

E-Governance and Political Modernization: an Empirical Study Based on the East and Southeast Asia from 2003 to 2014

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Abstract

This study aims to make it clear that whether E-governance matters for political modernization in East and Southeast Asia. Specifically, there are two main questions in this study. First, to what extent E-governance matters for political modernization in East and Southeast Asia? Second, what is the aspect or factor that has the greatest impact on political modernization in this region? According to the literature review, E-governance can be operated to three elements, which are "open data", "online service" and "E-participation". Political modernization also can be divided into three elements, which are the government's transparency, the offline political participation and the level of liberty. Using second-hand data from UN database, TI (Transparency International) and V-dem, this study draws such conclusions. 1. The development of E-governance will lead to the improvement of political modernization in East and Southeast Asia. Specifically, open data has a positive impact on the government's transparency. E-participation has a positive impact on the offline political participation and the level of liberty. 2. It is difficult to confirm what is the element that has the most important influence on political modernization, for these three elements have an impact on the different aspects of political modernization. Overall, this paper proofs that E-governance has a positive effect on political modernization in East and Southeast Asia and confirms the importance of E-participation. With the continuous improvement of E-participation in this region, ordinary people will aware the importance of political participation and regard this as essential political rights of themselves. So that the improvement of political participation in this region is worth looking forward to.

Keywords: e-governance, political modernization, East and Southeast Asia

1. Introduction

How to build an efficient, reliable, transparent, and democratic government is an enduring topic. With the aim of figuring out this conundrum, some scholars raised methods from old public administration to New Public Management (NPM) (Dunleavy & Hood 1994;

Kaboolian 1998); some others raised another way called New Public Service (NPS), a movement built on democratic citizenship, community and civil society, and organizational humanism and discourse theory (e.g., Denhardt & Denhardt 2000). Both of NPM and NPS are different from the traditional public administration, so they can be seen as the innovative governance or the development of politics. While these two theories or frameworks give us an orientation and thinking method about the innovative governance or the government's reform to some degree, while the rapid development of Internet, information and communication technologies (ICTs) creates a juncture actually to put the spirit of these theories into practice. Specifically, E-government beneficial from internet and ICTs is one of the most important elements that accelerates the government's reform around the world. And it can be seen as the typical case that ICTs have a positive impact on political development. As time goes by, more and more problems and issues are needed to be solved by the E-government system and the functions of E-government are enriched, so many scholars pointed out the name of E-governance is more suitable than E-government (Heeks 2001; Prabhu 2013).

As Martin Heidegger (1978) pointed out the influence of technologies' development is not only limited in the field of technology. E-government was born on the basis of technologies' innovation, and its influence today has already spread to every aspect of social life. In the past one or two decades, E-government had experienced the prosperous and rapid development around the world. United Nations (UN) had conducted 9 surveys totally around the world since 2001 for grasping and presenting E-government's development. Western countries, for example, have gained remarkable results in E-government's construction and relevant fields, because of the advanced Internet technologies and institutional advantages. According to UN E-government survey in 2016, all of the top 10 countries are western countries, excluding South Korea and Singapore. And there are 6 countries lie in Western and Northern Europe among these 10 nations¹. Meanwhile, the E-government's systems in non-Western countries, especially in East and Southeast Asia, have also experienced a rapid development. South Korea and Singapore are typical representatives ranking 3rd and 4th in UN E-government survey in 2016 (UN E-government survey 2016). And other non-Western countries, e.g., Japan, China, Malaysia, also make a good performance about E-government's construction. Considering the relatively backward Internet technologies and the level of political development, E-governance's construction in East and Southeast Asia is more worth of attention.

The impacts of E-governance can be witnessed around the world, no matter in Western countries or in East and Southeast Asia. For example, according to Torres et al. (2006) the relation between citizens and local governments in the European Union (EU) was narrowed, because of the development of E-government was promoting EU local governments' transparency and efficiency. In another piece of research, Parent et al. (2005) found using the Internet to transact with the government had a significant positive impact on citizens' trust in the Canadian government and citizens' external political efficacy. E-government's development in metropolises in U.S. is also arousing concerns. Municipal government Web sites in U.S. reduced the cost of information for citizens and allow interested citizens to review sources of revenue and expenditures for city government (Scott 2006). These in themselves could serve as an important inducement and support for public involvement (Bimber 2000). In spite of Western countries, the political influence of E-governance in East and Southeast Asia can also be witnessed widely. For instance, Iqbal and Seo (2008) pointed out E-governance was a good way for anti-corruption in South Korea. Hiroko Kudo (2010)

¹ These 10 nations are U.K., Australia, South Korea, Singapore, Finland, Sweden, Netherlands, New Zealand, Denmark, and France (UN E-government survey 2016).

held the view that E-governance played a role in the public sector's reform of Japan, especially in relation to public accountability. As some scholars pointed out the advanced E-government system in Singapore showed its function and meaning, which was the obvious increase in public trust in the government (Tan, Pan & Lim 2005). E-governance's development in China is also very eye-catching. The Chinese government, either central level or local level, has done from many aspects to improve governments' efficiency and transparency.² Meanwhile, so as to adapt to social reality, the government started to set up official accounts in Weibo, Wechat and other types of social media (Zheng & Zheng 2014).³ By the end of June 2016, there were more than 170 million net users had ever used official accounts in social media (China Internet Network Information Center 2016a).

