementation of the ASEAN Single Window, Vietnam also has obliged to execute some multilateral treaties related to

building ASEAN Single Window, including: Convention on the simplification, harmonization of customs procedures in 1999 (Kyoto Convention, as amended), the Convention on Facilitation of International Maritime Traffic (FAL Convention, 1965), Agreement on Facilitating the Movement of Goods and People through the border among the countries of the Mekong Sub-region (GMS Agreement). Therefore, successful implementation of the National Single Window plays an important role to ensure the compliance with international treaties according to the roadmap which Vietnam has committed to follow. When operating, the National Single Window will bring huge benefits for society by promoting international trade, improving the efficiency of state management of commercial activities, and being an important motivation for electronic commerce to be profoundly applied.

CHAPTER III

E-LEARNING

I. Overview of e-learning in Vietnam

II. Comments about e-learning implementation in Vietnam

CHAPTER III

E-LEARNING

I. OVERVIEW OF E-LEARNING IN VIETNAM

Vietnam is currently in the process of industrialization and modernization and is integrating more broadly and deeply into the world economy in every area. One of the important elements for realizing that process is to create a learning society based on applying information and communications technology in education.

Decision 222/2005/QD-TTg by the Prime Minister promulgating the Master Plan on E-commerce Development for the period 2006 - 2010 included six major groups of policy and measures. In which, e-commerce education and propaganda is one of the most important measures.

Regarding the propagation of distance and online education and training, the Prime Minister issued Decision No. 164/QD-TTg on July 4th 2005 approving the project on distance education development for the period 2005-2010. The Decision emphasizes the development and improvement of the distance learning quality to enable people to continually study and improve their knowledge and professional skills and to develop the human resource for the industrialization and modernization. Moreover, on Oct 6th 2005, the Prime Minister also issued Decision No. 246/2005/QD-TTg promulgating the Strategy for Vietnam Information and Communications Technology towards 2010 and direction towards 2020, in which one of the specific goals is providing effective distance learning services.

This chapter will briefly introduce the concept, development and application of e-learning in Vietnam as well as the potentials of the market of e-learning services. It will also provide an insight on e-learning and the awareness of its importance in the intellectual economy.

In 2009, VECITA conducted a survey on e-learning at 200 organizations, including state administrative agencies, educational institutions, and enterprises. There were 147 responses in total. Responses from state administrative agencies, educational institutions and enterprises accounted for 31%, 42% and 27% respectively. The e-learning application in institutions increased by 25% in educational institutions and 15% in surveyed enterprises compared to the two previous years. These figures have somehow shown the real situation of e-learning development in Vietnam.

Table III.1: Responses to surveys on e-learning

| No.	Groups	Number	Percentage
1	State administrative agencies	45	31%
2	Universities, colleges and educational institutions	62	42%
3	Enterprises	40	27%
	Total	147	100%

The findings of the survey on e-learning and e-learning service market in Vietnam can be briefed as followed:

- E-learning in Vietnam remains limited to pilot projects at small and medium level. Most of the organizations involving in e-learning are state administrative agencies, educational institutions, and some enterprises in the sectors of information technology, banking and finance... Anh those organizations are well aware of the role and benefits of e-learning and expect to witness effective investment.

- Most of the e-learning implemented businesses highly appreciated the role of e-learning in efficiency maximization and cost minimization.

- Most of institutions are considering extending, upgrading and developing their e-learning systems.

- The Vietnam's e-learning service market has a high potential for development.

1. E-learning development at educational institutions

At present, educational institutions are the most active participants in researching and developing e-learning applications. According to the nationwide survey of VECITA on e-learning applications at universities and colleges, e-learning is being used in 37 of 62 surveyed institutions (60%). Seven institutions (11%) are planning to and 18 ones (29%) are interested in but have not planned to launch e-learning application.

Figure III.1: E-learning application at some universities and colleges

- ■ Have been used
- ■ Planning to launch e-learning application
- ■ Interested in but have not planned to launch e-learning application
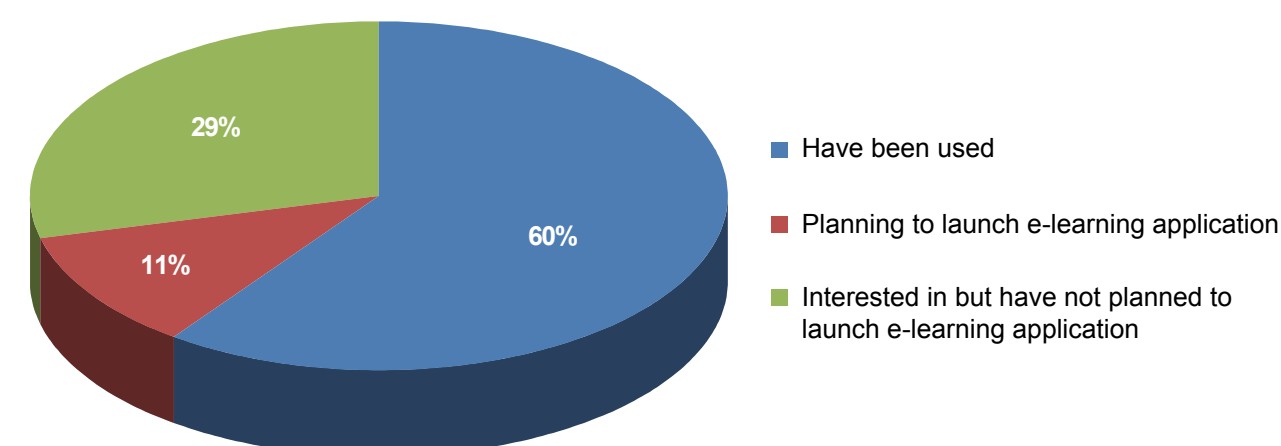
To implement the Decision 222 and governmental policies on developing information technology and e-commerce applications in education and training, universities and colleges have been investing heavily in the research and development of e-learning. Many workshops, seminars on advanced e-learning applications and related topics were held and received the interest of many educational institutions.

Box III.1: Some workshops on e-learning

- Workshop on *"Training quality improvement"* held by the Hanoi National University in 2000.
- Workshop on "Research and Development of e-learning" held by the Information Technology Institute (Hanoi National University) and the Department of Information Technology (Hanoi University of Technology) in March 2005.
- Workshop on "E-learning at Vietnamese Schools: Status-quo and Solutions" held by the Education Research Institute, Ho Chi Minh City Teaching College in December 2008.
- Workshop on "2009 national open and distance education" by the Hanoi Open University in October 2009.

Vietnam's major educational institutions soon realized the development trend of e-learning and approached this modern mode of education and training. The pioneers in using e-learning applications are universities and colleges such as: the School of Technology, and Information Technology Institute – Hanoi National University; Hanoi University of Technology; Foreign Trade University; Ho Chi Minh City National University; Academy of Post and Telecommunications; Hanoi Teaching College; Hanoi Open University; Ho Chi Minh City Open University; Hue University, Da Nang University... The Vietnamese branches of foreign educational institutions such as NIIT Vietnam, APTECH Vietnam, Fulbright Economics Teaching Program..., are extensively using e-learning in training, too. The application of e-learning at universities and colleges has initially generated positive outcomes.

From 2000 to 2005, because of weaknesses in the information technology infrastructure, e-learning was mainly the topic of workshops and meetings. Some institutions did e-learning experiment but its impacts on education were inconclusive. Since 2006, some institutions have started to use e-learning in teaching at different levels.

Regarding purposes of implementation, most surveyed educational institutions agreed that e-learning helps develop their human resource, improve teaching and learning quality, expand scope of training, broaden lecturers' and students' self- study skills, and save training costs.

In terms of modes of application, all e-learning implemented institutions have course content shared on their computer network and the Internet, in which 7 (18.9%) now use e-learning services by professional providers (courses are organized and managed by the cooperation between schools and service providers), 19 (51.4%) use their own e-learning systems that enable learners to access to and study courses managed by them.

Table III.2: Mode of e-learning application at educational institutions

No.	Mode of application	Number	Percentage
01	Sharing course content on computer network and Internet	37	100%
02	Using e-learning service providers	7	18.9%
03	Using their own e-learning systems enabling learners to access to learn courses	19	51.4%

Of the 37 e-learning implemented institutions, 9 (24.3%) have used e-learning for more than 3 years, 16 (43.3%) from 1 to 3 years and 12 (representing 32.4%) for less than 1 year. The majority of institutions have used e-learning for less than 3 years. The mode of application is now limited to sharing digitalized research and learning materials on computer networks.

Table III.3: Length of time of e-learning application at educational institutions

No.	Length of time	Number	Percentage
01	More than 3 years	9	24.3%
02	1 to 3 years	16	43.3%
03	Less than 1 year	12	32.4%
	Total	37	100%

The survey also showed that some institutions have started to include learning management software in their e-learning systems to manage their online teaching and learning. The examples are: Hanoi Technology College, Ho Chi Minh City University of Technology, Vietnam Aviation Academy... The software used by most institutions was developed based on the Moodle open source software.

Concerning the effects of e-learning, 33 out of 37 (89%) e-learning implemented institutions found their teaching and learning quality enhanced, 29 (representing 78%) found their teaching staff's ability improved, 21 (representing 57%) found their scope of education expanded. These have fulfilled their initial goals of e-learning application of *"improving teaching and learning quality of lecturers and students".*

Table III.4: Effects of e-learning application at educational institutions

No.	Effects of e-learning	Number	Percentage
01	Increased teaching and learning quality	33	89%
02	Improved teaching staff's ability	29	78%
03	Expanded scope of education	21	57%

The quantity and quality of e-learning-based courses have improved dramatically since they supplement the traditional classroom education modal and provide students with more learning opportunities. Most of the programs are partly provided online and the number of subjects taught online is rising. For example, Ho Chi Minh City University of Technology has started teaching many subjects using e-learning applications and conducted a survey on the effects of e-learning among the lecturers and students in 2008.[15]

Regarding level of education, most of e-learning-based courses are part-time and certificate-awarding, mainly foreign language ones. In addition, universities and colleges also combine e-learning with the classroom mode in their full-time courses to improve teaching and learning quality. Some MBA courses also have started to use e-learning.

Box III.2: Using e-learning in MBA course at the International Cooperation Centre for Technology Transfer and Training, Hanoi University of Technology

The Hanoi University of Technology has cooperated with The Northcentral University (US) in running MBA courses in E-commerce, Management Studies and Financial Management since 2002. The traditional classroom mode is combined with e-learning whose strengths are made use of. At the master level, 15 credits are given by traditional method and 24 are given by e-learning.

Graduates are awarded MBA Degree of the Northcentral University – a top US university in online education and the first to be accredited on running online PhD course on Business Management.

Source: www.mba.hut.edu.vn

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15   *Source: Bach Khoa e-Learning - BkeL - http://e-learning.hcmut.edu.vn.*
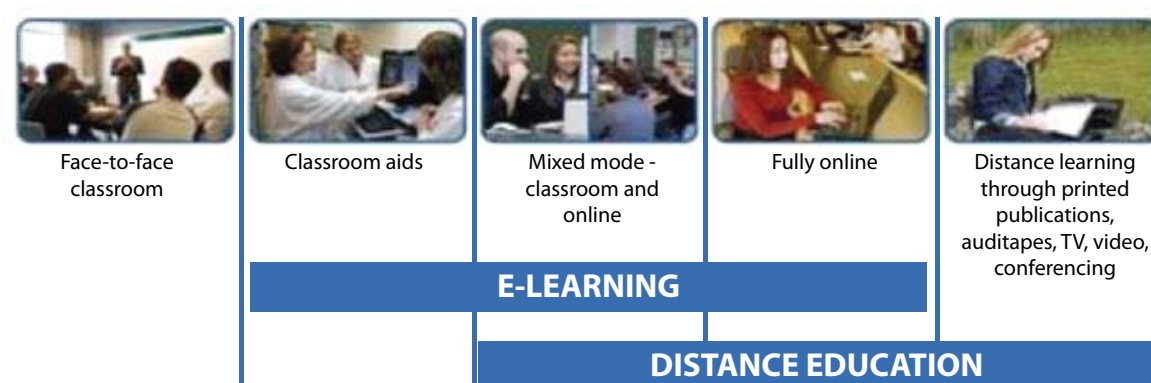
E-learning and distance education, to some extent, share many similarities. These types of education are closely linked with the network environment. The face-to-face classroom mode stresses the role of teachers while distance education requires learners to self-study and learn from materials (printed, audio, video...) Many universities in some countries as India and the United Kingdom have applied technology (like radio, TV) in distance learning courses. The upgrade from distance education to online learning is inevitable since teachers are now used to teaching from distance, schools already have course structures and students are used to the interactive environment in online classes.

E-learning is a web-based supplement to the existing types of education. It supports the traditional and distance learning models.

At present, education types can be categorized as followed:
- Face-to-face classroom: teachers and learners meet at classroom.
- Classroom aids: Learners at classroom and teachers are at another place communicating via network systems or video-conferencing, etc.
- Mixed mode – classroom and online: teachers and learners communicate mainly via the network environment but spend some time meeting face-to-face.
- Fully online: teachers and learners communicate completely online.
- Distance learning through printed publications, audiotapes, TV, video-conferencing...

Figure III.2: Types of education

| Face-to-face classroom | Classroom aids | Mixed mode - classroom and online | Fully online | Distance learning through printed publications, auditapes, TV, video, conferencing |

E-LEARNING

DISTANCE EDUCATION

Source: E-Primer Series – E-learning in Context – Mark Nichols, Laidlaw College, Auckland, New Zealand, 2008.

Both e-learning and distance education are non-classroom-based and web-based. Thus, e-learning can be seen as a tool for developing and expanding distance education. Vietnamese universities and colleges are fully aware of and start to effectively use e-learning to support the development of distance education.

The VECITA's survey showed that e-learning is extensively used at educational institutions over the past three years. The quantity and quality of e-learning applications have improved dramatically. Most universities and colleges having their own e-learning systems apply Moodle open source software.

2. E-learning application at state administrative agencies

The Vietnam Digital Content Development Program until 2010 emphasizes the need for "research and development investment in learning materials to support distance learning and e-learning, especially lectures, exercise, electronic dictionaries, virtual experiments on physics, chemistry and biology...".[16]

A survey at 15 ministries and 30 provincial and municipal people's committees by the VECITA showed that they have started using e-learning applications in providing information to and training officials. Some ministries have started creating their internal computer network and used information systems to provide guidance on work procedures.

Two typical examples for applying e-learning in the state administrative agencies are the Ministry of Education and Training, which is running its education network at *http://edu.net.vn*, and the Ministry of Information and Communications, which is cooperating with the Online Training School of Information and Communications at the website *http://www.mic-edu.vn.*
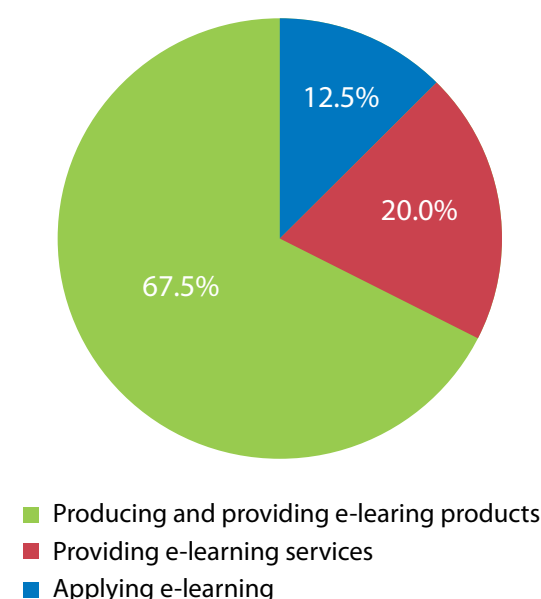
The Ministry of Industry and Trade is also operating an internal network to bring more information and awareness to its officials. In 2009, it started the project on building and using the TCVN ISO 9000-based quality management system. So far, the ISO procedure has been accessible in its internal network, supporting performance of officials.

Some other ministries are planning to launch e-learning in the coming time to make the staff training process more efficient.

3. E-learning application at enterprises

Many enterprises are now fully aware of the great benefits of e-learning and looking to apply it. In 2009, VECITA conducted a survey on e-learning application in enterprises.

Figure III.3: E-learning application at enterprises

12.5%
20.0%
67.5%

■ Producing and providing e-leaning products
■ Providing e-learning services
■ Applying e-learning

16   Decision 56/QD-TTg dated 3/5/2007 by the Prime Minister on "Approving the Vietnam digital content development program until 2010".

Some findings of the survey are as followed:

- Some software companies in Vietnam have launched supporting products for e-learning. Despite not having as many functions as foreign ones, these products still play an important role in e-learning development in Vietnam. Some other companies focus on providing localized foreign e-learning solution packages.
- E-learning service providers mainly focus on online courses in foreign languages, informatics, and soft skill improving subjects. Most of them adopt the B2C model. Their products are provided on the Internet via websites which learners can access to, enroll, pay tuition fees, study learning materials and take exams in. Popular electronic payment modes are: prepaid cards, SMS, online payment portals… In November 2008, VDIC, NCS Tech and ITPRO cooperated in holding the international workshop on "E-learning application solution in Vietnam" to introduce modern e-learning products and services.
- E-learning is applied in recruiting and training mainly at major corporations in the fields of information technology, telecommunications, banking, finance, and manufacturing.

In general, enterprises applying e-learning are in the process of piloting and assessing investment efficiency. Most of them have large number of employees and operate in broad areas. They often have training department and high demand for human resource development. E-learning application in businesses is seen as a measure to save costs and increase training efficiency. Some exemplary corporations include FPT Group, the Vietnam Post and Telecommunications (VNPT), Techcombank…

The e-learning application depends on human resource and infrastructure of businesses. Large companies often have their own e-learning systems or purchase digitalized content from external sources. Staff responsible for training directly manages the systems and online courses. Small and medium enterprises often buy available online courses from providers for staff members to learn.

According to the survey results, 89% of enterprises responded that their training costs were decreased, 80% found a professional skill improvement of staff taking online courses. Thus, 90% of the enterprises using e-learning told that they will increase spending for it while 10% will maintain the current budget and none is going to cut the current level of investment.

Table III.5: Effects of e-learning application at enterprises

No.	Effects	Number	Percentage
1	Saving training cost	35	89%
2	Improvement in staff's skills	32	80%

The survey also showed that e-learning has proven its deciding role in training activities of businesses. In the coming time, it has the potential for further development in companies, especially small and medium ones in different business areas.

In short, e-learning has been initially applied in Vietnam. However, due to the distinctive characteristics in national education and training and in the technological infrastructure, e-learning is now mainly in the process of piloting, laying the foundation for future comprehensive and extensive application.

II. COMMENTS ABOUT E-LEARNING IMPLEMENTATION IN VIETNAM

1. Potentials and challenges of e-learning implementation

The more society grows the higher people demand for education. Although the training facilitation system has been improved in both quantity and quality, the education demand of the people is still not satisfied. The training demand in Vietnam is particularly huge, due to the estimation that the number of pupils, students and learners engaging in all levels of training to the year 2020 is approximately 29,905,052.[17]

In terms of supply, based on surveys and result analysis, the awareness of e-learning application is enhanced. The human resource issue at institutions gets more and more investment. Thus, the supply of and demand for e-learning are now in the favorable situation, which marks the good signals of a potential training market.

However, based on the current situation in Vietnam as well as the characteristics of e-learning, it is necessary to keep on researching to find solution for following issues:

- Management, inspection, and supervision of training institutions.
- The study and examination assessment standard (result recognition and certification).
- Staff improving.
- E-learning habits of users.

2. Suggestions

In recent years, e-learning attracts more and more interests from the training institutions. It is considered to be a new teaching method that creating more studying opportunities for the society. Therefore, e-learning implementation in Vietnam is a matter of social concern. This report proposes some comments for reference in implementing e-learning in Vietnam:

2.1. Set the goals and allocate necessary resources in advance

E-learning system requires comprehensive investment in terms of infrastructure, software and content. Each organization should choose the appropriate model depending on its size and resource.

