EXPLAINING GOVERNMENT PERFORMANCE ON E-PARTICIPATION IN NEW

JERSEY: GOVERNMENT CAPACITY AND WILLINGNESS

by

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ABSTRACT OF THE DISSERTATION

Explaining Government Performance on E-Participation in New Jersey: Government

Capacity and Willingness

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The importance of citizen participation has been widely accepted. However, for

several reasons, the participation level has been decreasing during the past decades. The

limitation of traditional participation makes it difficult to save it from eroding. With the

rapid development of information technologies and their wide usage in private sectors for

interacting with customers, governments began to use ICT tools to provide convenient

ways for citizens to participate, which resulted in the rise of e-participation.

The rise of e-participation, however, cannot cover its problem of imbalance. Great

differences exist in government performance in e-participation both at the municipal and

national levels. Comprehensive and convenient ways have been provided by some

governments to actively engage citizens, while others have not followed suit. The

following research question focuses on why such differences exist. Researchers tried to

explain the determinants of e-participation diffusion and explore the factors influencing

e-participation adoption and usage. Roles of political culture and orientation,

infrastructure, transparency, etc., have been examined and tested. Still, a research gap exists in that government capacity and willingness have been missed.

Government capacity is the foundation for governments to perform well and achieve their goals. Without the necessary capacity to serve as a reasonable base, it's difficult for governments to adopt e-participation initiatives. Government willingness is the "pushing factor" in e-participation usage. Whether governments have the willingness to adopt and develop e-participation initiatives determines to what extent governments would like to allocate their resources to e-participation. So, in this study, I would like to test the impact of government capacity and willingness on e-participation.

With data from municipal managers/business administrators in New Jersey, this study found that government capacity and willingness have a significant impact on e-participation performance. Governments, which have a higher level of capacity (technical capacity, financial capacity, administrative capacity, and political capacity), are more likely to perform better in e-participation initiatives. Government willingness is also a determinant to e-participation development. For governments with more willingness to involve their citizens in the running and use of information technologies, they are more likely to have a higher level of e-participation among citizens.

This study, to some extent, fills the research gap in e-participation and contributes to the e-participation literature. With the data from municipalities in New Jersey, this research confirms the impact of government capacity and willingness on e-participation

performance at the municipal level. Four dimensions of government capacity and two aspects of government willingness could influence e-participation directly or indirectly. The positive relationships between government capacity and willingness have been examined as well. The model proposed in this study and the findings will help to increase understanding of the phenomenon of e-participation diffusion and the determinants of e-participation development at the municipal level in New Jersey.

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Chapter 1: Introduction

This chapter provides an overview to the entire dissertation. It introduces the research background, the literature review and theoretical hypothesis, the findings of this research, and the conclusion.

The importance of citizen participation in government operations has been widely accepted for a long time. Both Moynihan (2003) and Holzer & Mullins (2012) emphasized its positive role in improving government performance. Citizen participation could contribute to governmental performance improvement at the agenda-setting stage, the decision-making stage, the policy implementation stage, etc., by raising public issues, giving advices and suggestions, and providing feedback. It could also play a positive role in promoting government transparency and motivating governments to be more responsible and accountable. Zheng and Holzer (2013) (see also Irvin & Stansbury, 2004) believed that citizen participation was "an important way for citizens to gain skills for activist citizenship" (p. 3). Researchers also believed that citizen participation would improve the relationship between governments and citizens and the attitudes of citizens toward governments, as Wang and Wan Wart (2007) mentioned that citizen participation would increase trust in government.

However, the importance of citizen participation has not been able to save it from declining over the past several decades. Putnam (2002) warned that it was decreasing to dangerous levels in America (Dalton, 2006; Zheng & Holzer, 2013, p. 3). Kleinman, Del-

borne, and Anderson (2011) (see also Zheng & Liao, 2014) noted that, since the 1960s, the level of voter participation in the United States has dropped some 25 percent. Several challenges confront citizen participation. To begin with, governments at different levels have become larger and more complex in functions than in the past, increasing the difficulty for citizens to know government running well, which is the premise for meaningful participation. Additionally, citizen participation has costs, both in time and money. Anduiza, Gallego, and Cantijoch (2010) believed that being wealthy and having free time would foster participation. It's difficult to expect people who are busy and with low incomes to actively participate. These people usually have lower levels of social skills and political efficacy, which become further barriers for their participation. The problem is that the limited ways of traditional participation (e.g., writing letters, face-to-face interactions with government staff, physically attending public hearings, etc.) cannot address these challenges well or help to increase the citizen participation level.

The rapid development of information technology brings opportunities for improving citizen participation. More and more governments began to use information and communication technologies (ICTs) tools (e.g., email, social media, online discussion boards, online surveys/polls, etc.) to engage citizens. With the aid of various information technologies, citizens can conveniently express themselves and interact with governments. All of these resulted in the rise of e-participation, the combination of information technologies and citizen participation. E-participation, by using information technologies, has several advantages compared with traditional ways of citizen participation, such as reducing costs in time and money for citizens, promoting more effective and efficient

two-way interactions, and so on. However, both studies from Holzer, Zheng, Manoharan, & Shark (2014) and Torres, Pina, and Acerete (2006) indicated that governments performed differently at municipal level. The following question to be explored is why governments perform differently in e-participation and what the determinants of e-participation development are.

The adoption and development of e-participation relates to government capacity (technical capacity, financial capacity, administrative capacity, and political capacity) and willingness (the desire of the government to promote citizen participation online). Previous literature greatly emphasizes the impact of transparency, political structures and routines, the relationship between the government and citizens, and so on. However, a research gap exists in that the influence of government capacity and willingness for e-participation has been missed. E-participation cannot be adopted and developed well without the necessary technologies, adequate funding, human resources, and higher level of management and political support as its basis. Studies from the E-Governance Institute at Rutgers University in Newark indicate that only capacity factors are not sufficient to lead to e-participation development, since many municipalities, building great and user-friendly websites, perform poorly in e-participation with limited access provided for citizens to participate online. In other words, the willingness of the government to promote citizen participation online is another key factor that influences e-participation development. After reviewing the literature, this study argues that both government capacity and government willingness affect the adoption and development of e-participation.

This study aims to explain e-participation diffusion at the municipal level in New Jersey from two aspects: government capacity and government willingness. Specifically, by using part of the Rutgers E-Governance Index and evaluating each official municipal website of New Jersey, this study explores the e-participation offerings at the local level (i.e., what kinds of e-participation methods municipal governments are using to engage citizens) and the differences among these municipalities. Then, by conducting surveys of the 565 municipalities, an exploration was conducted into the factors inside government that could explain the e-participation offerings at the municipal level, especially government capacity and willingness.

This study makes several contributions both to theory and practice. By testing the impact of government capacity and willingness on e-participation, this study fills a research gap and enriches e-participation literature. Besides, this study, by evaluating the official municipal websites of New Jersey, reflects the current e-participation offering situation at the municipal level in that state. Data collected through the questionnaires will help researchers understand government officials' attitudes toward the adoption and usage of e-participation. Also, for practice, this study will help municipal officers to better understand e-participation, including its importance, forms, determinants, etc., which could help them to improve e-participation development.

This dissertation proceeds in several chapters. Chapter 2 focuses on the research background, discussing the rise of e-participation usage and its diffusion, which helps to

clarify why this issue needs to be studied. Chapter 3 centers on the literature review, which summarizes existing studies on e-participation (especially the determinants of it). The review of existing literature contributes to identifying the research gap and the need to examine the influence of government capacity and willingness. Chapter 4 discusses the role of government capacity in adopting and developing e-participation initiatives. E-participation's development needs government capacity (technical capacity, financial capacity, political capacity, and administrative capacity) to serve as its base. Chapter 5 is about the influence of government willingness, which serves as the driving force for governments to utilize their resources and capacity to develop e-participation. Chapter 6 explores the relationship between government capacity and willingness. Also, the theoretical model is built up here based on all of the hypotheses proposed. Chapter 7 is about the methodology and research design of the study, introducing the sampling, the survey, measurements, etc. Chapter 8 presents the results of the study, including the descriptive statistics for the dependent variable and each independent variable, as well as the test results for the hypotheses. Chapter 9 is the discussion part of this study. And Chapter 10 is the conclusion part, which contains highlights of the research findings and discusses the limitations and implications of this study, in addition to noting future research on this topic.

Chapter 2: Research Background

2.1 The Rise of E-Participation

Over the past two decades, information technologies have significantly changed the ways of government running, not only in providing services but also in the interactions with citizens: "[The] Internet is generally seen as a new medium that enables exchange across geographical, social and cultural boundaries and promotes free individual expression (notably because of the anonymity of participants)" (Vedel, 2006, p. 231). Zheng and Liao (2014) believed that e-government, with help from information technologies, "smoothes communications between citizens and government; provides new forms and more convenient ways to participate; [supplies] citizens with information needed; and [reduces] cost for participation" (p. 118).

With the aid of information technologies, the contact methods between citizens and governments have become more diverse and convenient. Governments use online newsletters and emails to send citizens the latest news or updates. Social media, such as Twitter, Facebook, or even YouTube, have been used to enable the public to learn more about government operations. Recorded videos of public meetings are provided to citizens to see the decision-making process for themselves. Online surveys or polls have been conducted by governments to understand public preferences and needs. In describing a web-based survey, developed by researchers at the University of Connecticut and in the town of West Hartford (Connecticut), to help decision-makers understand citizen preferences, Robbins, Simonsen, and Feldman (2008) argue that the web-based

process addresses several challenges that citizen participation faces by "eliciting public opinion in a systematic and comprehensive way" (p. 572).

A growing body of literature focuses on government efforts to utilize new technologies to bring greater citizen participation into policy formation and evaluation and to create greater information exchanges between citizens and government (Komito, 2005; Macintosh & Whyte, 2008; Norris, 1999; OECD, 2001; Kim & Lee, 2012). Many governments have adopted various forms of electronic participation (e-participation) applications, including online forums, virtual discussion rooms, electronic juries, and electronic polls (OECD, 2003; Kim & Lee, 2012). Quality services in e-participation programs can allow e-participants to make suggestions, locate policy and community information, ask government employees about policy and community issues, and view other participants' input easily and effectively (Coleman et al., 2008; West, 2004; Kim & Lee, 2012).

Notably, "citizen use of governmental Web sites appears to represent a new form of citizen-initiated contact" (Thomas & Streib, 2003). Email makes it easier and faster for citizens to contact government officials. Online chatting even enables citizens to interact with government personnel instantly. Making contact via the web may be easier and quicker than contacting by phone or in person, especially as use of the Internet becomes increasingly widespread and websites become more user-friendly (Thomas & Streib, 2003). Contacting governments through websites is so popular to young people that it's conceivable that it could, to some extent, replace traditional methods (e.g., by phone or in

person) and become the most important way to interact with governments. Online discussion boards have become important public spaces for citizens to express their opinions on public issues, and online petitions have been used for citizens to attract government attention on specific issues.

All of these developments created a new form of citizen participation: e-participation. A widely cited definition of e-participation comes from Macintosh (2004): the use of information and communication technologies to broaden and deepen political participation by enabling citizens to connect with one another and with their elected representatives. E-participation has also been defined as involving the extension and transformation of participation in societal, democratic, and consultative processes mediated by ICTs, primarily the Internet (Sæbø et al., 2008, p. 400). Based on the argument of Phang and Kankanhalli (2008), e-participation initiatives refer to "governments' efforts in employing ICT for disseminating policy planning information and soliciting citizens' inputs in planning" (p. 2). Medaglia (2012) offers a similar definition of e-participation in that it refers to the use of ICTs to support democratic decision-making (Macintosh, 2004; Medaglia, 2012), relating to the issues of enabling opportunities for consultation and dialogue between governments and citizens by using a range of ICT tools (Medaglia, 2012, p. 346). Summarizing their definitions, e-participation refers to the changes that ICTs have brought to traditional participation and aims at improving participation with the tools of ICTs.

Macintosh (2004) also discussed the objectives of e-participation, such as reaching a wider audience to enable broader participation; supporting participation through a range of technologies to cater to the diverse technical and communicative skills of citizens; providing relevant information in a format that is both more accessible and more understandable to the target audience to enable more informed contributions; and engaging with a wider audience to enable deeper contributions and support deliberative debate. A similar argument was given by Phang and Kankanhalli in 2008 that e-participation initiatives can be deployed to achieve four general objectives of citizen participation: information exchange, education and support-building, as a decision-making supplement, and input-probing (p. 4).

E-participation has three stages: e-enabling, e-engaging, and e-empowering (Macintosh, 2004). E-enabling is about supporting those who would not typically access the Internet to take advantage of the large amount of information available; e-engaging is concerned with consulting a wider audience to enable deeper contributions and support deliberative debate on policy issues; and e-empowering citizens focuses on supporting active participation and facilitating bottom-up ideas to influence the political agenda (Macintosh, 2004, p. 3).

2.2 Advantages of E-Participation

Traditional participatory techniques include "drop-in centers, public hearings, citizen advisory committees, citizen panels, nominal group processes, value analysis, and citizen surveys" (Phang & Kankanhalli, 2008, p. 3). Compared with traditional ways of citizen

participation, e-participation, equipped with advanced information technologies, has advantages.

White (1997) discussed the reasons for the low level of citizen participation, including lacking information, time, and resources. For citizens who live far away from the downtown governmental area, it would be time-consuming for them to attend public hearings and other government meetings, reducing their enthusiasm to participate. Also, it takes several days to mail a letter and get reply. With information technologies, e-participation enables the interactions between citizens and governments to be more efficient. Moreover, having related information and understanding how the government runs serves as the basic foundation for meaningful participation. In other words, citizens need to have enough knowledge about the structure, missions, responsibilities, policymaking processes, etc., in order to give valuable advice or suggestions they would like considered by the government. With traditional participation methods, it's hard to get the information conveniently. Bimber (2001) treats information as pertinent to political engagement strictly because it expands the volume of political information available to citizens and reduces its cost. This information helps to educate citizens and better prepare them to participate in the running of government. Thus, e-participation has the potential to overcome some of the problems faced by traditional citizen participation forms by enabling more convenient interactions, providing more comfortable forms of participation, reducing the cost of participation, educating citizens with knowledge of how the government runs, and so on.

Low levels of citizen participation also relate to the high cost that it brings to government. Irvin and Stansbury (2004) argue that the low end of the per-decision cost of citizen participation groups is arguably more expensive than the decision-making of a single agency administrator. And citizen participation processes require heavy time commitments (Lawrence & Deagen, 2001; Irvin & Stansbury, 2004). Traditional citizen participation methods, such as public hearings, citizen panels, citizen surveys, and so forth, cost money and time in organizing the meetings, scheduling meetings with visitors, printing documents, sending out surveys by mails, etc. With e-participation, governments have more convenient choices to reach citizens and collect public opinions. Governments can send out electronic newsletters or emails to citizens; operate e-meetings to enable citizens to "participate" in the meetings online; conduct online surveys; interact with "visitors" through online chatting; discuss with citizens on discussion boards; and other options. All of these reduce the government cost of promoting citizen participation.

Compared with traditional citizen participation forms, e-participation not only inherits their functions but also makes up for their shortcomings. Like the traditional methods, a web portal can act as an online drop-in center, where interested citizens come to obtain policy-planning information and to interact with government planners and other citizens (Phang & Kankanhalli, 2008, p. 5). E-participation efforts help to "inform citizens about the why and how of government's policy plans, and create a favorable climate for execution of these plans (Phang & Kankanhalli, 2008, p. 5). By clearly showing the process step by step, governments enable citizens to easily follow the status of the public issues they are focusing on and the progress that governments make to

address them, which makes e-participation more transparent. This helps citizens to see the government running better and understand the policymaking process inside government. Since all of the emails, messages, discussions, etc., can be recorded and tracked, participation in the e-participation environment becomes much more transparent than traditional participation methods, which is expected to improve the trust citizens have for government.

In fact, e-participation is not only for one-way information delivery but also enables two-way communications. It emphasizes two-way interactions between citizens and governments. Online chatting and online discussion forums, for example, can serve as virtual meeting places where planners and citizens gather to communicate and share their views, much like the public hearing context (Phang & Kankanhalli, 2008, p. 5). Barnes and Williams (2012) also stress this function and argue that, with interactive cable methodology, meetings can be conducted and televised, while citizens can provide feedback and opinions during the meetings. Email and online chatting give citizens more convenient choices for contacting government officials. Blogs, Facebook, and Twitter provide citizens with great ways to express their opinions and discuss public issues. And online surveys and discussion boards allow governments to gather citizen feedback on their services and policies. All of these tools are much faster and more convenient than traditional ways of participation.

Furthermore, the development of e-participation contributes to the promotion of direct democracy. The high cost of traditional citizen participation has constrained the

development of direct democracy, since citizens have to elect their representatives or choose their speakers to let their voices be heard by governments. However, e-participation, by utilizing information technologies, overcomes many of these impediments and promotes direct citizen participation and direct democracy. The growing body of literature on the democratic significance of new information technologies has focused on its ability to enhance direct citizen participation in the political process (Kakabadse, Kakabadse, & Kouzmin, 2003, p. 49). With e-participation, "citizens are given an opportunity for direct input into the planning process" (Phang & Kankanhalli, 2008, p. 7). E-participation helps governments to "obtain citizens' views on relatively under-explored policy issues" (Phang & Kankanhalli, 2008, p. 8) and enables governments to collect more comprehensive and direct opinions from citizens to gauge public preferences better, making government services and policies more citizen-oriented.

Phang and Kankanhalli (2008) built a framework showing that different e-participation initiatives and ICT tools could be used in various stages of a policymaking process. They asserted that e-participation initiatives with the input-probing objective were particularly important during the agenda-setting phase of a policy. In the policy formulation phase, e-participation initiatives with both an information exchange objective and decision-making supplement objective would be useful. Once the target policy has been formulated and needs to be implemented, e-participation initiatives with an education and support-building objective can be launched, and those with an information

exchange objective can again be employed in this phase (after the policy is implemented) (Phang & Kankanhalli, 2008, pp. 11-12).

2.3 Governments Perform Differently with Regards to E-Participation

The emergence of new forms of citizen participation in political activity through information and communication technologies (ICTs) has attracted attention from both research and practitioner communities, as shown by the mushrooming of government-initiated e-participation projects at all levels and by the increasing number of research contributions populating the scientific literature (Medaglia, 2012, p. 346). Participation using ICTs—e-participation—may bring three additional types of benefits: reduced transaction and coordination costs in social and political relationships; greater deliberativeness due to certain qualities of the medium; and the enhanced information-processing capacity of information technology (Smith & Dalakiouridou, 2009). Liden and Avdic (2003) studied the functions of information technology in democracy and noted seven fields in which such technology can support democratic processes: support for communication, support for human networks, support for efficiency, support for political decisions, support for authority decisions, support for community service, and support for public insight (Kardan & Sadeghiani, 2011, p. 468).

Although the importance of e-participation is widely accepted and efforts have been made to adopt and develop it, the reality is that the e-participation level is low, and different jurisdictions perform differently in e-participation development. The main research, assessing municipality websites, includes the studies from Holzer, Zheng,

Manoharan, and Shark (2014) and Torres, Pina, and Acerete (2006). Holzer et al. (2014) highlight the research finding of the latest worldwide digital governance survey conducted by E-Governance Institute of Rutgers University – Newark in 2013-14. Different from the Taubman Center's Global E-Government Survey, their survey had a section on "Citizen and Social Engagement" to evaluate whether the government provided sufficient opportunities for citizens to participate. Using 104 measures in five e-governance components (privacy/security, usability, content, service, and citizen participation), they found that the average score for citizen participation in all the 100 municipalities evaluated was 3.34 out of 20, which is very low. Still, great variances existed. For example, municipalities such as Seoul, Singapore, and Yerevan did quite well in providing access for citizens to participate, while several municipalities earned a zero, which means that they provided no online opportunity for citizens to contact them or give feedback. Only 14 municipalities earned a score higher than 7 (out of 20). Thirty-seven municipalities got a score lower than 2 (out of 20). And, among these 100 municipalities, only 20% of them provide an online policy forum, as indicated in Figure 2-1 below.