As the description above, E-governance's functions around the world can be roughly divided into two aspects. One is so-called "open government", which means the government opens official data and offers online services for citizens; the other is "E-participation", which means the government sets up some approaches for citizens to participate in public discussions and the process of policymaking (e.g., Tolbert & Mossberger 2006). In the past one decade, many scholars concentrated on the aspect of open government, aiming to analyze whether E-government system can improve governments' working efficiency and to what extent this influence exists. According to many pieces of empirical research, E-governance had a positive impact on governments' efficiency actually (Torres et al. 2006; Potnis 2010). While there were relatively fewer studies attempt to analyze the aspect of E-participation and its political influence. Even though some scholars aimed to involve this topic, their vision was limited in local or domestic layer, and many of those studies' result was not significant, which means that E-governance could not improve political modernization or democracy significantly (e.g., Torres et al. 2006; Mazzarella 2006; Noesselt 2014). But we can not draw such a conclusion that E-governance has no or very little impact on political modernization or political development, since just like the introduction above, there were still a considerable number of studies gained the different results that political influence of E-governance is obvious around the world, especially in East and Southeast Asia (e.g., Zheng & Zheng 2014; Hiroko Kudo 2010; Iqbal & Seo 2008; Tan, Pan & Lim 2005; Lewis & Litai 2003). While few of those studies illustrated the E-governance's impact on political development or modernization through analyzing cross-nations' materials or data among East and Southeast Asia. Political development or political modernization today is still an important topic no matter in the level of theory or realist in areas like East and Southeast Asia. So if E-governance has a significant influence on political modernization or even matters for political modernization in East and Southeast Asia is a worth-answer question. Under such background, this paper attempts to figure out the impact of E-governance on political modernization in this area through collecting and analyzing official second-hand data from UN, Transparency International (TI) and Varieties of Democracy (V-Dem).

² For example, Beijing's open government data contains more than 400 datasets, including tourism, education, transportation, land use zoning and medical treatment. People living in Beijing can get into the governments' website and gain that information freely. In spite of the "open data", people today can also use E-government to participate in public affairs. On the Chinese government's Ministry of Environment Protection website, people can provide their opinions on government document drafts, which might be received by government (UN E-government Survey 2016).

³ The development of Internet and social media in China is significant. By the end of June 2016, the total number of Chinese net users had reached 710 million, and the number of social media users reached more than 550 million (China Internet Network Information Center 2016a). So the Chinese government has to emphasize the importance of social media, and sets up official social media accounts to serve people and offer official data and materials for interested citizens.

To be more specific, there are two main questions of this study. (1) To what extent E-governance matters for political modernization in East and Southeast Asia? Whether E-governance, one of the most typical representative of ICTs, could matter for political modernization or political development is an ambiguous question to some degree, because different studies gained the different results. This study aims to figure out this question by analyzing global data from UN and so on. (2) What is the aspect or factor that has the greatest impact on political modernization? As the description above, E-governance can be divided into different aspects or functions. What is the aspect or function that has the most important influence on political modernization, including governments' transparency, the level of political participation and liberty, is yet to be solved. While this question is very valuable when we try to understand the political influence of E-governance. So this paper tries to solve it.

2. Literature review

2.1 Political modernization and its components

Political modernization is a relatively complex concept. After the World War II, or even since the period of Enlightenment, many countries around the world started to search their own approaches to reach political modernization. In short, political modernization can be regarded as the development of politics in many aspects. Meanwhile, Some scholars pointed out political modernization was based on democratic institutions (Gould 1990). Warren (1996) pointed out the deliberative democracy is the good way to handle authority and to make political decisions. Estlund (2009) held the view that how to make political decisions is one of the key indicators to evaluate authority's legitimacy. And he pointed out democracy is a way of giving every (adult) person an equal chance to influence the outcome of the political decision, even though democracy has no particular tendency to produce good decisions (Estlund 2009, p. 8). In general, political modernization or democracy means the structure of authority has changed significantly, which also indicates the development of rationalization and legitimacy of authority. Specifically, political modernization, citing the opinion raised by Max Weber means the source of authority changing from tradition and Charisma to legitimacy⁴. In pre-modern society, the authority had two main sources, the one was traditional way, which means political leaders inherit authority through the ties of blood; the other was Charisma way, which means political leaders gain authority through their glamour, talent, or other characteristics. In general, both of these two types of authority would lead to centralism. However, in western countries, thanks to Enlightenment and a sort of political reforms and revolutions, the source of authority has changed fundamentally. Citizens' votes are the essential resource of political leaders' authority today. In other words, rationalization or legitimacy of authority is widely existing in western countries. While in other places, e.g., East and Southeast Asia, the development of political modernization is relatively slow.

In general, political modernization is behind the process of economic and social modernization in non-western nations. For instance, in some nations of East and Southeast Asia, e.g., South Korea, Singapore, Taiwan, the political development was surely pushed after economic rising rapidly. But the progress of economy and society might also lead to several

⁴ The authority from tradition and Charisma to legitimacy means that government is the product of man, not of nature or of God, and that a modern society must have a determinate human source of final authority, obedience to whose positive law takes precedence over other obligations (Huntington 1966).

problems in developing countries, especially the corruption. Just like Huntington (2002, p. 253-254) said:

“Impressionistic evidence suggests that its (corruption) extent correlates reasonably well with rapid social and economic modernization [...] The differences in the level of corruption which may exist between the modernized and political developed societies of Atlantic world and those of Latin American, Africa, and Asia in larger part reflect their differences in political modernization and political development.”

In order to solve the serious situation of corruption, citizens' participation seems very important and useful (Huntington 2002). Citizen's participation is also important and workable to expose corruption and could intimidate officers to keep away from economic crime. Of course, the movement of anti-corruption, in turn, can foster national political development and modernization (Huntington 2002). Therefore, people's participation and the movement of anti-corruption or so-call the transparency of government are the important element that accelerates the progress of political modernization. Meanwhile, the liberal political environment is also irreplaceable for political modernization. In realist context, if the national political environment is not liberal or very autocratic, both of citizens' participation and the transparent government would not appear. In other words, the high level of freedom in national context is the fundamental element that leads to the development of political modernization. So I point out the view that political modernization involves three aspects or elements, which are the situation of liberty, governments' transparency and political participation or so-called civic engagement.

- **The theory of liberty**

Liberty is a widely discussed concept. But it is still difficult to illustrate this concept clearly and accurately to some degree. Because of the limitation of theme and space of this paper, it can not give comprehensive and enough introduction about the theory of liberty. Briefly, the theory of liberty could be divided into two types, the one is negative liberty; the other is so-called positive liberty (e.g. Bakhtin 2010; MacCallum 1967). First, negative liberty means citizens can avoid doing those things that they don't want to do (MacCallum 1967). In theory, this type of liberty can be held by people easily, because it seems everyone's natural right that avoids doing those things that damage to people's interests or contrary to people's willingness or wishes. But in realist, many people can not gain this natural right, even those persons living in democratic nations. For instance, people today have to be vaccinated almost around the world, but maybe there are some people don't want to be vaccinated. If just according to the theory of negative liberty, these people forced to be vaccinated are not free. There are a considerable number of similar cases. Second, positive liberty means citizens can do whatever they want to do unless those things will hurt others (MacCallum 1967). This type of liberty was strongly respected by Mill. In the book of on liberty, Mill pointed out the only situation that allowed the human being to interfere other person's liberal actions was self-defense. But in realist, people can not do everything that they want to do. Thus, positive liberty only exists in theoretical level to many extents.

