

E-GOVERNMENT SERVICE DEVELOPMENT – A VITAL FACTOR IN BUSINESS ENVIRONMENT IMPROVEMENT IN VIETNAM

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Abstract

In the past decades, e-government has been considered an effective tool for administrative reforms in both developed and developing countries. They are utilising information and communication technologies (ICTs) for more efficient governmental activities. E-government service development is contributing positively to the fight against corruption, administration reform and improving business environment competitiveness. However, based on the survey done by the authors along with the study of the outcome of the survey carried out by Vietnam's Ministry of Information and Communication (MIC) of the ranking of ministerial and local websites, the paper points out that the current development of e-government services is not up to expectation of citizens and businesses which will be the hindrances to the betterment of business environment in Vietnam. The development of e-government services is due to the lack of interoperability among responsible governmental organs and infrastructure, digital divide and the absence of user-centric approach. Therefore, the paper proposes recommendations to the development of e-government services in terms of designing and improving e-government service quality in order to improve business environment in Vietnam

Key words: e-government, e-government services, business environment, business competitiveness

1. Introduction

In the past few decades, e-government has been considered "a powerful enabling tool " (Bhatnagar, 2004) that has aided governments in utilising information and communication technologies (ICTs) in achieving administrative reform goals to save operational costs for themselves and the transaction cost for citizens and businesses. In the long run, e-government is considered a partial solution for eliminating corruption and improving democracy (Netchaeva, 2002). The implementation of e-government is especially important for developing countries to bridge their gap with developed countries and to benefit more from the development of ICTs. Therefore, e-government is no longer just an option but a necessity for countries aiming for better governance (Gupta and Jana, 2003).

However, many e-government projects have born almost no expected fruits for those who need it including citizens, businesses and even the governments themselves. From failure stories of developing countries' e-government projects, a lot of questions have been raised in terms of the lack of 'e-readiness for e-government' that can be charted along six dimensions including data systems infrastructure, legal infrastructure, institutional infrastructure, technological infrastructure, leadership and strategic thinking (Heeks, 2002).

One of the latest attempts for e-government was a project called 112 in 2006 along with mass computerisation and website building for ministries and provinces. However, the project is a failure due to the excessive reliance on outside consultants that leads to the lack of real ownership of the project at government level (Laodong, 2007). In late 2007, the government is preparing for its next attempt to restart its e-government projects which heads for a more effective and transparent government from local to central government with more concentration on serving citizens over the internet 24 hours at home (Vietnamnet, 2007). Besides e-government services will also contribute to the competitiveness of Vietnam's business environment. With the annual growth rate of 25%, Vietnam's telecommunication is laying a good foundation for e-government service's development.

The paper is structured as follow: the second section reviews literatures on development models of e-government and on e-governments services and existing model for assessment of e-government service availability as well as the linkage between the development of e-government services and business environment. The third section presents the research objectives and research methodology. The findings of the study are presented in the forth sections. The fifth section analyses different aspects of the research results in order to discover the limitations and obstacles for e-government service delivery. After that the recommendations and suggestions for the improvement of e-government services are then proposed.

2. Literature review

2.1. E-government and development model of e-government

Defining e-government

There are different approaches of defining e-government. From the angle of e-government's benefits, e-government is to provide access to more information generated by government, to offer an opportunity to improve the efficiency and effectiveness of the government's function and to make governments more transparent to citizens and business (Turban et al, 2004). There are two natures of e-government: (1) it is the use of information and communication technologies (ICTs), (2) it is to improve the effectiveness and efficiency of governments' activities internally while benefiting citizens and businesses in their transaction with governments.

According to Hiller& Belanger(2001), there are five types of relationship between government and different constituents. However, the paper will discuss two relationships: government delivering service to individuals or citizens (G2C) and government to business (G2B).