Figure 2-1: Online Policy Forums
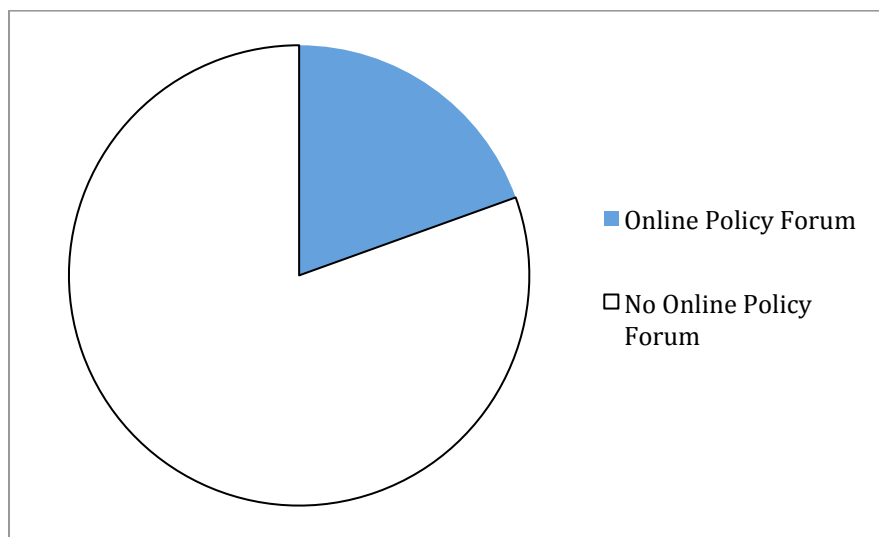
With a similar methodology, the Institute conducted the 2012 E-Governance Survey in New Jersey, and the results also indicate that almost all of the municipalities are doing poorly in providing opportunities for citizens to participate online. Also, a great variance exists in government performance in e-participation at the municipality level. Among the 100 municipalities evaluated, 80 of them earned a score lower than 3.0 (out of 20), and 27 of them were lower than 2.0. The average for all of these 100 municipalities was 2.48 (out of 20), which is very low.

Another notable study is Torres et al. in 2006. They researched the websites of 35 European Union cities, including the largest cities and national capitals belonging to Austria, Belgium, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom. Their study focused on the e-government dimension (including e-service and e-democracy) and web maturity. E-democracy is divided into three parts: the political dimension, financial accountability, and citizen

dialogue. The evaluation of this dimension studied whether information from the mayor

and government contacts was provided; whether financial statistics and reports were

provided through websites; and whether there was access for citizen dialogue. The results

showed that these 35 cities could be divided into four groups based on their scores, and

great differences existed among them in e-democracy. Glasgow earned a 73.3 in

e-democracy, which was quite high compared to other cities, while Athens and Lyon only

received an 18.3. The data showed that only around 60% of the websites offered cabinet

members' email addresses, and less than 50% offered the email addresses or telephone

numbers of council members. The researchers also found that less than 50% of the

websites provided budgetary information, and there were not sufficient opportunities for

citizens to interact with governments.

In addition to these studies, another important one is the UN E-Participation Survey,

which reflects e-participation at the national level. Their e-participation index assesses

the quality and usefulness of information and services provided by a country for the

purpose of engaging its citizens in public policymaking through the use of e-government

programs (UN, 2012). Different from the other two surveys focusing on the city and

municipality levels, the United Nations survey paid attention to an entire country's level.

Based on the definition in their global reports, e-participation aims at increasing the

dissemination of e-information to citizens for decision-making; enhancing e-consultation

for deliberative and participatory processes; and supporting e-decision-making by

increasing the input of citizens in decision-making (UN, 2012). As Figure 2-2 below

indicates, the countries surveyed performed very differently in e-participation. Countries

such as the Netherlands and the Republic of Korea earned a full score 1, while around 30

countries, such as Armenia and Gambia, received a zero. The average score for

developed countries was nearly 0.4, while the average score of the least-developed

countries was around 0.04.

Figure 2-2: E-Participation Diffusion at National Level
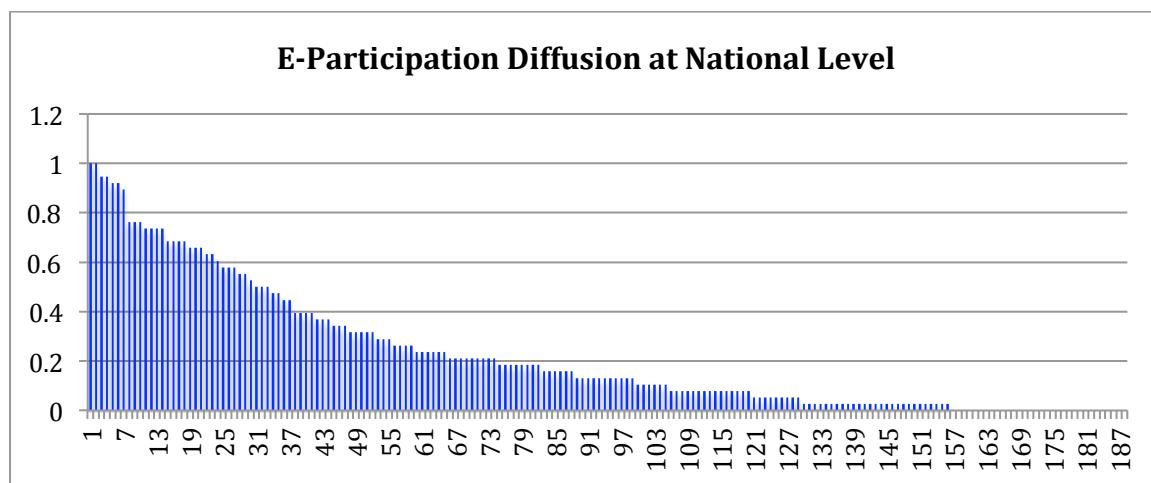
Chapter 3: Literature Review

3.1 E-Participation Literature

Research on e-participation is diverse. Sæbø et al. (2008) summarized the research in the e-participation field up to March of 2006 and outlined it by exploring its actors, activities, contextual factors, effects, and evaluation approaches. Medaglia (2012) used a similar method to summarize e-participation contributions between April of 2006 and March of 2011. Both of these two studies classified the research domains as e-participation actors (citizens, politicians, government institutions, and voluntary organizations); e-participation activities (e-voting, online political discourse, online decision-making, e-activism, e-consultation, e-campaigning, and e-petitioning); contextual factors (information availability, infrastructure, underlying technologies, accessibility, policy and legal issues, and governmental organization); e-participation effects (civic engagement effects, deliberative effects, and democratic effects); e-participation evaluation (quantity of e-participation, demographic of participants, tone and style in online activities); and e-participation research methods (survey, case study, action research, content and discourse analysis, and national state of the art) (Medaglia, 2012, pp. 348-349).

Among these studies, one stream focuses on "government institutions," believing that governments are the key actors in top-down e-participation initiatives (that is, ICT-enabled projects initiated and usually funded by public bodies) (Medaglia, 2012, p. 351). The organization of governments may both influence and be influenced by the

introduction of e-participation activities (Bekkers, 2004; Sæbø et al., 2008). The role of government in offering e-participation opportunities to citizens cannot be ignored. Whether governments are actively building the platforms for citizens to get information, give feedback, discuss public issues, and interact with government, their capacity determines its e-participation level, since the access for citizens to get information and interact with government are the prerequisite for citizens to participate.

Researchers have been exploring what kinds of factors related to governments are influencing e-participation adoption and development. Different characteristics of government, such as size, political orientation (Colombo, 2010; Medaglia, 2012, p. 352), degree of transparency, access to information provided to the citizenry, and availability of fora for discussion, have affected e-democracy policies over time in various national contexts (Vedel, 2006; Wright, 2006; Medaglia, 2012, p. 352). By analyzing citizen participatory experiences promoted by local Catalan governments, Colombo (2010) found that larger municipalities were more likely to have a higher level of e-participation. Colombo's (2010) study also confirmed the influence of political context and participatory context in e-participation. Municipalities with mayors from political parties on the left are likely to promote e-participation. And, the better the e-participation platform that is built, the higher level of e-participation adoption and usage there will be. However, the study from Colombo (2010) did not support the role of the technological context in e-participation development in that the percentage of bandwidth had no significant impact on e-participation.

The precondition for citizen participation is that citizens have the information they need. Without enough information about how the government runs and policymaking processes, citizens cannot contribute much in terms of participation. So, the level of transparency is expected to influence e-participation, in that a higher level of transparency could lead to better e-participation. Transparency here not only refers to the quantity of information provided by the government but also the quality. Vedel (2006) argues that "many citizens are cognitive misers who try to save their cognitive resources. Much of their effort is devoted not to search more information, but to filter, select and reduce information in personally meaningful ways" (p. 232). To promote transparency, governments need to enable citizens to get government information in an efficient and effective way. Otherwise, transparency is symbolic or even tactical, which would not contribute to the e-participation level.

The shape of existing political structures, routines, and cultures are focused on to provide an explanation for cases of poor degree of interactivity of online channels (Glassey, 2010; Medaglia, 2007; Sobaci, 2010; Torres et al., 2006; Medaglia, 2012, p. 352). Specific institutional designs (Grönlund & Åström, 2009; Medaglia, 2012, p. 352) and the existing relationship(s) between government and citizens (Bosnjak et al.; Medaglia, 2012, p. 352) are expected to influence online participation. The influence of the political culture has been confirmed by Torres et al. (2006) and Sobaci (2010). Governments that are more concerned with customer needs and with more political will to serve the public are more likely to develop citizen participation online. The political orientation of governments could also impact the adoption and usage of e-participation.

Municipalities with a center-left orientation, for instance, have been found to utilize

e-participation more by Medaglia (2007), and Colombo (2007) (see also Zheng,

Schachter, & Holzer, 2014) found that "internet incorporation of participatory

experiences was more favorable in municipalities where [the] mayor came from a party

on the left".

Zheng, Schachter, and Holzer (2014) examined the influence of government form on

government e-participation offerings. Using data from the 2012 New Jersey

E-Governance Survey conducted by the E-Governance Institute at Rutgers University in

Newark, they found that, among the three popular government forms in New Jersey

(mayor-council, council-manager, and township), when controlling for the influence of

technology, transparency, e-services, budget, and municipal size, "municipalities with the

mayor-council form of government are more likely to have higher levels of

e-participation offerings" (p. 653).

Andersen, Henriksen, Secher, and Medaglia (2007) (see also Medaglia, 2012)

believe that the governmental budget impacts e-participation policy implementation, and

Panopoulou, Tambouris, and Tarabanis (2010) (see also Medaglia, 2012) argue that

government commitment is a key success factor for e-participation initiatives: "The

actual involvement of governmental bodies and agencies not only as owners but

throughout the whole participation process has been highlighted by most of the reported

initiatives as a critical success factor" (p. 59). Specifically, Panopoulou et al. argue that

the commitment of the government is needed in three settings: the drive to set up and

support the initiative; support of the participatory process; and feedback and integration of results (p. 59).

The positive development of e-participation cannot be achieved without comprehensive regulations and good design. Panopoulou, Tambouris, and Tarabanis (2010) emphasize the importance of a thorough communication and promotion plan, as well as protection for users' security and privacy: "There is an absolute need for a detailed, professional and intensive communications strategy as well as for the will and the resources to back it up until the end" (p. 61). Strong protections for the privacy and security of users could enable e-participation users to trust government more and more actively participate. Further, the good design of e-participation initiatives is reflected in their usability level. Panopoulou, Tambouris, and Tarabanis (2010) also argue that "any kind of eParticipation initiative should be really easy and intuitive for all kinds of users, from internet savvy ones to those with limited ICT skills" (p. 60). Only when citizens believe that e-participation is more convenient and effective than traditional ways of citizen participation (e.g., phone calls, letters, face-to-face talks, physical public hearings, etc.) will they adopt and use e-participation forms. As such, high usability is one of the key factors influencing e-participation levels.

Although information technologies bring the potential for developing citizen participation, "new technologies do not, however, deterministically produce idealized conditions for discussion: there are many potential problems" (Wright, 2009, p. 550). The online environment can possibly lead a discussion to disorder and chaos without proper

management. Wright (2009) emphasizes the role of the moderator and moderation, believing that "moderator(s) can help to mitigate many of the problems by actively intervening in the debates" (p. 551). Also, "moderation is generally considered to be significant (and positive) in shaping the quality and usefulness of online debates" (Hron & Friedrich, 2003, p. 74; Wright, 2006, p. 551), "particularly for government-run discussions 'which might otherwise be chaotic, non-deliberative and respectless'" (Linaa Jensen, 2003, p. 350; Wright, 2006, p. 551). The need for moderation was also confirmed by Panopoulou, Tambouris, and Tarabanis (2010), in that e-participation needs "a heavy, active and timely moderation" (p. 62). And, in their perspective, "moderators need adequate training in order to be able to support and promote open, serious, and high quality participation" (p. 62).

Although e-participation adoption and usage relates to the behaviors of governments, "e-participation exists in a complex environment and is impacted by many external factors" (Zheng & Holzer, 2013, p. 5). An environment with a higher level of democracy and information technology usage would likely motivate governments to adopt and utilize e-participation, since its citizens have the need for it. Using data from the 2012 United Nations E-Government Survey, Zheng and Holzer (2013) explored the external determinants of e-participation development at the national level. They found that infrastructure, democracy, education, economy, population, and the urban population rate served as the external environment for e-participation, and these factors had both direct and indirect influences on e-participation: "Countries with higher levels of ICT infrastructure are likely to perform better in terms of e-participation" (Zheng & Holzer,

2013, p. 12). The economy, educational opportunities, and democracy could indirectly influence e-participation by impacting the infrastructure level. Thus, the environment, composed of infrastructure, democracy, education, and the economy, affects e-participation at the national level.

3.2 Research Gap in E-Participation Studies

The summary of the literature above shows that the research, in trying to explain government e-participation adoption and usage, focuses on three main areas: the government itself (government form, size, budget, political will, routines, etc.), e-participation design (regulations, management, etc.), and the external environment (infrastructure, education, democracy, economy, etc.). Although many factors have been covered and examined by these studies, limitations still exist in that an evaluation of government capacity and willingness have been missed.

Government capacity is the precondition for e-participation adoption and development. Without a reasonable level of capacity and resources, it's hard for governments to adopt e-participation and run such initiatives well. However, even with the necessary capacity, if governments do not have the willingness to use information technologies and better engage their citizens, the goal of e-participation adoption will still not be realized. The attitudes of governments toward the importance and usefulness of citizen participation in government operations will determine whether they would like to adopt e-participation and provide online methods for citizens to engage. Because of this,

government capacity and willingness cannot be ignored when exploring the determinants of e-participation adoption and usage at the municipal level.

3.3 Research Questions

This study aims to fill this research gap and explain government performance in e-participation from the aspects of government capacity and willingness. The research questions are as follows: First, what is the extent of the e-participation offerings at the municipal level in New Jersey? In other words, to what degree do municipalities in New Jersey use information technologies to engage citizens?

Secondly, do these municipalities have the capacity and willingness to adopt and develop e-participation initiatives? Through surveys of municipalities in New Jersey, this study will examine to what extent the municipalities have the capacity and willingness to develop e-participation.

Third—and most importantly—this research will test the influence of government capacity and willingness on e-participation adoption and usage—that is, whether government capacity and willingness have significant impact on government performance in e-participation offerings.

In answering these three research questions, this study is expected to make several contributions to both theory and practice. By testing the impact of government capacity and willingness on e-participation, this study fills a research gap and will enrich

e-participation literature, aiding in the understanding of the determinants of

e-participation adoption and usage. And, by evaluating e-participation offerings at the

municipal level in New Jersey, this study will reflect the current e-participation situation

in that state and identify best practices, which can be shared with other municipalities to

improve their e-participation levels.

Chapter 4: Government Capacity and E-Participation

4.1 Government Capacity Relates to Government Performance

"Simply put, a local government's capacity is its ability to do what it wants to do" (Gargen, 1981, p. 652). This is also viewed as the ability of governments to "set the terms for economic and political interactions and to carry out the functions assigned to them" (Grindle, 1996; Wallis & Dollery, 2002, p. 78). From the United States Office of Management and Budget's Interagency Study Committee on Policy Management Assistance, "government capacity" refers to capacities in three general areas: policy management, resource management, and program management (Gargen, 1981, p. 650). It's widely agreed that government capacity is the foundation for government performance. Hou, Moynihan, and Ingraham (2003) argue that the internal, systemic capacity of government organizations becomes one of several critical preconditions for performance. As the current trend of results-based governance prompts administrators to raise performance by changing malleable management variables, the question "How does strengthening a public agency's management capacity and management systems lead to improved performance in terms of servicing its mission, delivering services, or generating appropriate policy outcomes?" becomes ever more important (Hou, Moynihan, & Ingraham, 2003).

Government capacity is the foundation for its performance, and the realization of certain government goals cannot be achieved without certain government capacities. White (2003) explains the reasons why the federal government is most likely to lead on

insurance access issues, for example, in two perspectives of government capacity: technical capacity (the capacity to foresee a technically viable solution to a given condition) and political will (political capacity). Andrews and Boyne (2010) found that capacity possesses a positive statistical association with local government performance. Government capacity is reflected in the ability of a government to combine its "physical, human, informational, and financial resources" (Honadle, 1981; Andrews & Boyne, 2010). High-capacity governments will likely have a combination of strong policies, programs, and resource management, which, in turn, will enable them to be "adaptable, effective and efficient" (Burgess, 1975; Andrews & Boyne, 2010). On the other hand, a low-capacity government will struggle to develop and implement innovation and will typically lack the capacity for self-improvement (Andrews & Boyne, 2010).

Capacity has been characterized in many ways in different settings, with an overall trend toward greater specification in definition and measurement particular to the subject of study (Hall, 2008, p. 110). In Hall's perspective, staffing and spending factors (Bowman & Kearney 1988), leadership and vision, management and planning, fiscal planning and practice, and operational support (Frederickson & London, 2000), as well as the ability to attract resources (grantsmanship) and to absorb and manage grant funds (Honadle, 1981), all represent facets of capacity (Hall, 2008, pp. 110-111).

Organizational capacity refers to "organizations' ability to achieve their aims" (Berman & Wang, 2000; Melitski, 2003). It is differentiated between internal capacity (factors such as leadership, vision, management, and planning) (Fredericksen & London,

2000; Melitski, 2003) and external capacity (stakeholder capacity, project champions, political support, and so on) (Melitski, 2003). Wallis and Dollery (2002) summarized some discussions of governance capacity from researchers. Polidano (2000) distinguishes between "policy capacity" (i.e., "the ability to structure the decision-making process, coordinate it throughout government, and feed analysis into it"), "implementation authority" ("the ability to carry out decisions and enforce rules, within the public sector itself and the wider society"), and "operational efficiency" ("the ability to deliver services efficiently and at a reasonable level of quality") (Wallis & Dollery, 2002). Grindle's discussion is also mentioned by them. Grindle (1996) (see also Wallis & Dollery, 2002) says that state capacity incorporates institutional capacity, technical capacity, administrative capacity, and political capacity. Specifically, "institutional capacity" refers to the ability of a government to uphold authoritative and effective "rules of the game," to regulate economic and political interactions, and to assert the primacy of their policies, legal conventions, and norms of social and political behavior over those of other groupings. "Technical capacity" is related to government capacity in setting and managing coherent economic strategies based on the advice of a cadre of well-trained analysts and managers who operate out of appropriately placed units for policy analysis. "Administrative capacity" refers to the ability to effectively administer local infrastructure and supply local public goods. And "political capacity" is related to the ability to mediate conflict, respond to citizen demands, allow for the representation of interests, and provide opportunities for effective political participation.

A majority of the local governments reviewed enhanced their capabilities by giving attention to areas such as staff skills and professionalization, equipment, materials and buildings, organization, and planning and execution functions (Fiszbein, 1997). Fiszbein (1997) views capacity as an enabling factor: It is the effective existence, at the local level, of the tools that make it possible for the local government to perform successfully, specifically referring to three dimensions (labor, capital, and technology). Labor refers to staff professionalization (the skills and knowledge of staff); capital is regarded as the "physical dimension"; and the technology dimension consists of the government's internal organization and management style, such as the structure and distribution of functions and responsibilities within the organization; the management, planning, decision-making, and control and evaluation functions; and information-gathering, processing, and distribution (Fiszbein, 1997).

4.2 Government Capacity Influences E-Participation Performance

The definitions of capacity vary in the extent to which they specify the activities that should be performed versus the results that are sought (Honadle, 1981; Milio, 2007, p. 435). Capacity refers to different abilities and has different dimensions when being used in different areas. In e-participation, government capacity represents the resources and abilities that a government has to provide adequate access for citizens to participate online. Specifically, it includes the technical capacity (expertise and technologies), financial capacity (necessary funding), administrative capacity (administrative abilities), and political capacity (political support) to enable citizens to conveniently get information, express themselves, contact government officials and staff, discuss public

issues, and so on. These capacities, composing the government capacity for

e-participation development, serve as the necessary basis for e-participation adoption and

development.

Technical capacity (or IT capacity) refers to "the ability of the local government to

effectively apply IT to achieve desired ends" (Kim & Bretschneider, 2004, p. 2).

Governments need to have the technical capacity to build and run user-friendly websites

and make use of digital tools to provide access for citizens to interact with government,

which obviously involves many advanced technologies. Miah, Gammack, and Greenfield

(2009) argue that "e-Democracy technologies are not simply a portal or other website

where people can view or exchange documents but are rather a combination of networks,

personal devices, software technologies, that may support the entire political process and

canvass the desires among democratic entities through a meaningful interchange between

citizens and their governments" (p. 408). That is to say, e-participation requires a strong

technology capacity to serve as its basis.