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17   Source: The draft version 14th – the Strategy of Vietnam education development in the period of 2009-2020 was posted at the address of http://www.moet.gov.vn, updated on 20th February 2009.

2.2. Schedule to implement, maintain, and upgrade the e-learning system

In Vietnam, e-learning implementation is currently in the research and trial phase. Because of the characteristics of Vietnam's education as well as the infrastructure condition and learners' habits, e-learning is suitable to be the supplementary teaching method. Therefore, organizations' e-learning's implementing schedule needs to be well-matched with their general training plan, and supports the traditional education models. It is also necessary to regularly maintain and upgrade e-learning system in order to implement it effectively. Organizations should carry out various trial models under each phase and evaluate the outcomes before developing the appropriate one.

2.3. Define the methods to implement e-learning service business

The concept of e-learning is quite new in Vietnam. Thus, e-learning service business needs more time to examine and find out the most effective strategy. In order to succeed in this new area, it is important for organization to clarify basic elements such as target learners, learning content, technology requirements, required resources, method of supply and payment...

CHAPTER IV

E-COMMERCE APPLICATION IN ENTERPRISES

I. Introduction

II. E-commerce application readiness

III. E-commerce application status

IV. Enterprises' evaluation of e-commerce applicatioin efficiency

V. Specialized e-commerce business models

CHAPTER IV

E-COMMERCE APPLICATION IN ENTERPRISES

I. INTRODUCTION

1. The survey scale

In 2009, VECITA continued to send questionnaire on "E-commerce application in enterprises" to more than 3000 enterprises nationwide. The survey was conducted from June to September. The surveyed objects were randomly selected enterprises of various economic sectors, located in many areas and of different sizes.

VECITA received 2100 answered questionnaires, of which 2004 are valid. Statistics utilized in this chapter are primarily based on the analysis of the above 2004 questionnaires.

Table IV.1: Questionnaire return rate in recent years

| Year	Number of sent questionnaires	Number of received questionnaires	Return rate
2004	800	530	66%
2005	800	504	63%
2006	1300	1077	83%
2007	2000	1737	87%
2008	3000	1802	60%
2009	3000	2004	67%

From 2004, the survey scale and the number of received questionnaires constantly increase. The return rate fluctuated over years but maintained at the rates of more than 60%. Statistics and business data analysis from the survey not only outline the status of e-commerce application in enterprises in 2009 but also illustrate the e-commerce development trends over years.

2. The questionnaire

In 2009, VECITA designed a new, shorter questionnaire, in which survey questions were more scientifically relocated and simplified. Those changes were intended to help answerers easily answer questions in the survey and make the data processing result more accurate. Though there were many changes, new questionnaire inherited many questions and criteria from previous one to ensure data comparability between years.

Enterprises directly filled in the questionnaire. Survey answerers included administrators (directors, vice directors, heads of departments…) or employees. The rate of answerers that are administrators is relatively high. 22% of answerers are directors and vice directors and 14% are heads of departments. Remaining 64% are employers. Most of the answerers came from administrative or accounting department.

Figure IV.1: Survey answerers

- ■ Director, Vice director ■ Heads of department ■ Employees
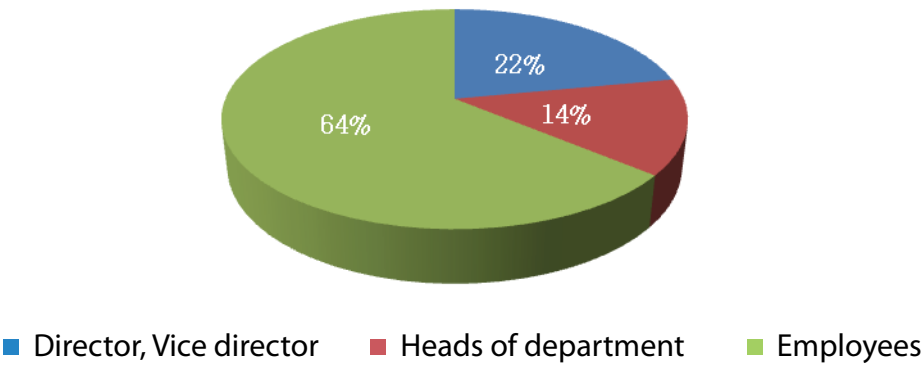
3. Primary categories

In order to generate a more comprehensive and profound view of e-commerce application in enterprises, all data is analyzed using 3 main categories:

- Size of business (number of employees).
- Business industry.
- Locality (geographic allocation).

These main categories are meant to reveal the correlations and the differences between levels of e-commerce application at enterprises of various economic sectors, located in different areas and of different sizes.

3.1. Size of business

The sizes of surveyed businesses, like previous years, are categorized based on number of employees. In 2009, 47% of surveyed businesses have less than 50 employees. The ratio of medium enterprises (with number of employees range from 51 to 300) was 38% and ratio of large enterprises (having more than 300 employees) was 15%. Compared to the sizes of surveyed businesses in 2007 and 2008, in 2009, the rate of large enterprises is relatively higher and the rate of enterprises of various sizes is also more equivalent.

Figure IV.2: Sizes of surveyed business

Business size (number of employees)
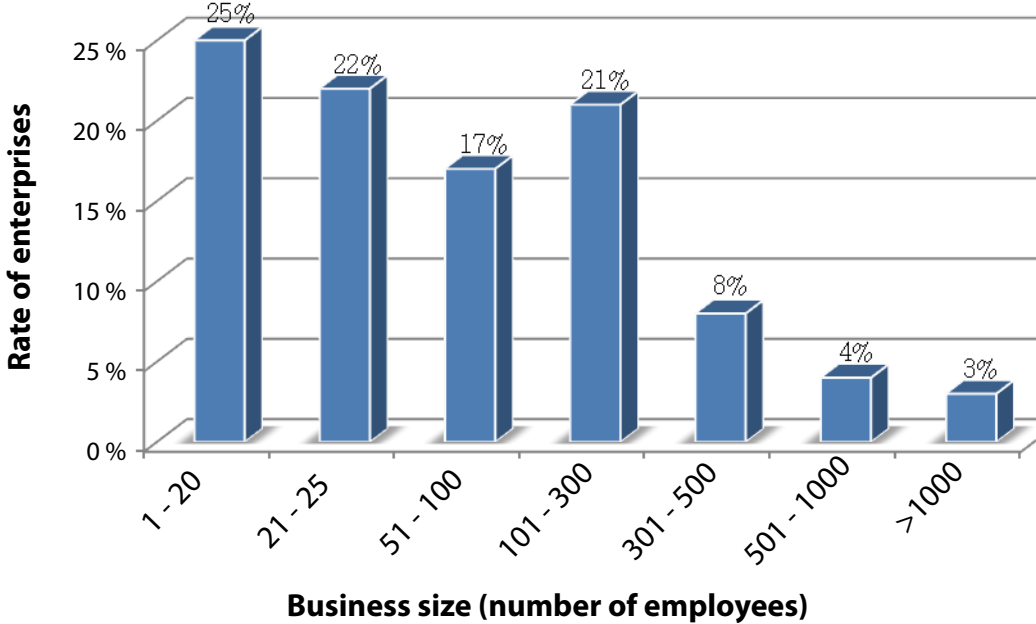
In order to simplify the analysis, the sizes of business are going to be grouped into two main categories: small and medium enterprises (having up to 300 employees) and large enterprises (having more than 300 employees). Categorized as above, 85% of surveyed enterprises are small and medium enterprises (SME), 15% left are large ones. Rates of SME and large enterprises are equivalent to previous years, hence the comparability between years is ensured.

Figure IV.3: Sizes of business through recent years

- ■ SME ■ Large Enterprises
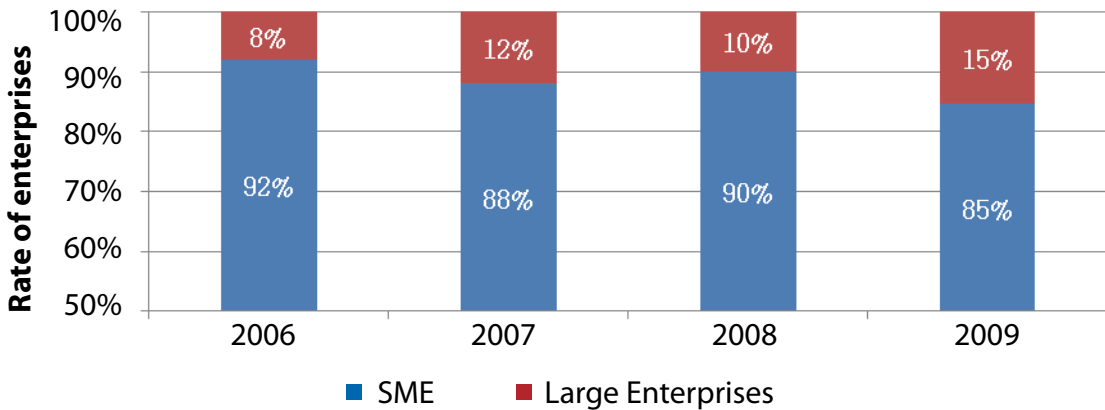
However, compared to the total number of businesses, the rate of large enterprises in this year sample is higher.[18] This means the overall result of some criteria is higher than real practice because large enterprises usually have better condition and higher e-commerce application level than SMEs. Therefore, in order to limit errors caused by the disproportion, in the statistics and analyze process, criteria are going to be separately analyzed by two categories, SMEs and large enterprises.

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18 According to The Statistics Yearbook 2008 of General Statistics Organization, Vietnam has 155771 enterprises, in which, rate of SME are 97.4% and large enterprises account for only 2.6%.

3.2. Business sectors

The surveyed businesses came from diversified business sectors. Many businesses operate in many sectors simultaneously. Of all the surveyed businesses, retail and wholesale enterprises predominated with the rate of 21%. Next are construction enterprises with the rate of 17% and agriculture and forestry enterprises with the rate of 14%. With that result, the first three places are sectors, in which a vast number of employees are unskilled labors with low level of computerization. On the other hand, enterprises from sectors with high level of computerization such as IT, financial account for only 7% and 4% relatively.

Figure IV.4: Business sectors
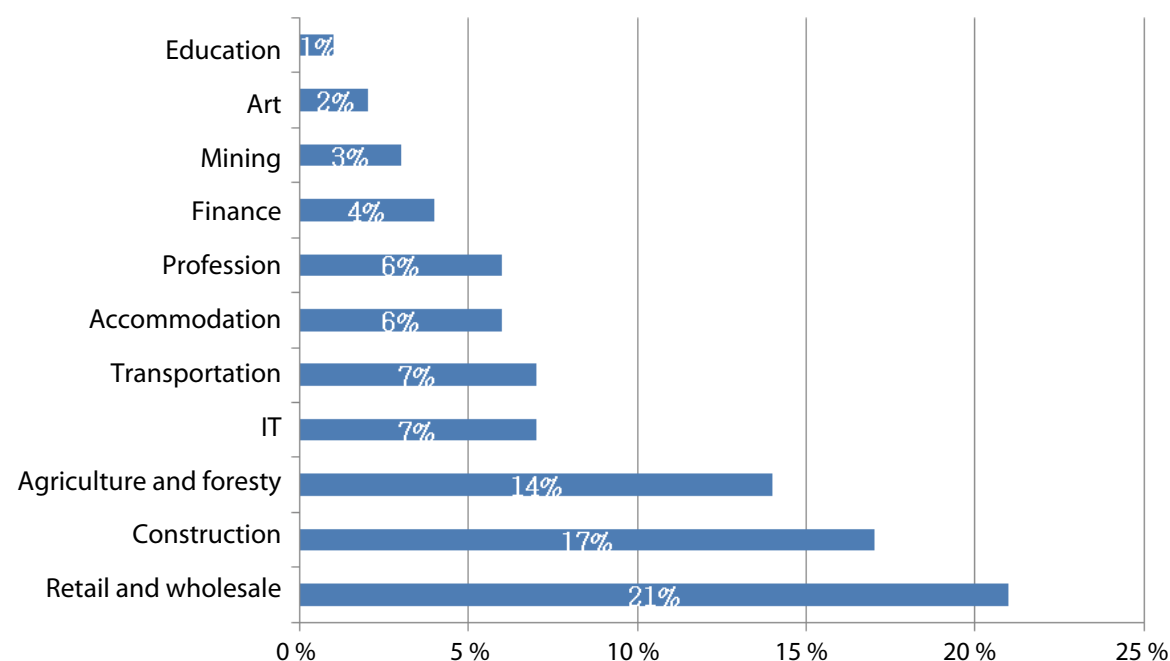
* Total rates of sectors are higher than 100% because an enterprise can operate in many sectors at once.

Besides, 34% of enterprises operated in some other business sectors, such as textile, package, design and consulting…

3.3. Location

Regarding the operating location, 16% of surveyed enterprises operated in Hanoi, 31% were from Ho Chi Minh City, and 53% of enterprises were from other localities nationwide.

Figure IV.5: Geographic allocation of surveyed enterprises
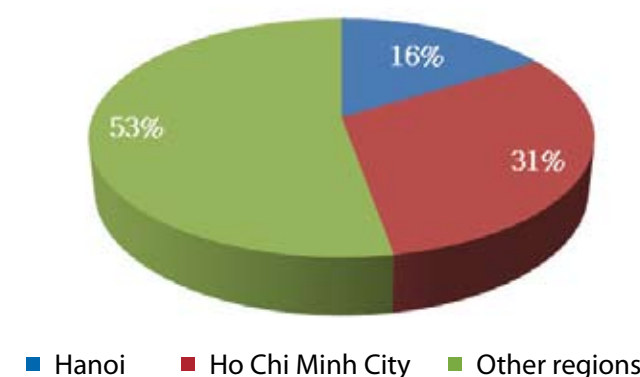
The allocation of surveyed enterprises by localities above resembles the general allocation of enterprises nationwide.[19] However, the rate of surveyed enterprises from other regions increases compared to previous years. According to statistics from recent years, e-commerce application level in other regions was still lower than in two major cities Hanoi and Ho Chi Minh City. Therefore, a high rate of enterprises from other regions might alter the results of some criteria.

On the other hand, size of business in different areas resembled each other. This is going to help analysis result comparable and stable between localities.

Table IV.2: Geographic allocation of surveyed enterprises categorized by size of business

	Hanoi	Ho Chi Minh City	Other regions
SME	83%	86%	84%
Large enterprises	17%	14%	16%

Size of business, locality and business sectors are primary categories that impact all the e-commerce application criteria. Besides, some criteria are going to be analyzed by some categories that directly influence them.

II. E-COMMERCE APPLICATION READINESS

In terms of e-commerce application readiness in enterprises, Vietnam e-commerce report 2008 made the comment "e-commerce application readiness in enterprises is generally stable". Therefore, 2009 questionnaire and report will concentrate on some main criteria reflecting the e-commerce application readiness:

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19   *According to Statistics Yearbook 2008, rate of enterprises operating in Hanoi was 15.9%, in Ho Chi Minh city was 28.9%, and in other regions was 55.1%.*

- Computer usage in enterprises.
- Internet connection and usage in enterprises.
- Training situation and e-commerce-specialized staffs in enterprises.

1. Computer usage in enterprises

In terms of infrastructure, computers take an indispensable role in IT application in general and e-commerce in particular. Hence, computer usage is one of the basis criteria that illustrate the e-commerce application readiness in enterprises.

In 2009, 100% of surveyed enterprises equipped with computer. Each enterprise had an average of 25.8 computers (22.9 in 2007 and 15.1 in 2008). On average, there is one computer for 8.2 employees (compared to 10 in 2008). This meant e-commerce application in enterprises had a considerable development step and created initial infrastructure needed for e-commerce application in the next stage.

The rate of enterprises having less than 10 computers reduced to 47% (from 55% in 2007 and 56% in 2008). Meanwhile, the rate of enterprises having from 11 to 50 computers increased to 44% (from 36% in 2008). Rate of enterprises having more than 50 computers also slightly increased compared to previous years.

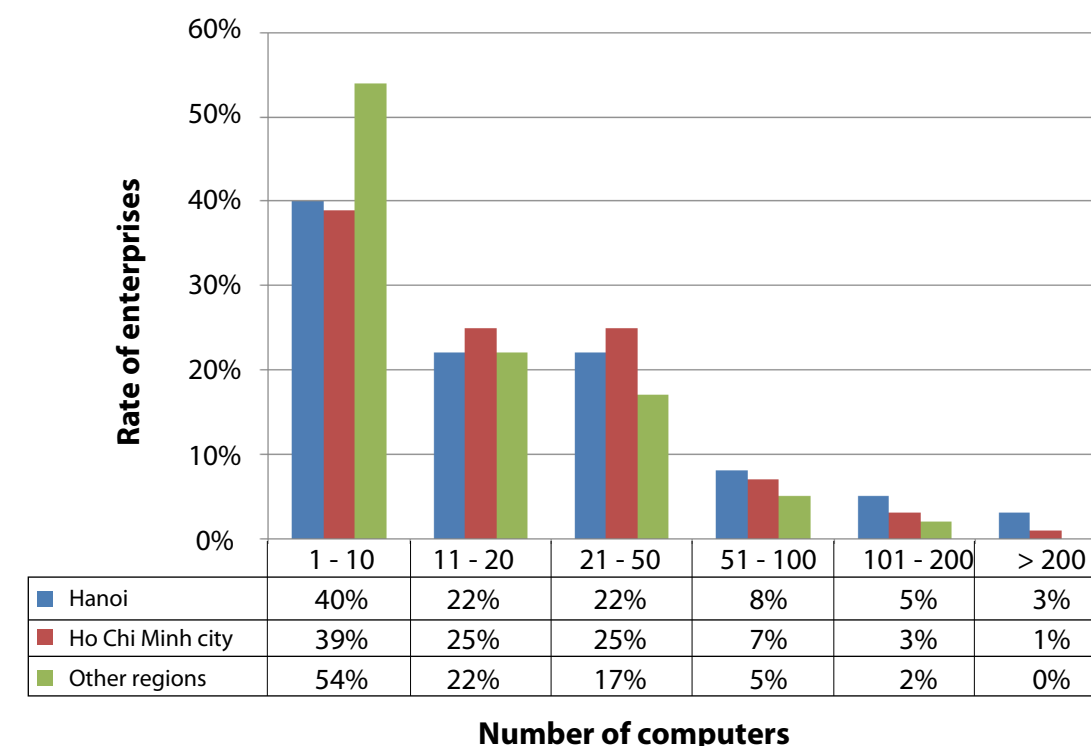**Figure IV.6: Number of computers in enterprises through recent years**
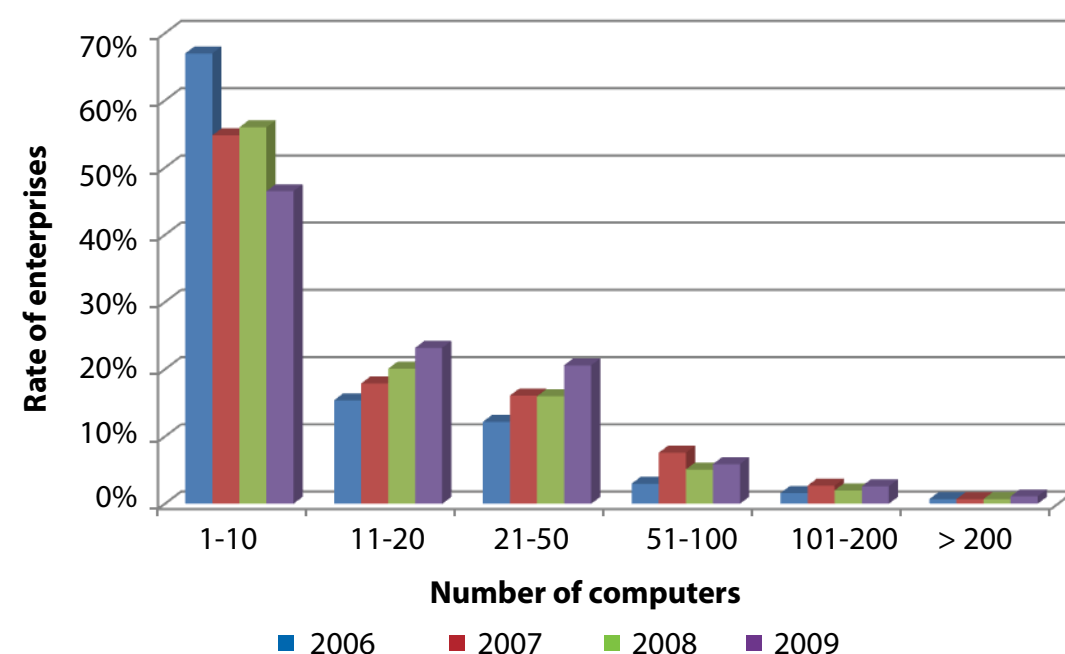
Besides enterprises in Hanoi and Ho Chi Minh City, enterprises in other regions also realized the potential of IT application in business process. Therefore, in 2009, although the rate of enterprises in other regions increases, the average number of computers in enterprises still maintains. The computer usage, however, considerably fluctuate between regions and business sectors.