People's liberty of different countries is being limited more or less. Just like Berlin pointed out people's liberty in Western countries was being limited even though these nations are so-called political developed countries (Bakhtin 2010). He illustrated this judgment that the individual may receive many benefits as health and education from a paternalistic government without having the opportunity to act in accordance with his own needs and desires. So Berlin encouraged us to feel that men ought to choose and be self-directing, even

though paternalistic governments might bring benefits to citizens to some degree. But these benefits are not worth enough to be exchanged by freedom (McCallum 1971, p. 215-217). According to Berlin's opinion, comparing to whether there is freedom or not, the differences between positive liberty and negative liberty are not significant. In other words, struggling for the different types of freedom, these questions are more meaningful, including how to estimate whether there is freedom or not? To what extent there is freedom? And what is the element or factor that can improve the level of freedom in different countries? Comparing to those political developed countries, liberty's level of many nations in East and South Asia is not very high. And there are many scholars see highly of E-governance, as they think this new governance method might bring changes for liberty's situation in East and Southeast Asia. This paper concentrates on this aspect.

- **The government's transparency**

Governments' transparency is also the key element in political modernization. Building a transparent government is one of the key aims of the theory of public administration. And in some scholars' opinions, the increasing level of governments' transparency will lead to the development of political modernization (Relly & Sabharwal 2009). In the past, because of the low level of governments' transparency, ordinary people had no access to official information, which led to serious corruption, especially in those undemocratic or semi-democratic nations with a rapid development of economy (e.g., Sung 2004). The serious corruption and power abusing, in turn, would lead to the process of political modernization is eroded to a great extent. Thus, building a transparent government effectively is very important. The transparent government means all of the processes from policymaking to policy implementation are opening and can be supervised by ordinary people. Even though improving the level of governments' transparency is widely accepted by almost every country, there are still many corruptions and black-box operations in considerable countries around the world, particularly in some places of East and South Asia. How to strengthen government's transparency is becoming a hot topic among the academia of politics, public administration, economy and so on. Some scholars pointed out the development of technologies might be a useful tool or approach that accelerates the progress of the government's transparency. For instance, Bertot et al. (2010) held the view that using the latest ICTs and Internet technologies can improve the level of "open government", so that the situation of corruption can be ameliorated and the relation between governments and citizens can be narrowed. In another piece of research, the authors pointed out thanks to the rapid development of Internet and ICTs, e.g., E-government's system and social media, ordinary people had access to governments' data so that officers have to notice their behavior because they now are monitored by hundreds and thousands of citizens (Relly & Sabharwal 2009).

Truth to told, the government's transparency in East and Southeast Asia is at a low level. From the early 1990s, the viability of authoritarian regimes and the effectiveness of curbs on expression and information flowed in East and Southeast Asia were increasingly questioned. Many theorists believed that the earlier collapse of authoritarian regimes would eventually be replicated across the region (Rodan 2004, p. 2). The raising powerful social groups would lead to the government in East and Southeast Asia releasing power, and then the power structure and its operational mode in this region will be changed significantly. In other words, a more transparent government can be expected. However, as time went by, these theorists' forecast failed. In East and Southeast Asia, the collapse of authoritarian regimes or so-called the third wave of democratization had not appeared widely. As a result,

the situation of governments' transparency in the region is still at a relatively low level. But just like Heidegger (1978) pointed out technology's function and influence is obvious, E-governance's development in East and Southeast Asia is remarkable, and many scholars have pointed out its political influence, including accelerating the development of governments' transparent, could be witnessed in many nations among the region (e.g., Zheng & Zheng 2014; Kudo 2010; Iqbal & Seo 2008; Tan, Pan & Lim 2005). These pieces of research give us a part of picture about the influence of E-governance on governments' transparency among East and Southeast Asia, but no one of them tried to figure out the whole situation in the region through collecting and analyzing cross-nation data. This paper aims to do so.

- **Political participation**

Political participation of ordinary people is a key factor in political modernization. In the past, because of lacking suitable approaches and the drawbacks of authority's structure, ordinary people could participate in nothing but voting when it comes to the political participation. But with the innovation of technology and the change of authority's structure, the contents and depths of political participation are enriched. In other words, people today can participate in other public affairs and public discussions, excluding voting. And that is also so-called democratic process or citizen politics.

One aspect of the new citizen politics is political engagement. Expanding political skills and resources should increase the cognitive sophistication of the citizenry. In addition, many people are placing greater emphasis on participating in political and economic decision making [...] direct forms of action are increasing. People are less likely to be passive subjects and more likely to demand a say in the decisions affecting their lives (Dalton 2013, p. 10).

While many scholars pointed out civic participation or political participation was affected by several factors, e.g., social structure, national history, tradition, and whatsoever (Nie, Powell & Prewitt 1969; Verba, Nie & Kim 1978; Pye & Pye 2009). So in some political developing countries and regions, including East and Southeast Asia, political engagement is increasing slowly. While some scholars pointed out civic society was strengthening during the past two or three decades. They cited many cases to proof their opinion, including the 1986 mass protest for president Marco's ouster in the Philippines and highly mobilized civil society in South Korea compelled president Chun Doo Hwan to accept the demand of opposition in 1987 (Alagappa 2004). But in spite of these countries that became democratic nations after civic movement and political reform, the civic engagement in many other nations among the region is still at a low level. In the recent decade, the rapid development and diffusion of Internet and other information tools, however, seemed accelerating political development or civic engagement in those political developing countries in East and Southeast Asia (Dalton 2013). For example, in mainland of China, the influence of E-governance could also be witnessed widely. In the past, people had no suitable and useful approaches to take part in political and public affairs, but with the diffusion of social media and the development of E-government, people today have their own way to participate in public affairs publicly and liberally (Zhang 2006; Zhang & Chan 2013; Zheng et al. 2014). There are many other similar cases in East and Southeast Asia but there seems none of research attempts to figure out the E-governance's influence on political participation by collecting and analyzing cross-nations data among East and Southeast Asia. This paper aims to fulfil the blanket.