Based on the perspectives of Kraemer, Dutton, and Northrop (1981) (see also Kim &

Bretschneider, 2004), to better understand how computers have changed organizations,

it's necessary to look at both "equipment" (like hardware, software, networks, etc.) and

the people that operate and run that equipment. Thus, technical capacity not only refers to

the equipment that governments have to develop for e-government or e-governance but

also relates to the staff who are particularly recruited for managing and running the

equipment. Kim and Bretschneider (2004) divided the level of IT capacity in a local

government into two categories: non-human capacity and human capacity. The first category reflects the IT infrastructure and the integration of it, such as the database management system, website/portal service, intranet, and so on. The second category (human capacity) refers to the analytical capacity, attitudes, and training resources of the people using the IT infrastructure (p. 2). The equipment is important, but the staff that manages and runs the information infrastructure is important too. The ability of these staff, including the IT manager, to "identify problems of the current information system, and to develop and evaluate alternatives to improve the IT capacity of the organization appears to be a decisive factor affecting the IT capacity of local government" (Honadle & Howitt, 1986; Kim & Bretschneider, 2004, p. 3).

With more than 10 years of study in the area of e-governance, the E-Governance Institute at Rutgers University-Newark has collected good practices over the years that governments need to learn to improve e-governance, including e-participation. For example, a website should have targeted audience links, a site map, and easily usable searching tools. It should also enable visitors to contact the government conveniently through email or online chatting; provide online discussion forums and online polls; offer synchronous video of public events and meetings; offer online tools for online decision-making; and enable citizens to post information, photos, and videos. All of these functions need to be realized by the necessary technologies and technicians to run an e-participation program. That's the reason why technical capacity is the precondition that needs to be met to for the successful adoption and development of e-participation. This leads to the first hypothesis of this study:

Hypothesis 1: Governments with a higher level of technical capacity are more likely to perform better in e-participation.

If we view e-participation as the "product" provided by governments, then information technology equipment, human resources, and financial recourses are only the raw materials or tools that governments can use to produce this "product." In fact, e-participation offerings and management include a lot of components, such as creating a project, setting up related regulations and policies, allocating related resources (financial resources and human resources), and providing training to related staff, as well as high levels of leadership and project management, project evaluation and improvement, and so on. All of these require high-quality administrative capacity to manage the resources and guarantee the maintenance of the project. Governments need to have the corresponding administrative capacity for e-participation adoption and development.

Arguing that the definitions of administrative capacity from other researchers are quite general and "do not indicate specific actions that the institutions need perform," Milio (2007) defines administrative capacity by four key actions: "management, programming, monitoring and evaluating" (p. 435). Although this definition is proposed in the background of the Structural Funds, it's instructive for understanding administrative capacity in e-participation development. Governments need to have this capacity to manage e-participation projects well, including setting them up, running them,

and monitoring and evaluating them. Only when governments have the administrative capacity can e-participation be adopted and developed well.

Furthermore, information technologies bring not only opportunities for government to improve its performance and promote citizen participation but also challenges it must face. To cope with these challenges, administrative capacity is needed. Government officials are expected to have the ability to adopt new technologies, recruit expert and related staff, train employees, and make long-term and short-term strategies for future development. A higher level of management and leadership will help government officials create the right strategies and plans to develop e-participation.

The relationship between technical capacity and administrative capacity cannot be ignored. Information technologies enable governments to have more advanced tools in their internal operations, such as human resources management, financial management, knowledge management, etc. All of these help governments to improve their efficiency and effectiveness in administration and management. So, it's expected that a government's technical capacity has a positive influence on its administrative capacity. Municipal governments with a higher level of technical capacity are more likely to have a higher level of administrative capacity. This discussion leads to the second and third hypotheses:

Hypothesis 2: Governments with a higher level of administrative capacity are more likely to perform better in e-participation.

Hypothesis 3: Technical capacity is positively associated with administrative capacity in municipal governments.

Another important capacity involves resources, especially adequate funding for e-participation adoption and development. Hall (2008) (see also Putnam, Leonardi, Nanetti, & Pavoncello, 1983) argues that the most common dimensions of public-sector capacity that have been identified focus on the financial resources of public institutions. Mohr (1969) (see also Kim & Bretschneider, 2004) believed that financial resources are a strong predictor for organizational innovation. Based on the arguments of Kim and Bretschneider (2004), "a large variation in IT innovation among city government can be explained by the amount of budget available to adopting new IT" (p. 4). Additionally, Gil-Garcia and Pardo, in discussing the factors necessary for e-government success, state that "financial resources are not always the most important factor, but are necessary" (p. 195).

It's the same for e-participation adoption and development. Only having technology is not enough; developing e-participation for the long run requires related staff to run the programs, provide services to citizens, and process the data collected. E-participation necessitates long-term funding, which can place financial pressure on governments. The updating of software and infrastructures, as well as the training of government employees, costs a lot of money. Responding to citizens' questions, managing comments and feedback, analyzing data, and providing strategic suggestions for government

development require adequate financial resources as their foundation. "Financial support is indispensable for procuring and developing adequate levels of hardware and software, and training end-users as needed" (Kim & Bretschneider, 2004, p. 4). Thus, financial capacity is another factor that serves as a precondition that needs to be met to guarantee the long-term development of e-participation.

Similar to the fundamental role of the economy at the national level, financial capacity serves as the basis for other capacities, particularly technical capacity. The building of technical capacity demands financial resources to house advanced IT facilities, build an IT department, recruit technicians, etc. Even if some governments choose to have part-time technicians or use IT-outsourcing, they still need to have a reasonable level of financial resources to afford to do so. As such, financial capacity is an important determinant for the building of technical capacity. Without strong financial capacity, it's hard to promote technical capacity at the municipal level. And while financial capacity might not directly influence e-participation, it's expected that it will affect the technical capacity of a municipal government. Based on this discussion, the fourth hypothesis 4 is established:

Hypothesis 4: Financial capacity is positively associated with technical capacity in municipal governments.

To better adopt and develop e-participation initiatives, political capacity is also needed. The policymaking and implementation of government requires political support

as the positive environment in which to make the process go smoothly. A low level of

support could cause conflicts that slow down the process and result in a high level of cost

for policymaking and adoption. The adoption and development of e-participation

involves systematic decisions related to the usage of information technologies to involve

citizens in the running of government, such as enabling citizens to give comments and

suggestions conveniently, efficiently interact with government officials and employees,

actively discuss public issues through online discussion boards, and so on. All of these

might bring significant changes to a government's inherent model. Political support needs

to be achieved before governments can accept these changes and gladly adopt

e-participation.

Also, political capacity is likely to affect administrative capacity in municipal

governments. Kim and Bretschneider (2004) argue that "improving [the] IT capacity of

local governments depends on whether support from administrative authorities is

available for IT managers who are in charge of implementing [the] IT adoption process

and its utilization" (p. 3). Based on the arguments of de Loë, Di Giantomasso, and

Kreutzwiser (2002), political capacity can be measured by the support of local political

leaders. The capacity for solving political conflicts inside government and achieving

political support from both inside and outside government is required to support the

adoption and development of e-participation.

A high level of effective management or administration cannot be achieved without

the support of supervisors and employees. Political support could promote efficiency in

decision-making and reduce conflicts during the process. It also helps to decrease the cost of policy design and implementation. So, governments with a higher level of political capacity, especially political support, will be more efficient and effective in policymaking and implementation. Thus, political capacity serves as the environment for administrative capacity. Administrative capacity is expected to be higher when there is more political support from both inside and outside of the government. Hypothesis 5 can be proposed based on this discussion.

Hypothesis 5: Political capacity is positively associated with administrative capacity in municipal governments.

Chapter 5: Government Willingness and E-Participation

5.1 Government Willingness Impacts E-Participation Performance

Will governments with a high level of capacity absolutely have a high level of e-participation development? The answer is no. While the capacity of government plays a foundational role and serves as the basis for e-participation development, it is still not sufficient to ensure development. The study from Rutgers University confirmed this point. There were 104 measures in five categories (privacy/security, usability, content, services, and citizen participation), which were used to evaluate 92 municipalities worldwide in the 2011-2012 survey to reflect the digital governance environment at the municipal level globally. A cluster analysis was used to divide the municipalities into four groups (Figure 5-1). The result indicates that there's not only a great gap among them in e-governance but also among different categories. "Usability," for instance, reflects the capacity of government to build a user-friendly website, and "citizen participation" refers to the access provided by a government for citizen participation online. The results show that there's a gap between them, as the average score for usability is much higher than for citizen participation, which means that even though the government has the capacity to build a great website, it does not guarantee that they will perform strongly in providing abundant opportunities for citizens to participate online. Willingness can explain the difference.

Figure 5-1: Clusters in E-Governance at Municipal Level
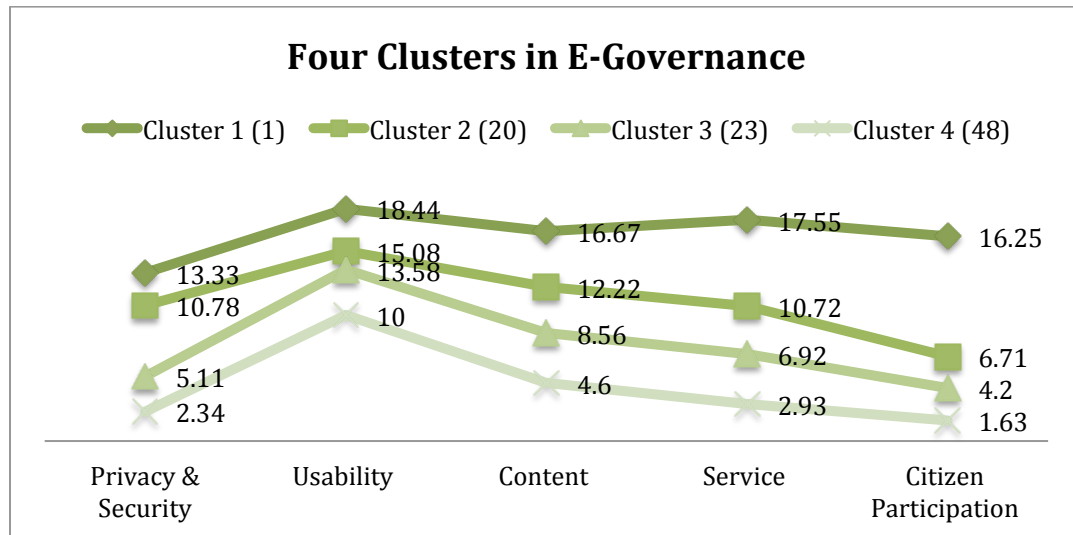
In fact, the difference between e-government and e-participation development is often ignored, and capacity factors, although significantly impacting e-government development, do not sufficiently determine e-participation development. Two broad dimensions regarding the value of ICTs to local government reform have been identified: entrepreneurial (good management) and participatory (good democracy) (Musso et al., 2000; Tettey, 2002). The first dimension emphasizes the ability of local governments to enhance their service delivery functions via ICTs, while the latter describes the quality of civic engagement (Tettey, 2002).

After two decades of development, more and more governments have the capacity to build websites and provide services online. However, they are still inactive to provide citizens access to participate online. Enhanced service delivery is more likely to be realized by a government with capacities, while it is more difficult to achieve

e-participation development since it's not only the capacity issue but also whether a government has the willingness to adopt and develop such initiatives.

The willingness of government to adopt and implement e-participation initiatives, to a large extent, is determined by the attitudes of government officials toward those initiatives, since government officials play an important role in policy adoption and implementation. And while e-participation, as discussed in the previous section, has many advantages, it still brings with it problems and issues. For example, participating online reduces the opportunities for face-to-face interaction between citizens and government staff, which is viewed as an important way for improving citizens' attitudes toward government. Also, the rise of e-participation may reduce people's willingness to participate in public hearings and meetings in person to express their ideas and discuss with others, since it costs them more time and money. However, participating physically in public hearings and meetings provides opportunities for citizens to communicate with each other, which is an important way to build social capital in a community. In addition, e-participation, by utilizing information technologies, has the potential to threaten the privacy and security of both users and the government, which is another issue that needs to be considered. Thus, adopting e-participation is not a simple issue but rather a complex choice that governments must make. Government willingness toward e-participation will, therefore, strongly affect the adoption and development of e-participation initiatives.

Moynihan (2003) argues that "administrators have substantial power in shaping the participation forum in terms of how much influence to share—which relates to the level

of participation—and what groups or individual citizens to involve—which relates to the

range of participation" (p. 171). Regarding the combination of citizen participation and

information technologies, the attitudes of government officials toward e-participation

have two dimensions: citizen participation and information technology usage. For

governments with more willingness to engage citizens and make use of ICTs, they are

more likely to adopt and implement e-participation initiatives, since this combines the

advantages of ICTs and traditional citizen participation. Conversely, governments with

less willingness to involve citizens in decision-making or with less passion for using

ICTs are not likely to adopt and implement e-participation initiatives.

5.2 ICT Usage Willingness

Margetts and Dunleavy (2002) adapted four myths—originally applied to

ecosystems—to sum up different cultural attitudes toward the new technological

environment (see Thompson et al., 1990, pp. 26-28) facilitated by web-based

technologies. These attitudes are "technology benign," "technology ephemeral,"

"technology perverse/tolerant," and "technology capricious." They believe that

government organizations are different from other types of organizations, and these

characteristics resulted in barriers in developing earlier information technologies

(Margetts, 1999; Margetts & Dunleavy, 2002). Margetts and Dunleavy (2002) also

mention the leading role of government in information technology (IT) provision in the

1950s and 1960s, though the government experienced more problems later and slipped

from that role. In their perspective, this experience means government organizations "are

more likely to have developed a negative attitude to information and communication

technologies" (p. 3). For example, many United Kingdom National Health Service managers were scared to enter into ICT contracts in the 1990s after a series of high-profile failures and became increasingly reluctant to spend budgets even already allocated (p. 3).

Besides negative experiences, Margetts and Dunleavy (2002) also connect government administrative values with the reluctance to use information technologies, such as formality, uniformity, hierarchy, and so on. Widespread use of email in particular challenges formal notions of how government correspondence should be dealt with, seeming to fall somewhere between a telephone call and a letter (Margetts & Dunleavy, 2002). This brings challenges to the running of government and leads to negative attitudes toward the adoption and use of information technologies. Additionally, uniformity, which is an administrative value, is threatened by the use of information technologies because these technologies make the information and services providing approach more diverse, which challenges the uniformity of government. Further, hierarchy is one of the most important values in government. However, "intranets and the sharing of information throughout organizations can challenge hierarchies—and can only really benefit an organization that develops a more networked approach" (Margetts & Dunleavy, 2002) instead of a hierarchical approach. Margetts and Dunleavy (2002) also believe that electronic hackers pose a barrier to government's image of itself as "robust," which presents another challenge for government adoption and use of information technology.

Based on this comprehensive discussion, it's easy to identify that governments perceive potential threats and costs when adopting information technologies, since these technologies will likely threaten governments' values and operations. Also, electronic hackers and lack of organizational demand contribute to the barriers facing governments using information technologies. In such a situation, a government's willingness to adopt and use information technologies to provide opportunities for citizens to participate is another factor that determines the real performance of e-participation. This discussion leads to the sixth hypothesis:

Hypothesis 6: Governments with a greater willingness to use information technologies are more likely to perform better in e-participation.

5.3 Willingness for Citizen Participation

The willingness of governments toward citizen participation depends on a lot of factors, including the cost and benefits citizen participation would bring. Moynihan (2003) summarized the administrative costs and instrumental benefits brought by citizen participation. The instrumental benefits refer to those more targeted and effective programs; innovative ideas; acceptance of public decisions (Moynihan, 2003); and so on. And, based on his perspective, the costs can be divided into "direct administrative costs, self-interested administrative costs, and decision process and decision outcome costs" (p. 173). Direct administrative costs are the direct costs placed on administrators when coordinating participation and include the actual and opportunity costs of time and resources devoted to participation (Kweit & Kweit, 1981; Moynihan, 2003).

Self-interested costs refer to the "public manager's potential loss of control of the

decision agenda, which in turn reduces administrative power and autonomy over

day-to-day activities" (Moynihan, 2003, p. 174). Also, lacking knowledge and expertise,

citizen participation has the potential to damage "the quality of the decision outcome" (p.

174).

Although e-participation has the potential to reduce costs in time and money for

citizens, whether it could reduce direct administrative costs is another issue that needs to

be clarified. With more citizens participating online, representative institutions "have to

deal with a large number of data processing tasks" (Arterton, 1987; Balnaves et al., 2004;

Coglianese, 2005; Marques, 2010). And governments need more in their budgets to fund

programs and employ experts and staff to run the programs, all of which might bring

more direct costs to the governments. Even if e-participation didn't result in a greater cost

to government, the self-interest cost, which involves government officials' support of

citizen participation, is still a strong impediment against the adoption and development of

e-participation. Findings of research conducted by Parvez (2003) indicate that the

outer-ICT context of local authorities plays an important part in driving the ICT agenda

and subsequently influencing the shape and role of ICTs in local democracy (Kardan &

Sadeghiani, 2011). Whether government officials have the willingness to promote citizen

participation becomes the key factor determining the real level of e-participation.

With more knowledge and expertise, government officials might not give enough

weight to citizen participation, since they may likely view opinions from citizens as not

practical or useful. Efforts to increase public participation may not work because "administrative systems that are based upon expertise and professionalism leave little room for participatory processes" (deLeon, 1992; Fischer, 1993; Forester, 1989; White & McSwain, 1993; King, Feltey, & Susel, 1998, p. 317). Another reason explaining the unwillingness of government to promote citizen participation might also be their reluctance to share their power with citizens.

Baker, Addams, and Davis (2005) argue that although public participation makes good theoretical sense, many problems are encountered in actual practice (p. 491). Six reasons were summarized by Walters, Aydelotte, and Miller in 2000, and one of them is that officials do not want to share power in making decisions (Baker, Addams, & Davis, 2005, p. 491). Their study on public hearings supported their argument. Public hearings "often fail to achieve their intended goals, frustrating both agencies and communities," and one important reason is that "administrators may comply minimally with laws requiring a public hearing, simply going through the motions without real intent" (Burby 2003, p. 36; Baker, Addams, & Davis, 2005, p. 491). Besides, public hearings are often a monologue rather than a dialogue and lack participation opportunities (Middendorf & Busch, 1997; Lowndes et al., 1998; Baker, Addams, & Davis, 2005).

Although it's expected that information technologies will bring changes to the way government runs, the changes are likely to stay at the operational level instead of changing government officials' minds on promoting citizen participation. ICTs are very likely to lead to more efficient service delivery, but it is not at all clear that they will lead

to a form of government that is more open, transparent, accountable, or democratic (Lenihan, 2002; Kardan & Sadeghiani, 2011, p. 468). Many scholars have pointed out various challenges faced by government projects aimed at using new media's participatory potential: the unwillingness of institutions and representatives to share political power; resistance due to the economic and political costs of implementation; and inadequate configurations of the interactive tools (Marques, 2010). It's indicated that many governments still have limited willingness to use information technologies to improve citizen participation, which is the content of e-participation.

Marques (2010) argues that there is an unwillingness by political representatives and state institutions to use new media to enhance their relationship with citizens. It has been suggested that the traditional emphasis on strict representation—a feature proper to modern democracies, according to Held (1987) and Manin (1997)—tends to resist changes in the decision-making process (Marques, 2010). This argument affirms that some representatives would be uncomfortable with the notion of sharing political power with citizens (Noveck, 2004; Stanley & Weare, 2004; Froomkim, 2004; Prattipati, 2003; Marques, 2010). Many governments do a great job providing citizens with comprehensive online services, but they are still hesitant to actively involve citizens in government decision-making online.

Resnick (2001) argues that information and communications technology extends "politics as usual" to a new medium, in part because the Internet simply reinforces the influence of already dominant actors in the policy process, such as political parties and

media corporations (Scott, 2006, p. 342). There is an interplay between new media and

traditional politics (Marques, 2010). Once representative institutions offer democratically

useful digital tools, societies will tend to increasingly employ them, and as a consequence,

these mechanisms will become an indivisible part of the political scenario (Marques,

2008; Marques, 2010).

The OECD (2003b, p. 9) (see also Kardan & Sadeghiani, 2011) emphasized the

following:

> "Technology is an enabler not the solution. Integration with traditional, offline tools
> for access to information, consultation and public participation in policy-making is
> needed to make the most of ICTs…The barriers to greater online citizen engagement
> in policy-making are cultural, organizational and constitutional not technological.
> Overcoming these challenges will require greater efforts to raise awareness and
> capacity both within government and among citizens."