In Hanoi, each enterprise had an average of 39 computers; there were 8.1 employees for a computer on average. In Ho Chi Minh City, each enterprise had 25.6 computers and every 7.9

labors had a computer on average. In other regions, each enterprise had 21.5 computers and every 10.3 employees had a computer on average.

About 53% of surveyed enterprises in other regions had 1 to 10 computers. On the other hand, 60% of enterprises in Hanoi and Ho Chi Minh City had more than 10 computers.

Figure IV.7: The rate of computers in surveyed enterprises in different regions

Number of computers	1 - 10	11 - 20	21 - 50	51 - 100	101 - 200	> 200
Hanoi	40%	22%	22%	8%	5%	3%
Ho Chi Minh city	39%	25%	25%	7%	3%	1%
Other regions	54%	22%	17%	5%	2%	0%

Enterprises from various business sectors had different average number of computers. Enterprises in financial, transportation, mining, and IT sectors had the greatest average number of computers. The average numbers of computers in enterprises in these sectors are 46.7, 41.0, 40.7, and 39.3, respectively. Enterprises from these sectors either have a vast number of employees or have a high level of computerization. To accurately acknowledge the generalization of computers in enterprises, the evaluation of the employee-per-computer ratio was carried out. Enterprises in IT, education and financial had the lowest rate of employee-per-computer, which are 3.7, 5.6, and 5.7 respectively. This means these are sectors in which enterprises had the highest level of computer generalization. Enterprises in mining and transportation sectors have high average number of computers but have very low employee-per-computer ratio instead.

Table IV.3: Computer usage in enterprises in business sectors

Business sectors	Computer per enterprise ratio	Employee per computer ratio
IT	39.3	3.7
Education	18.8	5.6
Finance	46.7	5.8
Art	22.3	6.0
Construction	28.5	7.1
Commerce	19.8	7.2
Accommodation	31.6	8.0
Profession	36.2	8.4
Transportation	41.0	9.1
Agriculture and Forestry	23.9	11.5
Mining	40.7	15.6

Large enterprises have much higher average number of computers compared to SMEs. Employee-per-computer ratio of large enterprises, however, is relatively low compared to one of SMEs. In SMEs, there are 6.9 employees for every computer on average. However, in large enterprises, there are 21.3 employees for every computer on average. This shows the recent initiative of SMEs in applying IT and e-commerce. Nevertheless, the application levels in SMEs are still low compared to large enterprises. However, a significant portion of large enterprises operate in sectors, in which most of employees are unskilled and the level of production computerization is still very low.

Table IV.4: Computer usage in enterprises of different sizes

Size of business	Computer per enterprise ratio	Employee per computer ratio
SME	15.7	6.9
Large enterprise	78.6	21.3

Regarding operating location, in Hanoi, each enterprise has an average of 29 computers and the average employee-per-computer ratio is 8.1. Enterprises in Ho Chi Minh City have an average of 26 computers and the average employee-per-computer ratio is 7.8. In other regions, on average enterprises have 21 computers and there are 10.1 employees for every computer

**Figure IV.8: Computer usage in enterprises in different localities**
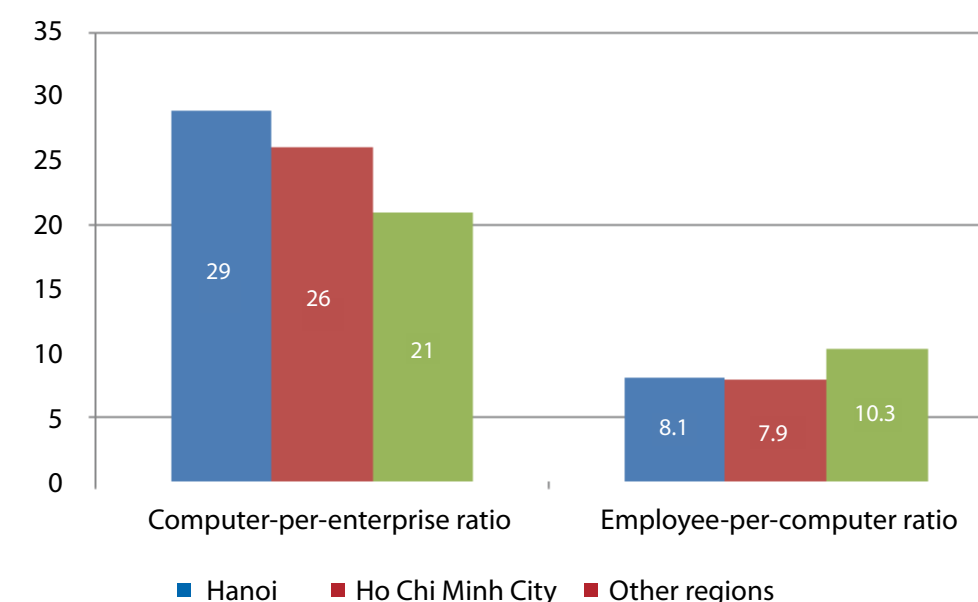
From the evaluation of computer usage in enterprises, it is able to assert that enterprises had taken care of and invested in infrastructure for IT and e-commerce at an elevated degree. However, this criterion also distinctively illustrates the gap of levels of e-commerce application between enterprises of various sizes, sectors and localities.

2. Internet connection and usage in enterprises

2.1. Internet connection

Internet is the requisite tool for enterprises to apply e-commerce. The survey result show that 98% of enterprises had connected to Internet by various means. In which, 86% of enterprises used ADSL, 10% used leased line and 2% used dial up connection.

Figure IV.9: Methods of Internet access of enterprises in 2009
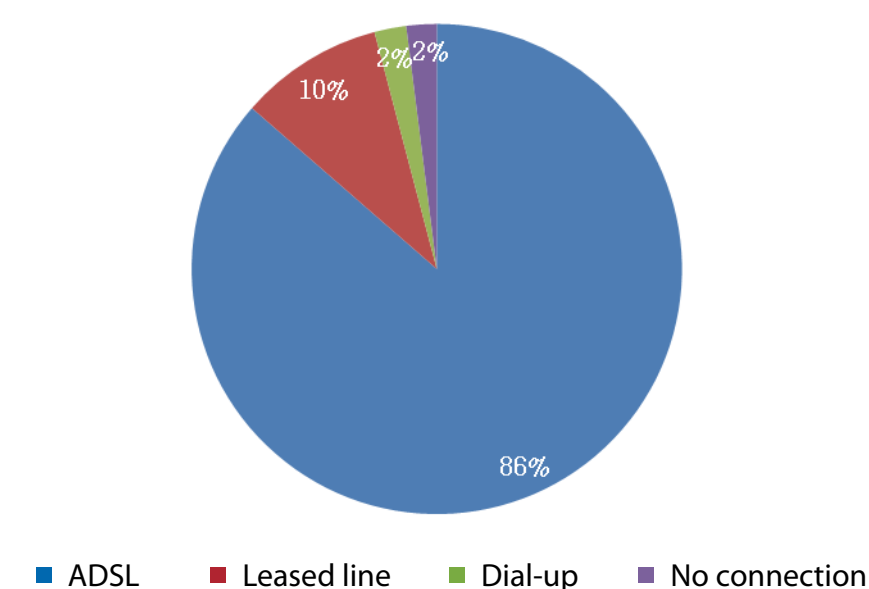
Most enterprises choose ADSL connection, however, the percentage of enterprises using ADSL reduced compared to the ratio of 92% in 2008. Leased line, with the advantage of speed, stable, and security are being chosen by more and more enterprises instead. In 2009, there are 10% of enterprises using leased line while in 2007 and 2008 the rate was only 4% and 6% respectively. This means enterprises went through the initial phase, in which they merely need to have an Internet connection available, to the application phase, in which they request a stable and high-speed Internet connection. In this application phase, however, enterprises need to take extreme cautious because many legal bases for applications in the leased line haven't been completed yet.

On the other hand, 2% of enterprises still had no Internet connection. This rate was higher than the rate of 1% in 2008 because this year survey sample had a vast number of enterprises from other regions. Only 1 enterprise having no Internet connection operates in Hanoi, the rest are from other regions. All enterprises having no Internet connection are SMEs, 100% of large enterprises had at least one kind of Internet connection.

Large enterprises also use leased line more than SMEs. 14% of large enterprises had leased line connection compared to the rate of 8% of SMEs.

Table IV.5: Internet connection in enterprises of different sizes

| Size of business	No connection	Dial-up	Leased line	ADSL
SME	2%	3%	8%	87%
Large enterprise	0%	1%	14%	85%

Dial-up connection method still maintains around the rate of 1% to 3% through recent years. Most of enterprises using this connection method are from other regions. This is because of the infrastructure for high speed Internet connection is not available in many remote regions so that enterprises must still use the dial-up connection method to exploit the available phone line system.

2.2. Email usage for business purpose

Email is one of the most frequent used tools in Internet. According to the survey result, 81% of enterprises use email for business purpose. This rate is relatively low because email is an economic, cost-saving, quick communication tool, which is more and more frequently used. Moreover, level of computerization and Internet generalization in enterprises is considerably high. This means enterprises have not fully exploited all potential of their IT infrastructure.

Regarding size of business, 95% of large enterprises use email for business purpose, meanwhile the rate of SMEs using email for business purpose is only 78%. This disparity demonstrates the inefficient application of invested IT and e-commerce infrastructure in SMEs. Due to the fact that nearly 100% of enterprises own at least one computer and have access to Internet, the email usage for business purpose must be very simple and straightforward. Therefore, the low usage rate shows that email in enterprises is being used for many other individual purpose rather than business ones.

Figure IV.10: Email usage for business purpose in enterprises of different sizes
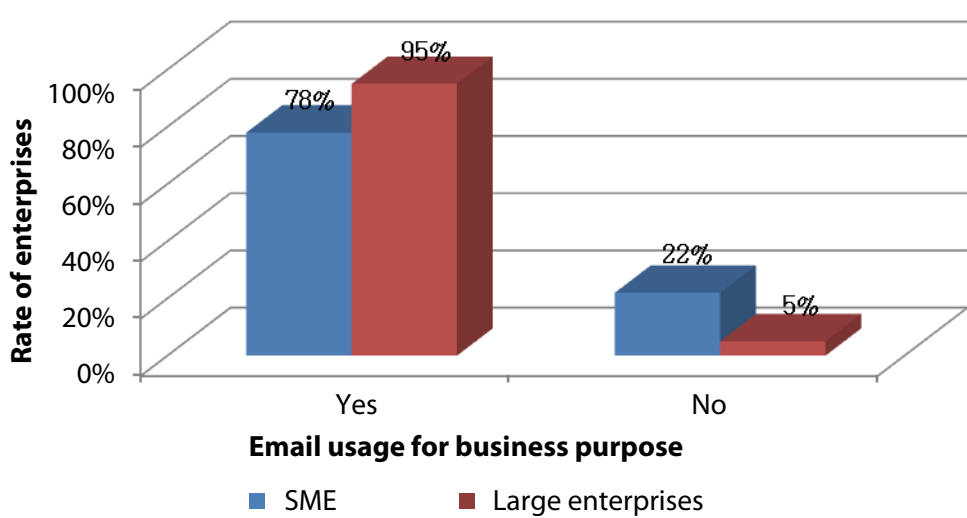
2.3. Security

Information security is the most concerned issue of enterprises applying e-commerce. Multitude of security methods have been used by enterprises to ensure the safety of internal information as well as customer data privacy.

The 2009 questionnaire surveyed some security methods, included: security software, firewall, security hardware and digital signature. Of these methods, 97% of enterprises use security software. The rate of enterprises use firewall and security hardware is 43% and 34%, respectively. Digital signature method is used by only 3% of enterprises.

Table IV.6: Security methods applied by enterprises

Method	Software	Firewall	Hardware	Digital signature
Ratio	97%	43%	34%	3%

Large enterprises are more active in applying security methods. The rate of large enterprises using more complicated methods such as firewall, security hardware and digital signature is much higher than one of SMEs. Due to higher information security risk, large enterprises have to protect themselves by using more reliable method and applying many methods simultaneously.

Figure IV.11: Security methods in enterprises of different sizes
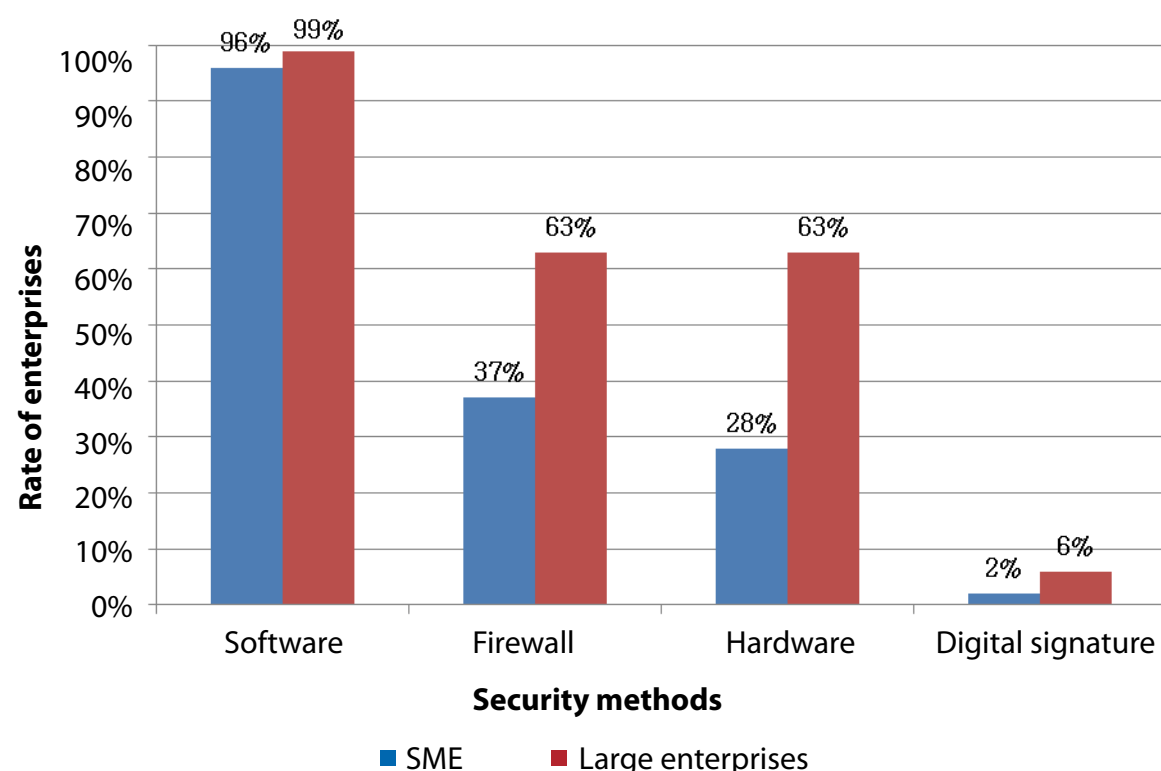
100% of surveyed enterprises apply at least one IT and e-commerce security method. Along with protecting their information, enterprises also pay attention to protect customer's data privacy. Answering the question on data privacy policy, 17% of enterprises said that they had the policy to protect information and data privacy of customer. The rate of enterprises having data privacy policy in Hanoi and Ho Chi Minh City is 77% and 75%, respectively. Meanwhile, this rate in other regions is only 66%.

Large enterprises are taking the lead in building data privacy policy with the rate of 87%. On the other hand, the rate of SMEs having customer data privacy policy is 67%.

3. Training methods and ecommerce-specialized staff

In 2009, 33% of enterprises had ecommerce-specialized staff. This rate slightly reduced compared to 2007 and 2008. This is because the number of surveyed enterprises in Hanoi and Ho Chi Minh City decrease.

In terms of operating location, 43% of enterprises in Ho Chi Minh City have e-commerce specialized staff, the rate of enterprises in Hanoi is 31%, and in other region is 27%. Vietnam e-commerce report 2008 asserted the role of e-commerce specialized staff to the efficiency of e-commerce application in enterprises. Therefore, the low rate of enterprises having e-commerce specialized staff in other regions is likely to widen the e-commerce application gap between two major cities and other regions.