Overall, it's obvious that political modernization is discussed by scholars diffusely, and summing up their opinions, political modernization includes three main aspects or factors, which are the situation of liberty, the government's transparency, and political participation.

So these three factors constitute the operational definition of political modernization, and this paper will choose suitable data from V-Dem and TI to measure all of these three aspects. There will be more in-depth description below.

2.2 E-governance and its functions

As mentioned in the beginning of this paper, how to build an efficient, transparent, and democratic government is an enduring and difficult question. While as the time goes by, the level of people's trust in the government is falling, no matter in democratic or undemocratic countries. So many of governments around the world have to find a right way to improve the efficiency and transparency of public sectors. E-government's system that is beneficial from the diffusion of internet and ICTs is appearing at such background. According to the definition of UN and American Society for Public Administration (ASPA) E-government was utilizing the Internet for delivering government information and services to citizens (Torres et al. 2006). Organization for Economic Cooperation and Development (OECD) gave another same illustration about E-government, that was, using ICTs and particularly the Internet as a tool to achieve better government (Torres et al. 2006). From these descriptions and realistic cases, we can find that the essential purpose of building E-government system in the very beginning was improving the efficiency of governments through opening and offering official information and data to ordinary people, which was also the main aim of the movement of NPM (Janssen & Estevez 2013; Torres et al. 2005; Chadwick & May 2003). According to some empirical studies, the function and influence of E-government seemed very significant. For example, Shim and Eom (2008) found E-government had a positive impact on anti-corruption. In the past, people had no enough access to official data and information, including financial budget and the process of policymaking. This situation mean government officers escaping from being monitored to some extent. While the development of E-government created a new way to connect with citizens who could receive the relative information and materials about budget and policymaking. Thus, corruption behaviors of government employees are falling.

As time goes by, the concept of governance that took place traditional concepts like government and administration had spread to every field of political, public administration and even international political theory, E-government was also not exception. Many scholars and institution had pointed out different definition and illustration of governance. For example, United Nations Educational, Scientific, and Cultural Organization (UNESCO) defined governance as structures and processes that are designed to ensure accountability, transparency, responsiveness, rule of law, stability, equity and inclusiveness, empowerment, and broad-based participation (UNESCO website 2016). Rhodes (1996) held the view that governance mean self-organizing, inter-organizational networks that complement markets and hierarchies as governing structures for authoritatively allocating resources and exercising control and coordination. There are still many different definitions of governance raised by different scholars or institutions. Summing up these ideas, we can find the common ground of them which is the government is no longer the only decision-maker, and corporations, citizens, non-government organizations (NGO) play an irreplaceable role in the political and public affairs. Under such background, the concept of E-governance had been put forward by many scholars. Traditional E-government's system could not fulfill the requirement of governance, even though citizens could get official data and receive online services through online systems. Specifically, the traditional online system lacked participatory function so that ordinary people could not take part in political affairs online, including raising their opinion about public policy and discussing the public affairs. While the functions of E-government

were enriched and the meaning of E-government was also deeper and deeper today. So many scholars pointed out E-governance was much more correct and accurate than E-government. Just like Torres et al. pointed out E-governance includes E-government plus key issues of governance such as online engagement of stakeholders in the process of shaping, debating and implementing public policies (Torres et al. 2006, p. 278).

The function of E-governance had experienced new development on the basis of E-government. At the beginning, the main function of E-government was offering online data and government materials, so that ordinary people could become more knowledgeable about the government and public affairs. In the past, many people had no access to the official data and officers' information, which mean the government and those officers could escape from being monitored. As the saying goes, "absolute power results in absolute corruption", power without monitoring will also result in serious corruption. While the development of E-government system let citizens had access to official data and improved the level of transparency of the government. Many online services today had been supplied by the government, which was aiming to facilitate people's live. With the help of E-government system, people can accomplish many things, such as applying documents and whatsoever, which had to be done offline in the past. These two functions have many common grounds to some extent, and both of them can improve the efficiency and transparency of the government, so according to some scholars' opinion, these two functions can be regards as open government (e.g., Tolbert & Mossberger 2006). While people's participation was the new functional development of E-governance. Online participation or E-participation means citizens can express their own opinion and take part in the discussions about public issues and supervise governments' working through E-government platform. In the past, these political rights of people were difficult to realize, since there was lacking suitable approach. E-governance, without a doubt, offers citizens a suitable and relatively workable approach to achieve own rights. Thus, this function is also called E-democracy (e.g., Tolbert & Mossberger 2006). Overall, the functions of E-governance can be divided into two main aspects, which are open government and E-participation.

2.3 The political influence of E-governance in East and Southeast Asia

There are many pieces of research focused on the E-governance's influence on the political development and modernization. And many of these studies gained the positive results, in other words, the development and innovation of E-governance had a distinct impact on the political development (Ciborra 2005; Madon 2008). For instance, Chadwick et al. (2003) pointed out E-governance enshrined some important norms and practices of E-democracy, even though the potential for linking E-democracy in civil society with E-government at the level of the local and national state was far from straightforward. Many scholars also pointed out E-governance's influence could be witnessed in East and Southeast Asia. For example, the Chinese government paid more attention to the transparency of the government and gained the significant results in recent years. To some degree, the rapid development of E-governance, especially the aspect of open government, is one of the most important elements that accelerate the process of the Chinese government's transparency (e.g., Jun, Wang & Wang 2014). Specifically, E-governance's influence on political modernization, according to the past studies, could be divided into three main aspects, which are governments' transparency, political participation and the field of liberty.