Fundamental to the success of any participatory experience is the political culture

and its rules for civic engagement (Putnam, 2000; Marques, 2010). To promote citizens'

participation requires more than simply offering e-participation mechanisms (Marques,

2010). The development of e-participation is based on the changes in government

officials' understanding of citizen participation and their support for a higher level of it.

E-participation cannot be realized without the resources of government (e.g.,

technologies, funding, experts and staff, etc.), but it also cannot be realized without the

support of government officials, since they play such an important role in e-participation

development. Once political institutions are actually willing to employ digital tools to

improve their democratic practices, they will take advantage of these tools while

considering the appropriateness of each mechanism to the problems they face on a routine basis (Marques, 2010).

Additionally, the willingness toward citizen participation is expected to influence the use of information technologies. The advantages of ICT usage have been widely confirmed, and both researchers and practitioners support the benefits information technologies bring to citizen participation through reducing participation costs and providing more convenient participation methods. So, municipal governments that have a greater willingness to involve citizens are more likely to adopt information technologies to improve their citizen participation levels. Based on these arguments, the hypotheses below can be proposed:

Hypothesis 7: Municipal governments with a greater willingness to engage citizen participation are more likely to perform better in e-participation.

Hypothesis 8: The willingness toward citizen participation is positively associated with the willingness toward ICT usage in municipal governments.

Chapter 6: Higher Capacity, More Willingness

Government capacity can not only directly influence e-participation adoption and development, but it can also impact it by affecting government willingness. Government capacity serves as the foundation for municipal government performance and operation, influencing its attitudes and confidence in addressing challenges brought by information technologies and citizen participation. It's expected that municipal governments having a higher level of capacity are more likely to have a greater willingness to involve citizens and use information technologies.

6.1 Financial Capacity, Technical Capacity, and ICT Usage Willingness

Information technologies have many advantages, which contribute to the promotion of government operations and performance improvement, enabling governments to be more efficient and effective. E-participation adoption and development cannot be achieved without a high level of information technology usage by governments, such as building citizen-oriented websites, enabling citizens to give feedback or interact with government officials through online tools, etc. However, information technology utilization has some preconditions that must be met before widespread use of it.

To begin with, no matter the tools (such as computers, high-speed Internet, moderators, etc.) updating all of them requires adequate financial resources, which could result in a considerable cost to the government. The cost of adoption is an important factor in the adoption and utilization of the web (Ernst & Young, 2001; Alam & Noor,

2009, p. 114). The direct relationship between cost and information technology adoption has been widely confirmed, in that "the lower the cost of adoption the higher the new innovation such as the ICT will be adopted" (Alam & Noor, 2009, p. 114).

The cost incurred by information technology usage is a concern for governments wanting to expand the usage of it. Without enough financial resources and a reasonable level of financial capacity, it's unlikely for a government to welcome information technology usage, since it would not be realistic for them to adopt and use it. So, larger governments with more financial resources are more likely to welcome information technology and have a greater willingness toward ICT usage. This leads to the ninth hypothesis:

Hypothesis 9: Municipal governments with a higher level of financial capacity are more likely to have more willingness toward ICT usage.

Technical capacity refers to the abilities that governments have to develop e-participation. Whether governments have the technical capacity will influence their willingness to adopt information technology usage. Information technology usage not only brings with it a financial cost to governments but also puts pressure on them in the aspect of human resources in technology. Governments that have their own IT facilities, IT department, chief information officer, and technicians are more likely to have a higher level of technical capacity than others. These governments are better prepared to accept new information technologies than others. Also, the high technical capacity serves as a

great foundation upon which they can adopt and use information technologies in their

operations. Thus, they are likely to have a higher willingness toward ICT usage since

they benefit more from the information technologies and have the confidence to use

them.

Hypothesis 10: Municipal governments with a higher level of technical capacity are
more likely to have greater willingness toward ICT usage.

6.2 Administrative Capacity, Political Capacity, and Willingness for Citizen
Participation

It's widely accepted that citizen participation is important and can benefit

government operations, such as by promoting democratic values like responsiveness and

accountability (Kim & Lee, 2012; Zheng & Holzer, 2014); helping governments to

improve their performance (Holzer & Mullins, 2012); enabling governments to be more

transparent; and improving the relationship with and the attitudes of citizens toward

government. However, we need to accept that citizen participation has a cost—not only

to citizens but also to governments, like the administrative costs mentioned by Moynihan

(2003), such as direct administrative costs, self-interested administrative costs, and

decision process and decision outcome costs (p. 173).

Citizen participation runs the risk of slowing down governments' decision-making

processes and doing harm to efficiency. Citizen participation also costs governments time

in addressing the problems raised by citizens, like responding to complaints and inquiries,

organizing public hearings, etc. Providing more citizen participation opportunities indicates that governments need to allocate more resources (time, financial resources, and human resources) to involve citizens. And, increased citizen involvement requires governments to have higher capacity to manage it. Take the city of Longyan in China, for example. The government there receives more than 200 complaints online each day. To respond to these complaints and solve the problems, the government needs to have both strong administrative capacity and political capacity to perform well. So, governments without adequate administrative capacity and political capacity to provide citizen participation opportunities and manage them have a difficult time involving citizens and benefitting from citizen participation. On the other hand, governments with a higher level of administrative capacity and political capacity are more likely to have greater willingness toward citizen participation. Based on the arguments above, the next three hypotheses can be proposed.
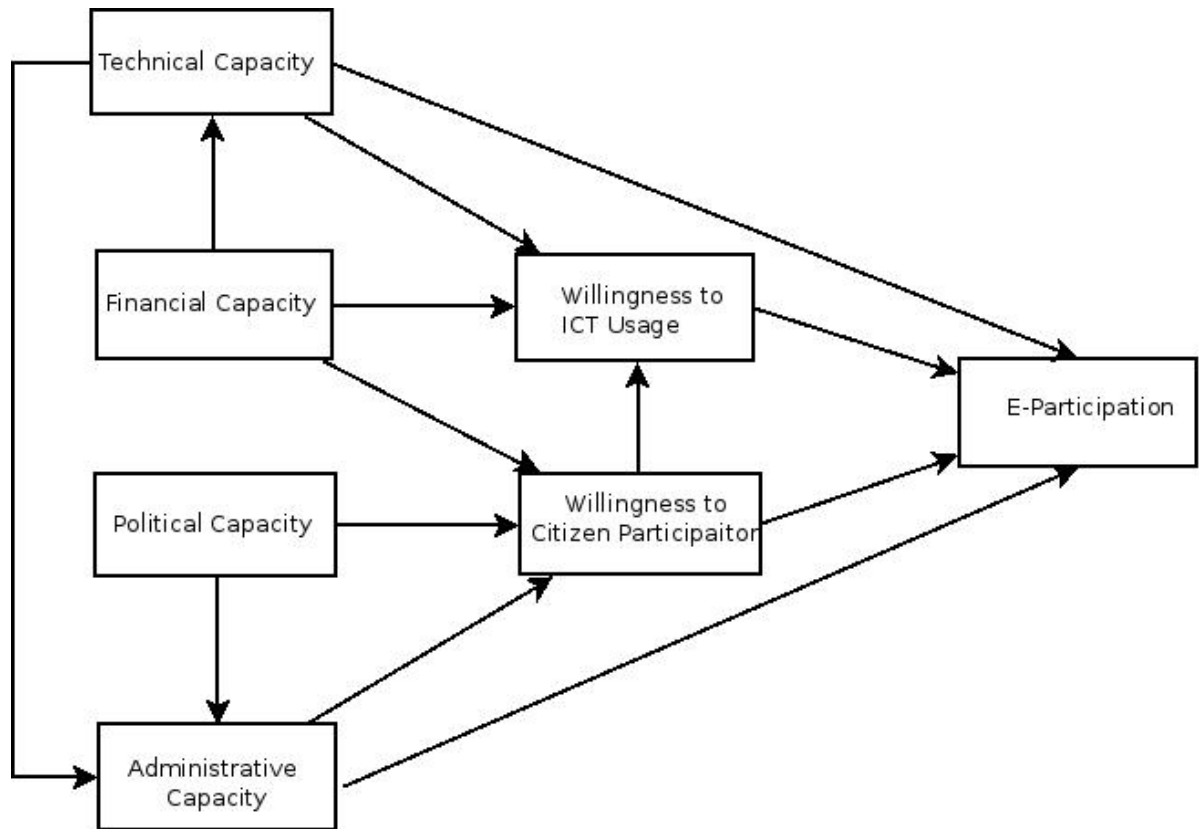
Hypothesis 11: Municipal governments with a higher level of administrative capacity are more likely to have greater willingness toward citizen participation.

Hypothesis 12: Municipal governments with a higher level of financial capacity are more likely to have greater willingness toward citizen participation.

Hypothesis 13: Municipal governments with a higher level of political capacity are more likely to have greater willingness toward citizen participation.

6.3 Theoretical Model

A theoretical model (Figure 6-1) can be created based on the discussions and hypotheses proposed. The model reflects how government capacity (technical capacity, financial capacity, administrative capacity, and political capacity) and government willingness (willingness toward citizen participation and willingness toward ICT usage) influence e-participation adoption and development. It's expected that e-participation performance at the municipal level will be higher when governments have higher levels of capacity and willingness. In addition, the relationships among the different dimensions of government capacity and willingness can also be reflected in the model. Government willingness toward information technology usage will be higher when governments have higher levels of technical capacity and financial capacity. And, governments with adequate financial resources are more likely to have stronger technical capacity too. Also, administrative capacity is expected to have a positive impact on government willingness toward citizen participation. Political capacity could influence the willingness toward citizen participation by affecting the administrative capacity of government. Overall, the different components of government capacity and willingness could directly and indirectly impact government performance in e-participation. Table 6-1 lists all the hypotheses proposed in this study.

Figure 6-1: Theoretical Model:

Table 6-1: List of Hypotheses

Hypothesis 1	Municipal governments with higher level of technical capacity are more likely to perform better in e-participation
Hypothesis 2	Municipal governments with higher level of administrative capacity are more likely to perform better in e-participation
Hypothesis 3	Technical capacity is positively associated with administrative capacity in municipal governments.
Hypothesis 4	Financial capacity is positively associated with technical capacity
Hypothesis 5	Political capacity is positively associated with administrative capacity
Hypothesis 6	Municipal governments with more willingness to ICT usage are more likely to perform better in e-participation
Hypothesis 7	Municipal governments with more willingness to citizen participation are more likely to perform better in e-participation
Hypothesis 8	The willingness to citizen participation is positively associated with the willingness to ICT usage in municipal governments
Hypothesis 9	Municipal governments with higher level of financial capacity are likely to have more willingness to ICT usage
Hypothesis 10	Municipal governments with higher level of technical capacity are likely to have more willingness to ICT usage
Hypothesis 11	Municipalities governments with higher level of administrative capacity are likely to have more willingness to citizen participation
Hypothesis 12	Municipal governments with higher level of financial capacity are

	likely to have more willingness to citizen participation
Hypothesis 13	Municipal governments with higher level of political capacity are likely to have more willingness to citizen participation

Chapter 7: Methodology: Data Collection and Measurement

This chapter discusses the methodology of this study, including data collection and measurement. Based on the discussions in the previous chapters, several hypotheses have been proposed. I argued that government capacity and government willingness have a significant impact on government performance in e-participation at the municipal level. In other words, municipal governments with higher levels of capacity (technical capacity, financial capacity, administrative capacity, and political capacity) and willingness (willingness to engage citizens and willingness toward ICT usage) are expected to have a higher level of e-participation offerings than others. Based on the needs of this study, there are two parts of the data (i.e., data for the independent variables and dependent variables), and different methods have been used to collect the data.

7.1 Data for the Independent Variables

The data for the independent variables (government capacity and government willingness) was collected by conducting a survey to explore municipal government capacity in developing e-participation (technical capacity, financial capacity, administrative capacity, and political capacity) and government willingness (willingness to engage citizens and willingness toward ICT usage). The questionnaire was designed to reflect the capacity and willingness level of each municipal government and was sent to public administrators of all the 565 municipalities in New Jersey. The details of the data collection for the independent variables will be discussed below.

Sampling

In this study, the unit of analysis is the municipality, and the theoretical population is all the municipalities in New Jersey. Government officials can be divided into two categories: elected officials and appointed officials. In New Jersey, elected officials are usually mayors, and appointed officials are generally city managers/business administrators.

Using a sample to forecast similar features for the entire theoretical population is a method often employed in academic research. Sampling includes probability sampling and nonprobability sampling. The simple random sample, systematic sample, stratified sample, and cluster sample random digit dialing, among others, belong to probability sampling. And the judgmental or reputation sample, convenience sample, quota sample, and volunteer sample belong to nonprobability sampling.

There are potential issues when using sampling, however. For example, sample bias might exist, since some members of the intended population might be less likely to be included in the sample than others. Also, sampling error may exist because it's possible that "a sample with characteristics that do not reflect the population is studied" (McNabb, 2008). To avoid problems with sampling, this study conducted a census, since the whole population in the study is not that large. Doing a census will improve the reliability of the study.

It's assumed that appointed officials such as city managers or business administrators understand their current government capacity and willingness toward e-participation better, since they are responsible for the everyday operations of the municipal governments. As such, surveys were sent primarily to appointed officials. For some small townships that do not have city managers or business administrators, surveys were sent to the mayors of those townships. 374 questionnaires were sent to business administrators; 50 of them were sent to city managers; and the rest 141 questionnaires were sent to the mayors.

Survey Research

There are two different types of surveys identified by this study: interviews (face-to-face interviews or phone interviews) and self-administered surveys (normally sent through the mail) (Robbins, 1999). The advantages of interviews include ensuring high completion rates; establishing a rapport between the interviewer and the respondent; not requiring respondents to have a certain level of education or a specific literacy rate; etc. (Robbins, 1999). However, the time and money incurred by interviews is greater than for self-administered surveys. For this study, therefore, I chose to use self-administered surveys. Using an online survey has several advantages, such as saving time and reducing costs. However, it can also have shortcomings, such as a low response rate. In this study, a mailed survey will be used to collect the data. And, generally, response rates for mail surveys should range between 60 to 70 percent (Robbins, 1999).

Questionnaire Development

Questionnaires are the most popular way to gather primary data, estimated to be used in 85 percent or more of all quantitative research projects (McNabb, 2008, p. 134). McNabb summarized the advantages of using questionnaires, the greatest of which is flexibility that can be designed to meet the objectives of almost any type of research project. Researchers can purchase the rights to employ many different types of prepared questionnaires; may develop their own questionnaires; can design questionnaires to determine what people know, what they think, or how they act or plan to act; and so on (p. 136). Although there are few rules in designing a questionnaire, still "questions must be arranged in a logical order; they must be worded in such a way that their meaning is clear to people of all backgrounds, ages, and educational levels" (McNabb, 2008).

The questionnaire in this study must be developed to answer the following research questions: (1) What's the government capacity level (technical capacity, financial capacity, administrative capacity, and political capacity) in each municipality? (2) What are government officials' attitudes toward citizen participation? (3) What are government officials' attitudes toward information technology usage?

The questionnaire was designed based on those questions around August and September of 2014. Then, based on suggestions from committee members and other colleagues, it was revised several times. A pretest was also adopted by sending the questionnaire to five government employees to get their feedback for further revision. After that, the questionnaire was submitted to the institutional review board for approval. Then, it was printed out so hard copies could be sent to the different municipalities. A

copy of the questionnaire can be found in Appendix A, attached at the end of the dissertation.

Data Collection

Questionnaires were sent to the 565 municipal governments in New Jersey at the beginning of December 2014 with a cover letter, a return envelope, and a stamp on the return envelope. Each questionnaire was assigned a code to conveniently track it. For an incentive, I offered to supply respondents with the results of the study to motivate them to finish the questionnaire. Follow-up emails were sent two weeks and two months after sending out the questionnaires to remind respondents to send them back.

A total of 106 questionnaires were returned in the first two weeks. Then, the first round of follow-up emails was sent out individually to remind respondents, and an electronic copy of the questionnaire was also attached for them. Eight municipal administrators chose to directly file the questionnaires electronically and sent them back through email. The second round of follow-up emails was sent out two months later, and three municipal administrators sent the questionnaires back through email. By the end of February 2015, 134 questionnaires had been returned, and the response rate was 23.72%.

Second-round survey was conducted at the end of February. The survey results, from the first-round, indicate that many small municipalities do not have the technical and financial capacity to develop e-participation. So, questionnaires were only sent to larger municipalities with population size 10,000 and above. Questionnaires were sent out with

a cover letter, a return envelope, and a stamp on the return envelope. Each questionnaire was also assigned a code for tracking it. By early April, 12 questionnaires had been returned. So, along with the first round survey, 146 questionnaires have been received and the total response rate was 25.84%.

7.2 Data for the Dependent Variable

Data for the dependent variable (e-participation) was collected by evaluating official municipality websites in New Jersey in terms of e-participation, examining to what extent these governments provide citizens with opportunities to participate online. The E-Governance Index from Rutgers University-Newark was used as an instrument to evaluate government performance in e-participation.

Content Analysis

To investigate the dependent variable of e-participation performance, a content analysis was conducted by using the "Citizen Participation" section of the E-Government Survey Index built by the E-Governance Institute at Rutgers-Newark to evaluate the e-participation offerings provided by each municipal government. The index was built by e-government experts and has been used and updated for more than 10 years, which guarantees its validity and reliability. All of the 134 municipalities that I received responses from were evaluated based on this index between February 10 and February 26, 2015. E-participation performance of 12 municipalities received in the second-round survey was examined in the middle of April. Appendix E lists the municipalities evaluated in this study.

Table 7-1 and Figure 7-1 reflect the distribution of the municipalities evaluated in this study based on their populations. Among these municipalities, 49 of them have populations lower than 5,000; 27 municipalities have populations between 5,001 and 10,000; 51 of them have populations higher than 10,000 but lower than 30,000; 13 municipalities have populations between 30,001 and 50,000; 5 of have populations between 50,001 and 100,000; and one municipality has a population higher than 100,000.

Table 7-1: Distribution of Municipalities based on Population Size

Population	< 5,000	5,001 - 10,000	10,001 - 30,000	30,001 - 50,000	50,001 - 100,000	> 100,000
Number of Municipalities in Analysis	49	27	51	13	5	1
Number of Municipalities	188	134	168	41	30	4
Percentage	26.06 %	20.15%	30.36%	31.71%	16.67%	25%

Figure 7-1: Distribution of Municipalities Based on Population Size
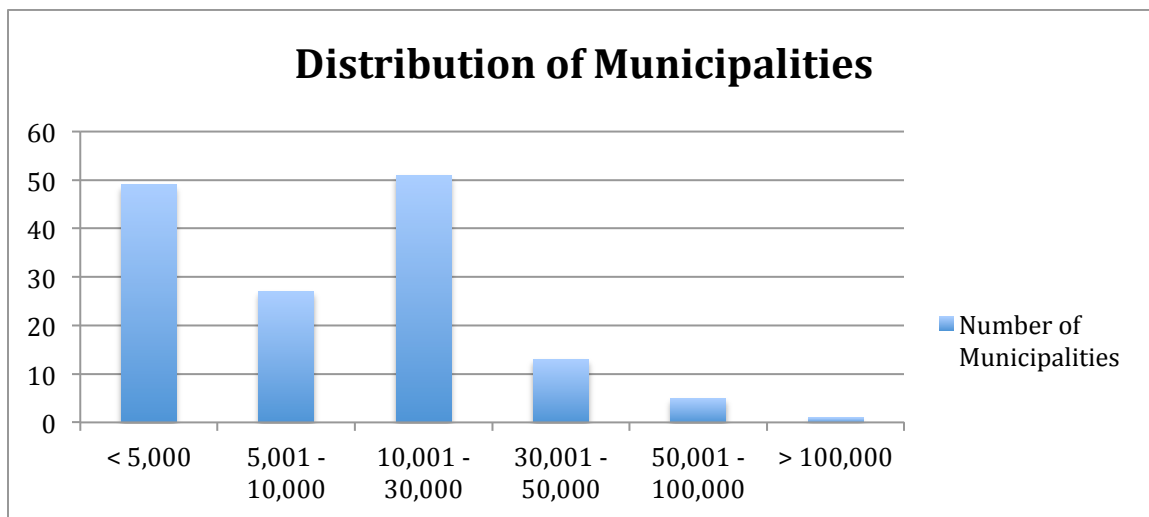
In the index, 18 measurements are included to comprehensively reflect the

e-participation offering levels. These measurements include whether a government allows

citizens to provide comments or feedback to individual departments or public officials;

whether online bulletin boards or discussion forums are available for citizens to discuss

public issues; whether online surveys or polls have been conducted by a government to

collect viewpoints or opinions of the public toward specific public issues; whether a

government enables citizens to post information, pictures, or videos; whether a

government offers tools for online decision-making, etc. Details of the "Citizen

Participation" section of the index can be found in Appendix F.