Figure IV.12: Ratio of enterprises having e-commerce-specialized staffs through recent years
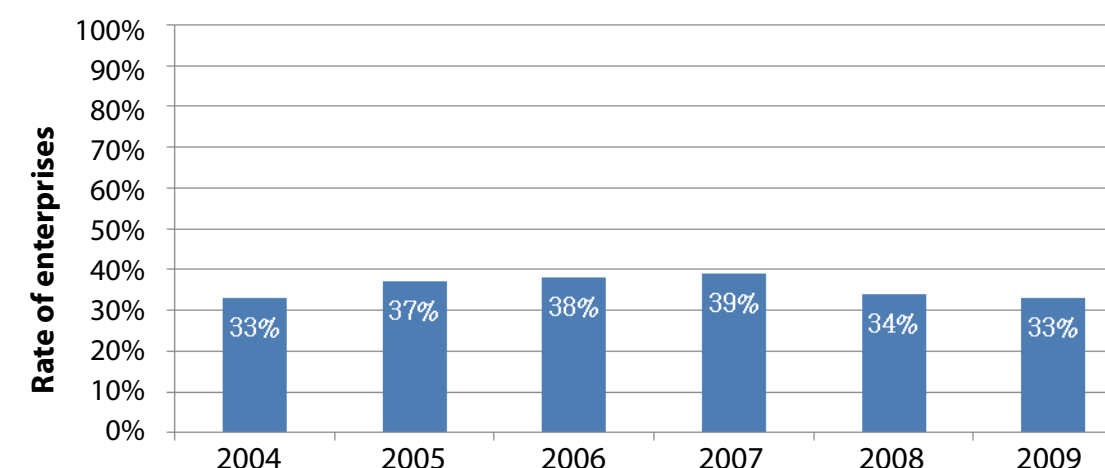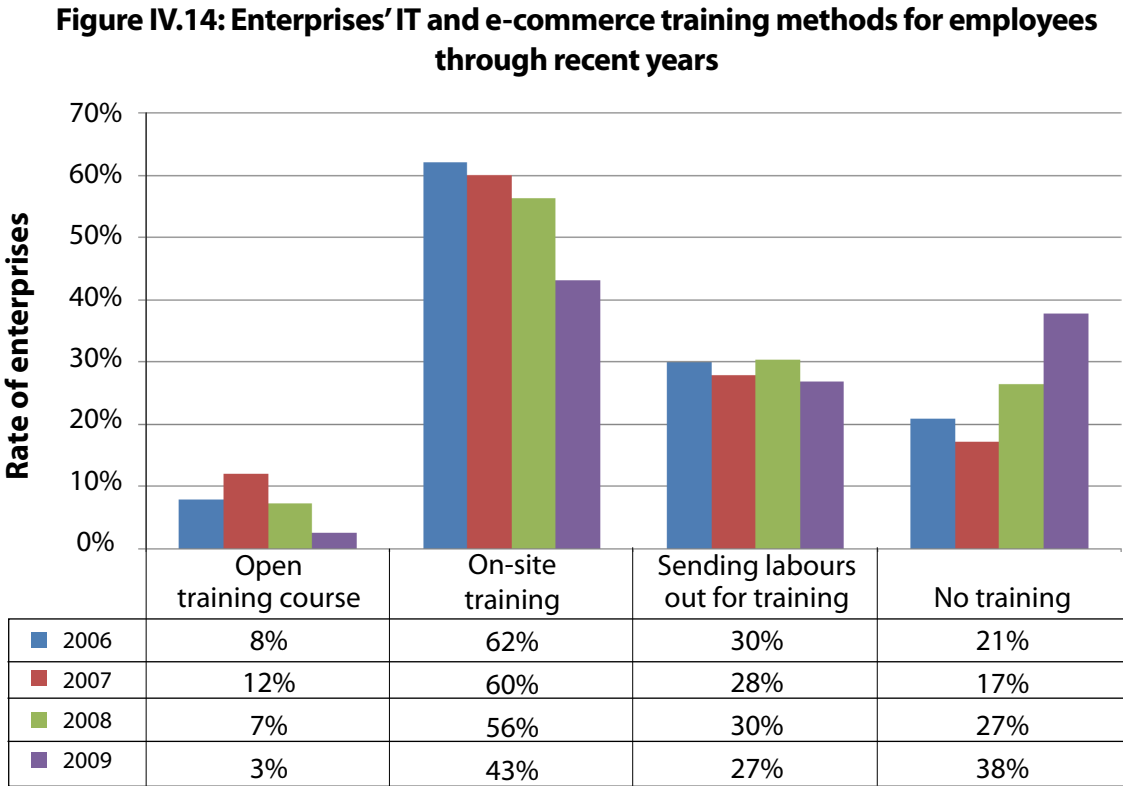

Size of business notably impacts the having e-commerce-specialized-staff rate of enterprises. While 57% of large enterprises have e-commerce specialized staff, this rate in SMEs is only 28%.

Rate of enterprises having e-commerce specialized staff in each business sector is directly proportional to the e-commerce application level of that sector. IT and finance sector have the highest rate of enterprises having e-commerce specialized staff, with the rate of 62% and 52%, respectively. Sectors that have the lowest rate of enterprises having e-commerce specialized staff are mining (23%), construction (21%), and art (13%). Commerce is the sector that requires a high IT and e-commerce application level, however, the rate of commerce enterprises having e-commerce specialized staff is relatively low compared to other sectors. Therefore, in the upcoming years, commerce enterprises have to focus more on developing their own ecommerce-specialized-staff.

Figure IV.13: Ratio of enterprises having e-commerce specialized staffs in different business sectors
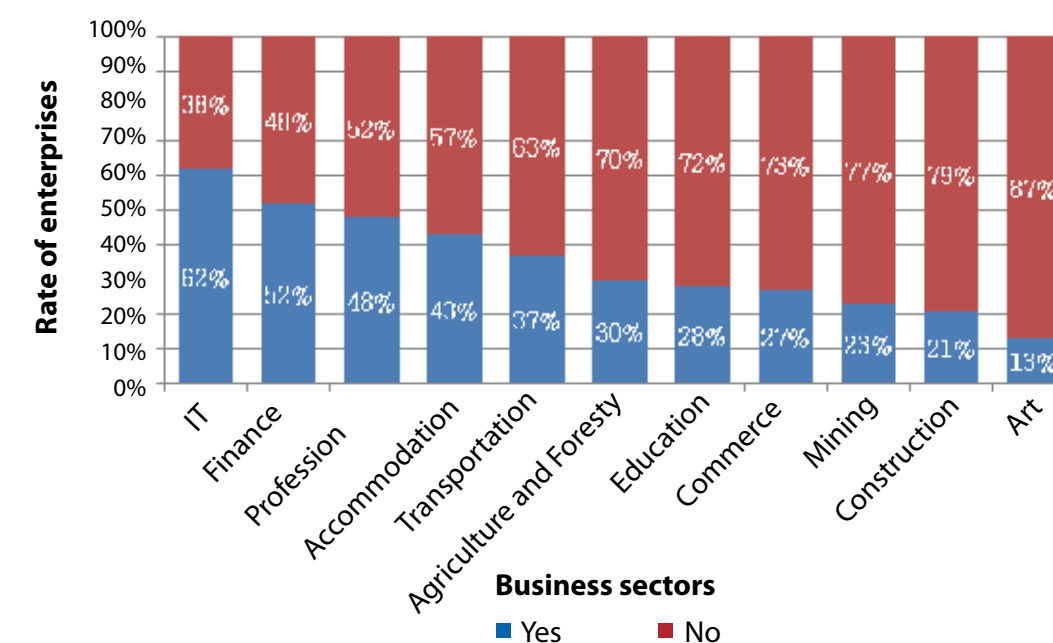
Regarding IT and e-commerce training, the most prevalent training form is on-site training, which is applying by 43% of enterprises. Meanwhile, 27% of enterprises apply sending labors out for training form, and merely 3% of enterprises open training course for employees. The rate of enterprises having no training form for employees increases to 38%. At the same time, the rate of enterprises having other e-commerce training forms decreases. Due to the economic crisis in 2009, most of enterprises do not recruit more employees. Therefore, the rate of enterprises applying the on-site training form greatly decreases because this method is generally used for newly recruited employees. On the other hand, the forms of sending labors out for training decreases at a slower pace since enterprises ordinarily pre-scheduled to apply this one periodically.

Figure IV.14: Enterprises' IT and e-commerce training methods for employees through recent years

	Open training course	On-site training	Sending labours out for training	No training
■ 2006	8%	62%	30%	21%
■ 2007	12%	60%	28%	17%
■ 2008	7%	56%	30%	27%
■ 2009	3%	43%	27%	38%

In 2009, rate of enterprises having no training forms for employees significantly increases to 38%, compared to previous years. 95% of those enterprises are SMEs. This sign showed that in order to cope with the economy crisis, Vietnam enterprises, especially SMEs, must have reduced cost for training and education of employees.

Figure IV.15: Training methods in enterprises of different sizes

Training methods
■ SME ■ Large enterprises
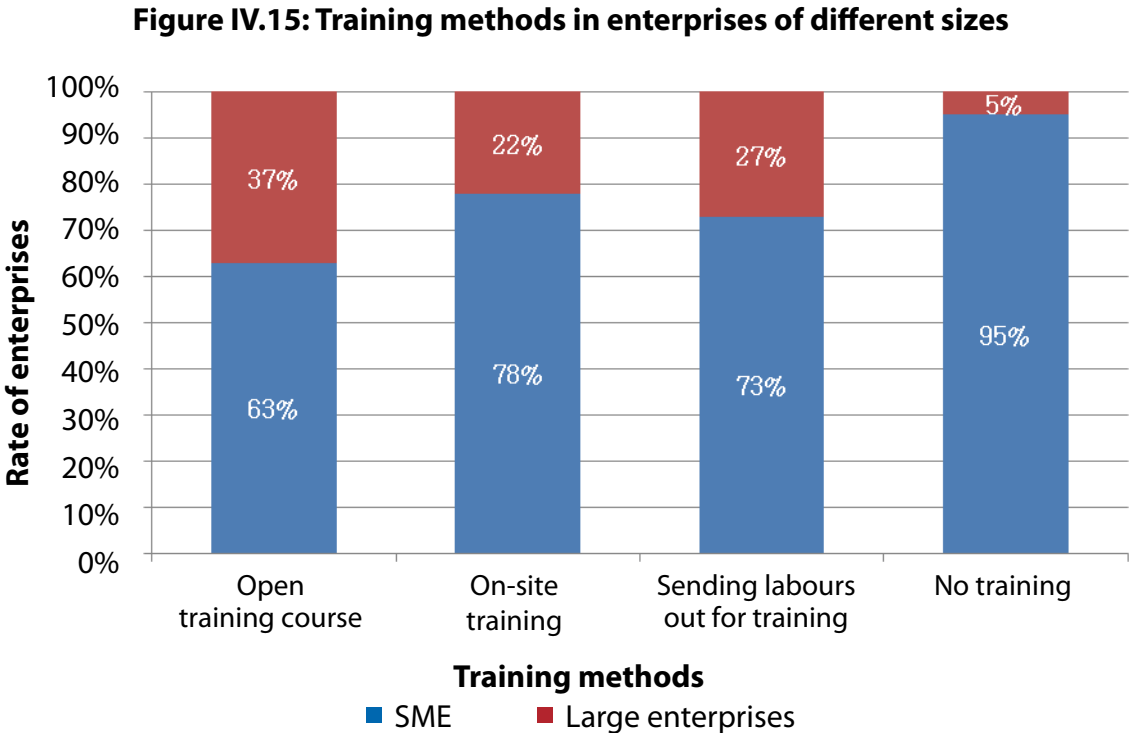
In terms of operating location, enterprises in Hanoi still maintain the training well, just 11% of enterprises do not have any training forms for employees. The rate of enterprises having no training forms in Ho Chi Minh City and other regions is 34% and 54%, respectively.

Figure IV.16: Enterprises having no training method in different localities

■ Hanoi ■ Ho Chi Minh City ■ Other regions
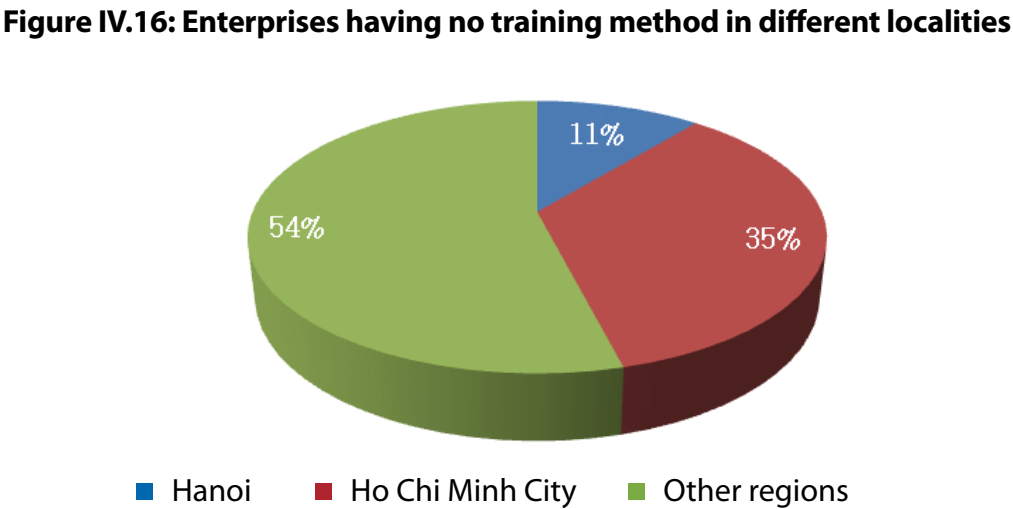
In 2009, the situation of training and e-commerce specialized staff in enterprises shows some recession. In the upcoming years, enterprises need to care more about the e-commerce human resource, which is the basic element for the success of e-commerce application.

III. E-COMMERCE APPLICATION STATUS

1. E-commerce software application in enterprises

Softwares are essential support tools for business and operation process of enterprises. In this report's scope, the application of two groups of softwares is going to be analyzed: popular softwares (accounting software and document processing software) and specialized softwares (Human Resource Management, Customer Relationship Management, Customer Service Management, and Enterprise Resource Planning).

1.1. Popular software

In this report, popular softwares include accounting softwares and document processing softwares.

There are many document processing softwares. In Vietnam, document processing softwares such as Microsoft Word, Microsoft Excel… are the most popular ones. Therefore, the questionnaire directly surveyed the application situation of the Microsoft Office software in enterprises.

In 2009, 98% of surveyed enterprise used Microsoft Office software. The rates of enterprises using Microsoft Office software in different regions are comparable. In Hanoi, 100% of enterprise used Microsoft Office software. The rate in Ho Chi Minh City and other region is 99% and 97%, respectively. This means document processing has become a valuable skill for office worker.

Figure IV.17: Office software usage in enterprises in 2009
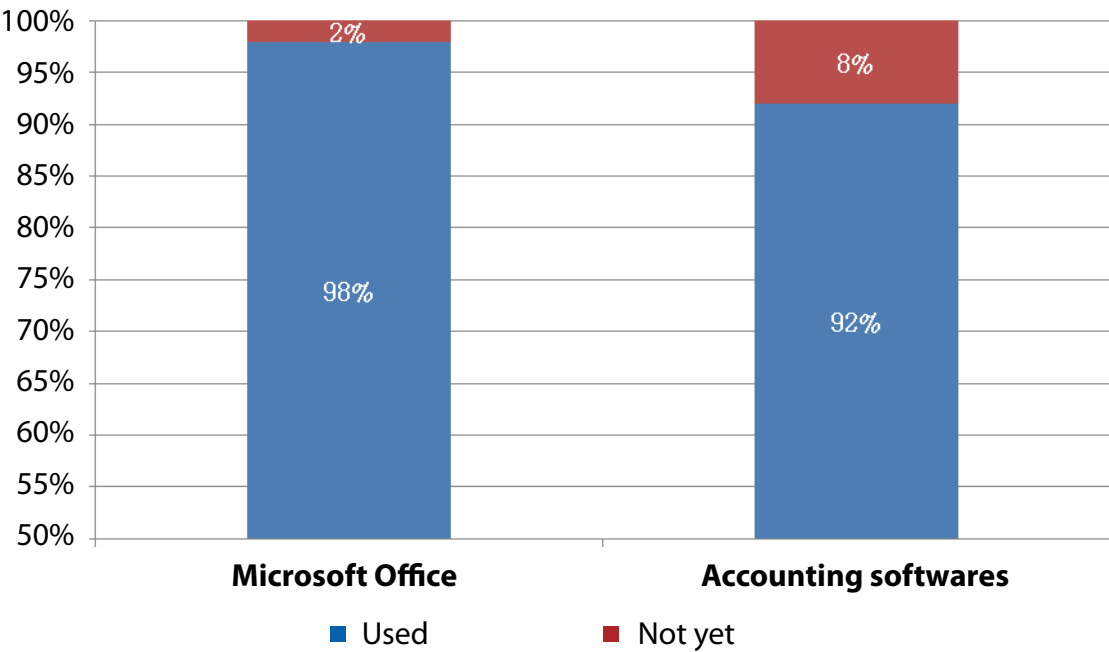
Accounting is an indispensable task in every enterprise. It requires a great amount of time and human resource and demands absolute precision. Computer softwares help enterprises precisely and swiftly handle accounting work. According to the survey data, 92% of enterprises

use accounting softwares. This rate is going to continue growing as all enterprises aim to use accounting softwares instead of doing traditional accounting work on paper.

Accounting software application shows greater location disparity than document processing software. Rates of enterprises using accounting software in Hanoi and Ho Chi Minh City are both 96%. Meanwhile, this rate in other regions is only 89%.

In terms of sizes of business, 99% of large enterprises use accounting softwares while the rate of SMEs is 91%. This reflects the fact that large enterprises have much more massive volume of accounting work. It's very inefficient and risky to do it without the help of softwares. On the other hand, large enterprises can afford those softwares more easily.

Document processing and accounting softwares have been generalized in enterprises. The rate of enterprises using this software is higher than 90%. The gap between regions and sizes of business is short and gradually decreases. The application of these softwares is becoming a necessary need in every enterprise.

1.2. Specialized softwares

Specialized softwares in this chapter include HRM, SCM, CRM and ERP in the ascending order of specialization level.

Box IV.1: Introduction of HRM, SCM, CRM and ERP

HRM (Human resource management) is the strategic and coherent approach to the management of an organization's most valued assets - the people working there who individually and collectively contribute to the achievement of the objectives of the business.[20]

SCM (Supply Chain Management) is the management of a network of interconnected businesses involved in the ultimate provision of product and service packages required by end customers.[21]

CRM (Customer Relationship Management) is a broadly recognized, widely-implemented strategy for managing and nurturing a company's interactions with customers and sales prospects. It involves using technology to organize, automate, and synchronize business processes—principally sales related activities, but also those for marketing, customer service, and technical support.[22]

ERP (Enterprise Resource Planning) is a term usually used in conjunction with ERP software or an ERP system which is intended to manage all the information and functions of a business or company from shared data stores.[23]

20   Armstrong, Michael (2006). A Handbook of Human Resource Management Practice (10th edition).
21   Harland, 1996.
22   Gartner, Inc. (6 June 2009) What's 'Hot' in CRM Applications in 2009.
23   Estevez, J., and Pastor, J., Enterprise Resource Planning Systems Research: An Annotated Bibliography, Communications of AIS, 7(8) pp. 2-54.

The rate of enterprises using HRM, SCM, CRM, and ERP is 43%, 32%, 27%, and 9%, respectively. Therefore, the application rates of these softwares are inversely proportional to the level of specialization.

Figure IV.18: E-commerce-specialized software usage in enterprises in 2009
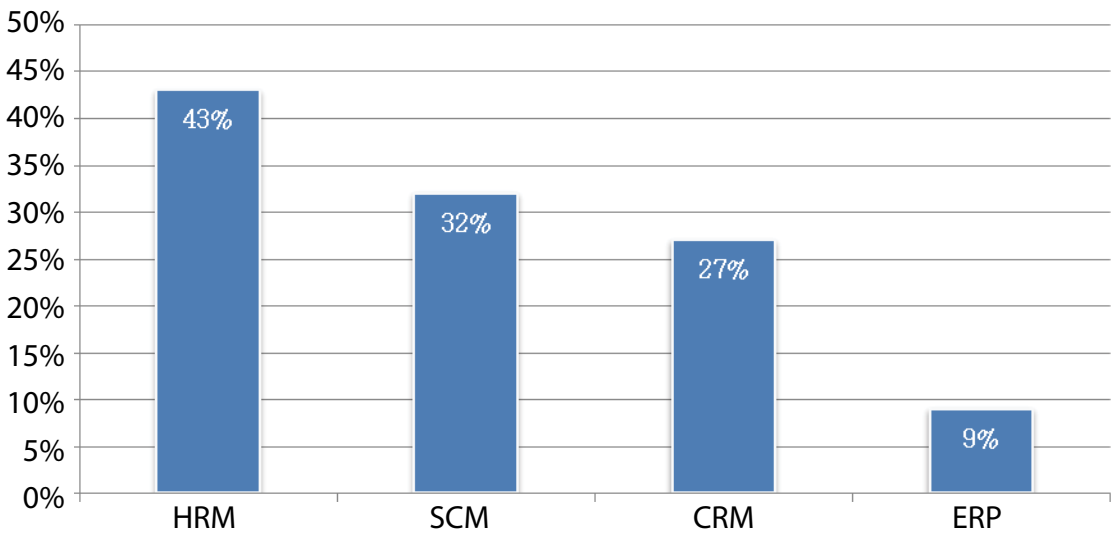
There is an obvious disparity of specialized software application between different regions and sizes of business. Among them, size of business is the most obvious element causing this disparity. The rate of SMEs using the specialized softwares is much lower than of large enterprises. The disparity is clearly shown in Table IV.7. In that, the degree of disparity is directly proportional to the specialization level of software.