E-government models of development and growth

In the past years, effort has been taken to develop models of e-government development. The evolution of e-Government has been conjured in different-stage models (Parajuli, 2007) such as Deloitte Research Model (2000), Elmagramid & Mclver Model (2001), Layne & Lee Model (2001) or Watson& Mundy Model (2001). Hiller& Belanger (2001)'s model represents the convergence of e-government stages and categories of relationships between the government and its constituents (Hiller and Belanger, 2001) and is composed of six kinds of government's relationships in relation with five stages of development. Conceding that stages of growth are combined with major types of e-government relationships (Hahamis, 2005), Reddick (2004) combines both models developed by Laynes& Lee (2001) and Hiller& Belanger (2001) to set up an e-government growth model at local level, which is composed of two development stages of cataloguing and transaction and three types of government's relationship. The model is illustrated in Table 1 below.

Stages of e-government growth and type of government relationship		
Types of relationship	Stages of e-government growth	
	Stage I: Cataloguing	Stage II: Transactions
G2C	Online presence of information about government and its activities for citizens	Services and forms online and databases to support online transactions for citizens
G2B	Online presence of information for businesses about government	Services and forms online and databases to support businesses transactions with government
G2G	Online presence of information for other levels of government and its employees	Services and forms online and databases to support online transaction for other levels and government and employees

Table 1. Stages of e-government growth and types of government relationship. Source Reddick (2004)

2.2. E-government services and measuring the availability of e-government services

2.2.1. E-government services

Since e-government is about a process of reform in the way governments work, shares information and delivers services to external and internal clients (Bhatnagar, 2004), e-government service or e-service in public sector (Buckley, 2003) plays an important part in the application of e-government. E-service along with e-democracy, e-commerce, e-management and e-decision making is constructing e-government for local authorities (Quirk, 2000) (quoted by Shackleton et al, 2006).

E-government services can vary from the simple like seeking for information to the complex like service from the government involving coordination with multiple services and transactions at various back-end departments (De', 2006). The delivery of e-service with the support of ICTs, therefore, can be in different formats. It can be varied from e-government portals, information kiosks to electronic stampings, e-voting etc.

2.2.2. Measuring the availability of e-government services

As the goal of e-government service is the facilitation of the transaction between the government and citizens and businesses, the number of e-government e-services available and their quality therefore, can be considered a measurement for the development level of e-government. There are different models for e-government services that have been developed such as ANAO (Australian National Auditing Office) model, SAFAD (Swedish Agency for Administrative Development) (Persson and Goldkuhl, 2005) and four level of e-service maturity based on the depth of interaction between the public and government (Curtin et al, 2003). Effort to measure the availability of e-government services has also been made by the European Committee since 2000 with a different-level model of sophistication of online public services from 'basic' information provision over one way and two way interaction to 'full' electronic case handling and personalisation (Capgemini, 2007). The similarity among those models is that the e-services which are modelled in stages will partially reflect stages of e-government development.

In the measurements of e-government services for citizens and businesses in different stages of development of e-government, the paper combines the two models: Stages of e-government growth and type of government relationship by Reddick (2004) and Level of sophistication of e-government service model (Figure 1) by EC in 2005 (Capgemini, 2005) and in 2007 (Capgemini, 2007) – Table 2 below.

