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3. IT infrastructure in parliaments

By

Penjira Kanthawongs, Ph.D.

Business Computer Department, School of Business Administration

Bangkok University, Rama IV Rd., Klong-Toey, Bangkok 10110 Thailand

Email: penjira.k@bu.ac.th, penjira@truemail.co.th

Office Telephone: +66(0)-2-350-3500 Ext. 1648

Fax: +66(0)-2-249-1819

Critical Success Factors of e-Parliament Systems to Enhance User Engagement:

A Case Study of the Thai Parliament (4,951 words)

Abstract

Since the implementation of e-Parliament systems are complex especially for a lower-income country such as Thailand, this paper presents four critical success factors including trust, usefulness, word of mouth, and strategic use of IT – networking of e-Parliament systems to enhance user engagement of the Thai Parliament. Scope of the study, related theories, conceptual framework development, methodology, results and discussion, and implications for theories and practitioners are stated.

1. Introduction

The United Nations and Inter-Parliamentary Union (2008) defined 'e-Parliament' as "a legislature that is empowered to be more transparent, accessible and accountable through Information and Communication Technology" (ICT). E-Parliament issues are important in today's world because there are 105 responses and comments from around the world to a survey on the use of ICT in parliament of the World e-Parliament Report 2008 (United Nations and Inter-Parliamentary Union, 2008). However, the implementation of e-Parliament is a complex exercise and many adopters in higher-income parliaments such as British Parliament and lower-income parliaments such as Thai Parliament have encountered problems in different phases. To illustrate for a higher-income parliament, neither British parliament nor government has devoted many resources to the full development of that potential (Ferguson, 2007). The elected Westminster parliamentarians have often been accused of reacting slowly to the development of new media technologies (Allan, 2006). The United Nations and the Inter-Parliament Union (2008) suggest that a high level of performance in the application of ICT depends on active engagement of members, resources, strong political leadership and skilled secretariat, well-trained technical staff, and sustained commitment to the strategic implementation of ICT in the legislative setting.

For a lower-income parliament specifically the Thai Parliament, although a roadmap of the Thai e-parliament development shows that the Parliament has been carrying out its e-parliament project for more than 17 years (Since 1991), the Thai parliamentarians have hardly made use of their e-parliament systems. For example, e-Parliament systems could only meet information needs of the House of the

Representative (HoRs) at a low level (Kanthawongs, 2004c, 2004d, 2005;

Kanthawongs & Polatoglu, 2005).

Bullen and Rockart (1986) have defined critical success factors (CSFs) as the

limited number of areas in which satisfactory results will establish successful

competitive performance for the individual, department, or organizations. Therefore,

the objective of this study is to suggest critical success factors (CSFs) in the

implementation of e-Parliament systems to enhance user engagement of the Thai

parliament.

2. Scope of the Study

During the late 1990's, the ten members of the Association of Southeast Asian

Nations (ASEAN) including Brunei Darussalam, Cambodia, Indonesia, Laos,

Malaysia, Myanmar, Philippines, Singapore, Vietnam, and Thailand sought to place

public sectors online and to promote e-government as part of the "e-ASEAN

initiative," which was an agreement of ASEAN countries to empower the region's

information technology (IT) capacity (Holliday, 2002). Thailand was the first country

in ASEAN to implement e-Parliament as a part of the e-ASEAN initiative (The

Secretariat of the House of Representatives, 2006b). The country accomplished the

first major task of the e-parliament project by hosting the 2nd General Assembly of

the International Parliamentarians' Association for Information Technology (IPAIT),

May 17-19, 2004 in Bangkok, Thailand. IPAIT was the world's first official inter-

parliamentary group founded to facilitate the exchange of ideas in the IT field in order

to improve the standard of ICT among member countries in both developed and

developing nations and to collect ideas on how to reduce the negative aspects of

utilizing ICT in parliamentary applications (IPAIT, 2003). Therefore, the term 'e-

Parliament systems' refers broadly to the implementation of ICT to facilitate and support the work of members of the Thai Parliament for this study.