Table IV.7: E-commerce specialized software usage in enterprises of different sizes

Software	HRM	SCM	CRM	ERP
SME	36%	26.3%	23.1%	6.2%
Large enterprise	78.5 %	60.4%	48.1%	26.1%

Enterprises in Hanoi and Ho Chi Minh City have higher rates of specialized software application. Enterprises in Hanoi are leading the application of SCM, though slower in applying ERP. Enterprises in Ho Chi Minh City are leading in the application of HRM, CRM and ERP.

Table IV.8: E-commerce-specialized software usage in enterprises of different localities

Region	HRM	SCM	CRM	ERP
Hanoi	46.5%	44.6%	28.4%	7.7%
Ho Chi Minh City	53.7%	34.0%	32.3%	11.4%
Other regions	34.8%	26.2%	23.5%	9.2%

Enterprises have paid attention to the application of specialized softwares. However, the rate of application is still low and disproportional between various kinds of softwares, sizes of business and regions.
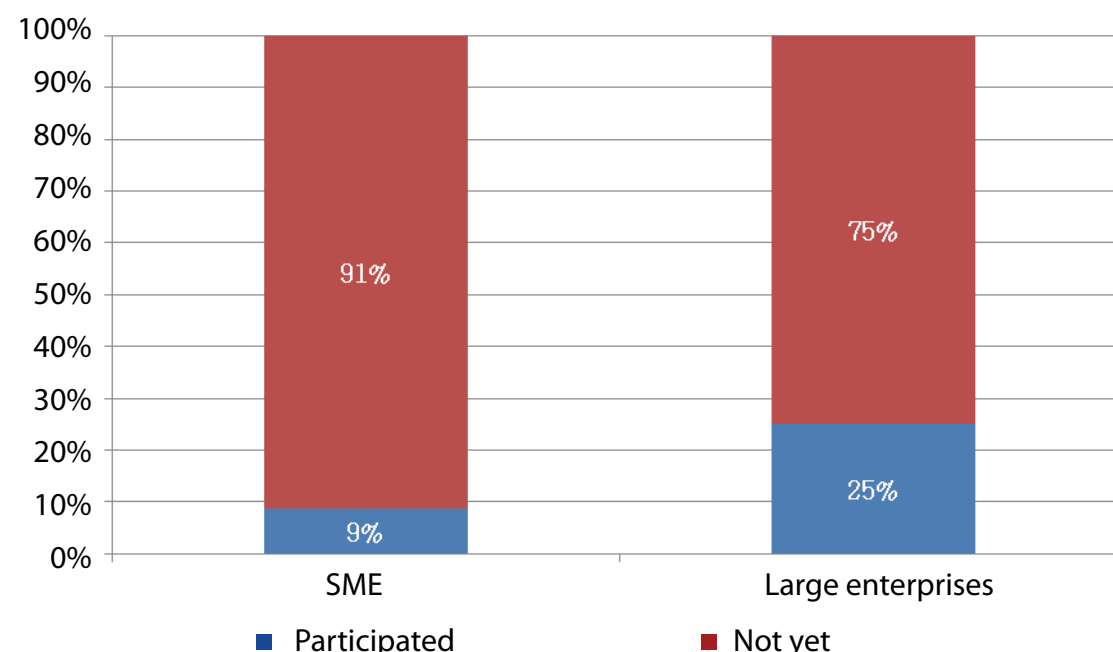
2. Participation in e-marketplace of enterprises

Of the total of the 2004 surveyed enterprises, 12% participate in domestic and foreign e-commerce marketplaces. This rate is unchanged compared to the rate of 2008 after three years of continuous growing. To a certain degree, this can be explained by this year's increase of enterprises in other regions. However, to a greater extent, the rate of e-commerce marketplace participation's was unchanged because of the blurred efficient of participating in e-commerce marketplaces.

Figure IV.19: Rate of enterprises participating in e-commerce marketplaces through recent years
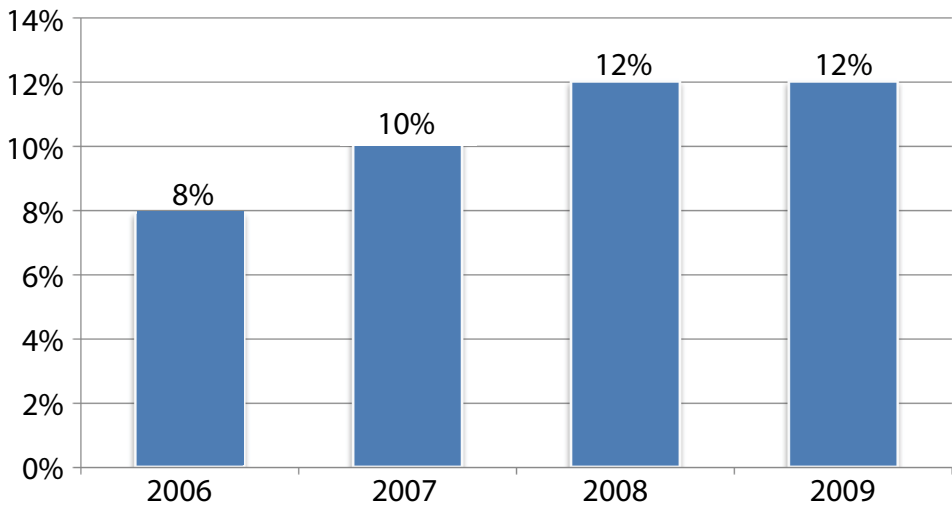
In terms of sizes of business, 9% of SMEs and 25% of large enterprises participate in e-commerce marketplaces. The rate of SMEs is 1/3 of the rate of large enterprises. Therefore, e-commerce marketplaces should focus more on SMEs as their target customers. At the same time, SMEs should also actively participate in e-commerce marketplace, which is an environment that opens up more chances and is less affected by the size of business than traditional commerce.

Figure IV.20: Rate of enterprises of different sizes participating in e-commerce marketplaces in 2009

In terms of operating location, 19% of enterprises in Hanoi participate in e-commerce marketplace. Enterprises in Ho Chi Minh City have the e-commerce marketplace participation rate of 10%. Enterprises in other regions have the rate of only 7%. Many local e-commerce marketplaces opened in the last few years, even in remote regions. However, the low rate of e-commerce marketplace participation in other regions reflects the shortcomings of these local e-commerce marketplaces.

The e-commerce marketplaces are surveyed this year includes ECVN, Gophatdat, EC21, and Alibaba. Of these marketplaces, 3 are Vietnamese and 1 is foreign one (Alibaba). The rates of enterprises participating in Vietnamese e-commerce marketplaces are 5% (ECVN), 6% (Gophatdat), and 2% (EC21). In the mean time, the rate of enterprises participating in Alibaba is 7%.
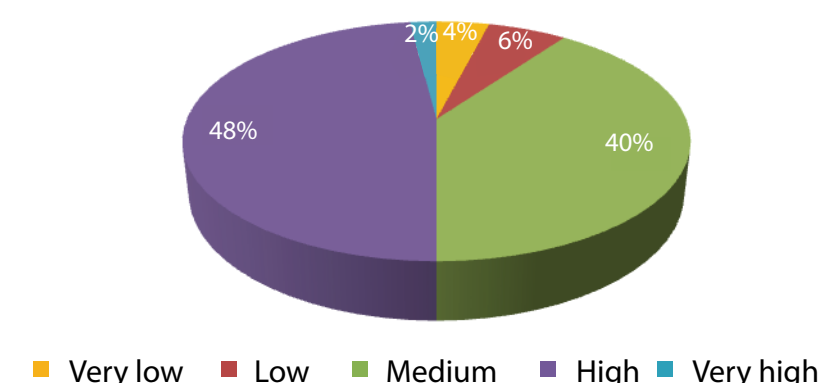
Table IV.9: Rate of enterprises participating in some specific e-commerce market places in 2009

E-commerce marketplace	ECVN	Gophatdat	EC21	Alibaba
Ratio	5%	6%	2%	7%

Besides, enterprises also participate in some other e-commerce marketplaces, for example: vatgia, chodientu, 123mua, muare… and some local e-commerce marketplaces.
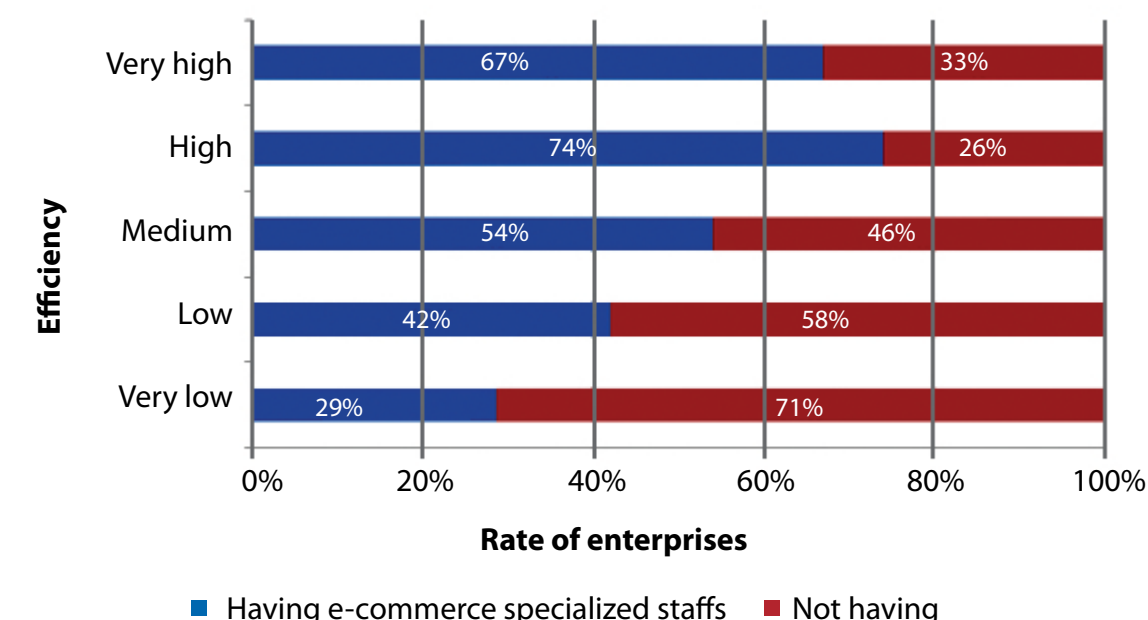
Of the enterprises participating in e-commerce marketplaces, 48% evaluate that the efficiency of these marketplaces is high. 40% have moderate efficiency. Only total 9% evaluate the efficiency is low and very low. However, the rate of enterprises reach the very high level of efficiency is only 2%. This means that the efficiency of participating in e-commerce marketplaces to a certain degree is only at a moderate level.

Figure IV.21: Enterprises' evaluation on efficiency of the participation in e-commerce marketplaces

64% of the enterprises participating in e-commerce marketplaces have e-commerce specialized staff while enterprises not participating in e-commerce marketplace have the rate of only 29%.

Figure IV.22: Efficiency of enterprises' participation in e-commerce marketplaces due to e-commerce specialized staff

Whether having e-commerce specialized staff or not obviously influences the efficiency of enterprises' participating in e-commerce marketplaces. 67% of enterprises having very high efficiency have e-commerce specialized staff. Meanwhile, 71% of enterprises having very low efficiency do not have e-commerce specialized staff. As shown in Figure IV.22, the efficiency is almost directly proportional to the rate of having e-commerce specialized staff.

Based on survey result, 76% of the enterprises not participating in e-commerce marketplaces are going to join at least one e-commerce marketplace in the next coming years. This is an encouraging number for e-commerce marketplaces managers. Enterprises' reasons of not participating in e-commerce marketplaces include:

- Efficiency of participating in e-commerce marketplaces is not high.
- Enterprises only handle small trade then do not need to join e-commerce marketplaces.
- Enterprises do not see the need of participating in e-commerce marketplaces.
- Business sector of enterprises does not suit e-commerce marketplaces.

Due to the above reasons, in order to make e-commerce marketplaces become the new trade environments for enterprises, the government needs to more effectively propagandize about the benefit of the e-commerce marketplaces. At the same time, e-commerce marketplace managers must operate and modify in the vision of better service and more appropriate response to enterprises' demand.

3. Establishment and utilization of website

In 2009, the rate of enterprises having websites is 38%. Compared to the rate of 45% in 2008, this year's rate reduces and is equal to the rate of 38% in 2007. The e-commerce reports in previous years stated that location is the most impacted element to the enterprises' rate of having websites. Therefore, the reduction of this year's rate of enterprises having websites is because of the increase of enterprises in other regions other than Hanoi and Ho Chi Minh City.

According to the survey result, 17% of enterprises intend to establish websites in the near future. In the previous years, this rate only ranged from 5% to 10%. This proves the enterprises' increasingly high need of website establishment.

Figure IV.23: Rate of enterprises own or are going to build websites in recent years
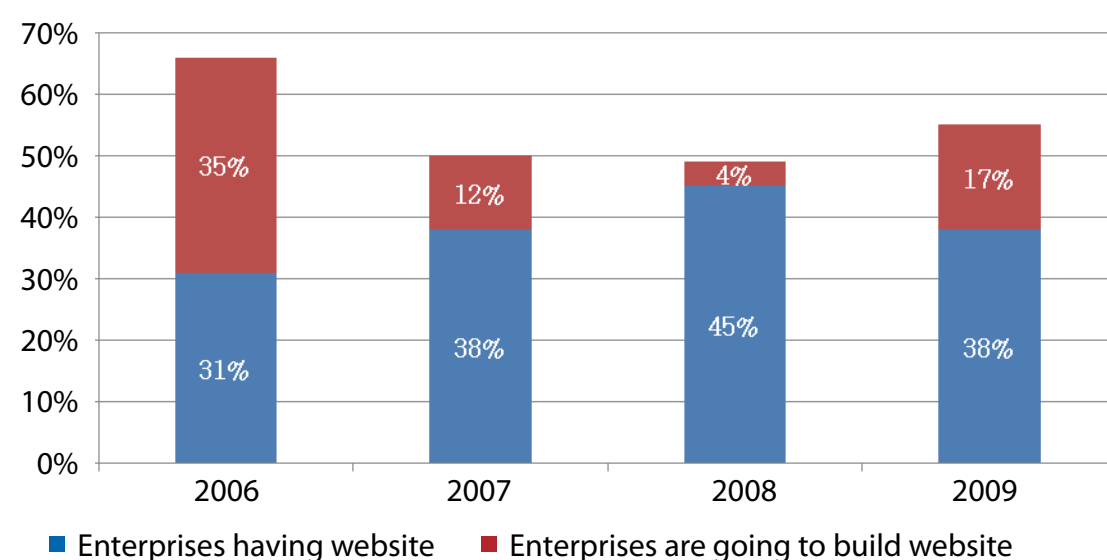
72% of websites are established in the period of 2006 to 2009. This demonstrates the practice of development and booming of Internet in Vietnam. However, the rate of enterprises establishing new website regularly drops down with each passing years.

Figure IV.24: Website establishment status of enterprises through periods
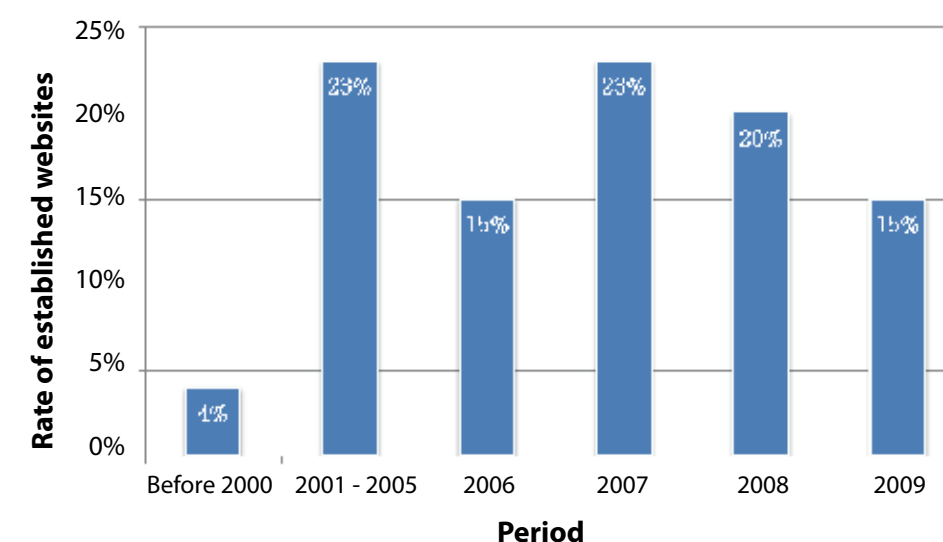
Sizes of business also have significant impacts to the rate of enterprises having websites. 64% of large enterprises already established websites, while SMEs only have the rate of 33%. This is an inevitable result because large enterprises have much more human and financial resources as well as having to establish websites to express enterprises' images.

The rates of enterprises having website in different regions are relatively equitable. In Hanoi and Ho Chi Minh City, the rates of enterprises having website are both 39%. In other regions, this rate is 36%. The rate of enterprises intending to establish websites in Ho Chi Minh City is 12%, these rates in Hanoi and other regions are both 21%.

Figure IV.25: Website owning and establishment in enterprises of different localities
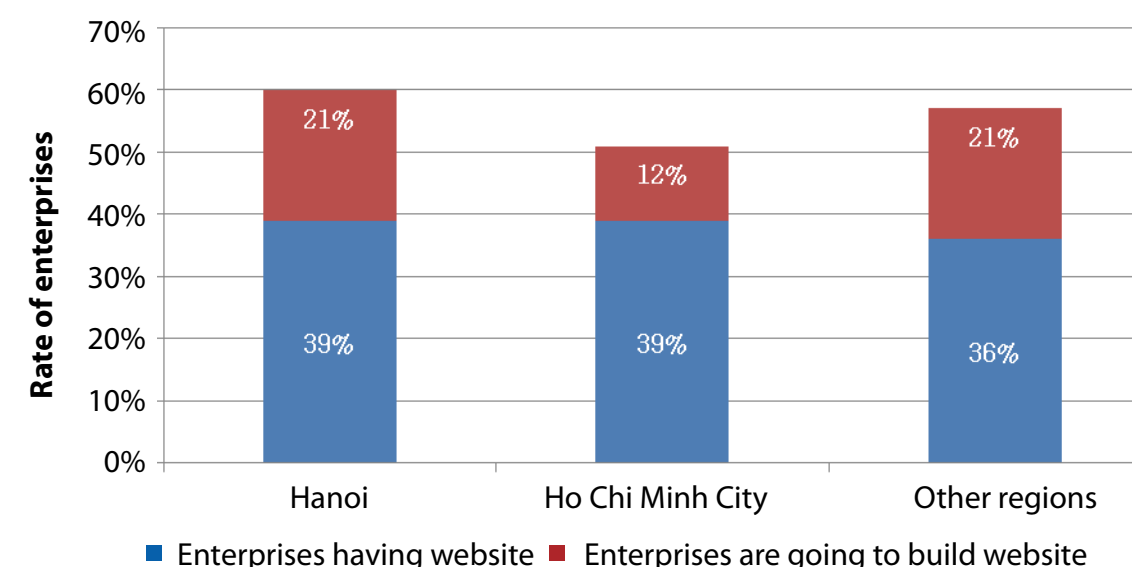
There is also a great disparity of the rates of enterprises having websites in different business sectors. Finance, IT and profession sectors have the highest rates of enterprises having websites. These sectors' rates are 67%, 53%, and 49%, respectively. On the other hand, the sectors which have the lowest rates of enterprises having websites are construction, commerce, and art. The rate of commerce enterprises having websites is low while commerce is a potential e-commerce
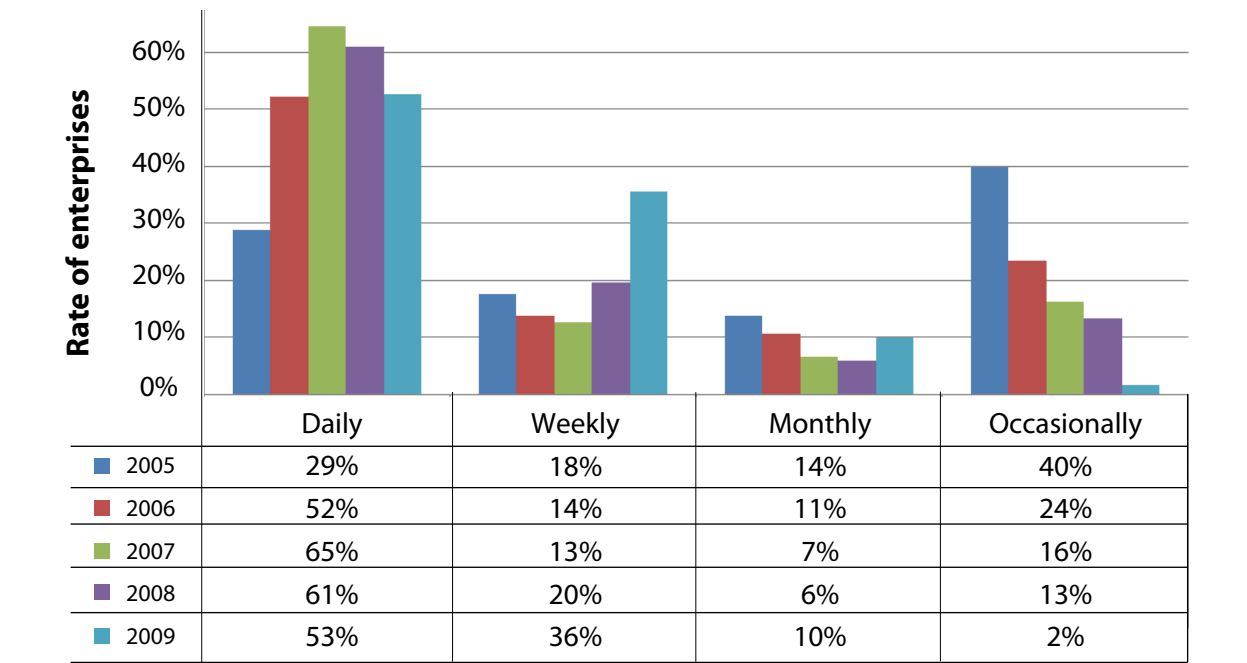
application sector. It means that commerce enterprises still strongly focus on traditional supply and sale channels. However, the rate of commerce enterprises intending to establish websites is 22%, the second highest rate of all the business sectors.