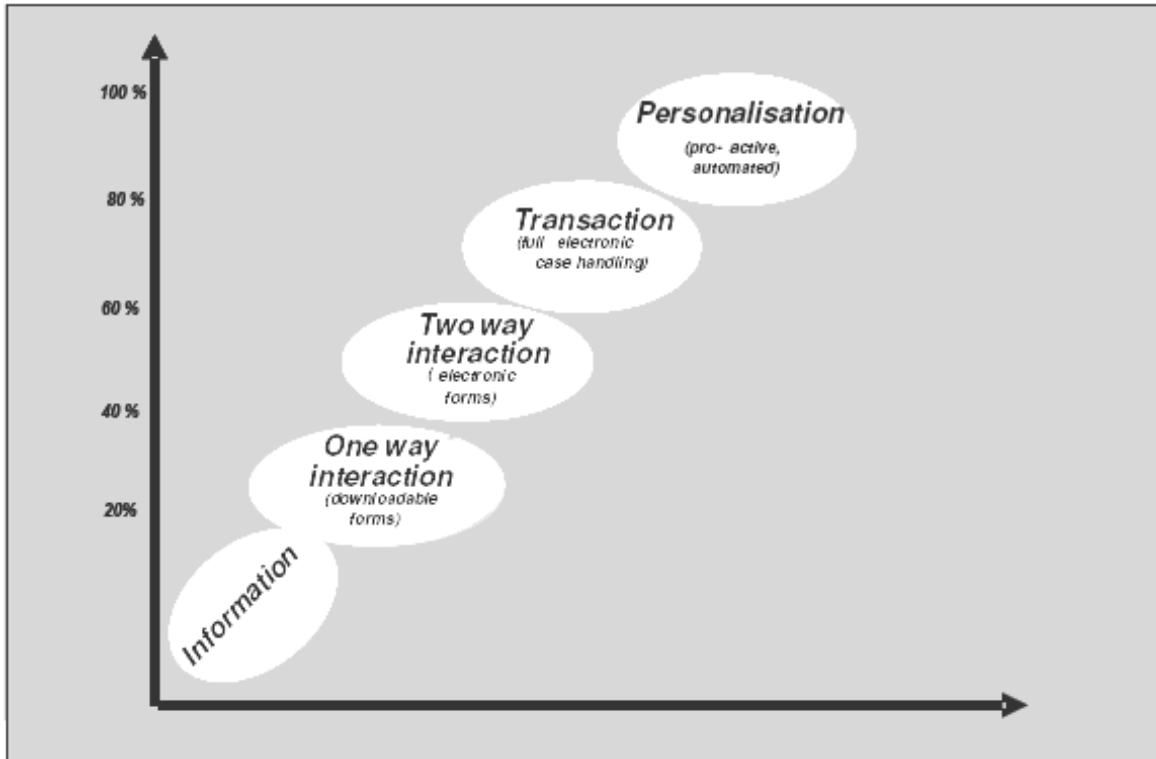


Figure 1. Level of e-government Service Sophistication. Source: **Capgemini, 2007**

The combination will help define level of sophistication of e-government service in correspondence with stages of development of e-government. The stages as mentioned are the cataloguing and transaction phases of e-government and the focus on G2C and G2B relationships. The levels of sophistication of e-government service include: Level 0: absence of services, Level 1: Information, Level 2: One way Interaction, Level 3: Two way interaction, Level 4: Transaction, Level 5: Personalisation (Capgemini, 2005, 2007).

Stages of e-government growth	Stage 1- Information		Stage 2 – Transaction			
	Level 0	Level 1: Information	Level 2: One way Interaction (downloadable forms)	Level 3: Two way interaction (electronic forms)	Level 4: Transaction(full electronic case handling)	Level 5: Personalisation (Pro-active and automated)
G2C	The service provider or the administrative responsible level does not have a publicly accessible website or the publicly	The information necessary to start the procedure to obtain a public service is available on-line.	The publicly accessible website offers the possibility to obtain in a non-electronic way (by downloading forms) the paper form to start the procedure to obtain this service. An electronic form to	The publicly accessible website offers the possibility of an electronic intake with an official electronic form to start the procedure to obtain this service. This implies that there must be a form of	The publicly accessible website offers the possibility to completely treat the public service via the website, including decision and delivery. No other formal procedure is	The government pro-actively performs actions to enhance the service delivery quality and the user friendliness. The government automatically provides specific