7.3 Measurement

As previously discussed, there are four dimensions of government capacity: technical

capacity, financial capacity, administrative capacity, and political capacity. Technical

capacity in this study indicates the ability of municipal governments to use information

technologies to provide e-participation offerings. There are several items in the

questionnaire that could reflect this, such as to what extent do government employees

receive timely IT training; whether a government has adequate IT facilities; and to what

extent has the software been updated in a timely manner. These items have been

combined to be a scale to measure the independent variable of technical capacity. The

alpha is 0.83.

Regarding the second independent variable, financial capacity, several items in the

questionnaire could reflect it, including to what extent a municipal government has

enough financial resources for maintaining and upgrading IT and software; recruiting IT staff or employees; training IT staff or employees; and building e-participation platforms. A scale was built based on these items, and the alpha is 0.94.

For the third independent variable, administrative capacity, nine items in the survey could reflect it, such as to what extent does a municipal government have comprehensive rules or regulations, long-term and short-term goals, and experienced leaders to engage citizens and promote citizen participation. These items were combined as a scale, and the alpha is 0.81.

With the last dimension of government capacity, political capacity, items in the survey like to what extent a government has consensus on the importance of citizen participation and can get support from publicly appointed professionals, council members, government employees, and residents to develop e-participation could be used to reflect it. These items were combined as a scale, and the alpha is 0.85.

There are two dimensions of government willingness: willingness toward citizen participation and willingness toward ICT usage. With regards to the first dimension (willingness toward citizen participation), a scale was based on several items in the questionnaire that may reflect it. The items include to what extent a government administrator agrees that citizen participation could contribute to government performance and service provision improvements and to what level a municipal

government believes that it has responsibilities to involve citizens in public affairs. The alpha for the scale is 0.85.

For the second dimension (willingness toward ICT usage), several items in the questionnaire could be used to reflect it, including whether public administrators believe that information technology benefits the running of government and helps them to improve service provision, efficiency, and effectiveness and whether a government wants to improve its information technology level. A scale was built based on these questions, and the alpha is 0.90.

Table 7-2: Independent Variables

Variable	Min	Max	Mean	Std. Dev.	Scale Reliability
Independent Variables					
Technical Capacity					alpha = .83
Please indicate to what extent you agree with the following statements:					
(1) Our government employee received timely IT training	1 = Strongly Disagree	5 = Strongly Agree	3.03	0.94	
(2) Our municipality has adequate IT facilities	1 = Strongly Disagree	5 = Strongly Agree	3.19	0.95	
(3) Software of our municipal government has been updated timely	1 = Strongly Disagree	5 = Strongly Agree	3.62	0.86	
(4) Our municipal government co-work a lot with IT company(s) to improve our e-participation performance	1 = Strongly Disagree	5 = Strongly Agree	3.05	0.91	
(5) Our municipal government has adequate technical capacity to develop e-participation	1 = Strongly Disagree	5 = Strongly Agree	3.07	0.98	
Financial Capacity					alpha = .94
Our municipal government has enough financial resources for					
(1) maintaining and upgrading IT facilities and software	1 = Strongly Disagree	5 = Strongly Agree	3.10	1.07	
(2) recruiting IT staff or employees	1 = Strongly Disagree	5 = Strongly Agree	2.62	0.99	
(3) training IT staff or employees	1 = Strongly Disagree	5 = Strongly Agree	2.87	0.99	
(4) building e-participation platform	1 = Strongly Disagree	5 = Strongly Agree	2.77	0.93	

(5) collecting and managing e-participation data	1 = Strongly Disagree	5 = Strongly Agree	2.7	0.94
(6) co-working with IT companies in e-participation	1 = Strongly Disagree	5 = Strongly Agree	2.68	0.90
(7) developing e-participation	1 = Strongly Disagree	5 = Strongly Agree	2.80	0.87

Administrative Capacity					alpha = .81
In our municipal government,					
(1) we have comprehensive rules or regulations to involve citizens	1 = Strongly Disagree	5 = Strongly Agree	2.76	0.87	
(2) we have clearly long-time and short-time goals in engaging citizens	1 = Strongly Disagree	5 = Strongly Agree	2.75	0.85	
(3) we have experienced leaders to promote citizen participation	1 = Strongly Disagree	5 = Strongly Agree	3.49	0.93	
(4) municipal officials co-work with each other closely	1 = Strongly Disagree	5 = Strongly Agree	3.93	0.70	
(5) resources are being used efficiently	1 = Strongly Disagree	5 = Strongly Agree	3.83	0.69	
(6) projects are being operated efficiently	1 = Strongly Disagree	5 = Strongly Agree	3.83	0.68	
(7) municipal officials interact with each other smoothly	1 = Strongly Disagree	5 = Strongly Agree	3.88	0.81	
(8) we provide local residents with high-quality services	1 = Strongly Disagree	5 = Strongly Agree	4.18	0.70	

Political Capacity					alpha = .85
(1) To the e-participation development in our municipality, government gets a lot of support from					
a. public appointed professionals	1 = Strongly	5 = Strongly	3.29	0.91	

	Disagree	Agree			
b. council members	1 = Strongly Disagree	5 = Strongly Agree	3.45	0.83	
c. general government employees	1 = Strongly Disagree	5 = Strongly Agree	3.39	0.91	
d. residents of this municipality	1 = Strongly Disagree	5 = Strongly Agree	3.30	0.85	
(2) In our government, we have consensus on the important of citizen participation	1 = Strongly Disagree	5 = Strongly Agree	3.80	0.77	
Willingness to ICT Usage					alpha = .90
(1) Information technology (IT)					
a. benefits our government running	1 = Strongly Disagree	5 = Strongly Agree	4.34	0.68	
b. helps our government to improve services provision	1 = Strongly Disagree	5 = Strongly Agree	4.24	0.71	
c. enables our government to promote performance	1 = Strongly Disagree	5 = Strongly Agree	4.06	0.78	
d. helps our government to increase efficiency	1 = Strongly Disagree	5 = Strongly Agree	4.14	0.83	
e. enables our government to raise effectiveness	1 = Strongly Disagree	5 = Strongly Agree	4.09	0.82	
f. helps our government to promote transparency	1 = Strongly Disagree	5 = Strongly Agree	4.22	0.72	
(2) Our government wants to improve our information technologies level	1 = Strongly Disagree	5 = Strongly Agree	4.06	0.82	
Willingness to Citizen Participation					alpha = .85
(1) Citizen participation in our municipality					
a. contributes to government performance improvement	1 = Strongly Disagree	5 = Strongly Agree	3.67	0.76	

b. helps government to improve services providing	1 = Strongly Disagree	5 = Strongly Agree	3.83	0.61
c. helps government to be more responsible	1 = Strongly Disagree	5 = Strongly Agree	3.68	0.87
(2) Our municipal government				
a. has responsibilities to involve citizens in public affairs	1 = Strongly Disagree	5 = Strongly Agree	3.90	0.80
b. wants to improve our citizen participation level	1 = Strongly Disagree	5 = Strongly Agree	3.89	0.76
c. is worth involving citizens in decision-making process	1 = Strongly Disagree	5 = Strongly Agree	3.69	0.82

Chapter 8: Findings

8.1 Descriptive Statistics

Table 8-1 provides the descriptive statistics of the different variables. It indicates the poor performance of e-participation at the municipal level in New Jersey. Among all the municipalities evaluated, the average score is 2.89 out of 20. The highest score is 6.67, while the lowest is 0.21, showing that these municipal governments have not provided convenient ways for citizens to engage online.

Regarding the four dimensions of government capacity, the average for technical capacity is 3.19, with a minimum of 1 and maximum of 4.40; the average for financial capacity is 2.87, with a minimum of 1 and maximum of 5; the average for administrative capacity is 3.61, with a minimum of 1 and maximum of 4.80; and the average for political capacity is 3.45, with a minimum of 1.40 and maximum of 5. Among these four dimensions, the lowest capacity is financial capacity, with an average score of 2.87. The highest capacity is administrative capacity, with an average score of 3.64.

For the two dimensions of government willingness, the average level of willingness toward ICT usage is 3.45, with a minimum of 1.86 and maximum of 5. The average level of willingness toward citizen participation is 3.78, with a minimum of 1.33 and maximum of 5.

Table 8-1: Descriptive Statistics

		Mean	Std. Dev.	Min	Max
Dependent Variable	E-Participation	2.76	1.23	0.21	6.67
Independent Variables	Technical Capacity	3.19	0.71	1.00	4.40
	Financial Capacity	2.87	0.81	1.00	5.00
	Administrative Capacity	3.61	0.49	2.00	4.80
	Political Capacity	3.45	0.67	1.40	5.00
	Willingness to ICT Usage	4.16	0.60	1.86	5.00
	Willingness to Citizen Participation	3.78	0.59	1.33	5.00
Control Variable	Population	14986	18355	603	124969

Table 8-2 shows government e-participation performance in some key areas. Among the 146 municipalities evaluated, 13.2% of them still do not enable citizens to give comments or feedback to public officials through email or online forms. Only 12.5% of them provide a bulletin board for citizens to post their ideas or opinions regarding public issues, and none of them has an online discussion board. Further, just 34.6% of these municipalities have used online surveys or polls to collect public opinions, and only 1.49% of them offer tools for online decision-making, such as e-petitions, electronic citizen juries, e-referenda, etc.

Table 8-2: Results to Key E-Participation Items

	Percentage
Feedback to Public Officials	86.8%
Online Surveys/Polls	34.6%
Online Bulletin Board	12.5%
Online Decision-Making	1.49%

Note: "Feedback to Public Officials" refers to whether the website allow users to provide comments or feedback to individual departments/agencies through online forms; "Online Surveys/Polls" reflect the condition of governments' using online surveys/polls for specific issues; "Online Bulletin Board" measures the extent of using online bulletin board, where citizens can posts ideas, comments, or opinions without specific discussion topics, to gather citizen input on public issues; "Online Decision-Making" reflect the condition that governments provide tools for citizens to raise issues of concern to government agencies.

Table 8-3 and Figure 8-1 show the average e-participation of the municipalities based on population size. The average e-participation score for the 49 municipalities with a population lower than 5,000 is 1.83. For the 27 municipalities with populations between 5,001 and 10,000, it is 2.62. For the 51 municipalities with populations higher than 10,001 but lower than 30,000, it is 3.54. For the 13 municipalities with populations between 30,001 and 50,000, it is 3.65. For the 5 municipalities with populations higher than 50,001 but lower than 100,000, it is 4.06, which is the highest. And, for the municipality with a population higher than 100,000, the e-participation score is 3.33. So, except for the largest municipality evaluated, the rest of the municipalities follow the pattern that larger municipalities are more likely to perform better in e-participation offerings.

Table 8-3: E-Participation of Municipalities with Different Population Size

Population	< 5,000	5,001 - 10,000	10,001 - 30,000	30,001 - 50,000	50,001 - 100,000	> 100,000
Number of Municipalities	49	27	51	13	5	1
Average E-Participation Score	1.83	2.62	3.54	3.65	4.06	3.33

Figure 8-1: E-Participation of Municipalities with Different Population Size
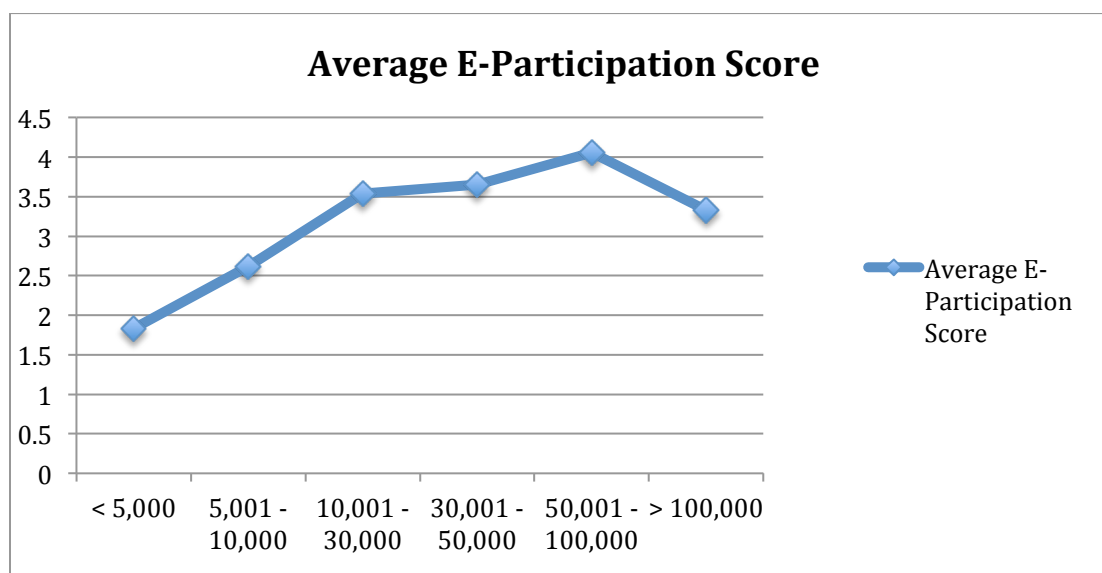
The content analysis for e-participation also found that, among all the 146municipalities evaluated, only nine received an e-participation score higher than 5. Fifty-four municipalities got a score higher than 3, while 10 received a score lower than one out of 20. The average e-participation score for these municipalities is 2.76, which is very low. The results reflect poor e-participation performance at the municipal level. More details can be found in Appendix G.

Table 8-4 shows the results of some key items of the independent variables, which to some extent indicate government capacity and willingness toward e-participation adoption and development. Only around 40% of the municipalities believed that they have adequate technical capacity to develop e-participation. As for financial capacity, one-third of them argued that they do not have enough financial resources for maintaining and upgrading IT facilities and software. Almost one-half of them do not have enough financial resources for recruiting IT staff or employees. Only around 20% of them argued that they have enough financial resources for developing e-participation. All of this indicates that governments still lack the technical capacity and financial capacity for e-participation adoption and development.

With regards to administrative capacity, more than 40% of the municipalities argued that they do not have comprehensive rules or regulations to involve citizens. Around 40% of them have clear long-term and short-term goals for engaging citizens. Only around one-third of them believed that they have adequate administrative capacity to develop e-participation. As far as political capacity, while more than 70% of the municipalities argued that they have consensus on the importance of citizen participation, only around 45% of them believed that government gets a lot of support from publicly appointed professionals in e-participation development. These results reflect the low levels of administrative capacity and political capacity for e-participation adoption and development.

Table 8-4: Results for Key Government Capacity Items:

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Technical Capacity	Our municipal government has adequate technical capacity to develop e-participation	4.72%	27.36%	27.36%	37.74%	2.83%
Financial Capacity	Our municipal government has enough financial resources for maintaining and upgrading IT facilities and software	7.27%	26.36%	20.00%	41.82%	4.55%
	Our municipal government has enough financial resources for recruiting IT staff or employees	11.82%	37.27%	30.00%	19.89%	1.82%
	Our municipal government has enough financial resources for developing e-participation	6.54%	28.04%	45.79%	17.76%	1.87%
Administrative Capacity	In our municipal government, we have comprehensive rules or regulations to involve citizens	4.59%	36.70%	38.53%	18.35%	1.83%
	In our municipal government, we have clearly long-time and short-time goals in engaging citizens	4.59%	35.78%	41.28%	16.51%	1.83%
	In our municipal government, we have adequate administrative capacity to develop e-participation	3.67%	29.36%	33.94%	24.77%	8.26%
Political Capacity	To the e-participation development in our municipality, government gets a lot of support from public appointed professionals	3.25%	15.45%	35.77%	39.84%	5.69%
	In our government, we have consensus on the important of citizen participation	0.00%	6.40%	22.40%	56.00%	15.20%

For government willingness toward ICT usage, as shown in Table 8-5, the importance of it has been widely accepted, as 88% of respondents agreed with the importance of information technology for helping with service provision. On the other hand, more than 42% of the municipalities argued that information technologies bring significant costs to their governments, and less than two-thirds of them want to improve their information technology level. As for willingness toward citizen participation, two-thirds of them believe that citizen participation in their municipalities contributes to government performance improvements, and around 80% of the municipalities agreed that their municipal governments have responsibilities to involve citizens in public affairs.

Table 8-5: Results for Key Government Willingness Items:

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Willingness to ICT Usage	Information Technology helps our government to improve services provision	0.80%	0.00%	11.20%	50.40%	37.60%
	Information Technology brings a lot of costs to our government	2.42%	23.39%	31.45%	33.06%	9.68%
	Our government wants to improve our information technologies level	2.38%	3.97%	27.78%	53.97%	11.90%
Willingness to Citizen Participation	Citizen participation in our municipality contributes to government performance improvement	1.59%	3.97%	28.57%	57.14%	8.73%
	Our municipal government has responsibilities to involve citizens in public affairs	1.59%	4.76%	13.49%	62.78%	17.46%
	Our municipal government wants to improve our citizen participation level	0.79%	2.38%	23.02%	54.76%	19.05%

Table 8-6 shows the correlations among the dependent variable, independent variables, and the control variable. There is a high correlation between technical capacity and financial capacity (0.66), which indicates that municipalities with higher technical capacity are often the municipalities with a higher level of financial capacity. There are also strong correlations between political capacity and financial capacity (0.45) and political capacity and administrative capacity (0.43). The correlation between e-participation and willingness toward citizen participation is only 0.04, which is quite weak.

Table 8-6: Correlations among Dependent Variable and Independent Variables

	E-Partici pation	Technical Capacity	Financial Capacity	Administ rative Capacity	Political Capacity	Willingnes s to ICT Usage	Willingness to Citizen Participation
E-Participati on	1.00						
Technical Capacity	0.24	1.00					
Financial Capacity	0.30	0.66	1.00				
Administrati ve Capacity	0.28	0.34	0.34	1.00			
Political Capacity	0.12	0.33	0.45	0.43	1		
Willingness to ICT Usage	0.32	0.24	0.36	0.19	0.31	1	
Willingness to Citizen Participation	0.04	0.24	0.35	0.28	0.34	0.38	1

8.2 Structural Equation Model Results

Table 8-7 and Figure 8-2 show the structural equation model (SEM) results. Table 8-8 shows the fit statistics for them: that the model is acceptable, the model vs. saturated is not significant, RMSEA is 0.00 (lower than 0.05), CFI is 1.00 (higher than 0.90), and SRMR is 0.03 (lower than 0.05).

The SEM results show that many of the hypotheses proposed in this study are supported, while some are rejected. To begin with, technical capacity has no directly significant influence on e-participation, which rejects Hypothesis 1. Hypothesis 2, though, is supported by the results that administrative capacity has a significant impact on e-participation performance, showing that municipal governments with a higher level of administrative capacity are more likely to perform better in e-participation. In addition, the relationships among the four dimensions of government capacity have been confirmed by the results. The results support Hypothesis 4, that municipalities with a higher level of financial capacity have a higher level of technical capacity, reflecting the important role of financial resources in adopting and developing e-participation. Further, both technical capacity and political capacity could significantly influence administrative capacity (showing support for Hypotheses 3 and 5). Since administrative capacity could directly influence e-participation performance at the municipal level, technical capacity and political capacity could impact e-participation by influencing administrative capacity. And, financial capacity, which serves as a foundational capacity, could also influence e-participation at the municipal level by affecting technical capacity. So, all four

dimensions of government capacity could influence e-participation in direct or indirect ways.

The results also indicate that government willingness influences e-participation performance. Municipalities with more willingness toward the use of ICTs are likely to have a higher level of e-participation (Hypothesis 6). But, the impact of willingness toward citizen participation on e-participation (Hypothesis 7) is not supported, which means that government willingness toward citizen participation has no significantly direct impact on e-participation. However, since the results support that willingness toward citizen participation is positively associated with willingness toward ICT usage (Hypothesis 8), willingness toward citizen participation could influence e-participation indirectly.

In addition, the relationships between government capacity and willingness have been supported. Financial capacity has a significant impact on willingness toward ICT usage (Hypothesis 9). Municipalities with more financial resources are more likely to use information technologies. However, the influence of technical capacity on willingness toward ICT usage is not supported by the results. Still, technical capacity could directly impact e-participation performance by influencing administrative capacity. The results show that political capacity has no significant impact on willingness toward citizen participation, which means that Hypothesis 13 is rejected. Municipalities with higher levels of administrative capacity and financial capacity are more likely to have a greater willingness toward involving citizens in government operations (Hypotheses 11 and 12).

So, financial capacity could not only influence e-participation by affecting technical capacity but also by influencing government willingness toward ICT usage and citizen participation. Political capacity could indirectly influence e-participation through affecting administrative capacity. Table 8-9 lists the test results of all the hypotheses proposed in this study.