Table IV.10: Website owning and establishment in enterprises by sectors

Sector	Having website	To build website
Finance	67%	14%
IT	53%	14%
Profession	49%	15%
Accommodation	48%	19%
Agriculture and Forestry	44%	21%
Transportation	42%	18%
Education	39%	29%
Mining	39%	19%
Art	38%	14%
Commerce	32%	22%
Construction	28%	18%

The data on website update frequency from 2005 till now represents the enterprises' efficiency of using websites. The number of enterprises which do not update or rarely update websites progressively declines. Meanwhile, the rate of enterprises updating websites weekly steeply increases.

Figure IV.26: Enterprises' website update frequency in recent years

	Daily	Weekly	Monthly	Occasionally
2005	29%	18%	14%	40%
2006	52%	14%	11%	24%
2007	65%	13%	7%	16%
2008	61%	20%	6%	13%
2009	53%	36%	10%	2%

The website update frequency of SMEs and large enterprises are relatively equitable. Despite of lower rate of having websites, SMEs reserve a portion of their limited resource to maintain and update websites regularly. It shows the importance of having websites to enterprise of various sizes of business.

Table IV.11: Websites update frequency in enterprises of different sizes

	No update	Daily	Weekly	Monthly
SME	2%	53%	36%	10%
Large enterprises	3%	52%	35%	11%

4. Receiving orders via electronic means

Electronic means are actively used by enterprises to receive as well as placing orders. Regarding receiving orders via electronic means, the most popular means that are using by enterprises are telephone and fax with the respective rates of 95% and 91%. Though not as popular as two means above, email also is progressively used. 70% of enterprises have accepted orders via email. However, all these means have the same weakness of the mere capability of processing individual orders. Meanwhile, only 22% of enterprises, a very moderate rate, use websites, a mean in which multitude of orders can be accepted, stored and processed at the same time.

Table IV.12: Receiving orders via electronic means in enterprises in 2009

Mean	Telephone	Fax	Email	Website
Ratio	95%	91%	70%	22%

The using of electronic means substantially contributes to enterprises' operating outcome. In 2009, revenue from electronic orders account for 33% of enterprises' total revenue on average. In large enterprises, this rate is 40% of total revenue and in SMEs is 31% of total revenue.

5. Placing orders via electronic means

In parallel with receiving orders, enterprises actively place orders via electronic means also. The rates of receiving orders and placing orders are comparable. The rate of enterprises using telephone and fax are 95% and 91%, respectively. 68% of enterprises use email. There are only 24% of enterprises using website to placing orders.

Table IV.13: Placing orders via electronic means in enterprises in 2009

Mean	Telephone	Fax	Email	Website
Ratio	95%	91%	68%	24%

Cost of orders placed via electronic means accounts for 28% of the total cost of orders placed by enterprises. Large enterprises have the rate of 29% and the rate of SMEs is 27%. This illustrates the importance of electronic means to the business outcome of enterprises.

IV. ENTERPRISES' EVALUATION OF E-COMMERCE APPLICATION EFFICIENCY

1. IT and e-commerce application cost

IT application cost of enterprises significantly varies between different enterprises. Because of a small sample of 2000 surveyed enterprises, an absolute value of enterprises' IT application cost can not be estimated. However, the average rate of IT application cost in total cost of enterprises can represent surveyed enterprises' relative level of investment in IT and e-commerce.

On average, the rate of IT application cost in total cost of surveyed enterprises is 5%. The rate of SMEs is 7% and of large enterprises is 3%. Therefore, IT investment is still a considerable cost for SMEs. On the other hand, large enterprises can heavily invest in IT and e-commerce and gain highly efficient outcome.

Figure IV.27: IT and e-commerce investment structure in enterprises in 2009


■ Hardware ■ Software ■ Training ■ Others
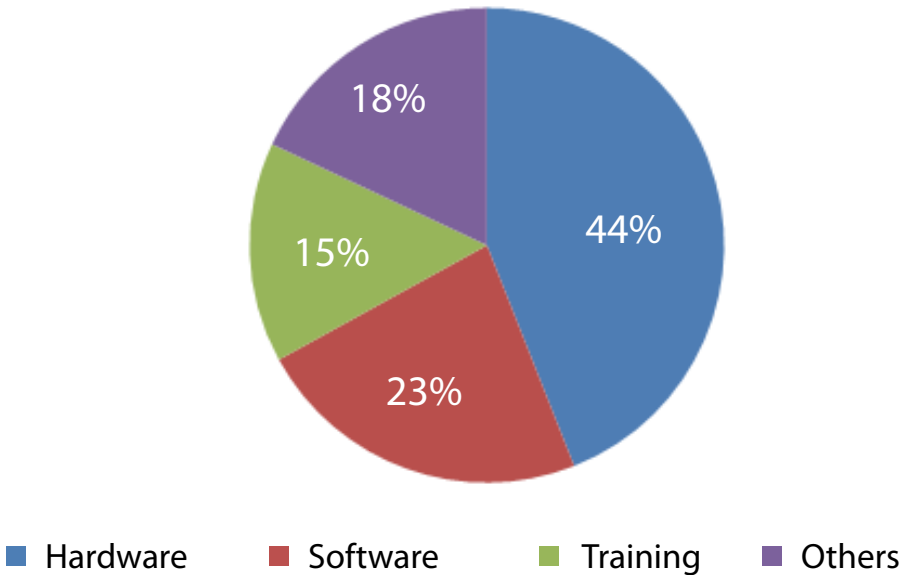
Structure of IT application cost in enterprises is divided into 4 main portions: hardware, software, training and others (Internet, website, repair and maintenance cost…). Compared to the previous years, IT application cost structure remains the same. The rates for each portion are comparable. Cost for hardware accounts for the highest rate, 44%. The second highest is the cost for software, which accounts for 23% of total IT application cost. 15% of IT application cost is for training. And the cost for others takes the remaining 18%.

The IT and e-commerce investment cost accounts for only 5% of total operation cost of enterprises. However, 33% of enterprises' revenue is from orders receiving via electronic means

and 28% of procurement cost is from orders placing via electronic means. This illustrates the importance and efficiency of IT and e-commerce investment in enterprises operating outcome.

Figure IV. 28: Compare the rates of IT application cost in enterprises' total cost with the rate of revenue and cost from orders via electronic means in 2009

■ IT and e-commerce ■ Others
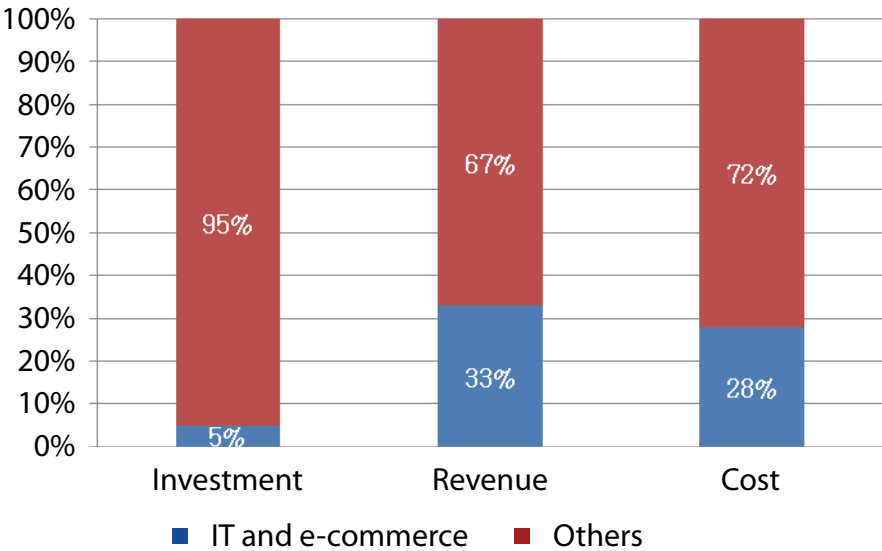
### 2. Impacts of e-commerce application

Evaluating the revenue from goods and services marketed by the e-commerce channel, 60% of enterprises have increasing revenue, 33% of enterprises have unchanged revenue, and only 7% have decreased revenue. With the total of 93% of enterprises have increasing and unchanged revenue from e-commerce channels; it can be asserted that marketing through e-commerce is becoming more and more important to business outcome of enterprises.

Table IV.14: Enterprises' evaluation of revenue from e-commerce through recent years

Year	Increasing	Falling	Unchanged
2009	60%	7%	33%
2008	56%	6%	37%
2007	62%	3%	34%
2006	57%	4%	38%
2005	37%	1%	61%

The survey also asked enterprises to grade the effects of e-commerce on operating outcome on a mark scale from 1 to 4, in which 4 is the highest level of effect. The average marks of these effects are shown in Figure IV.29 below.

**Figure IV.29: Enterprises' evaluation of effects of e-commerce on business operation**

Effects of e-commerce
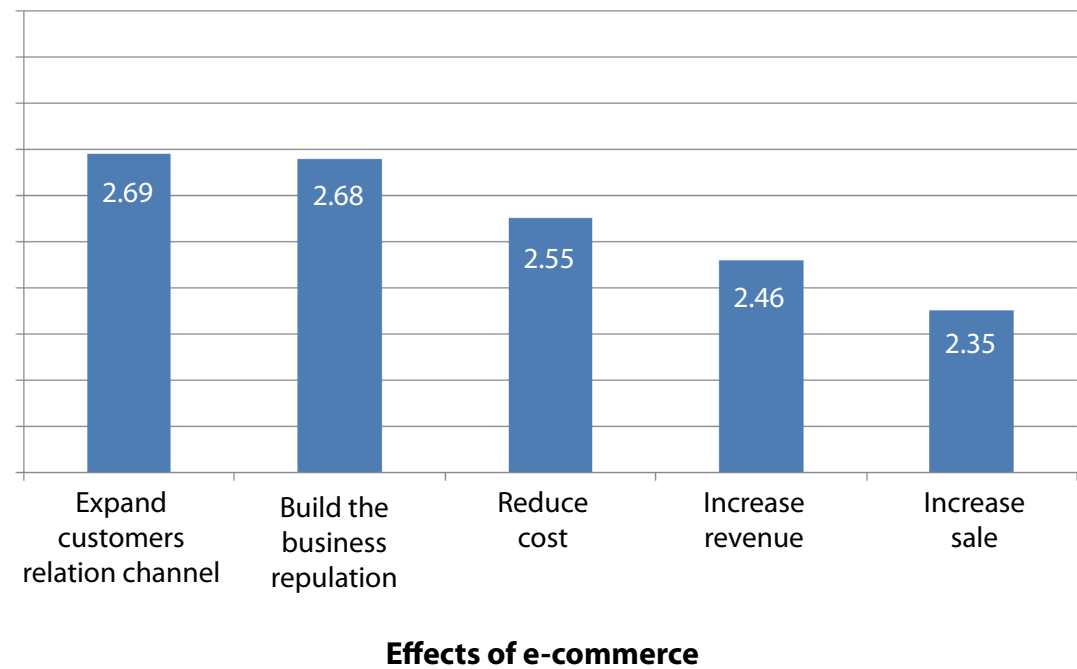
Two effects that have the highest marks are "expand customer relation channel" (2.69) and "build the business reputation" (2.68). The effects "reduce cost", "increase revenue" and "increase sales" are lower evaluated with their marks of 2.55, 2.46, and 2.35, respectively.

Enterprises' evaluation reflexes the fact that e-commerce has just impacted the marketing and customer relation part. The effects on operating outcome are still unclear.

3. Obstacles to e-commerce application

Along with the effects of e-commerce, enterprises are also requested to grade the obstacles of e-commerce application on a scale from 1 to 4, in which 4 is the highest obstacle. The average marks of obstacles are shown in the Figure IV.30 below.

Figure IV.30: Evaluation of enterprises of obstacles to e-commerce application
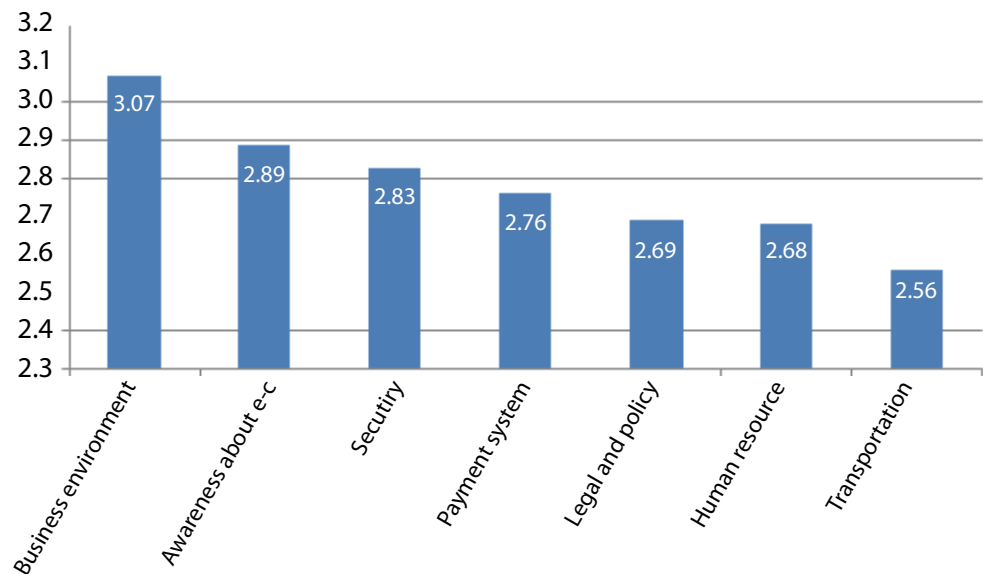
The marks of obstacles are of little disparity and are all higher than 2.5. Therefore, these obstacles have not been thoroughly solved yet and still obstruct enterprises' progress in applying e-commerce.

Two obstacles received highest marks are "business environment" and "Awareness about e-commerce". In the previous years, when the investment level in IT and e-commerce was still low, enterprises see technical issues such as Security and Payment system as the greatest obstacles. In recent years, these technical issues have been somewhat solved. Therefore, business environment and people's awareness about e-commerce arise as two greatest obstacles to e-commerce.

The obstacles of security, payment system, legal and policy have prevailed year after year. At some time, they became the greatest obstacles. However, with the efforts of government bodies as well as enterprises, these issues have been evaluated as merely moderate obstacles.

Two obstacles received lowest marks are "human resource" and "transportation and logistics". It does not mean that there is no need to pay attention to these obstacles. Developed countries' experience shows that these two are just the greatest issues that e-commerce must face. Vietnam enterprises just took the beginning steps in applying e-commerce, at the same time, e-commerce have not really penetrated into social and economic life. Therefore, other obstacles are of greater level. However, without immediate solutions, these obstacles will become the greatest blockages to the development of e-commerce.

4. Proposals of enterprises

Surveyed enterprises proposed many comments and suggestions to government bodies. Enterprises' proposals primarily focus on government's measures to support the facilitation of and to eradicate the obstacles to e-commerce application. The proposals are categorized into six main groups as shown in Table IV.15.

Table IV.15: Proposals of enterprises

Proposals	Ratio
Propaganda about e-commerce	36%
Train the e-commerce human resource	34%
Improve legal and policy system	31%
Improve security issues	17%
Develop online payment solutions	16%
Support transportation and logistics systems	14%

* The ratios above are calculated based on the total of enterprises having at least 1 proposal. The total of all ratios is higher than 100% because an enterprise can give more than 1 proposal.

These are the issues that enterprises can not solved by themselves but entirely depend on the initiative of government. Therefore, concerned government bodies need to establish concrete policies and plans to support enterprises to triumph over these obstacles in the future.

V. SPECIALIZED E-COMMERCE BUSINESS MODELS

1. Online recruitments

Despite the fact that online recruitment was introduced and has been developed in Vietnam since early 2000s, it has played a more and more important role in business recruitment.

Online recruitment means one part or the whole process of communicating between recruiters and applicants (publishing information, submitting applications, selecting candidates, completing multiple choice tests and interviewing candidates) is carried out via the Internet. Businesses as well as job finders are more and more aware of these recruitment methods thanks to advanced information technology and great increase in the number of Internet users.[24]

Recruitment can be undertaken on the website of a business or via another recruitment website which belongs to a third party. These two are the most popular methods of online recruitment.

Table IV.16: Some websites of enterprises with online recruitment feature

Companies	Website
FPT Joint-stock Company	www.fpt.com.vn
Dutch Lady Vietnam Company	www.dutchlady.com.vn
Asia Bank	www.acb.com.vn
Joint-stock commercial bank for foreign trade of Vietnam	www.vietcombank.com.vn
Prudential Vietnam	www.prudential.com.vn
Metro Cash and Carry Group	www.metro.com.vn

Online recruitment helps businesses reduce costs and avoid dependence upon recruitment agencies. However, this method only becomes an advantage if a business has sufficient online recruitment system and a strong brand name in order to attract aspiring candidates. As a result, a majority of businesses still need assistance either from recruitment agencies via online recruitment portals or combine both online recruitment and recruitment through agencies.

Table IV.17: Services provided by online recruitment portals

Services for Recruiters	Services for job finders
Publishing online recruitment advertisements	Providing information about "vacant jobs"
Analyzing and selecting suitable candidates	Publishing applications of candidates
Searching for candidates from the archive of documents	Sending e-mails which inform information about jobs relevant to the applications of candidates
Undertaking surveys according to the requirement of recruiters	Sending e-mails which inform the results of shortlist phase and interviews.
Setting up logos	Job consultation
Supporting employee training	Training information

The wide choice of customer services and the advantages enhanced by Information Technology applications bring substantial benefits for recruiters as well as job finders.