	accessible website managed by the service provider or by the administrative responsible level does not qualify for any of the criteria for the stages		order a non-electronic form is also considered as level 2.	authentication of the person requesting the services in order to reach level 3.	necessary for the applicant via "paperwork"	services being social and economic rights for citizens (and business), linked to a certain condition of the user. There is no need for the user to request the service.
G2B	The service provider or the administrative responsible level does not have a publicly accessible website or the publicly accessible website managed by the service provider or by the administrative responsible level does not qualify for any of the criteria for the stages	The information necessary to start the procedure to obtain a public service is available on-line.	The publicly accessible website offers the possibility to obtain in a non-electronic way (by downloading forms) the paper form to start the procedure to obtain this service. An electronic form to order a non-electronic form is also considered as level 2.	The publicly accessible website offers the possibility of an electronic intake with an official electronic form to start the procedure to obtain this service. This implies that there must be a form of authentication of the business (or juridical organisation) requesting the services in order to reach level 3.	The publicly accessible website offers the possibility to completely treat the public service via the website, including decision and delivery. No other formal procedure is necessary for the applicant via "paperwork"	The government pro-actively performs actions to enhance the service delivery quality and the user friendliness. The government automatically provides specific services being social and economic rights for businesses linked to a certain condition of the business. There is no need for the business to request the service.

Table 2: Level of sophistication of e-government G2B and G2C service in different stages of e-government development

2.3. The linkage between e-government services and business environment's competitiveness

E-government services is believed to bring about positive changes in the way governments deals with businesses and citizens and consequently, e-government services help improve the competitiveness of business environment in terms of creating intelligent customers, helping businesses save time, enabling a good tool in dealing with corruption.

Research done by Vu and Jones (2006) has pointed out that e-government will strategically enhance national competitiveness of a country in terms of macroeconomic environment, local cluster performance and firm behaviour.

E-government services save time and money, bring about convenience for the citizens and businesses with online information, online transaction and fair treatment among citizens and among businesses.

Once e-government services are developed to involve citizens in to learn about the rights and to enjoy its convenience, e-government services are creating more well-educated citizens and customers alike because they are learning and executing their rights from their transactions with the government.

Besides, e-government services are helping businesses save time, money and human resource in dealing their transaction with the government from business registration to paying tax duty by producing the same output in less time which will help them reduce operational costs. This is also believed to contribute positively in the fight against corruption. Besides, in G2B transaction, the importance of e-government services in government's e-procurement has not been put in its right position. Theoretically speaking, for example, when government portal is used for online procurement like bidding for government's spending in a transparent way, it will bring equal chances to small and big businesses alike. As a result, the business environment is much more friendly and encouraging for private sector and also clearer to public. Moreover, the government will also save time and money, become more interactive and more innovative (Vu et al, 2005) which will help them gain more confidence from citizens and businesses.

3. Research approach, research objectives and methodology

The research was to survey four Vietnamese local government websites that have e-government services for citizens and businesses. Vietnam has 64 provinces and cities which are also 64 local government level authorities. Each of these provinces has their own website except for 3 provinces.

The research aims to clarify the current status of e-government services in Vietnam and its impact on the competitiveness of the business environment. Based on the secondary data of the ranking of local and ministerial websites done by MIC, and other sources of secondary data of business demand for e-government services, the research's objectives is to point out the linkage between e-government services and business environment's competitiveness.

The model applied in this paper is the one developed based on the combination of Reddick's model and that of the EC. The model is used because the model that MIC is using for ranking the website has the same level of ranking and criteria as the one by EC. The difference is that the model used by MIC mentioned four among five stages of sophistication of e-government services. The model is used to clarify the stage of development of e-government services.

In order to study the availability of e-government services on local government websites, various approaches have been adopted. Data were collected using web content study, secondary data from statistics office and researches on e-government and ICTs development in Vietnam. The identification

of obstacles that affect the application of e-government services were done by studying secondary data from previous researches.