Table 8-7: Structural Equation Model Results

	Coefficient	Std. Err.	Z
E-Participation <——			
Administrative Capacity	0.49**	0.21	2.39
Willingness to Citizen Participation	-0.29	0.19	-1.50
Willingness to ICT Usage	0.53***	0.18	2.87
Technical Capacity	0.13	0.15	0.89
Population	0.00	0.00	3.87
Administrative Capacity <——			
Technical Capacity	0.17**	0.07	2.48
Political Capacity	0.22***	0.07	3.33
Willingness to Citizen Participation <——			
Administrative Capacity	0.18*	0.11	1.69
Financial Capacity	0.16**	0.07	2.32
Political Capacity	0.13	0.09	1.55
Willingness to ICT Usage <——			
Willingness to Citizen Participation	0.29***	0.10	3.03
Technical Capacity	0.01	0.10	0.14
Financial Capacity	0.17**	0.09	2.01
Technical Capacity <——			
Financial Capacity	0.56***	0.06	8.74
LR test of model vs. saturated: chi2(11) = 6.75, Prob > chi2 = 0.8190 *p<0.1, **p<0.05, ***p<0.01			

Table 8-8: Fit Statistics of SEM Model

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(11)	6.75	model vs. saturated
p > chi2	0.82	
chi2_bs(25)	167.45	baseline vs. saturated
p > chi2	0.00	
Population error		
		Root mean squared error of approximation
RMSEA	0.00	
90% CI, lower bound	0.00	
upper bound	0.06	
pclose	0.92	Probability RMSEA <= 0.05
Information criteria		
AIC	3798.22	Akaike's information criterion
BIC	3861.91	Bayesian information criterion
Baseline comparison		
CFI	1.00	Comparative fit index
TLI	1.07	Tucker-Lewis index
Size of residuals		
		Standardized root mean squared residual
SRMR	0.03	
CD	0.60	Coefficient of determination

Table 8-9: Test Results of Hypotheses:

Hypothesis 1	Municipal governments with higher level of technical capacity are more likely to perform better in e-participation	Rejected
Hypothesis 2	Municipal governments with higher level of administrative capacity are more likely to perform better in e-participation	Supported
Hypothesis 3	Technical capacity is positively associated with administrative capacity in municipal governments.	Supported
Hypothesis 4	Financial capacity is positively associated with technical capacity	Supported
Hypothesis 5	Political capacity is positively associated with administrative capacity	Supported
Hypothesis 6	Municipal governments with more willingness to ICT usage are more likely to perform better in e-participation	Supported
Hypothesis 7	Municipal governments with more willingness to citizen participation are more likely to perform better in e-participation	Rejected
Hypothesis 8	The willingness to citizen participation is positively associated with the willingness to ICT usage in municipal governments	Supported
Hypothesis 9	Municipal governments with higher level of financial capacity are likely to have more willingness to ICT usage	Supported
Hypothesis 10	Municipal governments with higher level of technical capacity are likely to have more willingness to ICT usage	Rejected
Hypothesis 11	Municipalities governments with higher level of administrative capacity are likely to have more willingness to citizen participation	Supported
Hypothesis 12	Municipal governments with higher level of financial capacity are likely to have more willingness to citizen participation	Supported
Hypothesis 13	Municipal governments with higher level of political capacity are likely to have more willingness to citizen participation	Rejected

Figure 8-2: Structural Equation Model Results
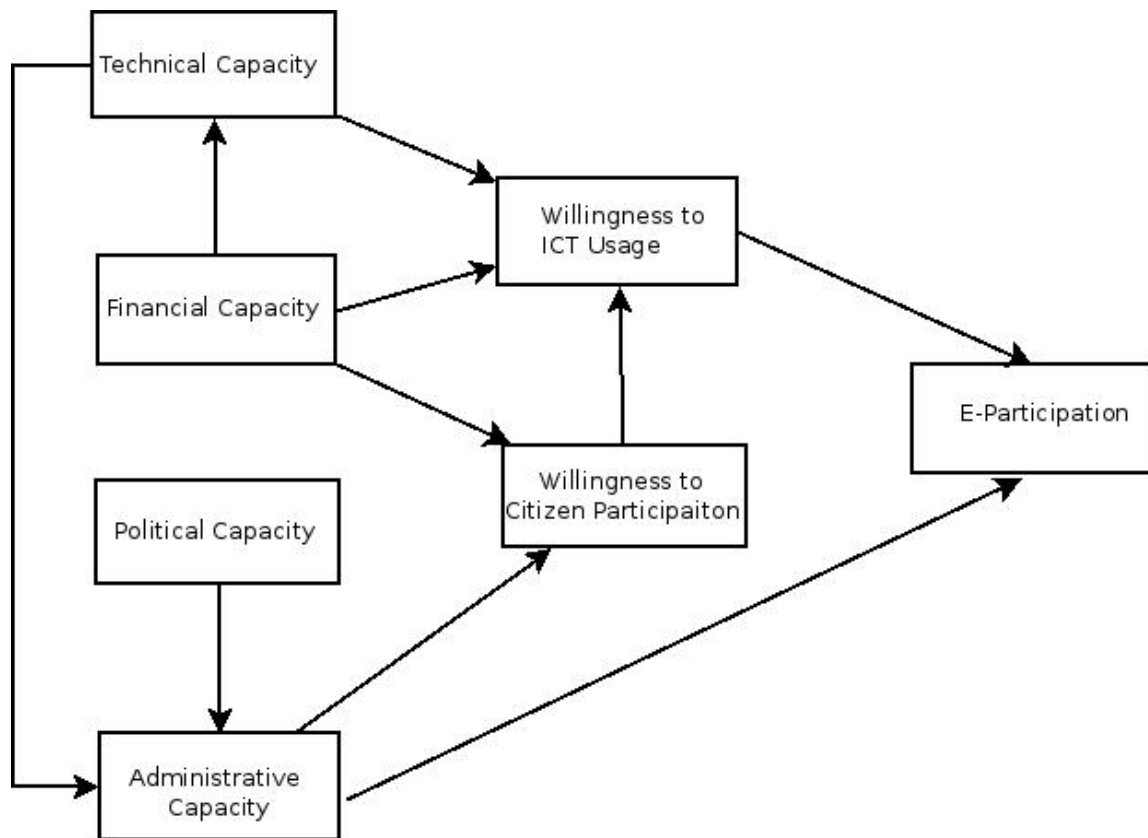
Chapter 9: Discussion

This study examines the roles of government capacity and willingness in e-participation performance at the municipal level. It also explores the relationships among the four dimensions of government capacity and the two aspects of government willingness. The results indicate that all of these dimensions and aspects can influence e-participation in direct or indirect ways.

9.1 Government Capacity Influences E-Participation Performance

In e-participation, government capacity reflects the potential abilities of governments to engage citizens online. This study indicates that the four dimensions of government capacity (technical capacity, financial capacity, administrative capacity, and political capacity) could influence government performance in e-participation directly or indirectly. Technical capacity reflects local governments' ability to use information technologies to provide convenient ways for citizens to participate online. It has been assumed that technical capacity could influence e-participation performance. However, the results show that governmental technical capacity has no directly significant influence on e-participation. This finding confirms that a great gap exists between usability and e-participation in the digital government survey conducted by the E-Governance Institute at Rutgers University-Newark. Governments can built websites with great usability and comprehensive functions, which indicates their technical capacity. And many online services may have been provided, such as paying fees and taxes, registering for public events, etc. However, their e-participation level is low, indicating that they are not active

in using their technical capacity to develop e-participation. So, it is reasonable to conclude that technical capacity has no significant impact on e-participation since the technical capacity required to develop e-participation is not as high to become the impedes for it.

Administrative capacity has been defined by Milio (2007) as the actions of "management, programing, monitoring and evaluating" (p. 435). Governments need to have the capacity to manage costs well and make good use of citizen participation to aid in the promotion of government performance. It has been expected that governmental administrative capacity can influence e-participation at the municipal level. The results of the study confirm this hypothesis and found that municipalities with a higher level of administrative capacity are more likely to perform better in e-participation. Enabling citizens to conveniently engage online is a systematic project requiring governments to have the administrative capacity to set up the project, train related employees, create regulations and policies, build e-participation platforms, manage collected data, and so forth. All of this requires that governments have the capacity to adopt e-participation and implement it.

This study also confirms the foundational role of financial capacity in e-participation adoption and development. Scholars, such as Hall (2008) and Putnam et al. (1983), emphasize that financial resources are one of the most common dimensions of public-sector capacity. Government performance in e-participation necessitates adequate financial capacity. E-participation development requires long-term funding to recruit IT

staff and train them, buy IT infrastructure and maintain it, create e-participation projects and manage them, and so on. Further, e-participation will bring with it a lot of data to collect, process, and manage, which will force governments to form specific positions and have employees do the work. In other words, technical capacity development needs financial capacity as its basis. Additionally, financial capacity, as supported by this study, has an impact on government willingness toward ICT usage and citizen participation. Both ICT usage and involving citizens will bring direct or indirect costs to governments. Governments with a higher level of financial capacity are more likely to have a willingness toward ICT usage and engaging citizens. So, by influencing technical capacity, the willingness toward ICT usage, and the willingness toward citizen participation, financial capacity could indirectly affect government performance in e-participation.

The importance of political capacity has also been supported by this study, in that it could influence e-participation performance by impacting administrative capacity. The development of e-participation requires a positive political environment in which to support the e-participation-related activities, such as creating e-participation projects, giving authority to IT managers to implement e-participation policies, and so forth. A lack of this would result in conflicts and low efficiency in e-participation adoption and implementation. Thus, political capacity contributes to the promotion of administrative capacity.

9.2 Government Willingness Influences E-Participation

Besides government capacity, a willingness toward ICT usage and citizen participation could also affect e-participation adoption and development at the municipal level. This study found that government willingness could directly or indirectly influence e-participation performance. First, willingness toward ICT usage is important. Although it's widely known that information technologies have the potential to help governments improve their services and the involvement of citizens, there are many risks and challenges involved with the use of ICTs. Only when governments have the willingness to use ICTs could they adopt and develop e-participation. This willingness is influenced by financial capacity and technical capacity, since ICT usage brings with it financial costs and requires that governments have the technical capacity at their foundation. So, financial capacity and technical capacity could influence e-participation through impacting the willingness toward ICT usage.

It's interesting to find that the analysis results do not support the argument that willingness toward citizen participation has no directly significant impact on the e-participation performance of municipal governments. It might be because governments have two choices when they want to involve citizens: traditional participation and e-participation. Willingness cannot result in e-participation when governments do not want to use information technologies, since they can simply use traditional participation methods to engage citizens. However, it doesn't mean that government willingness to engage citizens cannot influence e-participation performance. This study indicates that municipalities with a higher level of willingness toward citizen participation are more likely to have a greater willingness toward using ICTs. As discussed in the previous

chapters, information technologies have the potential to improve citizen participation

levels by providing more convenient tools and reducing citizen participation costs.

Governments that want to promote citizen participation are likely to actively adopt ICTs.

Since the willingness toward ICT usage has a significant impact on e-participation, the

willingness toward citizen participation could influence e-participation indirectly by

affecting the willingness toward ICT usage.

Chapter 10: Conclusion

The development of information technologies not only furthers the level of public services delivery but also enables governments to better engage citizens. It reduces the costs of citizen participation and helps governments to provide citizens with convenient ways to express themselves and interact with governments, as argued by Zheng and Liao (2014). Diverse and convenient online tools, such as social media, online surveys/polls, online discussion boards, etc., help governments to gauge public preferences and opinions "in a systematic and comprehensive way" (Robbins, Simonsen, & Feldman, 2008, p. 572). With more and more governments adopting ICTs to involve citizens, a new form of citizen participation—e-participation—has arisen.

The rise of e-participation can be partly explained by its advantages when compared with traditional ways of participation, such as public hearings, drop-in centers, etc. Traditional participation methods have been criticized for high costs to citizens and low efficiency. Information technologies, however, can help solve these problems by providing flexible and convenient ways for citizens to play their roles and engage with governments. These technologies facilitate interactions and information flows between citizens and governments, enabling citizens to get more information and knowledge about government operations, which serves as the basis for meaningful participation. Also, e-participation, with each step trackable, is more transparent and efficient. All of these advantages motivate citizens to participate more.

Despite these many advantages, e-participation is low at both the national and municipal levels. In turning to the research in the field, there is a gap with regards to government capacity and willingness. This study aims to fill that gap and examine the role of government capacity and willingness in e-participation adoption and development at the municipal level. By evaluating municipal government websites in New Jersey and collecting data through surveys, this study confirms the role of government capacity and willingness in e-participation. The four dimensions of government capacity can influence e-participation performance directly or indirectly. Administrative capacity can both directly and indirectly affect e-participation. Governments with a higher level of administrative capacity perform better in setting up related projects, managing participation activities, and so on. This capacity enables governments to achieve a higher score in e-participation. Political capacity and financial capacity play foundational roles in e-participation adoption and development by providing political and financial support. And although they do not directly influence e-participation, they could impact it by influencing technical capacity and administrative capacity. Also, a higher level of capacity leads to a greater willingness by a government to use ICTs and involve citizens, since they have more resources and confidence to do so. After more than two decades of development, technical capacity is no longer the key factor in determining the development of e-participation. However, it could still influence e-participation by affecting the willingness toward ICT usage. Thus, the four dimensions of government capacity can influence government performance in e-participation directly or indirectly.

Government willingness also influences e-participation performance at the municipal level. High government capacity cannot guarantee good performance in e-participation, since governments must still have the willingness to use their capacity to adopt ICTs and engage citizens. E-participation is the combination of information technologies and traditional methods of citizen participation. As such, e-participation can be adopted only when governments want to use information technologies to involve citizens in their operations. Since governments have two choices (traditional participation and e-participation), their willingness toward citizen participation cannot directly determine their e-participation adoption. However, when governments have a greater willingness toward involving citizens, they are more likely to use information technologies, since these technologies reduce costs and provide more convenient ways for citizens to participate. So, willingness toward citizen participation could indirectly influence e-participation by affecting the willingness toward ICT usage.

This study has some limitations. To begin with, the sample size is not large enough. Although both online and paper surveys were sent to all of the 565 municipalities in New Jersey, only 146 of them were returned. Further, because of missing data, the final sample size is 105. Another limitation is that all of the data collected relates to New Jersey, and the arguments and conclusions are based on the situation of this one particular state. Also, using public administrators' perceptions to measure government capacity is not comprehensive. In addition, there is only one control variable in this study, which is quite limited. Future research could be conducted in other states to examine this model and the

conclusions. Finally, better measurements could be employed to gauge government capacity.

References

Alam, S. S., & Noor, M. K. M. (2009). ICT adoption in small and medium enterprises: An empirical evidence of service sectors in Malaysia. International Journal of Business and Management, 4(2), p112.

Andersen, K. V., Henriksen, H. Z., Secher, C., & Medaglia, R. (2007). Costs of e-participation: The management challenges. Transforming Government: People, Process and Policy, 1(1), 29–43.

Andrews, R., & Boyne, G. A. (2010). Capacity, leadership, and organizational performance: Testing the black box model of public management. Public Administration Review, 70(3), 443-454.

Anduiza, E., Gallego, A., & Cantijoch, M. (2010). Online political participation in Spain: the impact of traditional and Internet resources. Journal of Information Technology & Politics, 7(4), 356-368.

Arterton, F. C. (1987). *Teledemocracy: Can technology protect democracy?* (pp. 21-2). Newbury Park, CA: Sage Publications.

Baker, W. H., Addams, H. L., & Davis, B. (2005). Critical factors for enhancing municipal public hearings. *Public Administration Review*, *65*(4), 490-499.

Balnaves, M., Walsh, L., & Shoesmith, B. (2004). Participatory technologies: The use of the internet in civic participation and democratic processes. In *A paper presented in the Australian Governance Conference*.

Barnes Jr, W. B. S., & Williams, B. N. (2012). Appling Technology to Enhance Citizen Engagement With City and County Government. *The State of Citizen Participation in America (Hc)*, 1163.

Bekkers, V. (2004). Virtual policy communities and responsive governance: Redesigning on-line debates. Information Polity, 9(3/4), 193−203.

Berman, E., & Wang, X. (2000). Performance measurement in U.S. counties: Capacity for reform. Public Administration Review, 60, 409-420.

Bimber, B. (2001). Information and political engagement in America: The search for effects of information technology at the individual level. *Political Research Quarterly, 54*(1), 53-67.

Bosnjak, M., Galesic, M., & Klicek, B. (2008). Determinant of online political participation in Croatia. Drustvena Istrazivanja, 17(4–5), 747–769.

Bowman , Ann O'M. , and Richard C. Kearney . 1988 . Dimensions of State Government Capability. Western Political Quarterly 41 (2): 341 – 62 .

Burby, R. J. (2003). Making plans that matter: Citizen involvement and government action. *Journal of the American Planning Association*, *69*(1), 33-49.

Burgess, Philip M. 1975. Capacity Building and the Elements of Public Management. Public Administration Review 35(6): 705–16.

Carrizales, T., Holzer, M., Kim, S. T., & Kim, C. G. (2006). Digital governance worldwide: A longitudinal assessment of municipal Web sites. *International Journal of Electronic Government Research (IJEGR)*, *2*(4), 1-23.

Citrin, J., & Muste, C. (1999). Trust in government.

Coglianese, C. (2005). The Internet and citizen participation in rulemaking. I/S: Journal of Law and Policy for the Information Society volume 1, pp. 33-57

Coleman, Renita, Paul Lieber, Andrew L. Mendelson, and David D. Kurpius. 2008. Public Life and the Internet: If You Build a Better Website, Will Citizens Become Engaged? New Media and Society 10(2): 179–202

Colombo, C. (2010). e-Participation experiences and local government in Catalonia: An explanatory analysis. Lecture Notes in Computer Science, 6229, 82–94.

Dalton, R.J. (2006). Citizenship norms and political participation in America: The good news is...the bad news is wrong. The Center for Democracy and Civil Society, 1, 1-14.

Day, D. (1997). Citizen participation in the planning process: An essentially contested concept?. *Journal of Planning Literature*, *11*, 421-434.

DE LOË, R. C., Di Giantomasso, S. E., & Kreutzwiser, R. D. (2002). Local capacity for groundwater protection in Ontario. Environmental management,29(2), 217-233.

DeLeon, P. (1992). The democratization of the policy sciences. *Public Administration Review*, 125-129.

Ernst & Young (commissioned by the National Office for the Information Economy (NOIE) of Australia) (2001), Advancing with E-commerce, [Online] Available: Http://www.noie.gov.au

Fischer, F. (1993). Citizen participation and the democratization of policy expertise: From theoretical inquiry to practical cases. *Policy Sciences*, *26*(3), 165-187.

Fiszbein, A. (1997). The emergence of local capacity: lessons from Colombia.World development, 25(7), 1029-1043.

Forester, J. (1989). *Planning in the Face of Power*. Univ of California Press.

Franklin, A., & Ebdon, C. (2004). Aligning priorities in local budgeting processes. *JOURNAL OF PUBLIC BUDGETING ACCOUNTING AND FINANCIAL MANAGEMENT.*, *16*, 210-227.

Frederickson , Patricia , and Rosanne London . 2000. Disconnect in the Hollow State: Th e Pivotal Role of Organizational Capacity in Community-Based Development Organizations . Public Administration
Review 60 (3): 230 – 39 .

Froomkin, A. (2004). "Technologies for democracy," In: P. Shane (editor). Democracy online: The prospects for political renewal through the Internet. New York: Routledge, pp. 3–20.

Fung, A. (2006). Varieties of participation in complex governance. *Public administration review*, *66*(s1), 66-75.

Gargan, J. J. (1981). Consideration of local government capacity. Public Administration Review, 649-658.

Glassey, O. (2010). A survey on participation at Geneva's constituent assembly. Lecture Notes In Computer Science, 6229, 151–161.

Grindle, M. S. (1996). Challenging the State: crisis and innovation in Latin America and Africa. Cambridge University Press.

Grönlund, Å., & Åström, J. (2009). DoIT right: Measuring effectiveness of different eConsultation designs. Lecture Notes in Computer Science, 5694, 90–100.

Hall, J. L. (2008). The forgotten regional organizations: Creating capacity for economic development. Public Administration Review, 68(1), 110-125.

Held, D. (1987). Models of democracy. Stanford, Calif.: Stanford University Press.

Holzer, M. & Mullins, L. B. 2012. Citizen participation and performance: A model for citizen-based government and performance management, in *The state of citizen participation in America*. Ed. H. L. Schachter and K. Yang. pp. 325-347. Raleigh, North Carolina: Information Age Publishing.

Holzer, M., Zheng, Y., Manoharan, A., & Shark, A. (2014). Digital Governance in Municipalities Worldwide (2013-14)., National Center of Public Performance, Newark

Honadle , Beth Walter . (1981) . A Capacity-Building Framework: A Search for Concept and Purpose .Public Administration Review 41 (5): 575 – 80 .