Thailand adopted the parliamentary system after governance by the King was changed from an absolute monarchy to a constitutional monarchy in 1932. The Prime Minister chosen by the Parliament was the Chief Executive of the country, while the King or the Queen was the Head of State. Under the constitution (October 11, 1997), the Thai Government includes the National Assembly (The Parliament), the Cabinet Ministers (35 ministers and the prime minister), and the Courts. Since the last Senatorial National Election in 2000 and the last House of Representatives National Election in 2005, Members of the Parliament (MPs) have included 200 Senators (Ss) and 500 Members of the House of Representatives (HoRs). Four hundred HoRs were elected as the constituency basis and 100 were elected as the party list (C. Kanthawongs, personal communication, November 15, 2005; Kanthawongs, 2004b, 2004c, 2004d, 2005; Kanthawongs & Polatoglu, 2005; The National Assembly of Thailand). By July 2004, the population of Thailand was around 64 million (CIA, 2004). The HoRs represented 76 provinces. Thus, there were 400 constituencies for 400 HoRs in the whole country of Thailand (C. Kanthawongs, personal communication, November 15, 2005; Kanthawongs, 2004b, 2004c, 2004d, 2005; Kanthawongs & Polatoglu, 2005; The National Assembly of Thailand). While Members of the House of Representatives (HoRs) introduce and draft bills, Senators (Ss) approve the bills; therefore, they are the legislators who play major roles in the legislative processes.

3. Related Theories and Conceptual Framework Development

Human-Computer Interaction (HCI)

The field of Human-Computer Interaction (HCI) is concerned with evaluating user engagement, user involvement, user participation, and user satisfaction in software development projects. The user perspective of the e-parliament concepts for this study covers only user engagement derived from the field of HCI.

MP Engagement (MP)

The MP engagement concept is derived from the user engagement perspective of Human-Computer Interaction (HCI) studies. The MPs in this study are considered to be stakeholder users, who are directly affected by the systems or services. HCI is concerned with the ways humans interact with information, technologies, and tasks, mostly in business, managerial, organizational, and cultural contexts (Zhang, Benbasat, Carey, Davis, Galletta, & Strong, 2002; Zhang & Li, 2005; Zhang, Nah, Benbasat, 2005). However, HCI has been applied to e-government studies since the late 2000s (Hoening & Christopher, 2001; Griffith, 2001; Scherlis & Eisenberg, 2003). To illustrate, the US staff developing Legislative Information System (LIS) interface used the research and methods from the growing discipline of human/computer interaction, including extensive usability testing when possible (Griffith, 2001). Therefore, MP engagement is the degree to which a Thai MP is absorbed in a subject in terms of attention focus, curiosity, fun, and intrinsic interest, which may lead to favorable behavior changes involving cognitive interactions, while the MP experiences less control (Malone & Lepper, 1987; Kappelman and McLean, 1993, 1994; Chapman, Selvarajah, and Webster, 1999; Webster & Ho, 1997; Webster & Ahuja, 2006).

<center>Strategic Use of IT (SU)</center>

Within the strategic context, an argument pursued in this study is that web-based political activities based on web site development of e-government models are

likely to capture the future use of IT applications with the other users of e-parliament

systems such as citizens, businesses, other governmental agencies, and the media

when performing the core activities of the MPs. Indeed, MPs who can efficiently and

effectively use their web site development are likely to gain competitive advantage.

The web-based technology enables the MPs and/or the Parliament to harvest

economies-of-scale benefits, improve document repository facilities, and reduce

transaction costs (Andersen & Henriksen, 2006) to provide information (i.e., MPs'

profiles) and services (i.e., volunteer forums) to a larger audience.

Strategic Use of IT – Networking (SU-N)

Networking for this research focuses on the instant and extensive links

between organizations through the qualities of hypertext or hypermedia of the web

sites, which are related to the Thai MPs. Such links may be between bodies internal

to the party, such as constituency organizations, elected politicians and central party

staff. The links may also be to external groups that are supportive of the parties' aims

(Gibson & Ward, 2002; C. Kanthawongs, personal communication, November 1,

2005). Network measures assess the perceived number of hypertext links within an

MP site such as internal party links, partisan links (pressure groups or related

campaign sites), and reference links (i.e., the media or governmental bodies). Thus,

strategic use of IT in terms of networking for this study means the extensive links of

the Thai MPs' web sites to the parliamentary web sites, political parties, government's

web sites such as Ministry of Interior, other service agencies such as Provincial