- **The E-governance's influence on governments' transparency**

As mentioned above, the government will offer important official data and materials through E-government system, and as time went by, citizens who recognize the function of E-government system will also require the government to send data through the online platform. This situation will help ordinary people grasp important information of the government and monitor the government and officers to some extent. As a result, the level of the government's transparency will improve significantly. According to many empirical studies, this hypothesis has come true. Some scholars pointed out the government's transparency occurred through one of four primary channels, which were proactive dissemination by the government; releasing of requested materials by the government; public meetings; and leaking from whistle-blowers (Piotrowski & Van Ryzin 2007). While the E-government system built by governments can fulfil these four points. First, people can give relative data and materials that they need from the online system. And if there is lacking relative data citizens can request it through the online platform. Second, with the development of Internet and ICTs, online meetings between citizens and the government is appearing around the world, even though this situation is a rare occurrence to some degree. Thus, Bertot et al. (2010) pointed out E-government, in particular, had been used in many prominent, comprehensive transparency efforts in a number of nations, after an empirical study. EU is a typical region that enjoys the advantages brought by advanced E-government system and the idea of E-governance. As Torres, Pina and Acerete (2006) pointed out that The Internet aids good governance by increasing transparency and customer-oriented service delivery in this region. They indicated there were opportunities for ICTs to enhance governance in local government, especially in the areas of management and delivery of services, though the Internet is not yet running as an effective medium facilitating democratic inputs into the policymaking process (Torres 2006).

Apart from EU, the E-governance's influence on the government's transparency in East and Southeast Asia seems also obvious. For example, E-governance in South Korea plays an important role in anti-corruption and improving the government's transparency. Corruption can be widely found in both democratic or undemocratic, developed or developing countries, the only difference lies in the degree. South Korea, a relatively developed state in Asia, had experienced a rapid economic growth but had been encountering serious corruption. How to solve this situation is one of the main tasks faced by the government and every citizen in South Korea. Some scholars claimed anti-corruption movement can make big difference through E-governance. Some online systems in South Korea have a impact on anti-corruption such as the Online Procedure ENhancement (OPEN) system for civil applications of Seoul Metropolitan Government (SMG) and the Government e-Procurement System (GePS) will be analyzed and generate policy implications for reducing corruption (Iqbal & Seo 2008, p. 53). In short, E-governance's development offers a right way to enhance transparency in the process of administrative services. Singapore is another typical representative. As some scholars pointed out the advanced E-government system in Singapore showed its function and meaning, which was the obvious increase of public trust in the government (Tan, Pan & Lim 2005). The reason why citizens in Singapore would show a higher level of trust in the government is that they could get more information from the government through E-government system. In other words, the level of the Singapore government's transparency has improved significantly with the help of E-governance, so that citizens are prone to take the positive attitude toward the government. So if this phenomenon exists widely in East and Southeast Asia? Or the development of E-governance will improve the level of transparency in this region? This paper aims to solve it with the help of statistical data.

- **The E-governance's influence on political participation**

The situation of people's political participation is one of the most important indicators to evaluate the level of democracy of countries to some degree. In the past, people's participation was not very easy, since there was lacking suitable approach. Thus so-called democratic regime or institution almost just mean one-time voting. While E-government system offered a new approach for citizens to take part in public and political issues. In the online platform, citizens can express their opinion about public affairs and monitor the process of policymaking. In the realist, there are many scholars also concentrated on the E-governance's effect on political participation, even though Some scholars found the E-governance's influence on civic engagement or political participation was complex. For instance, taking 100 largest cities of America for example, Scott (2006) observed its official websites and analyzed if cities' official website could improve civic engagement and political participation. Scott found some cities' websites were useful and could improve citizens' involvement, while in other cities, it was hard to find the same effect, in other words, official websites in these cities had no or very little effect on civic engagement and political participation. As time went by, especially with the development of Internet (e.g., Web 2.0), the political effect of E-governance seemed more and more significant. For example, some scholars focused on biodiversity governance, they analyzed 2,000 networks in Finland, Greece, Poland, and the UK, finding citizens in those countries widely engaged in policymaking processes that relate to the environment (Paloniemi et al. 2015).

In the recent decade, governments in East and Southeast Asia had emphasized the importance of building an outstanding E-government's system. The Chinese government, for example, aims to improve the efficiency and transparency through E-government's system. While with the development of the E-government's system, other aspects of political affairs are also affected, including civic engagement and political participation. For example, "citizens' political participation, under the development of E-governance, may generate unintended consequences of incremental reform of China's local governance and political institutions." Jiang and Xu (2009) pointed out, "even though E-governance in China only lead to limited improvement in administrative efficiency and transparency." He et al. (2016), taking environmental policymaking process, for example, found today more and more Chinese ordinary people take part in this process, and express their own opinions within the E-government's system. Meanwhile, according to UN E-government survey, Chinese people can provide their opinions on government document drafts, which might be received by the government, on the Chinese government's Ministry of Environment Protection website (UN E-government survey 2016). So we can find the development of E-governance, especially the development of E-participation, offers ordinary people a chance to take part in political affairs and the process of policymaking.

- **The E-governance's influence on liberty**

There were no many pieces of research focused on the E-governance's influence on the level of liberty. But the impact of E-governance on citizens' liberty seemed obvious. First, citizens had more liberal to gain official data and materials when the E-government's system had been built completely. In the past, this type of liberty was not held by citizens. Second, citizens had more liberal to choice and enjoy government services, since they could choose online services supplied by E-government's system or choose offline services. Before the development of E-governance, this situation was not existing in realist. In other words, citizens had to choose offline service, they had no liberty in this aspect. Third, citizens today

have liberty to participate in the online political discussion or express their opinion through the online platform, which could not be imaged in two or three decades ago. Overall, the development of E-governance exactly brings a higher level of liberty to citizens. As Relly and Sabharwal (2009) emphasized one of the key element that E-governance brought to our societies is more a liberal lifestyle. And they thought this lifestyle also can promote so-called “good governance”. So this paper also aims to test if the development of E-governance will lead to higher level of liberal in East and Southeast Asia, by analyzing collected data.

3. Methodology

3.1 Hypotheses and research framework

- **Hypotheses of this paper**

According to the literature review and the main research questions of this paper, the hypotheses of this paper can be put forward as bellow.