Honadle, B.W., and A.M. Howitt, (1986). Perspectives on Management Capacity Building. State University of New York Press, Albany, NY.

Hou, Y., Moynihan, D. P., & Ingraham, P. W. (2003). Capacity, management, and performance exploring the links. The American Review of Public Administration, 33(3), 295-315.

Irvin, R. A., & Stansbury, J. (2004). Citizen participation in decision making: is it worth the effort?. *Public administration review*, *64*(1), 55-65.

Kakabadse, A., Kakabadse, N. K., & Kouzmin, A. (2003). Reinventing the democratic governance project through information technology? A growing agenda for debate. *Public Administration Review*, *63*(1), 44-60.

Kardan, A. A., & Sadeghiani, A. (2011). Is e-government a way to e-democracy?: A longitudinal study of the Iranian situation. *Government Information Quarterly*, *28*(4), 466-473.

Kim, S. (2009). Management Strategy for Local Governments to Strengthen Transparency in Local Governance. *Seoul, Korea: United Nations Project Office on Governance*.

Kim, H. J., & Bretschneider, S. (2004, January). Local government information technology capacity: an exploratory theory. In System Sciences, 2004. Proceedings of the 37th Annual Hawaii International Conference on (pp. 10-pp). IEEE.

Kim, S., & Lee, J. (2012). E   Participation, Transparency, and Trust in Local Government. *Public Administration Review*, *72*(6), 819-828.

King, C. S., Feltey, K. M., & Susel, B. O. N. (1998). The question of participation: Toward authentic public participation in public administration.*Public administration review*, 317-326.

Kleinman, D. L., Delborne, J. A., & Anderson, A. A. (2011). Engaging citizens The high cost of citizen participation in high technology. *Public understanding of science*, *20*(2), 221-240.

Komito, Lee. 2005. E-Participation and Governance: Widening the Net. Electronic Journal of e-Government 3(1): 39–48.

Kraemer, K.L., W.H. Dutton, and A. Northrop, (1981). The Management of Information Systems, Columbia University Press, New York.

Kweit, R. W., & Kweit, M. G. (1980). Bureaucratic decision-making: Impediments to citizen participation. *Polity*, 647-666.

Kweit, M. G., & Kweit, R. W. (1981). *Implementing citizen participation in a bureaucratic society: A contingency approach* (p. 185). New York: Praeger.

Kweit, M. G., & Kweit, R. W. (2007). Participation, perception of participation, and citizen support. *American Politics Research*, *35*(3), 407-425.

Lawrence, Rick L., and Debbie A. Deagen, R. (2001). Choosing public participation methods for natural resources: a context-specific guide. *Society &Natural Resources*, *14*(10), 857-872.

Lenihan, D. G. (2002). *Realigning governance: from e-government to e-democracy*. Ottawa: Centre for Collaborative Government.

Lidén, G., & Avdic, A. (2003, January). Democracy functions of information technology. In *System Sciences, 2003. Proceedings of the 36th Annual Hawaii International Conference on* (pp. 7-pp). IEEE.

Lowndes, V., Stoker, G., & Pratchett, L. (1998). *Enhancing Public Participation in Local Government: A Research Report to the Department of the Environment, Transport and the Regions*. Great Britain, Department of the Environment, Transport and the Regions.

Macintosh, A. (2004, January). Characterizing e-participation in policy-making. In *System Sciences, 2004. Proceedings of the 37th Annual Hawaii International Conference on* (pp. 10-pp). IEEE.

Macintosh, A., & Whyte, A. (2008). Towards an evaluation framework for eParticipation. *Transforming Government: People, Process and Policy*, *2*(1), 16-30.

MacNair, R. H., Caldwell, R., & Pollane, L. (1983). Citizen Participants in Public Bureaucracies Foul-Weather Friends. *Administration & Society*, *14*(4), 507-524.

Manin, B. (1997). Principles of representative government. Cambridge: Cambridge University Press.

Margetts, H., & Dunleavy, P. (2002). Cultural barriers to e-government. National Audit Office, UK.

Marques, F. (2008). Participação política e internet: Meios e oportunidades digitais de participação civil na democracia contemporãnea, com um estudo do caso brasileiro

[Political participation on the Internet: A study on how opportunities of political participation are offered by Brazilian Government institutions through digital communication]. Tese de Doutorado, Faculdade de Comunicação, Universidade Federal da Bahia. Salvador, 498 fls.

Marques, F. P. J. A. (2010). Government and e-participation programs: a study of the challenges faced by institucional projects.

Mcnabb, D. E. (2008). Research Methods in Public Administration and Nonprofit Management: Quantitative and Qualitative Approaches.

Medaglia, R. (2007). Measuring the diffusion of eParticipation: A survey on Italian local government. Information Polity: The International Journal of Government & Democracy in the Information Age, 12(4), 265–280.

Medaglia, R. (2012). eParticipation research: Moving characterization forward (2006–2011). *Government Information Quarterly*, 29(3), 346–360.

Melitski, J. (2003). Capacity and e-government performance: An analysis based on early adopters of internet technologies in New Jersey. Public Performance & Management Review, 376-390.

Miah, S. J., Gammack, J., & Greenfield, G. (2009, June). An infrastructure for implementing e-participation services in developing countries. In Digital Ecosystems and Technologies, 2009. DEST'09. 3rd IEEE International Conference on (pp. 407-411). IEEE.

Middendorf, G., & Busch, L. (1997). Inquiry for the public good: Democratic participation in agricultural research. *Agriculture and Human Values*, *14*(1), 45-57.

Milio, S. (2007). Can administrative capacity explain differences in regional performances? Evidence from structural funds implementation in southern Italy.Regional Studies, 41(4), 429-442.

Mohr, L.B., "Determinants of Innovation in Organizations", The American Political Science Review, 63, 1969, pp.111-126.

Moynihan, D. P. (2003). Normative and Instrumental Perspectives on Public Participation Citizen Summits in Washington DC. *American Review of Public Administration*, *33*(2), 164-188.

Nelson, N., & Wright, S. (1995). *Power and participatory development: theory and practice*. Intermediate Technology Publications Ltd (ITP)

Noveck, B. (2004). "The future of citizen participation in the electronic state: Modeling communicative action in e–rulemaking practice, paper for the Ninth International Working Conference on the Language–Action Perspective on Communication Modelling (29 May).

Norris, P. (Ed.). (1999). *Critical Citizens: Global Support for Democratic Government: Global Support for Democratic Government*. Oxford University Press, USA.

Organisation for Economic Co-operation and Development (OECD). 2001. The Hidden Threat to E-Government. Avoiding Large Government IT Failures. Policy Brief no. 8. http://www.oecd.org/dataoecd/19/12/1901677.pdf [accessed June 7, 2013].

Organisation for Economic Co-operation and Development (OECD). 2003. Checklist for E-Government Leaders. Policy Brief. http://www.oecd.org/dataoecd/62/58/11923037.pdf [accessed June 7, 2013].

Organisation for Economic Co-operation and Development (OECD) (2003). Promise and problems of e-democracy, challenges of online citizen engagement. Retrieved June 7, 2013, from. www.oecd.org

Panopoulou, E., Tambouris, E., & Tarabanis, K. (2010). eParticipation initiatives in Europe: Learning from practitioners. Lecture Notes in Computer Science, 6229, 54–65.

Parvez, Z. (2003). Local democracy shaping E-democracy. In *Electronic Government* (pp. 63-68). Springer Berlin Heidelberg.

Phang, C. W., & Kankanhalli, A. (2008). A framework of ICT exploitation for e-participation initiatives. *Communications of the ACM*, *51*(12), 128-132.

Polidano, C. (2000). Measuring public sector capacity. World Development,28(5), 805-822.

Prattipati, S. (2003). "Adoption of e–governance: Differences between countries in the use of online government services," Journal of American Academy of Business, volume 3, numbers 1/2, pp. 386–391.

Putnam, R. D., Leonardi, R., Nanetti, R. Y., & Pavoncello, F. (1983). Explaining institutional success: The case of Italian regional government. *The American Political Science Review*, 55-74.

Putnam, R. (2000). Bowling alone: The collapse and revival of American community. New York: Simon & Schuster.

Resnick , Paul . 2001 . Beyond Bowling Together: Sociotechnical Capital. In Human Computer Interaction in the New Millennium, edited by John Carroll . New York : Pearson Education .

Robbins, M. D., Simonsen, B., & Feldman, B. (2008). Citizens and Resource Allocation: Improving Decision Making with Interactive Web   Based Citizen Participation. *Public Administration Review*, *68*(3), 564-575.

Roberts, N. (2004). Public deliberation in an age of direct citizen participation.*The American Review of Public Administration*, *34*(4), 315-353.

Sæbø, Ø., Rose, J., & Skiftenes Flak, L. (2008). The shape of eParticipation: Characterizing an emerging research area. *Government Information Quarterly*, *25*(3), 400-428.

Scott, J. K. (2006). "E" the people: Do US municipal government Web sites support public involvement?. *Public Administration Review*, *66*(3), 341-353.

Smith, S., & Dalakiouridou, E. (2009). Contextualising public (e) Participation in the governance of the European Union. *European Journal of ePractice*, *7*, 4-14.

Sobaci, Z. (2010). What the Turkish parliamentary web site offers to citizens in terms of e-participation: A content analysis. Information Polity: The International Journal of Government & Democracy in the Information Age, 15(3), 227–241.

Stanley, J. and Weare, C. (2004). "The effects of Internet use on political participation: Evidence from an agency online discussion forum," Administration & Society, volume 36, number 5, pp. 503–527.

Tettey, W. J. (2002). ICT, local government capacity building, and civic engagement: An evaluation of the sample initiative in Ghana. Perspectives on Global Development and Technology, 1(2), 165-192.

Thomas, J. C. (1995). *Public participation in public decisions: New skills and strategies for public managers*. San Francisco: Jossey-Bass.

Thomas, J. C., & Streib, G. (2003). The New Face of Government: Citizen   Initiated Contacts in the Era of E   Government. *Journal of public administration research and theory*, *13*(1), 83-102.

Timney, M. M. MODELS OF PARTICIPATION: MEASURING ENGAGEMENT AND COLLABORATION.

Torres, L., Pina, V., & Acerete, B. (2006). E   Governance Developments in European Union Cities: Reshaping Government's Relationship with Citizens. *Governance*, *19*(2), 277-302.

United Nations Department of Economic and Social Affairs. (2012). E-Government Survey 2012: E-Government for the People. New York. Retrieved from

http://unpan1.un.org/intradoc/groups/public/documents/un/unpan048065.pdf, June 07, 2013.

Vedel, T. (2006). The idea of electronic democracy: Origins, visions and questions. Parliamentary Affairs, 59(2), 226-235.

Wallis, J., & Dollery, B. (2002). Social capital and local government capacity.Australian Journal of Public Administration, 61(3), 76-85.

Walters, L. C., Aydelotte, J., & Miller, J. (2000). Putting more public in policy analysis. *Public Administration Review*, *60*(4), 349-359.

Wang, X. (2001). Assessing public participation in US cities. *Public Performance & Management Review*, 322-336.

Wang, X., & Wan Wart, M. (2007). When public participation in administration leads to trust: An empirical assessment of managers' perceptions. Public Administration Review, 67(2), 265-278.

Weeks, E. C. (2000). The Practice of Deliberative Democracy: Results from Four Large Scale Trials. *Public Administration Review*, *60*(4), 360-372.

West, Darrell M. 2004. E-Government and the Transformation of Service Delivery and Citizen Attitudes. Public Administration Review 64(1): 15–27

White, C. S. (1997). Citizen participation and the Internet: Prospects for civic deliberation in the information age. *The Social Studies*, *88*(1), 23-28.

White, J. (2003). Three meanings of capacity; Or, why the federal government is most likely to lead on insurance access issues. Journal of Health Politics, Policy and Law, 28(2-3), 217-244.

White, O. F., & McSwain, C. J. (1993). The semiotic way of knowing and public administration. *Administrative Theory & Praxis*, *15*(1), 18-35.

Wright, S. (2006). Electrifying democracy? 10 years of policy and practice. Parliamentary Affairs, 59(2), 236–249.

Wright, S. (2009). The role of the moderator: problems and possibilities for government-run online discussion forums. Online deliberation: Design, research, and practice, 233-242.

Zheng, Y., & Holzer, M. (2013). Explaining E-participation Diffusion at the National Level: An Examination of External Environmental Influences. IJeN, 1(2), 1-21.

Zheng, Y., & Liao, Y., (2014). Improving Citizen Participation via E-Government: The Why and How, in "E-Government and Websites: A Public Solutions Handbook". Edited by Marc Holzer & Aroon Manoharan, M.E. Sharpe Publishing

Zheng, Y., Schachter, H. L., & Holzer, M. (2014). The impact of government form on e-participation: A study of New Jersey municipalities. Government Information Quarterly, 31(4), 653-659.

Appendices

Appendix A: First Round Hard Copy Survey Cover Letter and Questionnaire

Dear Municipal Manager/Administrator,

I'm a Senior Research Associate at the E-Governance Institute, and Ph.D Candidate, in School of Public Affairs and Administration, Rutgers University-Newark. I'm conducting a research project on e-government and citizen participation in New Jersey, which has been approved by IRB of Rutgers University (Protocol#: E15-190). The enclosed questionnaire was designed to collect opinions and expertise from NJ municipal managers and administrators. I cordially invite you to participate in the survey.

The questionnaire takes approximately 15 minutes to complete. Your participation is completely voluntary but it is very essential to the success of my research. Upon completion of the survey, a summary of responses will be sent to you via email around early 2015.

Responses to the survey will be aggregated and used for academic purpose only. Confidentiality will be guaranteed and no personal information will be used in any form or any situation. If you consent to participate, please complete and mail the questionnaire back to me, with stamped envelope enclosed, at your earliest convenience, ideally by December 20. Your support is much appreciated.

Please email me (zhengyp1222@gmail.com) if you have any questions regarding the research. And, please feel free to contact with Institutional Review Board at Rutgers (humansubjects@orsp.rutgers.edu) if you have any questions about your rights as a research participant. Thanks again for your participation!

Sincerely
Yueping Zheng
Senior Research Associate, E-Governance Institute
Ph.D Candidate, School of Public Affairs and Administration
Rutgers University-Newark
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Cell phone: 862-754-6600

Rutgers-Newark School of Public Affairs and Administration
New Jersey Municipal E-Government and Citizen Participation Survey

Questions 1 - 3 are about <u>information technologies</u> usage of your municipality in engaging citizens. Please evaluate each of the statements below and mark the response from five possible options.
Information technologies refer to the technologies involving the use of computer systems, software, and the internet for government to communicate with residents. They include the forms of email, social media, online vote systems, online forums, etc.

1. Our municipality	Never	Rarely	Sometimes	Often	Always
1.1 releases public events in electronic ways (website/emails/videos/social media)	□	□	□	□	□
1.2 enables citizens to download government documents or reports online	□	□	□	□	□
1.3 enables citizens to give feedbacks with electronic tools (emails, online chatting, online forms, social media, etc)	□	□	□	□	□
1.4 collects public opinions through online citizen surveys/polls	□	□	□	□	□

1.4.1 How many surveys/polls have been conducted so far in 2014? _____

1.4.2 What's the average response rate of these surveys/polls? _____

	Never	Rarely	Sometimes	Often	Always
1.5 releases surveys/polls results to public online	□	□	□	□	□
1.6 enables citizens to propose/disc public issues or agenda through onlin forums or bulletin boards	□	□	□	□	□
1.7 enables citizens to vote public agenda through online voting systems	□	□	□	□	□

2. Our municipality has specific staff/administrator to respond or collect public feedback.   Yes   No

     If Yes, 2.1 approximately how many hours on average each week does he/she need to do this job? _____

3. The influence of citizens' feedback or comments on the policy/decision-making processes in our municipality is	Not at all influential	Slightly influential	Neutral	Moderately influential	Very influential
	□	□	□	□	□

Questions 4 - 7 are about citizen participation. Please indicate to what extent you agree or disagree with following statements.
Note: Citizen Participation refers to the activities of local residents, aiming at participating in public affairs and influencing government decision-making processes, such as giving comments or feedback to public officials, attending public hearings or meetings, discussing public issues with others, vote, etc

4. Citizen participation in our municipality	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
4.1 contributes to government performance improvement	□	□	□	□	□
4.2 helps government to improve services providing	□	□	□	□	□
4.3 helps government to increase efficiency	□	□	□	□	□
4.4 helps government to promote	□	□	□	□	□

effectiveness

4.5 helps government to be more <u>transparent</u>	□	□	□	□	□
4.6 helps government to be more <u>responsible</u>	□	□	□	□	□
4.7 brings a lot of <u>administrative costs</u> to government	□	□	□	□	□

5. Our municipal government	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5.1 has responsibilities to involve citizens in public affairs	□	□	□	□	□
5.2 wants to improve our citizen participation level	□	□	□	□	□
5.3 is worth involving citizens in decision-making process	□	□	□	□	□

6. The citizen participation level in public management of our municipality is	Very Poor	Poor	Neutral	Good	Very Good
	□	□	□	□	□

Questions 7 – 8 below are about your opinion on <u>information technologies</u>. Please indicate to what extent you agree or disagree with each of the following statements.

7. Information technology (IT)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7.1 benefits our government running	□	□	□	□	□
7.2 helps our government to improve <u>services provision</u>	□	□	□	□	□
7.3 enables our government to promote <u>performance</u>	□	□	□	□	□
7.4 helps our government to increase <u>efficiency</u>	□	□	□	□	□
7.5 enables our government to raise <u>effectiveness</u>	□	□	□	□	□
7.6 helps our government to promote <u>transparency</u>	□	□	□	□	□
7.7 brings threats to the <u>security</u> of our government	□	□	□	□	□
7.8 brings threats to the <u>privacy</u> of citizen users	□	□	□	□	□
7.9 bring a lot of <u>costs</u> to our government	□	□	□	□	□

8. Our government wants to improve our information technologies level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	□	□	□	□	□

Questions 9 – 11 are about your opinion on <u>e-participation</u> and please indicate to what extent you agree with the following statements.

Note: e-participation refers to the activities of participation under help of information technologies, such as contacting with government officials through email, subscribing to government updates, participating in online surveys, discussing public issues on discussion board, etc.

9. E-Participation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9.1 <u>costs less</u> than other ways of citizen participation	☐	☐	☐	☐	☐
9.2 is <u>more convenient</u> than other ways of citizen participation	☐	☐	☐	☐	☐
9.3 is needed in government <u>decision making</u> process	☐	☐	☐	☐	☐
9.4 helps to improve <u>relationship</u> between citizens and government	☐	☐	☐	☐	☐
9.5 contributes to improve citizens' <u>satisfaction</u> toward government	☐	☐	☐	☐	☐
9.6 is useful to increase citizen <u>trust</u> toward government	☐	☐	☐	☐	☐
9.7 can get more citizens involved than the traditional citizen participation.	☐	☐	☐	☐	☐
9.8 can make government officials more accountable	☐	☐	☐	☐	☐
9.9 can reduce possibilities of public corruption	☐	☐	☐	☐	☐

10. The e-participation level of our municipal government is	Very Poor	Poor	Neutral	Good	Very Good
	☐	☐	☐	☐	☐

11. Our government wants to improve our e-participation level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	☐	☐	☐	☐	☐

Question 12 – 14 involve your <u>municipal government capacity</u> in information technology, please answer:

12. Does your municipality have a full-time staff responsible for IT development?
Yes   No

12.1 If yes, how long has he/she been working in the position?   Approximately _____year(s) (including current year)

12.2 Has he/she received any professional training before?   Yes   No

13. Does your municipality have a Chief Information Officer (CIO)?   Yes   No

13.1 If yes, how long has he/she been working in this position?   Approximately _____years(s) (including current year)

13.2 Has he/she received any professional training before?   Yes   No

14. Please indicate to what extent you agree with the following statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
14.1 Our government employees	☐	☐	☐	☐	☐

received timely IT training

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
14.2 Our municipality has adequate IT facilities	□	□	□	□	□
14.3 Software of our municipal government has been updated timely	□	□	□	□	□
14.4 Our municipal government co-work a lot with IT company(s) to improve our e-participation performance	□	□	□	□	□
14.5 Our municipal government co-work a lot with other municipalities in e-participation	□	□	□	□	□
14.6 Our municipal government has adequate technical capacity to develop e-participation	□	□	□	□	□

Question 15 is about <u>financial resources</u> in your municipal government.

15. Please indicate your level of agreement or disagreement with each of the following statements.

Our municipal government has enough financial resources for	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
15.1 maintaining and upgrading IT facilities and software	□	□	□	□	□
15.2 recruiting IT staff or employees	□	□	□	□	□
15.3 training IT staff or employees	□	□	□	□	□
15.4 maintaining and managing website	□	□	□	□	□
15.5 building e-participation platform	□	□	□	□	□
15.6 collecting and managing e-participation data	□	□	□	□	□
15.7 co-working with IT companies in e-participation	□	□	□	□	□
15.8 co-working with other municipalities in e-participation	□	□	□	□	□
15.9 developing e-participation	□	□	□	□	□

Questions 16 - 18 are about <u>administrative capacity</u> of your municipal government to adopt and develop e-participation.
Note: administrative capacity refers to the ability of leading programs/projects, using resources efficiently to provide high-quality public services, making short-time and long-time goals, and the efficiency of government employees in co-working with each other.