Waterworks Authority, other MPs' web sites, and newspapers' web sites.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) (Davis, 1989), which was

originated from Theory of Planned Behavior (TBP) and Theory of Reasoned Action

(TRA), is the most widely used theoretical model for predicting and explaining system usage. Recent rigorous empirical studies (Wixom & Todd, 2005; Lee, Kim, Rhee, & Trimi, 2006; Srite & Karahanna, 2006) based on TAM and its extension models (Venkatesh, 2000; Venkatesh & Davis, 2000) theorized that an individual's behavioral intention to use a system is determined by perceived usefulness, and perceived ease of use. Interestingly, TAM had been applied to the e-government context (Gefen, Pavlou, Warkentin, and Rose, 2002; Carter & Belanger, 2005; Chang, Li, Hung, Hwang, 2005; Hung, Chang, and Yu, 2006).

Usefulness (U)

The factor for the use of e-parliament systems of the Thai parliamentarians (based on TAM, extension of TAM1, TAM2, TRA, TBP, and ICT diffusion framework) is perceived usefulness. Usefulness is defined for this study as the extent to which one believes that using a system will enhance one's performance (Davis, 1989; Venkatesh & Davis, 2000; Hung et al., 2006; Pavlou & Fygenson, 2006; Srite & Karahanna, 2006).

<center>ICT Diffusion Framework</center>

On the basis of TAM, extension of TAM1, TAM2, TRA, TBP, and DOI, Lee (2003) proposed a framework for Korean ICT diffusion. Specifically, the researcher emphasized the importance of the external, innovation, and imitation. External factors include global economy and government policies. Innovation factors consist of usefulness, ease of use, and self-efficacy. Subjective norm and word of mouth are imitation factors. Lee (2003) pointed out that South Korea had transformed itself from a poverty-stricken country into a leading ICT country because of these ICT diffusion framework's factors. On the basis of TAM2, TRA, TBP, DOI, and ICT

diffusion framework, 'word of mouth' offered in this study is how incumbent MPs interact individually with others related to the use of e-parliament systems.

Word of Mouth (WM)

This word of mouth concept is originated from DOI and ICT diffusion framework in the management information systems field (Frenzen & Nakamoto, 1993; Roger, 1995; Lee, 2003). Diffusion researchers have pointed out that word of mouth was the primary driver in the diffusion of new innovations (Arndt, 1967; Sultan, Farley, & Lehmann, 1990; Brown, Barry, Dacin, & Gunst, 2005). Word of mouth communication has also been well tested in the marketing field (Richins & Shaffer, 1988; Blodgett, Granbois, & Walters, 1993; Walker, 2001; Anderson & Salisbury, 2003; Tom, Barry, Dacin, & Gunst, 2005). Within the marketing area, word of mouth communication often has a strong impact on product judgments because information received in a face-to-face manner is more accessible and has proven to be important to consumer attitudes and behaviors toward product or technology (Herr, Kardes, & Kim, 1991; Lee, 2003).

Applied to this research, word of mouth is informal interpersonal messages between the MPs and their circle of influence such as their assistants, academic experts, co-workers, family members, and friends about attitudes and behaviors toward e-parliament systems.

Intention to Use (IU)

Behavioral intention is a motivational factor that captures how hard one is willing to try to perform a behavior (Ajzen, 1991). TAM, extension of TAM1, TAM2, TRA, TBP, and ICT diffusion framework suggest that behavioral intention is the most influential predictor of behavior. Users who enjoy a computer activity report higher intention to use it in the future (Venkatesh & Davis, 2000) and those with higher

intrinsic enjoyment show higher intentions to return to a particular web site (Koufaris,

2002). Therefore, a person intends to use the systems if that person engages in the

systems (Davis, 1989; Venkatesh & Davis, 2000; Hung et al., 2006; Pavlou &

Fygenson, 2006; Srite & Karahanna, 2006).

Trust

Trust is a positive belief about the perceived reliability of, dependability of,

and confidence in a person, object, or process (Fogg & Tseng, 1999; Gefen, Karahanna,

& Straub, 2003; Everard & Galletta, 2006). Trust gives the trustor the confidence that

the trustee will behave capably (ability), ethically (integrity), and fairly (benevolence)

(Gefen et al., 2003; Pavlou & Fygenson, 2006).