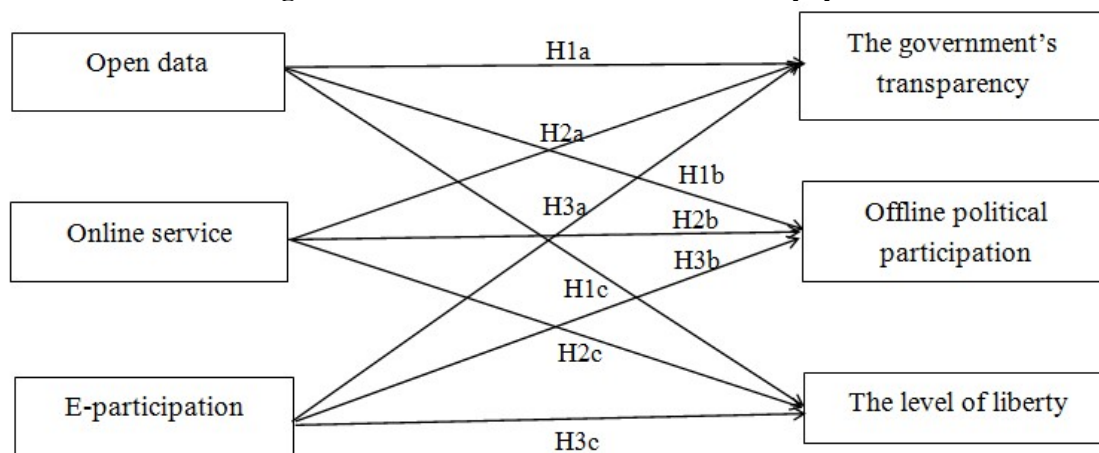
H1a: the development of open data will lead to a higher level of the government’s transparency. H1b: the development of online service will lead to a higher level of government’s transparency. H1c: the development of E-participation will lead to a higher level of government’s transparency.

H2a: the development of open data will lead to a higher level of offline political participation. H2b: the development of online service will lead to a higher level of offline political participation. H2c: the development of E-participation will lead to a higher level of offline political participation.

H3a: the development of open data will lead to a higher level of liberty. H3b: the development of online service will lead to higher level of liberty. H3c: the development of E-participation will lead to a higher level of liberty.

- **Research framework of this paper**

Figure 1: The research framework of this paper



Source: own elaboration

First, the independent variables contain three variables, which are open data, online service and E-participation. Second, the dependent variables contain three variables, that are, the government's transparency, political participation, and national liberty. And the relations of these different variables or so-called framework of this paper can be seen as bellow (figure 1).

3.2 Data source

There are three main databases used by this study, which are UN database, TI and V-Dem. First, the relative data of independent variables are from UN database. Specifically, open data, online service and E-participation are sourcing from UN E-government survey. Second, data of governments' transparency are source from TI where studies for Corruption Perceptions Index (CPI) have been taken since 1995. So the score of CPI can be regarded as the level of different governments' transparency. Third, relative data of political participation and level of liberty can be found from V-Dem database. There are three things should be illustrated. First, UN E-governance survey began from 2001 and there are totally 9 times surveys had been held so far. While there was lacking relative data about E-participation in the first survey and there was no useful data in V-dem database about 2016, as a result, there are totally 7 times surveys can be used in this study, and the specific years are 2003, 2004, 2005, 2008, 2010, 2012 and 2014. So this study is collecting the relative data from three databases about these years. Second, in order to confirm all of the relative data mentioned above is existing, which is the essential condition for former research this study removes those countries that lack the whole or part relative data in East and Southeast Asia. So there are totally 13 countries in this study, which are Cambodia, China, Indonesia, Japan, Lao, Malaysia, Mongolia, Myanmar, Philippines, South Korea, Thailand, Timor-leste and Vet Nam. This study is based on the relative data resourced from these countries in East and Southeast Asia from 2003 to 2014. Third, both of independent variables and dependent variables are standardized by this study, for statistical and operational convenience. Specifically, the range of the data is from 0 (the worse) to 1 (the best).

3.3 Variables' operation

- **Open data**

Based on UN E-government survey, there is an index that can represent this element. To be more specific, this index called Telecommunication Infrastructure Index (TII), which evaluates the status of the development of telecommunication infrastructure that is the essential basis of the improvement of open data. In other words, if the telecommunication infrastructure is not developed very good, people can not get those information or data from the online platform. As a results the level of open data in this country is not very high. On the contrary, if the TII index of a country is very high which means the telecommunication basis in this nation is good and open data will also be developed remarkable.

- **Online service**

Based on UN E-government survey, there is an index that can be regarded as the situation of online service in different countries, which is called Online Service Index (OSI). This index can evaluate the level of online service around the world. If a nation can gain a high score of OSI means the level of online service in this country is relatively high. On

contrast, if the score of a nation is low means there is lacking high level online service in this nation. So the score of OSI can represent the element of online service.

- **E-participation**

The factor of E-participation aims to evaluate the situation of citizens take part in online political issues, which is also one of the key parts in UN E-government survey. In this survey report, E-Participation Index (EPI) is raised to represent the situation of people's online political participation in different countries, so the data of EPI can be used in this research.

- **The government's transparency**

The government's transparency represents the level of transparency in different countries. TI database had started to evaluate this situation by setting up Corruption Index (CPI) since 1995. And there is annual report about CPI in TI database. Thus this paper regards the score of CPI as the situation of the government's transparency.

- **The offline political participation**

The factor of offline political participation aims to test what is the situation of ordinary people's public and political engagement in realist. There are a suitable data that can be regarded as the situation of offline political modernization in East and Southeast Asia. To be more specific, the data is called civil society participation index (CSPI) from V-dem database. This index aims to provide a measure of a robust civil society, understood as one that enjoys autonomy from the state and in which citizens freely and actively pursue their political and civic goals. And these questions used to measure CSPI are not concluding something about internet or E-participation, so these two indexes, I mean EPI and CSPI, are independent of each other. To summing up, the score of CSPI can represent the offline political participation in this study.