Table IV.18: Advantages of online recruitment portals

| Advantages	For Recruiters	For job finders
Help saving time, effort and improve effectiveness	The amount of time it takes to collect applications is short and the process is assisted with technology solutions (search tools, finding keywords). Therefore, the validity and effectiveness of recruitment process is maximized, which helps businesses select suitable candidates easily.	Searching for information and applying for jobs becomes simple, which can be done from anywhere only by entering keywords and clicking. Flexible assistant applications also help applicants find and choose appropriate jobs in a faster and more effective way.
Help saving costs	With only 60-100 USD, recruiters can publish recruitment information on e-commerce portals during 30 days and be given a password to enter the database, which contains hundred thousands of candidate applications.	Candidates can send their applications online via the Internet without paying any fee for recruitment or agencies.

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24   *According to the Vietnam Information Technology and Communications White book 2009, as of May 2009, the number of Internet users in Vietnam is 21,430,463, with the density of 24.87 users per 100 people.*

No limitation of space	Publishing information on the Internet allows recruiters attract high standard candidates from different regions of the country and even abroad.	Candidates have more opportunities to earn a job since they can communicate with thousands of jobs from various local and international recruiters.
Other advantages	Publishing information on the Internet, including the link to the website of a business or advertising video clips is a useful method of marketing. The benefits of an online recruitment system are very valuable, which include keeping archives, classifying documents, standardizing and calculating ratios of regarding the number of candidates and jobs. The information assists experts in personnel management in businesses and macro-economists in researching and analyzing statistic, which is the foundation of personnel strategies.	Candidates also make use of Internet tools to do research on recruiters, for instance, management structure, missions, current situation, corporate culture and many more. Based on that, candidates might be able to attain knowledge and experience on consultation sections in order to enhance their competence and competitiveness throughout the process.

These advantages are the reason why the demand for online recruitment has continuously increased since this method was introduced, which was shown clearly on the "Quarterly online personnel resource report" of Vietnamworks.com, when the online recruitment demand index of businesses raised significantly.[25]

Figure IV.31: Online recruitment demand index
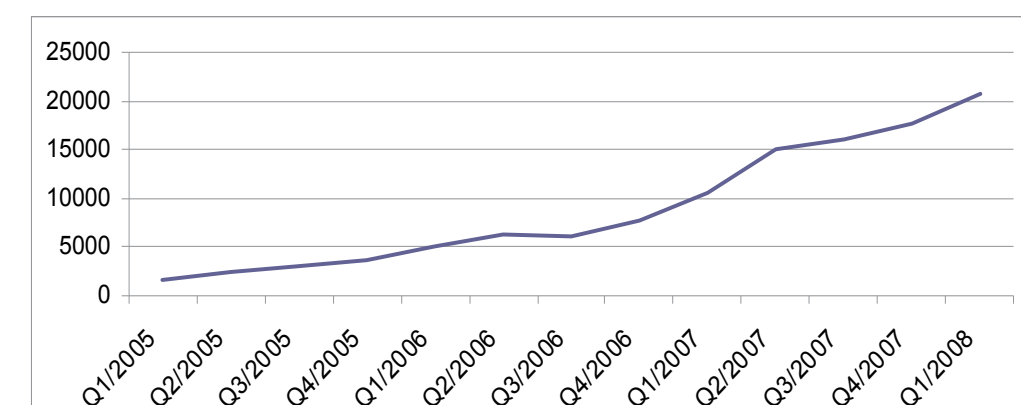
Source: vietnamworks.com

Since the demand of Vietnam businesses and job finders for online recruitment was high, a great number of online recruitment companies have been established. However, the standard of technology and services provided by these companies' website varies. Some new websites agree to publish information which is previously on other websites, or publish recruitment advertisements for a period of time without any charges and offer a competitive price scheme for its customers afterwards. Websites which limit the number of customers and advertisements and offer poor services cannot compete with those which are largely invested and operated professionally. In addition to that, the economic recession near the end of 2007 led to the downfall of many industries, which resulted in the personnel demand of businesses. Because of limited budgets, a lot of businesses had to delay their recruitment plans, while others sought for less costly methods such as recruiting based on recommendation and direct recruitment. Because of that, the turnover of many businesses declined and at the same time, several challenges arose to online recruitment companies. Companies of this type have strived to improve their policies in order to compete with each other to attract customers.

In 2009, effective strategies along with the initial recovery of the economy brought back the demand for online recruitment. According vietnamworks.com, personnel statistics indicate that online recruitment demand index in the third quarter of 2009 increased by 11.4%, compared with that in the second quarter and 52.4% compared with the first quarter. These were the positive signs for online recruitment companies. Nevertheless, the recovery in the difficult situation also placed greater obstacles for the websites in making strategies to obtain customers and developing their businesses.

Online recruitment companies not only invest in services for businesses but also diversify and improve the quality of services for job finders and interactive activities between recruiters and candidates.

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25   Demand index is calculated based on the number of new and relevant jobs that are published on the website of Vietnamworks. com in each quarter.

Box IV.2: Some promotions of online recruitment portals

Earlier, when the competition was not as severe, job websites often caught attention from customers through promotion programs in which people introduced the services to their friends in order to enhance the chance of winning prizes or lottery for their member users, with the value of the prizes increasing more and more.

When these programs gradually lost their effectiveness, recruitment websites were focused on developing their customer services. Some websites also provided personnel management software, which allowed candidates to apply online even though they did not have the need to find a job at the time.

Vietnamworks.com: Besides sections that include information about experience of finding jobs, interview skills, how to gather necessary documents, trends of recruitment, VietnamWorks.com also offers candidates a service for managing personal documents (register personal information, keep track of documents, inform about new jobs relevant to the criteria of applicants, send emails including results of shortlist phase and interviews...)

Timviecnhanh.com: Recruitment and job finding advertisements are all free of charge. In addition to information about jobs, courses and vocational guidance, timviecnhanh.com also deploys "Recruiters' accounts verification" which gives warnings about the tricks used to deceive applicants in order to reduce untrue information and the number of fraud recruiters.

Loanle.com.vn: Recruitment services are professionalized: File finder software is used to divide candidates into nearly 2.000 categories of jobs instead of 20-30 categories like before. The recruitment procedure includes 16 main steps and 200 detailed stages with the aim to bring high standard candidates to businesses.

VNRecruiment.com: The website is focused on recruitment services, personnel training and consultation. It does not expand its operation largely to concentrate on areas like finance, quick consumed products, chemicals, production, civil engineering...

Vietladders.com: Vietladders.com also chooses to concentrate on a narrow market, however, it applies a different approach. Candidates with strong academic background and experience, especially in highly demanding industries are sought and invited to be interviewed (with rewards). This method helps candidates have adequate decisions in choosing jobs and create interactive relations between candidates and recruiters for future collaboration.

VIPdatabase.com: In addition to selecting and offering personnel resource for the fastest developing industries in Vietnam and classifying information about recruitment trends, the website improves other applications such as blogs for open discussions between experts in many areas and people who are interested in recruitment. Conferences and workshops are also organized.

Source: Saigon economics time online.

Since 2008, recruitment websites have been in the system of BITCup (The Best IT Solutions), organized annually by PC World Vietnam. The survey was carried out with the two main groups of customers of these websites. The criteria include: content, design and technology,

customer service and results from using the websites (the ratio of successful recruitments). Three websites which received the most votes in 2008 are VietnamWorks.com, kiemviec.com and timviecnhanh.com.

Figure IV.32: Survey result of recruitment websites in 2008
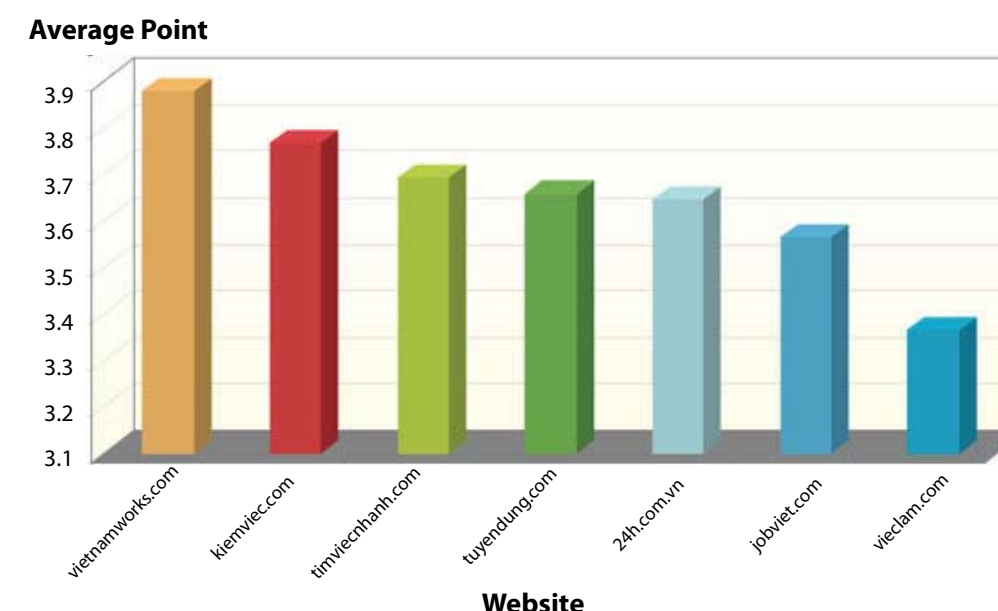
Source: www.pcworld.com.vn.

In 2009, Vietnamworks.com continued to top the list of recruitment websites of the BITCup awards, however, the second and the third position changed.

Table IV.19: Survey result of recruitment websites in 2009

Rank	Website	Provider	Point
1	www.vietnamworks.com.vn	VietnamWorks	4.7
2	www.timviecnhanh.com	VINA Head Hunter Corporation	4.1
3	24h.com.vn	CTCP Online Advertisement 24h	2.9

*The maximum point given is 5

According to the summary of BITCup awards 2009 organizers, users are most concerned with the diversity of information and the frequency of updates in recruitment websites. These two factors are essential for the victory of vietnamworks.com.vn. They also indicate the trend of rising demand for information from online services. Moreover, on the basis of information validity and credibility, vietnamworks.com.vn gained 80% of the votes from users, which was the highest percentage among all nominated websites.[26]

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26   In the group of transaction websites, 55% users claim that the ability to compare products of these websites is average or poor, 47% are not satisfied with the details of products described on the websites and 60% are not pleased with speed of transaction after payments being made.

The development of online recruitment, especially recruitment websites, which have brought a comprehensive and diverse source of information as well as sufficient assistant services, has opened many large opportunities for job finders. At the same time, this method of recruitment also helps businesses fulfill the need of personnel in a faster and more proper way. It is predicted that, online recruitment will continue to be a method that captures the interest of people as well as benefits from investments. This is an advantage and also a challenge for online recruitment companies in improving service quality and brand names to draw the attention of working people.

2. Advertising on social networks

Advertising on social network websites has attracted businesses more and more, thanks to the features of any online recruitment websites such as no limitation regarding time and space, reasonable costs, indefinite imagination because of advanced technology, ease of determining market segmentations plus the strengths of social networks like high level of interaction between users and information being spread out in an incredible speed.

Advertising on social network websites is the form in which, one part or the whole process of introducing information about products, services, companies and ideas of businesses or individuals to customers, are carried out through social network websites.

According to Government's Decree No. 97/2008/ND-CP dated August 28th, 2008 on the management, provision and use of Internet services and electronic information on the Internet, "Online social network services" are defined as the services that provide the large community the ability to interact, share, store and exchange information on the Internet, including creating blogs, forums, chatting and other services.

Blogging service has been noticed as a trend in Vietnam since 2005. After that, Yahoo! 360° was a dominant network in Vietnam in terms of number of members. In the research "The habits of Internet users in Vietnam" carried out by Yahoo and TNS Media in late April 2009, when Yahoo! 360° was still at its peak, 85% of participants stated that they used this service. Meanwhile, only 4% of participants used Facebook. The number is 46%, 27%, 21% and 5% for Youtube, Google Group, Yahoo! Group and MySpace respectively.

Around the time when Yahoo! 360° was closed, other social networks in Vietnam such as Hi5, MySpace, CyWorld, Opera, Twitter, Wordpress, Tamtay, Youbanbe gained a sudden increase in the number of registers. Yet, the increase only happened in a short period of time then stopped, except for Facebook. The number of Facebook users grew significantly by 200,000 users every month, especially when the Vietnamese version was introduced. Facebook gained the second position among the most used social networks in Vietnam after the period of Yahoo! 360° according to statistics in August 2009, because of its flexible features and highly interactive ability.

Figure IV.33: The most favorite social networks in Vietnam after the Yahoo! 360° period
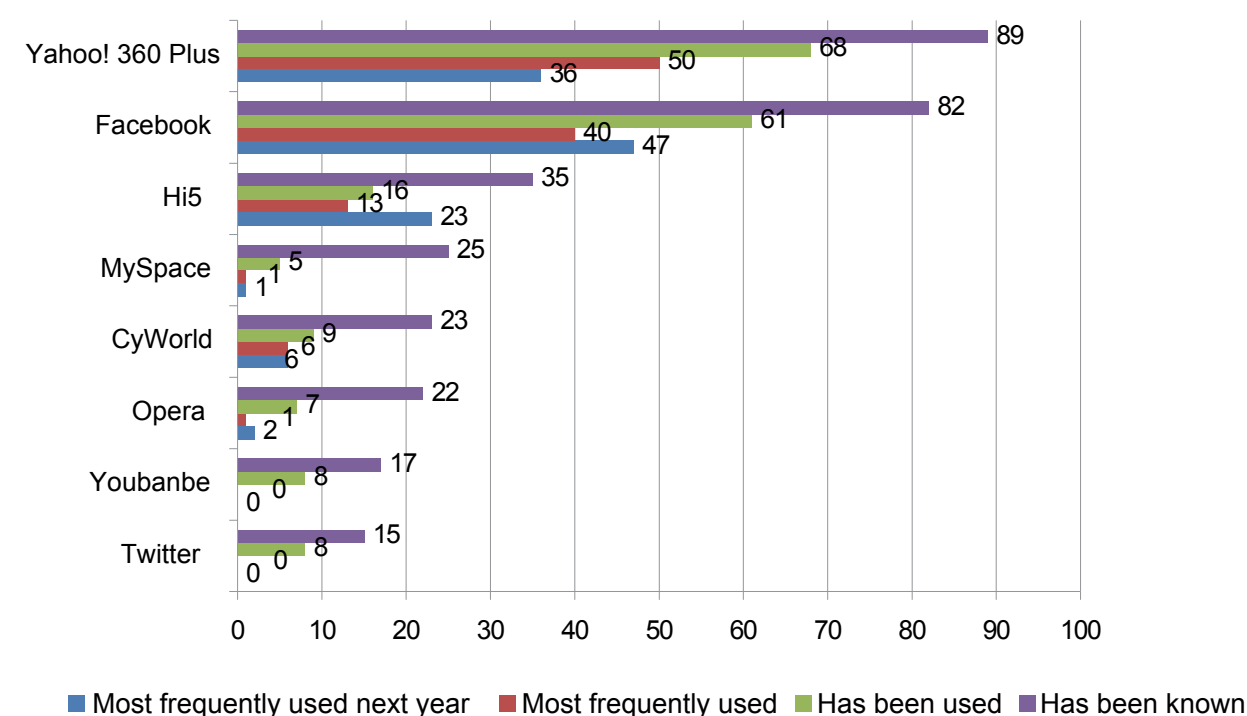
Source: FTA Viettrack 09/2009.

Despite of being released quite late (August, 2009), Zing Me has seen a tremendous increase in the number of members. According to the statistics given by Zing Me on the public media, this social network reached 3.75 million members in December 4th 2009, while that number of Facebook is 1.02 million. Nevertheless, the number of clients that want to put advertisements on the website is still small, because the majority of Zing users are in their teenage who use the network only for entertainment purpose. Therefore, there has not been a noticeable segment of customers.

Apart from social network websites that provide blogging service, there are other forums which attract numerous of businesses and individuals to come for advertising reason, such as muare.vn, 5giay.vn, webtretho.com, lamchame.com. The most well-known social network for online chatting in Vietnam is Yahoo! Messenger.

Recently, there are two main forms of online advertising on social network websites in Vietnam, which are display advertising and interactive advertising.

2.1. Display Advertising

The most common forms of display advertising are logo, banner and text advertising, which are often in highly accessed social network websites, in which there are potential customers of certain products and services. Besides, businesses can also implement multi-media applications like flash to create special effects on websites. These effects require investment on ideas and art designs. In return, they are creative, eye-catching and interactive, which helps determine promising customers.

Figure IV.34: Demonstration of display advertising

Advertisements on muare.vn forum   Flash advertisement on Yahoo! Messenger

Display advertising (especially banner advertising) is the most popular form of advertising in social network websites of Vietnam, which is extremely effective for promoting brands because of the ability to display advertising messages clearly. This form of advertising is also simple and less time-consuming for businesses.

On the other hand, the dense appearance of banners and flash advertisements on such websites is also causing irritation for users. Even though many banner advertisements are seen as the most popular and effective means of advertising at the moment, people are paying attention on them less and less because these advertisements have to compete with other banners to gain their frequency of appearance and positions

Box IV.3: Evaluate the efficiency of some businesses' adverts placed in Facebook

Vinabook: Adverts put in Facebook have not proved a resounding success in comparison to other forms of online ads, for example the promotion of targeted keywords ads has not demonstrated the capability to gain access in large. The CTR (Cost-through Rate) is relatively low, around 0.05-0.07%. The cost is approximately equivalent to push banners in some giant online newspaper. However the volume of customers uses Facebook has quality and motivation of purchasing far better than some other sources such as those banners of those sites include news content. The placed order conversion rate from Facebook is at round about 1.6 - 2.8%.

Baomoi Mobi: After two weeks of running trial adverts (from 09/9 to 27/9/2009), there are more than 30m impression, the amount of clicking is approximate 20.000. The CTR is fairly low, around 0.05% - 0.1%, it depends on times.
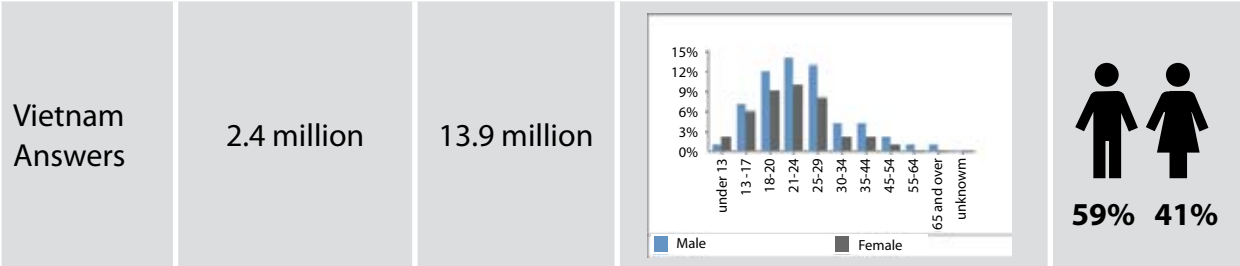
Source: Vinabook and Baomoi Mobi provided.

There are many ways of calculating the cost of issuing ads on social networks, which can be divided into two main groups that are fixed charge (or all-in charge) and variable charge.