Trust (T)

Parent, Vandebeek, and Gemino (2005) and Hung et al. (2006) draw trust into

the e-government context and suggested that e-government efforts might be better

aimed at citizens with high pre-extant levels of trust rather than in developing better

web sites. Applied to the e-parliament engagement, an MP is willing to rely on the

performance of e-parliament systems because he/she has confidence that the system

will behave with capability, accuracy, and benevolence.

Continued IS or Post-Adoption Model (PAM)

In recent years, researchers have begun to propose the need to understand

continued information system (IS) usage behavior (Bhattacherjee, 2001; Davis &

Venkatesh, 2004). IS continuance describes behavior patterns reflecting continued use

of a particular IS. It refers to a form of post-adoption behavior or the Post-Adoption

Model (PAM) (Bhattacherjee, 2001; Cheung & Limayem, 2005).

Continuance to Use (CU)

Bhattacherjee's post-acceptance model of IS continuance sought to explain an IS user's intention to continue using an IS. Based on expectation-confirmation theory, IS continuance intention is predominantly determined by satisfaction (Cheung & Limayem, 2005). However, this study will only test the relationship between user engagement and IS continuance. Therefore, continuance to use for this study refers to behavior patterns reflecting continued use of e-parliament systems if a user engages in the systems.

Conceptual Framework
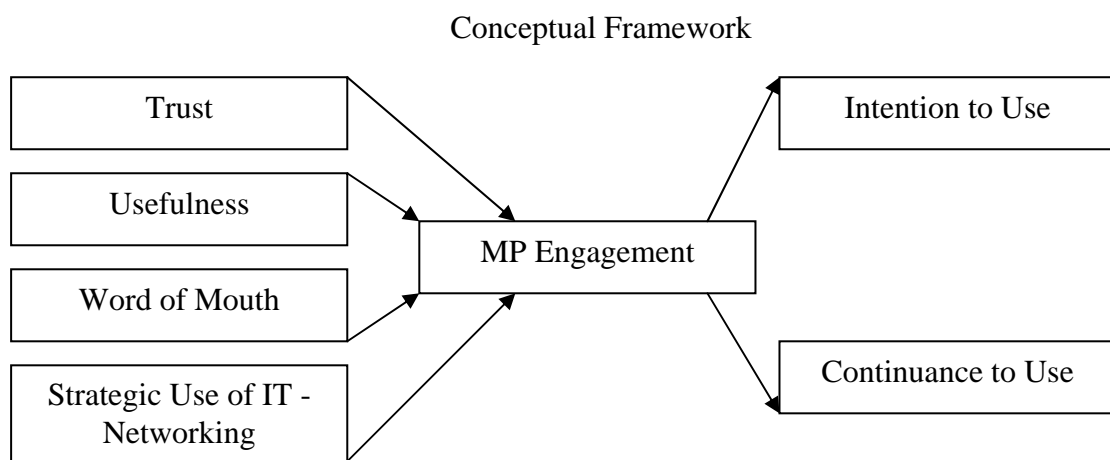
4. Methodology

The foundation for this dissertation on e-parliament systems is based on previous research, conducted by this researcher, including the published results of two qualitative studies (Kanthawongs, 2004b; 2005), one conceptualized study (Kanthawongs, 2004c), and one quantitative study (Kanthawongs & Polatoglu, 2005). The researcher has spent three years (since 2004) studying, analyzing, and learning about incumbent MPs and Parliament processes, as well as the relationships that have surrounded the Thai Parliament especially from the aspect of ICT. More than 40 semi-structured interviews with MPs, parliamentary IT staff, parliamentary library staff, and MPs' constituencies were conducted to assess when, what, how, and why certain aspects and problems had arisen within the environment for e-parliament

systems. The same interviewer conducted these interviews in order to reduce

variance of the study. Although it was often difficult to conduct interviews with MPs,

IT staff, and library staff at the Thai parliament, the researcher had access to the

Parliament through a personal connection with an MP who had been elected to the

Thai Parliament for ten terms and had been working at the Thai Parliament for more

than 30 years. This social capital enabled the researcher to obtain useful

parliamentary documents such as the Thai e-parliament project draft as well as all

relevant information about MPs and a list of their addresses. More than 100 pages of

transcription generated from the interviews were further supplemented by direct

observations and written documents such as bills, committee reports, special

committee statements, motions to amend, statements of reasons, parliament's replies,

political and business newspapers, and other trade magazines.

The mail survey method was chosen for this study for the following reasons.