4. Findings of e-government services in Vietnam - E-government services on local and ministerial websites

Based on the survey done by MIC (2007) (Vietnamnet, 2007), it can be drawn that 54,7% of the localities have developed e-government services at level 1 of development, 28,1% of them have developed e-government services at level 2 of development and 4,7% at level 3. The weakness of the survey is that it has not pointed out how many services have been developed online. Among them how many are still at level 0 of development and the percentage of services developed above level 1. On the other hand, the survey has not mentioned how many services have been used by the citizens, the number of citizens and businesses use the services.

Upon studying the websites' content, it's learned that the four websites are at early stages of transaction. The application of the developed model on the stage of website's development and their service's level of sophistication to the survey findings reflects the followings.

Firstly, a great number of services are available on the websites and portals; however, most of the services provided are at early stage of development. The majority of services available are at level 1 of sophistication. On average, around 2% of services among them reach level 2 of sophistication or above. Among the services available for citizens and businesses from level 2, only two or three of them reach level 3, none of the services reach level 4 of sophistication.

Secondly, G2C service provision is still at its early stages of development. Most of G2C services are at level 1 where information necessary to start a procedure to obtain a public service is available online.

Thirdly, compared to G2C services, G2B services above level 1 are larger in quantity as well as reach higher level of sophistication. Most of the e-government services supply businesses with downloadable forms to obtain the services. However, the G2B relationship limits to the administrative procedures rather than the G2B relationship in marketplace where transactions between government and businesses involve procurement decisions (Reddick, 2004). Hochiminh City's; Hanoi's and Haugiang's websites provide services of company registration and foreign investment registration online which reaches the level 3 of sophistication thanks to ability of drilling down to the portal of responsible department of planning and investment.

One notable point is most of communication with the local authority service like question and answer about administrative procedure available for both business and citizen have reached the third level of sophistication. The content study also reveals that there is no framework used for each province's website or portal's design in general and for e-government service provision in particular.

5. Analysis and recommendations

5.1. Analysis

Although a small number of e-government services available online are reaching level 2 and level 3 of sophistication, according to Reddick's model, most of the websites studied can be classified at the stage of transaction. However, the application of the research's developed model has clarified that these websites and/or portals are still at their early stages of development. The findings have opened to certain issues in the development of e-government services on local government websites in Vietnam.

First, there is still a big gap between citizens' and businesses' demands and the ability to supply from local government authorities from the design of services to the development and adjustment of services from users' feedback. Most of the services are developed without taking into account the real demand of businesses and citizens (Nguyen and Schauder, 2007). As e-government services focus more on internal administration than G2B and G2C affaires (Vu and Jones, 2006), services are designed and developed according the supplier's will more than citizen and business' demand. It's clear that these current efforts to implement e-government services on these websites are far from enough to meet those demands.

Secondly, there is neither any framework for the development of e-government services on the four websites nor benchmarking about the efficiency and effectiveness of these services. No statistic data are given about the usage of e-government services by citizens and businesses.

There are certain reasons for the current situation of e-government services on the four websites which are also applicable for other local government websites in Vietnam.

First, technically speaking, the absence of interoperability among responsible departments or responsibility authorities has hindered the ability to drill down to appropriate responsible organs or departments to fulfill an online service. Besides, infrastructural issues like internet access or unsynchronised platform for service development are also obstacles to e-government services.

Second, lack of citizen-centric strategy for e-government services development has led to the fact that the website/portals' services are not designed to be user friendly, making it difficult for citizens and

businesses find documents and services related to their needs. Websites are not well structured and do not have a clear focus on serving businesses and citizens (Vu and Jones, 2006).

Third, ICT literacy and digital divide is the main problem which prevent citizens from benefiting from e-government service (Nguyen and Schauder, 2007). With more than 20% of the population are internet users up to 2008 (MIC, 2008), the country has a lot to do to overcome digital divide for their citizen to benefit from its online services.