* Fixed charge: Businesses or individuals that want to place ads will have to pay an all-in fixed charge on a weekly, monthly, quarterly or yearly basis. The rate of charge is varied, which depends on the popularity of the social networks, their positions of placing ads, the size of banners or the rank of the displayed pages. This charge is applied by many forums in Vietnam such as muare.vn, 5giay.vn, enbac.com, webtretho.com, vn.yahoo.360plus.com, vn.answers.yahoo.com... Its advantages are that organizations can gain initiative in spending advertising expenditure; simplify the payment and management system. Fixed charge also assists the businesses in minimizing the risk of the statistical system or the association of access-authorized groups and service suppliers to receive commission. The disadvantages of this method are that the businesses are at charge though the volume of access can be imbalanced (reduced at weekends or holidays, Tet holidays) or the whole system is interrupted.

Table IV.20: Advertising charge displayed on Yahoo! 360 Plus and 5giay.vn

Advertising charge displayed on Blog Yahoo! 360 Plus of Yahoo! Vietnam (from 01/7/2009)		
Position	**2009 Rate**	**Remark**
Large rectangle & supper banner	VND 45,000,000	2 weeks exclusive, no tier discount
Large rectangle	VND 30,000,000	
Supper banner	VND 20,000,000	

ADVERTISING CHARGE ON 5GIAY.VN FORUM (from 01/10/2009)

(unit price: VNĐ per month)

Banner	Size	Quantity (Shared)	Homepage	1st tier sale page	2nd tier sale page
Top banner	600*80	3	15,000,000	6,000,000	4,000,000
Fulltop banner	980*80	3	24,000,000	9,600,000	6,400,000
Center banner	468*60	3	12,000,000	4,800,000	3,200,000
Great banner	320*80	3	9,60,000	3,800,000	2,500,000
Right banner XL	200*300	3	7,200,000	2,800,000	1,800,000
Right banner L	200*200	3	4,000,000	1,600,000	1,000,000
Heart banner 1	780*80	3	8,400,000	5,000,000	2,800,000
Heart banner 2	780*80	3	6,000,000	4,000,000	2,500,000
Heart banner 3	780*80	3	4,800,000	-	-
Quick reply banner	780*80	3	-	3,000,000	2,000,000

Source: provided by Yahoo! Vietnam and 5giay.vn

* Variable charge: There are many ways of calculating the variable charge such as CPC (Cost per Click), CPM (Cost per thousand impressions), CPS (Cost per sale) or CPA (Cost per Action). Nevertheless, in Vietnam the most two popular methods are CPC and CPM.[27]

The advantages of this method are that the businesses only pay for potential customers or those who want to conduct a transaction with them. However, implementing this plan can go beyond businesses' control in calculating the cost of promotion campaigns if the social networks do not allow to limit the maximum budget. Meanwhile, the statistical errors of the systems or fraudulent clicks can also pose a serious risk for businesses.

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27   *CPC (Cost per click): Calculated based on the number of clicks to the advertisements.*
     CPM (Cost per thousand impressions): Calculated based on each 1000 times that advertisements are displayed.
     CPA (Cost per Action): Calculated based on how each action (transaction, application) relates to a display advertisement.

Box IV.4: The method of calculating advertising cost displayed on Facebook

Only pay when there are people want to pay for the businesses' services: Just like any other modern advertising suppliers, Facebook allows organizations to choose the payment method based upon the amount of clicks on the ads of those use CPC (cost per click) or 1000 advertising times displayed CPM (cost per thousand impression). However, it does not mean a business will have to pay for a burden of cost if the ad is enticing. Facebook allows to limit the daily advertising expenditure (at least 1 USD/day). Hence, the businesses can feel secure as they never have to pay more than the amount they planned. The advertising system of Facebook will automatically cease to display the ads when the daily advertising expenditure reaches the planned limit.

Great flexibility: Organizations can switch between the two forms of payment from CPC to CPM and vice versa.

Online payment: Facebook provides a quick and simple online payment method for businesses. The advertising expenditure is automatically deducted everyday from debit or credit cards of the businesses.

The advertising charges amongst social networks are radically different and compatible with the popularity of each social network. While the advertising cost in many forums such as muare.vn, 5giay.vn hay webtretho.vn is at average and suitable for both businesses and individuals, other social network services of Yahoo! Vietnam such as Yahoo! Messenger, Yahoo! 360 Plus or Yahoo! Answers apply high charge due to their large amount of visitors and access, which is appropriate for the bigger companies.

Table IV.21: Statistics of amount of access in Yahoo! Vietnam

Service	Number of visitors per month	Access rate per month	Population statistics		
Vietnam Messenger	7.9 million	100.1 million		64%	36%
Vietnam 360 Plus	2.4 million	13.9 million		67%	43%

Vietnam Answers	2.4 million	13.9 million		59%	41%

If they have head-offices in Vietnam customers can contact directly their sales units and purchase the advertising position in a weekly, monthly, quarterly or yearly basis. If customers want to place their ads on a foreign social network, they have to buy the advertising position in accordance with the contract signed with an advertising company that plays an intermediate role. However, some social networks like Facebook allow customers to create their own ads via the self-served advertising system. Using this system, customers can built URL, set headlines, contents, add pictures, choose targeted viewers, auction the value of CPC or CPM etc. using the supportive system of Facebook.

Box IV.5: The promotion campaign of Baomoi Mobi on Facebook

Goals
- Popularize their images.
- Support the inauguration campaign.
- Support marketing in accordance with other channels to gain a fixed rate (at the time of advertising): at least 1000 people will use Baomoi Mobi in one day.

Methods:
Using Facebook Ads will link to the main page http://baomoi.mobi which contains the message: "Cheap phones read news freely" and the contents are outlined as "The new irresistible trend of reading news is compatible for phones of all ranges". The image used is identical to which is on Baomoi Fan Page.

Results:
After two trial weeks, there are 30m Impression, the amount of clicks is at round about 20,000. The rate of Click is equal to ages. Those do the mouse click at 18-24 age held the proportion of 60%, 25-34 age is 34%, the remains are 35-54 age. Female observes the impression more than male (based upon the actual sex ratio on Facebook), however, male do the mouse click more than female. Baomoi Mobi reached the target of 1,000 users every day.

Source: Baomoi Mobi.

2.2. Interactive Advertising

Online interactive advertising went to the market at the same time with the appearance of Web 2.0. Businesses and individuals create accounts on a popular social network website to communicate with customers and potential clients. Information about products and services is discussed and queries are answered. These contents are kept and published for everybody

to read and send feedbacks. With this type of advertising, it is convenient for businesses to specify their potential customers depending on the community characteristics. It also helps bring promotion information and advertisements to the public in a subtle way but still ensure the ability to be spread out among the community (viral marketing).

Forums such as www.muare.vn, www.5giay.vn, www.webtretho.com, www.enbac.com are the first websites in which interactive advertising was brought into practice in Vietnam. Businesses and individuals were able to create topics to promote their products and communicate with customers directly on the topics. Making topics for advertising was free of charge, however, these topics were pushed behind as new ones entered the forum or when there were new posts in other topics. As a result, demand for "attached topics" arose. These are topics that are placed in a separate section on top of the page of each division, therefore, are more helpful in terms of marketing. At the moment, the need of using attached topics for advertising purpose on forums is rising, especially on websites that are popular.

Muare.vn is one of the websites which have the busiest attached topics since the number of members and visitors have reached thousands. Starting from August 2008, when the desire for attached topics increased, the management board of muare.vn decided to undertake public auctions of these topics on the forum. The auctions take place once in two months, each lasts for 24 hours from 12 o'clock in the afternoon of the first day to 12 o'clock in the afternoon of the second day, with simple procedures of participation.

Box IV.6: Muare.vn's regulations of the attached topics auction

- The nickname used to bid has to be activated by SMS. It is not allowed to spam or ask and questions in the bidding topic. Only bidding is accepted. Nicknames of users who violate the rule are locked in minimum 3 days.

- The bidding price is for one month. It doubles when the payment is made (The topic is valid in two months).

- Contact details including mobile phone number (compulsory) and Yahoo username or e-mail address have to be stated in the first reply post.

- Bidders are allowed to increase the price by n times compared with the current price. One username is allowed to bid many times, in which the price in later bidding must be greater than that in the previous one. Other than that, the bidding is not valid.

- The next bidder can set a lower price compared with the previous bidder in order to avoid price manipulation or inflation of price. If the bidder with the higher price cancels the bidding, the other one will replace the position. The nicknames of users whose prices are valid and selected but cancel payment are blocked in one month.

- Once the bidding is posted, it is unacceptable to edit the post. Users can only post a new reply.

- At 12 o'clock sharp in the afternoon of the last day of the auction, biddings are finished. The biddings after 12 o'clock will be eliminated. If there are two identical biddings, the user who placed the bid earlier will be chosen.

Several forums such as 5giay.vn and webtretho.com do not apply auction like muare.vn and set a fixed charge for attached topics, which are placed on the top of every section with varied levels of price for each section.

Besides attached topic auction method, many forums also develop "SMS - AUTO UP" service, used when people want to send messages from their mobile phones to update the topics; and "SMS - HOT TOPIC", used when people want to send messages from their mobile phones to update the topics and attach the word "HOT" to them during 24 hours. With these services, businesses and individuals are able to send each separate message or have the messages sent automatically by setting time to update the topics without login to the forums.

However, the features and applications of these forums have not fulfilled the demand to manage and search for information as well as express their individualities. For example, a series of posts can be mixed with comments of other members, or if a thread is made, it will be quickly drifted away because of newer threads.

Another form of advertising is to create an account on social networks.

* Facebook: Businesses can create a separate advertising page on Facebook by registering as a user of the network. After that, they are able to update information constantly for other members called "fans" to see. Quite a number of big groups in the world have made the most of Facebook to promote their brands, among which are Starbucks, Coca Cola, Ford. This trend has recently started to be noticed by businesses in Vietnam, for example, the affiliation of Dell in Vietnam created a Facebook page for Dell at www.facebook.com/dellvietnam to connect with customers. The number of fans of this page has reached more than 3,300. The fan page of Vinabook at http://www.facebook.com/vinabook has also achieved the number of fans of more than 2,200. These impressive numbers of fans along with their networks are the most potential customers for businesses.

* Cyworld: Cyworld Vietnam network is a new version of Cyworld Korea. This network has experimented a new interactive advertising method for several businesses. Companies register as the users of the website with their usernames to own an account called "My Home". They are able to decorate the home page with themed pictures and messages as well as connect with friends to promote their products. A business now becomes a "neighbor" that also creates blogs to share thoughts, announces new plans, uploads photos and video clips to its collection, posts comments to other accounts and organizes clubs and contests. As of December 2009, statistics show that the home page of Lacvert Essance cosmetics on Cyworld attracted hundred thousands of visitors, connected with 22,000 friends and had 18,000 comments

* YouTube: Youtube allows users to broadcast, view and share video clips without charges. Many businesses have made use of this feature by posting their advertising clips on the website. The success of advertising video clips can be assessed by the number of views and user ratings. Businesses also need to take into consideration user comments about both the advertisements and the products or services.

Figure IV.35: Demonstration of advertising video clips on YouTube
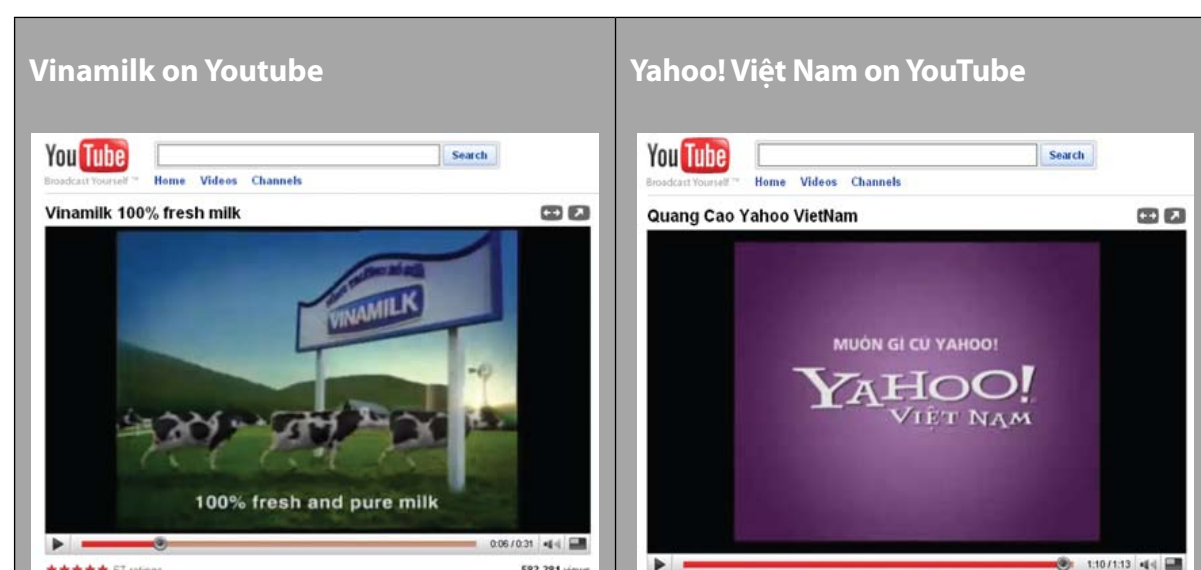
* Twitter: Twitter is a social network website, which provides micro-blogging service. It keeps users informed on their newest updates, which is called "tweet" or "update". To a certain extent, this service is equivalent to Blast of Yahoo! 360 or Status of Facebook, which allows a message of no more than 140 characters. Twitter users in Vietnam send information on website http://twitter.com, through WAP, which involves accessing the Internet from mobile phones, on http://m.twitter.com, via applications such as Twitterific, TwitterFox, Twhirl or Instant Message. The convenience and fastness of Twitter enhances discussions about brands which involve active participation from the user community, at the same time, businesses are able to keep track of public response with their products or services. In Vietnam, many businesses as well as other social network websites also have accounts on Twitter, for example, Baomoi, Vinapay, Clip.vn, Buzz.vn, YanTV, TuVinhSoft, LinkHay. Nevertheless, Twitter has not been very popular in Vietnam.

Interactive advertising is a sufficient method to approach customers. The social benefits of interactive advertising are considerable. It improves customer services, raising awareness of brand names, directs and adjusts communications campaigns and product development strategies as well as helps increase quality of products and services, taking into account public response. With interactive advertising, customers also access information actively, select what information they want and share their experience, thought, predictions and demand. As a result, good interactive advertising development and management will help growing the number of potential customers and maintaining their support for businesses much longer.

However, businesses might face several difficulties when choosing interactive advertising. Since both positive and negative responses can display on websites, plus anybody can set up an account to enter comments and information being spread out easily among the online community, managing blogs and forums needs special consideration. Good management will help business minimize negative information being spread out uncontrollably.

In general, advertising on social network websites is still new form and only holds a small market share in Vietnam. Yet, its advantages and the success of many businesses that experiment this advertising form has made it a remarkable trend. When social network websites become more popular, online advertising in Vietnam will expand more rapidly, which requires serious research and investment from businesses in order to create optimal advertising strategies. Advertising on social network websites will contribute towards the future development of online advertising in Vietnam.

RECOMMENDATION

RECOMMENDATION

After 4 years of implementing Master plan on e-commerce development 2006-2010, Vietnam e-commerce have substantially developed, gradually come into social life and positively contributed to the nation's development.

In order to maintain the continuous development and enhance competitivess of enterprises, government, enterprises, social organizations and consumers need to closely and actively cooperate in the time to come. This Report will emphasize the solutions needed to be concentrated on doing in 2010.

I. RECOMMENDATIONS FOR STATE AGENCIES

1. Supporting enterprises on applying e-commerce

The recent years' survey results show that most of enterprises nationwide have applied e-commerce at various levels and achieved substantial results.

In order to help enterprises have another information channel on market and customers, since 2006 the Ministry of Industry and Trade built some e-commerce portals and information portals on Internet, including: Vietnam national e-commerce portal at www.ecvn.com, foreign market information portal at www.ttnn.com.vn and Export information portal at www.vnex.com.vn. In 2010, the Ministry of Industry and Trade need to improve those portals' operation.

The online provision of public service also helps enterprises to reduce operation time and cost related to business registration procedure, import and export procedure... In recent years, the online provision of public services has been successfully implemented by some ministries and provinces and needs to be enhanced in the upcoming years.

Regarding specific support measure for enterprises, the state management body for e-commerce should build the pilot programs which are specialized to support enterprises in various business sectors and expand the electronic data exchange model between enterprises.

2. Promoting popularization and propaganda on e-commerce

Popularization and propaganda on e-commerce is an important assignment in the Master plan on e-commerce development 2006-2010 and have been widely implemented by state administrative bodies and social news agencies. In terms of the current e-commerce practice, the e-commerce popularization and propaganda activities achieved the defined targets.

However, since e-commerce is still a new field with rapid development, in the coming time popularization and propaganda activities on e-commerce need to be intensified. The popularization and propaganda must be focused on concrete activities such as: introduction of the effective models of e-commerce application, ensuring the security of electronic transactions, protection of data privacy, benefit of purchasing and selling in the Internet and electronic payment.

3. Enhancing e-commerce law and policy enforcement

After the Law on Electronic Transactions and the Law on Information Technology being approved by the National Assembly, from 2006 to 2008 the Government has promulgated 7 Decrees guiding these two laws. Those legal texts form the basic legal framework for e-commerce activities in Vietnam. Many other legal texts guiding those laws and decrees also have been promulgated by competent ministries and ministerial agencies.

For those laws to come into practice, state administrative bodies need to improve the enactment and ensure the serious implementation of the approved regulations by management bodies, enterprises and individuals. It's also necessary to concentrate on guiding, popularizing the content of those legal texts so that enterprises and individuals can perceive and implement precisely. The law infringement activities also need to be timely detected and strictly sentenced.

The protect measures for online consumers should be enhanced in order to improve the participation of people in online transactions and purchases.

II. RECOMMENDATIONS FOR ENTERPRISES

1. Improving e-commerce application in order to enhance competitive capability

The enterprises applying e-commerce have achieved practical results. Many of them actively invested in e-commerce specialized softwares, assigned e-commerce staff, used online public services. However, the ratio of enterprises applying e-commerce at higher levels is still low.

Enterprises need to improve e-commerce investment to optimize business and product process, especially investment in e-commerce specialized softwares such as ERP, SCM, CRM...

Participating in e-marketplaces is a measure to promote trade, find efficient market. However, enterprises' e-marketplace participation came to a halt in the two year 2008 and 2009 because of many reasons. In order to take full advantage of this measure, enterprises should participate in Vietnamese and foreign marketplaces more actively.

To achieve good results of applying e-commerce, enterprises must review their business strategy for finding out a more appropriate one. Simultaneously, enterprises' e-commerce strategy ought to be suitable to their locality's information technology infrastructure.

2. Increasing e-commerce awareness and law abiding consciousness

Currently, state administrative bodies issued many legal normative texts related to e-commerce. The e-commerce legal framework has been relatively completed. Besides, enterprises have been aware of and applied e-commerce at many levels.

However, the interest of enterprises at e-commerce regulations is still low. In the future, enterprises need to actively enquire and study about e-commerce legal texts such as the Law on Electronic Transaction, the Law on Information Technology, and bylaw texts such as the guidance decrees and circulars. In the implementation stage, enterprises should propose the encountered problems to competent state administrative bodies for supplementing or amending legal texts. This can be done with support of social organizations, Vietnam e-commerce association, VCCI...

III. RECOMMENDATIONS FOR CONSUMERS

Since 2007, online purchase activity had rapidly developed in major cities. Selling of goods and products via Internet has been carried out by many large and prudent enterprises of various sectors. This brought up many satisfactory results, contributed to competence improvement for enterprises and convenience for consumers.

For a stronger improvement of online purchase and in order to form a modern purchase environment, consumers should actively conduct online buying and selling, start from experimenting with a prudent e-commerce website. Besides, experienced individuals should propagate and encourage their relatives to participate in this convenient mode of purchase.

In order to build a safe and secure e-commerce environment, consumers also need to equip themselves with basic knowledge of using Internet, preventing online fishing, protecting data privacy, avoiding virus dispersal...