First, the MPs who were the target sample of this study lived in different geographical

areas throughout Thailand (Mangione, 1995). Second, the researcher wanted to give

the MPs times to think about their answers. Third, the questionnaire instrument could

be developed in a closed-end style. Fourth, the researcher wanted to provide the MPs

privacy in answering the questions. Fifth, the mail survey method allowed

respondents to be more comfortable in answering questions at their convenience

during the response periods (Czaja & Blair, 2005). Therefore, the mail survey was

suitable for this study.

Before carrying out the large mail survey procedure, a pretest with eight

respondents for the qualitative aspects of this study and a pilot test with 107

respondents for the quantitative aspects were conducted to test and refine the

questionnaires. Then, Pearson product-moment correlation coefficients, multiple

regression analysis, analysis of variance, and simple regression were chosen for

statistical methods for this study. Lastly, the posttest in-depth interviews of ten

selected MPs who filled out the questionnaire were conducted to clarify the reasons if

the results deviated from the theories.

Subject Selection

Questionnaires were mailed to all 700 parliamentarians [500 members of the

Thai House of Representatives (HoRs) elected in the national HoR's election in 2005

and 200 Thai Senators (Ss) elected in the national Senator's election in 2000] because

they had used the Thai e-parliament systems for more than four years. The sampling

frame of this research consisted of the most up-to-date directories containing names,

addresses, and telephone numbers of the elected MPs of Thailand. These directories

were obtained from the ten-term MP and updated with the address lists from the Thai

Parliament on November 1, 2006. A total of 371 usable questionnaires had been

returned, accounting for the high response rate of 53%.

5.   Results and Discussion

Interpretation of Standardized Regression Coefficients (β)

Mickey et al. (2004) confirmed that by comparing the magnitude of the

standardized regression coefficients, researchers could determine which explanatory

variables had the strongest linear relations with the response variable when

adjustment was made for the others. Additionally, the standardized regression

coefficient (β) parameters can be viewed to see which of the predictor variables have

the most relative influence or the critical success factors on the dependent variable,

MP engagement, especially when all of the predictor variables in this study are

measured using the same ordinal five-point Likert scale (Miles & Shevlin, 2001).

Therefore, the order of the significant influence predictor variables or the order of the critical success factors on MP engagement are (1) trust ($\beta = 0.281$), (2) usefulness ($\beta = 0.225$), (3) word of mouth ($\beta = 0.204$), and (4) strategic use of IT in terms of networking ($\beta = 0.200$) respectively.

Trust (T)

As explained before, Trust gives the trustor the confidence that the trustee will behave capably (ability), ethically (integrity), and fairly (benevolence) (Pavlou & Fygenson, 2006; Gefen et al., 2003). It is not surprising that trust is the first critical success factor, which has more influence than other three variables on MP engagement in as much as trust has often been found to have a stronger linear relation with user's attitude in other e-government cases such as tax filing and payment systems (Hung et al., 2006) and other contexts, including e-commerce (Gefen et al., 2003; Everard & Galletta, 2006).

Applied to the e-parliament engagement model of this study, an MP is willing to engage in e-parliament systems because the MP has confidence that the system will behave with capability, accuracy, and benevolence. Capability, accuracy, and benevolence can be the starting points for e-parliament systems' builders to act on. For example, as e-parliament systems' builders, parliamentarians who are in the e-parliament project at the Thai parliament, parliamentary IT staff, and parliamentary library IT staff must convey to all other members of the Thai Parliament (who are users of the systems) that they as well as the systems have all the capability, accuracy, and benevolence to provide e-parliament systems designed to meet the users' needs. This could be accomplished by distributing documentation to the users on the role of e-parliament systems and including pictures of parliamentary IT staff and

parliamentary library IT staff who provide the services. This documentation could be provided both online and offline.

Usefulness (U)

Usefulness was the second critical success factor among the four predictor variables on MP engagement for the influence of the model. Since usefulness is defined for this study as the extent to which one believes that using a system will enhance one's performance (Davis, 1989; Venkatesh & Davis, 2000; Hung et al., 2006; Pavlou & Fygenson, 2006; Srite & Karahanna, 2006), this indicates that members of the Parliament who are users of the systems will be more engaged to use the services if these services are believed to enhance the users' performance.