Fourthly, little effort has been taken to educate and inform citizens and businesses of the availability of e-government services. The absence of awareness about e-government service's benefit will in turn make the reforms and the improvement of e-government services slower and less motivated.

It can be drawn that such limitations in e-government service is having negative impact on business environment of Vietnam. E-government services are developed not to serve the real demand of businesses and citizens. The lack of information of government's main customers – citizens and businesses are leading e-government services to a waste of money and time of the whole society. From business angle, the weaknesses of online government services could have bad effect on the country's investment environment reputation (Vu and Jones, 2006). In the long run, the government will lose businesses and citizens' confidence in government's services.

5.2. Recommendations

In terms of the application of the model developed: the model can be applicable for both assessing existing service and further developing new e-government services of local websites. Although EC's framework is applied in Europe culture and context, it can be a good example for a newly established e-government in Vietnam because the level of sophistication model has been working successfully among EC countries in the past 7 years.

A list of basic services should also be developed in Vietnam through the co-operations among government local authorities and responsible organs or departments. The adoption of the list should be based on the needs of citizens and businesses and e-government initiatives rather than taking a supply side approach (Vu and Jones, 2006). This list will play an important role in setting up a commonly used framework for the measurements of service quality of local governments' websites.

This model, however, needs empirical study for further application because it needs modifications to get along with Vietnamese cultural and social context. Besides, the limitation of this research that should also be considered lies in the fact that distance and the lack of available online statistical data about Vietnam's telecommunication made it impossible for the authors to carry out further research in

obstacles for e-government service application such as human resource, internal hindrance and detailed infrastructural issues as well as demand side of businesses and citizens for e-government services.

In terms of the development of e-government services: The interoperability among local authorities departments is the key factor to the development of e-government service. This will decide the ability to drill down of the web-portal for the appropriate services. Therefore, synchronised improvement of cooperation among local authorities and departments is required to create a firm infrastructure for any service development.

The local government authorities should upgrade current services at medium level to higher levels of sophistication while at the same time develop new basic services for citizens and business equally. At the same time, ICT literacy policy and strategies should be launched to bridge the digital gap among the population.

Also recommended is a “user-centric” service model which treats citizens and businesses like customers (Box, 1999). The needs of citizens and businesses should come first rather than operational or other imperatives inside the government (Intel and Gov3, 2006). The development of e-government services should go with e-commerce development policy to encourage businesses to do businesses with the government in its e-procurement. The development of security policy along with electronic payment will also pave the way for businesses to deal transaction online such as tax payment, fee for administrative services. Further study, therefore, should be taken in studying the demand of citizens and businesses to offer basic services with citizen-centric orientation, not agent-centric one. Besides, the quality of ICT infrastructure is crucial ingredient in the long term success of e-government initiatives.

6. Conclusion and further research

The paper developed a model for assessment of e-government services' availability based on the combination of Reddick's model of e-government development and EC's model of e-government service's levels of sophistication. The study is taken on Vietnamese local government websites and ministerial websites by web content supported by secondary data research. The application of the developed model in the survey has shown that most of the websites are at early transaction stage. The websites have a modest number of available online services that reach medium and high level of sophistication. The main obstacles for the development of e-government services can be identified as the lack of proper ICT infrastructures, the absence of interoperability among local authority organs' websites and the digital divide among the population as well as the lack of user-centric orientation in developing services. Interoperability is recommended to play the key role in the development of e-

government services, basic services should be developed along with the improvement of existing services and a citizen-centric approach should be taken in the development of e-government service.

Further research about the availability of e-government service can be taken from different approaches. First, from policy recommendation for the central government, further research should be carried out in making available online services from the central government's website which can interoperate with local government websites. From the angle of the application of the developed model in the paper, further research and modification should be performed to make the model applicable in ministerial website's service development or local government websites of lower level than provinces. More empirical study also needed for the implementation of the model in the development of e-government services.

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