- **The level of liberty**

According to literature review, liberty is a complex concept and it is difficult to illustrate and measure this concept. But the level of liberty can be roughly divided into two aspects, which are civil liberty and political liberty. And there are two indexes that can represent these two aspects in V-dem database. The first one is called Civil Liberty Index (CLI). This index is measured by some questions that are related to the level of absence of physical violence committed by government agents and the level of absence of constraints of private liberties and political liberties by the government. The second one is called Political Liberty Index (PLI). Among the set of civil liberties, these liberal rights are the most relevant for political competition and accountability. The index is based on indicators that reflect government repression and that are not directly referring to elections. So the level of liberty can be regarded as CLI plus PLI.

4. Results and discussion

From Table 1. we can find the whole situation of E-governance and its political influence in East and Southeast Asia. According to the score of Std. we can find these countries have the least difference on the aspect of online service, in other words, the developing gap of online business-solving and other relative services is relatively small in East and Southeast Asia. While the biggest gap among these countries is laying on the E-participation. To be more specific, the level and quality of citizens' online political participation is very different from country to country in this region. When considering the situation of political modernization, we can find countries have the least gap on the score of CPI. In other words, the degree or level of governments' transparency in East and Southeast is relatively small. And according to the specific score, it is easy to draw such conclusion that the whole level of governments' transparency in this region is not very high. While there is a big gap between the minimum score of liberty and the maximum score of liberty in East and Southeast Asia, as well as, the difference among these countries on liberty's level is most significant. So it is obvious, citizens living in different countries in this region are enjoying the unequal liberty. Apart from data description, the more important and meaningful aim of this paper is figuring out the determinants model of political modernization, which is combined by three aspects.

First, when considering the government's transparency, the relative situation can be found in Table 2. The Model I is significant and the score of Adj. R square is up to 0.868, but considering the score of VIF, this Model is not suitable. If excluding the element of E-participation, open data and online service can explain the change of governments' transparency reach 80.7% together, but the Model II is not significant neither the whole model nor these two component elements. So the Model III is most suitable one among these three models. The score of Adj. R square is 0.810, which means the element of open data can illustrate the change of governments' transparency more than 80% in statistical context. And the Bate's score of open data in Model III is 0.909 ($P < .001$), which means if the level of open data grows 1 unit, the development's level of governments' transparency in East and Southeast Asia will grow 0.909 unit in theory. There is no doubt that open data plays an important role in improving the government's transparency in East and Southeast Asia. So H1a set by this study can be accepted, while H1b and H1c are invalid.

There are many possible reasons that the development of open data can lead to a higher level of governments' transparency in East and Southeast Asia. While the most important and explainable one is that ordinary people can get more information and materials from the government and they can also supervise the department of government and its officers to some degree when the function of open data in E-government's system have experienced rapid growth. For example, Beijing's open government data contains more than 400 datasets, including tourism, education, transportation, land use zoning and medical treatment. People living in Beijing can get into the governments' website and gain that information freely (UN E-government survey 2016). This is a microcosm of China as the development of E-governance, especially the growth of open data in China is very remarkable. Many scholars also gained the same conclusion that open data has a significant positive role in the Chinese government's transparency (e.g., Lollar 2006). Apart from China, the level of transparency in South Korea also experienced an obvious growth. There are many online systems in South Korea have impact on anti-corruption such as the Online Procedure ENhancement (OPEN), the Government e-Procurement System (GePS) and so on. All of these online systems are aiming to offer official information for ordinary people and let them supervise government and its officers (Iqbal & Seo 2008). To some degree, these online

platforms can be regarded as the components of open data. At such background, people have more access to official data and force the government to be more transparent.

Second, Table 3. shows the influence elements of the offline political participation. Model I concludes three independent variables and the Adj. R square reaches 0.452, while all of these independent variables are not statistically significant. In other words, Model I can not be accepted. Considering the score of VIF, Model II is also not suitable one, even though the element of “E-participation” in this model is significant and the whole model can illustrate the change of offline political participation reaches 0.432. Model III is significant and the Bate’s score of E-participation in this model is 0.632 ($P < .05$), which means if the level of E-participation grows 1 unit, the level of offline political participation will grow 0.632 unit in East and Southeast Asia theoretically. To be more specific, E-participation has a significantly positive impact on the improvement of the offline political participation in East and Southeast Asia. At such background, we can accept the H2c, while can not accept H2a and H2b.

There are two main influential aspects or reasons that can be used to illustrate the impact of E-participation on the offline political participation. The first one is that the growth of E-participation means the government liberalizes the restrictions on citizens political participation so that ordinary people have more opportunities to take part in political affairs. In Sweden, people are calling for participating in political affairs, such as online voting, online discussions, through online platforms (Phang & Kankanhalli 2008). The percentage of people’s political participation has been improved obviously since the time and money cost of online political participation is laying at a low level. Besides Sweden and other Western countries, many countries in East and Southeast also try to build a completed online platform so that citizens living in these countries can take part in online discussions and other political issues freely and conveniently. At such background, countries in East and Southeast Asia gained a good performance in E-participation which can be seen from UN E-government surveys. The government encourages ordinary people to take part in political affairs through online platforms and other internet tools is a representative that the government in East and Southeast Asia hopes ordinary people can play a more important role in public affairs and political issues. As time goes by, citizens will show more interest and be willing to take part in many types of offline political affairs. The second one is that ordinary people show more interest in political participation result from the development of E-participation. Because of the convenient process and cost saving, citizens are more willing to take part in public affairs online than doing it offline. While citizens participate in public affairs frequently and regularly, they will cultivate the habit of political participation and their sense of political efficiency will also be improved. All of these create the necessary conditions that encourage and push people to take part in political issues offline.

Third, according to Table 4. we can understand the liberty determinant model. Model I concludes three independent variables but its Adj. R square only reaches 0.267. Besides that, all of these three variables are not significant, in other words, these three independent variables can not illustrate the change of liberty in East and Southeast Asia together. The Adj. R2 of Model II is rising at 0.339 but both of open data and E-participation in this model are not significant which means this two element also can not illustrate the change of liberty together. While Model III is significant while means this model can be used to illustrate the change of liberty in East and Southeast Asia. Although, the explanatory level of Model III is not very high, according to the score of Adj. R2 , this model can illustrate the change of liberty in 33.4% in theoretically. Specifically, the Beta’s score of E-participation is 0.624 ($P < .05$) which means if the level of E-participation grows 1 unit, then the level of liberty will increase 0.624 unit in statistical context. Based on the illustration, we can accept H3c set by this study and abandon H3a and H3b.