On the basis of the analysis and the requirement specification phase derived from the user perspective in the field of Human-Computer Interaction (HCI), the roles and needs of members of the parliaments were assessed. For example, the systems might allow the MPs to make sure that correspondence is replied and followed up quickly, and that information concerning existing cases could be accessed instantly by MPs and their staff. Additionally, e-parliament systems may help handling and organizing constituency casework and mailbags and seek better cross-referencing with other databases such as electoral registers (Campbell et al., 1996). In conclusion for usefulness of e-parliament systems, the system may offer a well-organized office in order to work efficiently and communicate effectively with their colleagues and staff, with political interests and actors, with government, with the media, and above all with their constituents.

Word of Mouth (WM)

As the third critical success factor on MP engagement, word of mouth communication often has a strong impact toward product or technology because

information received in a face-to-face manner is more accessible (Herr, Kardes, & Kim, 1991; Lee, 2003). Applied to this research, word of mouth (WM) is informal interpersonal messages among users about their attitudes and behaviors toward technology. E-parliament systems' developers must consider that the MP users talk (face-to face or at a distance) or write to each other. Often, social communication is non-verbal signaling using body language or symbols or imitation, and may occur when an MP user copies other users' behaviors. Most of the Thai MP users often communicate face-to-face with their academic experts, assistant, peers, and family members about the e-parliament system. The systems' developers must be aware of this social communication when conducting training or development programs of the systems' usage.

Strategic Use of IT – Networking (SU-N)

Strategic use of IT in terms of networking, the last in the order of the critical success factor on MP engagement, has emerged from the e-government maturity stages or the development of web sites for public services and politicians (Gibson & Ward, 2002; C. Kanthawongs, personal communication, November 1, 2005). Applied to this study, networking means the extensive links of the Thai MPs' web sites to the parliamentary web sites, political parties, government web sites (such as Ministry of Interior), other service agencies (such as Provincial Waterworks Authority), other MPs' web sites, and newspapers' web sites.

Continuance to Use

The researcher finds that MP engagement (ME) has a beta value of 0.610, and that therefore MP engagement (ME) accounts for ($0.610^2 = 0.3721$) 37.21% of the variance in continuance to use (CU). Bhattacherjee's Post-Acceptance Model (PAM) of IS continuance sought to explain an IS user's intention to continue using an IS.

Therefore, continuance to use for this study refers to behavior patterns reflecting

continued use of e-parliament systems if a user engages in the systems. This group of

users is also called adopters of the systems. MP engagement is a significant

determinant for adopters of e-parliament systems.

Intention to Use

The researcher finds that MP engagement (ME) has a beta value of 0.538, and

that therefore MP engagement (ME) accounts for $(0.538^2 = 0.2894)$ 28.94% of the

variance in intention to use (IU). The TRA, TPB, TAM and its extension models

suggest that behavioral intention is the most influential predictor of behavior (Ajzen

1991; Venkatesh & Davis, 2000; Koufaris, 2002). MPs are potential adopters of

e-parliament systems; if the MPs engage in the systems, then they intend to use the

systems. This result shows a positive sign for developing e-parliament systems since

these potential adopters, who may not be aware or care for the systems, perceive the

importance of the systems. In conclusion, MP engagement is a significant

determinant for potential adopters of e-parliament systems.

6.   Implications for Theories and Future Studies

Building upon previous studies in Human-Computer Interaction (HCI), e-

government models, Technology Acceptance Model (TAM), Post-Adoption Model

(PAM), Diffusion of Innovation Theory (DOI or DIT), and trust theories, this study

further introduces the concept of user engagement of the governmental integrated

internal system, with a particular focus on its relationships between e-parliament

systems and user engagement for adopters and potential adopters.

The sample group consisted of real MPs who had used or had not used

e-parliament systems. The model explains 60.6% of the variance ($R^2 = 0.606$) for the

MP engagement part and 28.9% of the variance ($r^2 = 0.289$) for the intention to use

part and 37.2% of the variance ($r^2 = 0.372$) for the continuance to use part in

e-parliament system initiatives. It extends previous adoption research by collecting

and analyzing data from a pool of the MPs that are the direct representatives of the

population. Such a sample provides insight into the users' perceptions of this unique

governmental integrated internal system.