It is not difficult to understand the influence of E-participation on the level of liberty. On the whole view, the level of liberty in these countries lie in East and Southeast Asia is not very high, especially comparing with Europe and North America. The most two important reasons that limit the level of liberty in this region are that citizens can not or just enjoy the political rights partly such as freedom of speech and ordinary people have no or little access to political issues, they can not play an irreplaceable role in countries' political life. While with the help of E-governance people can extend their political rights in many aspects. For example, people can enjoy a higher level of speech's freedom through the online platform, and China is a typical case. Although citizens still can not express all of the opinions especially these negative discourses about the central government and political highest-level persons, ordinary people today can express their feeling and advises about the departments and specific officers through online platforms set by the government, and a considerable opinions and advises will be feedback (Yang 2009). In addition, the improvement of E-participation means people have more useful and workable approaches to take part in political issues, which is a big change for many countries in East and Southeast Asia, for people living in these countries had on or very little chance to participate in public discussions, let alone made their opinions and advises to be national formal policies in the past (Chen et al. 2006). Nowadays, changes are existing obviously in this region since the improvement of E-governance, especially the growth of E-participation. At such background, the level of liberty in East and Southeast Asia is also increasing.

Table 1: Data description

Variable	N	Min	Max	Mean	Std.
Open data (TII)	13	0.004	0.730	0.213	0.228
Online service (OSI)	13	0.030	0.425	0.192	0.119
E-participation (EPI)	13	0.023	0.872	0.296	0.239
The government's transparency (CPI)	13	0.150	0.733	0.322	0.172
Offline political participation (CSPI)	13	0.170	0.899	0.620	0.229
The level of liberty (CLI + PLI)	13	0.171	1.876	1.179	0.586

Table 2: The government's transparency determinants model

	Model I			Model II			Model III		
	Bate	t	VIF	Bate	t	VIF	Bate	t	VIF
Dependent Variable: the government's transparency									
Open data	.839*	2.95	7.34	.630	1.93	6.66	.909***	7.22	1.00
Online service	.931*	2.46	13.04	.302	.924	6.66			
E-participation	-.862*	-2.34	11.99						
Adj. R ²		.868			.807			.810	

* means P < .05, ** means P < .01, *** means P < .001

Table 3: Offline political participation determinants model

	Model I			Model II			Model III		
	Bate	t	VIF	Bate	t	VIF	Bate	t	VIF
Dependent Variable: offline political participation									
Open data	-1.16	-2.00	7.37	-.881	-1.64	6.13			
Online service	.903	1.71	13.04						
E-participation	.833	1.13	11.99	1.439*	2.67	6.13	.632*	2.71	1.00
Adj. R ²		.452			.432			.345	

* means $P < .05$, ** means $P < .01$, *** means $P < .001$

Table 4: Liberty determinants model

	Model I			Model II			Model III		
	Bate	t	VIF	Bate	t	VIF	Bate	t	VIF
Dependent Variable: the level of liberty									
Open data	-.632	-.94	7.37	-.609	-1.05	6.13			
Online service	.075	.08	13.04						
E-participation	1.130	1.32	11.99	1.181	2.03	6.13	.624*	2.65	1.00
Adj. R ²		.267			.339			.334	

* means $P < .05$, ** means $P < .01$, *** means $P < .001$

5. Conclusion

First, according to the statistical results, we can draw a conclusion that E-governance has a positive impact on political modernization in East and Southeast Asia. Specifically, the improvement of open data can promote the growth of governments' transparency, while another two elements, online service and E-participation have no significant effect on the government's transparency. This finding is same with many other empirical studies. For example, Relly et al. (2009) had pointed out telecommunication infrastructure (TI), which is described as open data in this study, influenced the perceptions of government transparency in a positive and significant way. In addition, E-participation can be regarded as an explaining variable for the improvement of offline political participation and the level of liberty. In contrast, online service and open data can not affect these two dependent variables in statistical context. This finding is very different with some former empirical studies' results. Based on statistical results, many scholars evaluated E-participation not very high, regarding this function of E-governance as something dispensable and useless (Saglie & Vabo 2009; Goldfinch, Gauld & Herbison 2009). While according to regression result made by this study, E-participation has a positive impact on offline political participation and the level of liberty in East and Southeast Asia.

Second, it is difficult to confirm what is the element that has the most important influence on political modernization, for these three elements have a impact on the different aspects of political modernization. As a result, comparing to confirm the element that can affect political modernization in East and Southeast Asia at the largest degree, it is better to discuss this agent separately. Specifically, if we consider the aspect of governments' transparency, there is no doubt that open data are needed to be emphasized firstly. While the offline political participation and the level of liberty are considered, the importance of E-participation is higher than another two elements obviously.

Third, we can illustrate the influence of E-governance on political modernization in three aspects. The first one is that ordinary people can get more information and materials from the government and they can also supervise the department of government and its officers to some degree when the function of open data in E-government's system have experienced rapid growth, which can help increase the level of governments' transparency. Just like Bertot et al. (2010) pointed out the combination of E-government, Web-enabled technologies, transparency policy initiatives and citizen desire for open and transparent government are fomenting a new age of opportunity that has the potential to build a more transparent and reliable government. The second one is that the growth of E-participation means the government liberalizes the restrictions on citizens political participation and ordinary people will show more interest in political participation, which are the useful conditions that promote the development of the offline political participation. The third one is that the improvement of "E-participation" will create an approach for the public to enjoy a higher level of political rights and take part in political issues. Both of them are favorable factors to promote the level of liberty. The influence of E-governance on political modernization in East and Southeast Asia seems having been proofed. While what should be pointed out here is that the overall situation about E-governance is still needed to be enhanced and improved, according to the collected data. If the level of E-governance in East and Southeast Asia is always laying in relatively low level, the political modernization in this region will also stagnant.

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