Future studies include testing the questionnaire with other actual users of

e-parliament systems such as the MPs' assistants, the MPs' staff, the MPs' academic

experts, and the Parliament staff because these groups of people are likely to be other

important actual users of the systems. Then, the results from these different groups of

actual users can be compared for further findings. Since only the concept of user

engagement of Human-Computer Interaction (HCI) development is utilized for this

study, the concepts of user involvement, user participation, and user satisfaction of

HCI development can also be researched in the future. Finally, research should also

be conducted on other countries. If the research model of this study is tested with MPs

from different cultures such as the American culture and Asian cultures, word of

mouth might have higher significant relative influence on MP engagement.

Implications for Practice

Managerial implications for the MPs who are computer illiterate, government

policy makers, government agencies, and system developers are also discussed. The

findings can provide useful recommendation to development of practice and policy

making, which are user oriented.

Suggestions to the MPs

On the basis of Lee and Lee (2002) research, both computer literacy and

information literacy are essential for executives in conducting today's activities. An

MP who does not know how to use computers and the Internet will be low in computer literacy and information literacy because he/she cannot instantly know about information that may affect his/her political activities. The MPs now need to learn from other MPs who are using their web sites in many effective ways. The constituencies will soon be able to put more trust in a web site when they watch the MP's video clip in the MP's homepage. Sharing quality information through the Internet will soon be as important to the MP as receiving quality reports from assistants, staff, and academic experts.

Suggestions to Governmental Policy Makers

For governmental policy makers responsible for future strategic planning of e-parliament systems or effective e-parliament systems in particular, this study provides the following recommendations:

1. Several studies pointed out the lack of appropriate performance measurement for e-government services (Steyaert, 2004). The four critical success factors (trust, usefulness, word of mouth, and strategic use of IT – networking) of user engagement of e-parliament services were identified. These four important antecedents can be effectively evaluated as performance indicators for the performance of e-parliament services.

2. The four factors (trust, usefulness, word of mouth, and strategic use of IT – networking) are significant predictor variables for both adopters and potential adopters. Bhattacherjee (2001) indicated that user continuance to use are determined by satisfaction with past use experience. Accordingly, to retain e-parliament service adopters and attract more potential adopters, the researcher suggests to policy makers that marketing strategies for e-parliament services seeking to increase user loyalty and retention can focus on these points. Alternatives include improving user interface of

e-parliament services, enhancing services security mechanisms, employing mass media marketing, and increasing the availability of necessary hardware and software for e-government service use. Additionally, for supporting and marketing e-government service adoption, the research suggests that policy makers should emphasize the advertising of adopters' successful experiences to attract more potential adopters.

Suggestions to Governmental Agencies

For governmental agencies responsible for developing implementation strategies for e-parliament services, this study provides the following recommendations:

1. Important predictor variables of the e-parliament system use in sequence are trust, usefulness, word of mouth, and strategic use of IT – networking. To successfully implement e-parliament systems given constraints in resources, the researcher suggests that governmental agencies set priorities based on the relative importance of the factors.

2. To increase positive attitude towards e-parliament services, the researcher suggests that governmental agencies should develop implementation strategies that emphasize user trust and the usefulness of e-parliament services.

3. To further benefit from word of mouth, the researcher suggests that Parliament agencies implement marketing strategies that seek to produce face-to-face communication impact among academic experts, assistants, peers, and family members of the MPs. For example, encouraging e-parliament services adopters to enhance their peer influence through various channels, and endorsing e-parliament service by well-known stars.

Suggestions to System Developers

For system developers responsible for e-parliament services design, this study provides the following recommendations:

1. Trust, usefulness, and strategic use of IT are key factors influencing user engagement of e-parliament systems. Therefore, the researcher suggests that system developers should reinforce security mechanisms for e-parliament systems, design a useful information system matching the MPs' roles and the MPs' needs, and develop the MPs' web sites with necessary links such as links to parliamentary web sites, political parties' web sites, government's web sites (i.e., http://www.moi.go.th - Ministry of Interior), other service agencies (http://www.pwa.co.th – Provincial Waterworks Authority), web sites of other MPs, and newspapers' sites.

2. To support e-parliament service engagement, the researcher suggests that system developers can focus on developing effective user guidance, continuously improving security mechanisms, and using community of practice on the Internet for promoting e-parliament services and sharing user experiences.

7.   Bibliographic References (Upon Request to penjira.k@bu.ac.th)