16. Does your municipal government have specific public official to manage e-participation (Mayor/city manager/etc)?

     Yes   No

If Yes, what is his/her official title?_____	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
16.1 The public official has a lot of knowledge or skills in e-participation development	☐	☐	☐	☐	☐
16.2 The public official has a lot of experiences in e-participation development?	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

16.3 Has he/she received any professional training before?   Yes   No

17. Does your municipal government have any specific project to promote e-participation?   Yes
No
   If Yes, what is the name of the project? _____
   17.1 How long has this project been running? Approximately _____year(s) (including the current year)

18. In our municipal government,	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
18.1 we have comprehensive rules or regulations to involve citizens	☐	☐	☐	☐	☐
18.2 we have clearly long-time and short-time goals in engaging citizens	☐	☐	☐	☐	☐
18.3 we have experienced leaders to promote citizen participation	☐	☐	☐	☐	☐
18.4 government officials are authoritative	☐	☐	☐	☐	☐
18.5 municipal officials co-work with each other closely	☐	☐	☐	☐	☐
18.6 resources are being used efficiently	☐	☐	☐	☐	☐
18.7 projects or program are being operated efficiently	☐	☐	☐	☐	☐
18.8 municipal officials interact with each other smoothly	☐	☐	☐	☐	☐
18.9 we provide local residents with high-quality services	☐	☐	☐	☐	☐
18.10 The municipal officials hold up a high standard to prevent corruption	☐	☐	☐	☐	☐
18.11 we have adequate administrative capacity to develop e-participation	☐	☐	☐	☐	☐

Question 19 - 21 are about <u>political capacity</u> of your municipal government to adopt and develop e-participation. Please indicate your level of agreement or disagreement with each of the follow statements.
Note: political capacity refers to the political support you can achieve from both inside and outside of municipal government, and the extent that conflicts are well mediated.

19. To the e-participation development in our municipal, government gets a lot of support from	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
19.1 Public appointed professionals	☐	☐	☐	☐	☐
19.2 Council members	☐	☐	☐	☐	☐
19.3 General government employees	☐	☐	☐	☐	☐
19.4 Residents of this municipality	☐	☐	☐	☐	☐

20. In our government,	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20.1 we have consensus on the importance of citizen participation	☐	☐	☐	☐	☐
20.2 officials are easy to get along with	☐	☐	☐	☐	☐
20.3 there's a lot of conflicts among government officials	☐	☐	☐	☐	☐
20.4 agreements are easy to be reached	☐	☐	☐	☐	☐
20.5 conflicts are being well mediated	☐	☐	☐	☐	☐
20.6 different interests have channels to be expressed and respected	☐	☐	☐	☐	☐
20.7 citizen demands are being well responded	☐	☐	☐	☐	☐

21. Our government has adequate political capacity to develop e-participation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	☐	☐	☐	☐	☐

Questions 22-31 are about your <u>personal background</u>, please answer:

22. My job title in this municipal government is _____

23. I have been working in this <u>position</u> for approximately _____ years.

24. I have been working in this <u>municipality</u> for approximately _____ years.

25. My highest education level is: Middle School or below   High school   College   Graduate School or above

26. I (**do   do not**)   have MPA degree. (please circle one)

27. My gender is: Male   Female

28. My annual salary is approximately _____ dollars

29. My racial identification is: Native American   African-American   Hispanic   Asian-American   Caucasian
                          Others_____(please specify)

30. My political affiliation is ____   Democratic   Republican   Other Party   No party affiliation

31. I have worked in each of the following types of organizations: (Put 0 if you do not have any experience with that type)

   31.1 Public sectors (including the government you are working in)   Approximate ____ years

   31.2 Private sectors   Approximate ____years

   31.3 Nonprofit organizations   Approximate ____years

Appendix B: First Round Survey Follow-Up Emails_1

Dear Municipal Administrator,

I'm Yueping Zheng, a Senior Research Associate of E-Governance Institute and Ph.D Candidate of School of Public Affairs and Administration, Rutgers University-Newark.   I'm conducting a research project on e-government and citizen participation in New Jersey. And, a questionnaire has been sent to you two weeks ago to collect your opinions toward them.

I would greatly appreciate it if you kindly complete and mail the questionnaire back to me, with stamped envelope enclosed, at your earliest convenience. You can also choose to finish the electronic questionnaire as attached. The questionnaire takes approximately 15 minutes to complete. Your participation is very essential to the success of my research.

Thanks a lot for your help and I appreciate it!

Best
Yueping

Appendix C: First Round Survey Follow-Up Emails_2

Dear Municipal Administrator,

I'm Yueping Zheng, a Senior Research Associate of E-Governance Institute and Ph.D Candidate of School of Public Affairs and Administration, Rutgers University-Newark.   I'm conducting a research project on e-government and citizen participation in New Jersey. And, a questionnaire has been sent to you two months ago to collect your opinions toward them.

I would greatly appreciate it if you kindly complete and mail the questionnaire back to me, with stamped envelope enclosed, at your earliest convenience. You can also choose to finish the electronic questionnaire as attached. The questionnaire takes approximately 15 minutes to complete. Your participation is very essential to the success of my research.

Thanks a lot for your help and I appreciate it!

Best
Yueping

Appendix D: Second Round Hard Copy Survey Cover Letter and Questionnaire

Dear Municipal Manager/Administrator,

I'm a Senior Research Associate at the E-Governance Institute, and Ph.D Candidate, in School of Public Affairs and Administration, Rutgers University-Newark. I'm conducting a research project on e-government and citizen participation in New Jersey, which has been approved by IRB of Rutgers University (Protocol#: E15-190). The enclosed questionnaire was designed to collect opinions and expertise from NJ municipal managers and administrators. I cordially invite you to participate in the survey.

The questionnaire takes approximately 15 minutes to complete. Your participation is completely voluntary but it is very essential to the success of my research. Upon completion of the survey, a summary of responses will be sent to you via email around this May.

Responses to the survey will be aggregated and used for academic purpose only. Confidentiality will be guaranteed and no personal information will be used in any form or any situation. If you consent to participate, please complete and mail the questionnaire back to me, with stamped envelope enclosed, at your earliest convenience, ideally by March 18. Your support is much appreciated.

Please email me (zhengyp1222@gmail.com) if you have any questions regarding the research. And, please feel free to contact with Institutional Review Board at Rutgers (humansubjects@orsp.rutgers.edu) if you have any questions about your rights as a research participant. Thanks again for your participation!

Sincerely
Yueping Zheng
Senior Research Associate, E-Governance Institute
Ph.D Candidate, School of Public Affairs and Administration
Rutgers University-Newark
111 Washington Street, Newark, NJ 07102
Cell phone: 862-754-6600

Rutgers-Newark School of Public Affairs and Administration
New Jersey Municipal E-Government and Citizen Participation Survey

Questions 1 - 3 are about <u>information technologies</u> usage of your municipality in engaging citizens. Please evaluate each of the statements below and mark the response from five possible options.
Information technologies refer to the technologies involving the use of computer systems, software, and the internet for government to communicate with residents. They include the forms of email, social media, online vote systems, online forums, etc.

1. Our municipality	Never	Rarely	Sometimes	Often	Always
1.1 releases public events in	□	□	□	□	□

electronic ways
(website/emails/videos/social media)

1.2 enables citizens to download government documents or reports online	□	□	□	□	□
1.3 enables citizens to give feedbacks with electronic tools (emails, online chatting, online forms, social media, etc)	□	□	□	□	□
1.4 collects public opinions through online citizen surveys/polls	□	□	□	□	□

      1.4.1 How many surveys/polls have been conducted so far in 2014? _____

      1.4.2 What's the average response rate of these surveys/polls? _____

1.5 releases surveys/polls results to public online	□	□	□	□	□
1.6 enables citizens to propose/discuss public issues or agenda through online forums or bulletin boards	□	□	□	□	□
1.7 enables citizens to vote public agenda through online voting systems	□	□	□	□	□

2. Our municipality has specific staff/administrator to respond or collect public feedback.   Yes   No

    If Yes, 2.1 approximately how many hours on average each week does he/she need to do this job? _____

	Not at all influential	Slightly influential	Neutral	Moderately influential	Very influential
3. The influence of citizens' feedback or comments on the policy/decision-making processes in our municipality is	□	□	□	□	□

Questions 4 - 7 are about citizen participation. Please indicate to what extent you agree or disagree with following statements.
Note: Citizen Participation refers to the activities of local residents, aiming at participating in public affairs and influencing government decision-making processes, such as giving comments or feedback to public officials, attending public hearings or meetings, discussing public issues with others, vote, etc

4. Citizen participation in our municipality	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
4.1 contributes to government performance improvement	□	□	□	□	□
4.2 helps government to improve services providing	□	□	□	□	□
4.3 helps government to increase efficiency	□	□	□	□	□
4.4 helps government to promote effectiveness	□	□	□	□	□
4.5 helps government to be more transparent	□	□	□	□	□
4.6 helps government to be more responsible	□	□	□	□	□
4.7 brings a lot of administrative	□	□	□	□	□

costs to government

5. Our municipal government	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5.1 has responsibilities to involve citizens in public affairs	□	□	□	□	□
5.2 wants to improve our citizen participation level	□	□	□	□	□
5.3 is worth involving citizens in decision-making process	□	□	□	□	□

6. The citizen participation level in public management of our municipality is	Very Poor	Poor	Neutral	Good	Very Good
	□	□	□	□	□

Questions 7 – 8 below are about your opinion on information technologies. Please indicate to what extent you agree or disagree with each of the following statements.

7. Information technology (IT)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7.1 benefits our government running	□	□	□	□	□
7.2 helps our government to improve services provision	□	□	□	□	□
7.3 enables our government to promote performance	□	□	□	□	□
7.4 helps our government to increase efficiency	□	□	□	□	□
7.5 enables our government to raise effectiveness	□	□	□	□	□
7.6 helps our government to promote transparency	□	□	□	□	□
7.7 brings threats to the security of our government	□	□	□	□	□
7.8 brings threats to the privacy of citizen users	□	□	□	□	□
7.9 bring a lot of costs to our government	□	□	□	□	□

8. Our government wants to improve our information technologies level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	□	□	□	□	□

Questions 9 – 11 are about your opinion on e-participation and please indicate to what extent you agree with the following statements.
Note: e-participation refers to the activities of participation under help of information technologies, such as contacting with government officials through email, subscribing to government updates, participating in online surveys, discussing public issues on discussion board, etc.

9. E-Participation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9.1 costs less than other ways of citizen participation	□	□	□	□	□

9.2 is <u>more convenient</u> than other ways of citizen participation	□	□	□	□	□
9.3 is needed in government <u>decision making</u> process	□	□	□	□	□
9.4 helps to improve <u>relationship</u> between citizens and government	□	□	□	□	□
9.5 contributes to improve citizens' <u>satisfaction</u> toward government	□	□	□	□	□
9.6 is useful to increase citizen <u>trust</u> toward government	□	□	□	□	□
9.7 can get more citizens involved than the traditional citizen participation.	□	□	□	□	□
9.8 can make government officials more accountable	□	□	□	□	□
9.9 can reduce possibilities of public corruption	□	□	□	□	□

	Very Poor	Poor	Neutral	Good	Very Good
10. The e-participation level of our municipal government is	□	□	□	□	□

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11. Our government wants to improve our e-participation level	□	□	□	□	□

Question 12 – 14 involve your <u>municipal government capacity</u> in information technology, please answer:

12. Does your municipality have a full-time staff responsible for IT development?
Yes   No

   12.1 If yes, how long has he/she been working in the position?   Approximately _____year(s) (including current year)

   12.2 Has he/she received any professional training before?   Yes   No

13. Does your municipality have a Chief Information Officer (CIO)?   Yes   No

   13.1 If yes, how long has he/she been working in this position?   Approximately _____years(s) (including current year)

    13.2 Has he/she received any professional training before?   Yes   No

14. Please indicate to what extent you agree with the following statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
14.1 Our government employees received timely IT training	□	□	□	□	□
14.2 Our municipality has adequate IT facilities	□	□	□	□	□
14.3 Software of our municipal government has been updated timely	□	□	□	□	□
14.4 Our municipal government	□	□	□	□	□

co-work a lot with IT company(s)
to improve our e-participation
performance

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
14.5 Our municipal government co-work a lot with other municipalities in e-participation	☐	☐	☐	☐	☐
14.6 Our municipal government has adequate technical capacity to develop e-participation	☐	☐	☐	☐	☐

Question 15 is about <u>financial resources</u> in your municipal government.

15. Please indicate your level of agreement or disagreement with each of the following statements.

Our municipal government has enough financial resources for	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
15.1 maintaining and upgrading IT facilities and software	☐	☐	☐	☐	☐
15.2 recruiting IT staff or employees	☐	☐	☐	☐	☐
15.3 training IT staff or employees	☐	☐	☐	☐	☐
15.4 maintaining and managing website	☐	☐	☐	☐	☐
15.5 building e-participation platform	☐	☐	☐	☐	☐
15.6 collecting and managing e-participation data	☐	☐	☐	☐	☐
15.7 co-working with IT companies in e-participation	☐	☐	☐	☐	☐
15.8 co-working with other municipalities in e-participation	☐	☐	☐	☐	☐
15.9 developing e-participation	☐	☐	☐	☐	☐

Questions 16 - 18 are about <u>administrative capacity</u> of your municipal government to adopt and develop e-participation.
Note: administrative capacity refers to the ability of leading programs/projects, using resources efficiently to provide high-quality public services, making short-time and long-time goals, and the efficiency of government employees in co-working with each other.

16. Does your municipal government have specific public official to manage e-participation
(Mayor/city manager/etc)?
　　　Yes　　　　　No

If Yes, what is his/her official title?_____	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
16.1 The public official has a lot of knowledge or skills in e-participation development	☐	☐	☐	☐	☐
16.2 The public official has a lot of experiences in e-participation development?	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

16.3 Has he/she received any professional training before?　　　Yes　　　　　No

17. Does your municipal government have any specific project to promote e-participation?　Yes
No

　　If Yes, what is the name of the project? _____

　　17.1 How long has this project been running? Approximately _____year(s) (including the
current year)

18. In our municipal government,	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
18.1 we have comprehensive rules or regulations to involve citizens	□	□	□	□	□
18.2 we have clearly long-time and short-time goals in engaging citizens	□	□	□	□	□
18.3 we have experienced leaders to promote citizen participation	□	□	□	□	□
18.4 government officials are authoritative	□	□	□	□	□
18.5 municipal officials co-work with each other closely	□	□	□	□	□
18.6 resources are being used efficiently	□	□	□	□	□
18.7 projects or program are being operated efficiently	□	□	□	□	□
18.8 municipal officials interact with each other smoothly	□	□	□	□	□
18.9 we provide local residents with high-quality services	□	□	□	□	□
18.10 The municipal officials hold up a high standard to prevent corruption	□	□	□	□	□
18.11 we have adequate administrative capacity to develop e-participation	□	□	□	□	□

Question 19 - 21 are about <u>political capacity</u> of your municipal government to adopt and develop e-participation. Please indicate your level of agreement or disagreement with each of the follow statements.
Note: political capacity refers to the political support you can achieve from both inside and outside of municipal government, and the extent that conflicts are well mediated.

19. To the e-participation development in our municipal, government gets a lot of support from	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
19.1 Public appointed professionals	□	□	□	□	□
19.2 Council members	□	□	□	□	□
19.3 General government employees	□	□	□	□	□
19.4 Residents of this municipality	□	□	□	□	□

20. In our government,	Strongly	Disagree	Neutral	Agree	Strongly

	Disagree				Agree
20.1 we have consensus on the importance of citizen participation	□	□	□	□	□
20.2 officials are easy to get along with	□	□	□	□	□
20.3 there's a lot of conflicts among government officials	□	□	□	□	□
20.4 agreements are easy to be reached	□	□	□	□	□
20.5 conflicts are being well mediated	□	□	□	□	□
20.6 different interests have channels to be expressed and respected	□	□	□	□	□
20.7 citizen demands are being well responded	□	□	□	□	□

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21. Our government has adequate political capacity to develop e-participation	□	□	□	□	□

Questions 22-31 are about your <u>personal background</u>, please answer:

22. My job title in this municipal government is _____

23. I have been working in this <u>position</u> for approximately _____ years.

24. I have been working in this <u>municipality</u> for approximately _____ years.

25. My highest education level is: Middle School or below   High school   College
Graduate School or above

26. I (**do   do not**)   have MPA degree. (please circle one)

27. My gender is: Male   Female

28. My annual salary is approximately _____ dollars

29. My racial identification is: Native American   African-American   Hispanic
Asian-American   Caucasian
                    Others_____(please specify)

30. My political affiliation is _____   Democratic   Republican   Other Party
No party affiliation

31. I have worked in each of the following types of organizations: (Put 0 if you do not have any experience with that type)

   31.1 Public sectors (including the government you are working in)   Approximate _____
years

   31.2 Private sectors   Approximate _____years

   31.3 Nonprofit organizations   Approximate _____years

Appendix E: Municipalities Evaluated in the Study

County	Municipality
Atlantic (7)	Hammonton
	Longport
	Weymouth Township
	Northfield
	Pleasantville
	Estell Manor
	Folsom
Bergen (17)	Fair Lawn
	Franklin lakes
	Teaneck
	Oakland
	Hillsdale
	Bogota
	Paramus
	Waldwick
	River Vale
	Edgewater
	Englewood
	Garfield
	Maywood
	Saddle Brook
	Palisades Park
	Cresskill
	Harrington Park
Burlington (9)	Lumberton
	Mount Holly
	Delran
	Maple Shade
	Willingboro
	Delanco
	Beverly
	Burlington Township
	New Hanover
Camden (6)	Voorhees
	Audubon
	Gloucester City
	Pine Hill
	Gibbsboro

	Laurel Springs
Cape May (3)	Stone Harbor
	Sea Isle City
	Dennis Township
Cumberland (4)	Hopewell Township
	Deerfiled Township
	Greenwich Township
	Downe Township
Essex (3)	Maplewood
	Millburn
	Bloomfield
Gloucester (2)	Harrison Township
	Monroe Township
Hudson (1)	East Newark
Hunterdon (8)	Kingwood
	Tewksbury
	Lambertville
	Bloomsbury
	Raritan Township
	Califon
	Stockton
	Alexandria Township
Mercer (4)	West Windsor
	hopewell Township
	Hamilton
	Hopewell
Middlesex (5)	South River
	East Brunswick
	Piscataway
	Spotswood
	Dunellen
Monmouth (11)	Spring Lake
	Fair Haven
	Freehold Township
	Lake Como
	Sea Bright
	Sea Girt
	Atlantic Highlands
	Upper Freehold
	Neptune City
	Englishtown

	Deal
Morris (12)	Morris Township
	Morristown
	Roxbury
	Randolph
	Montville
	Rockaway Township
	Denville
	East Hanover
	Florham Park
	Mine Hill
	Netcong
	Boonton Township
Ocean (5)	Toms River
	Lacey
	Beach Haven
	Ocean Gate
	South Toms River
Orange (1)	Orange City
Passaic (3)	North Haledon
	Pompton Lakes
	Prospect Park
Salem (6)	Pilesgrove
	Lower Alloways Creek
	Mannington
	Oldmans Township
	Carneys Point
	Woodstown
Somerset (8)	Bernards Township
	Montgomery
	Branchburg
	Watchung
	Raritan
	Bedminster
	Green Brook
	South Bound Brook
Sussex (6)	Newton
	Wantage
	Hopatcong
	Byram
	Stanhope

	Hampton Township
Union (9)	Springfield
	Union Township
	Roselle
	Linden
	Rahway
	Elizabeth
	Kenilworth
	Mountainside
	Scotch Plains
Warren (4)	Knowlton Township
	Liberty Township
	Belvidere
	Hope
Total	134

Appendix F: E-Participation Evaluation Index

#	Measures	Example or Alternative Scale	0	1	2	3	Score
1	Does the site allow users to provide comments or feedback to individual departments/agencies through online forms?	0=No; 1= Departments/agencies post phone numbers or fax numbers for submitting comments or feedback; 2=Departments/agencies provide an e-mail (mail to) for submitting comments or feedback; 3=Several departments allow users to provide comments or feedback through online forms.					0
2	Does the site allow users to provide comments or feedback to elected officials?	0=No; 1= Governor/Mayor or elected officials have e-mail posted; 2= Both governor/mayor and elected officials have e-mail posted; 3=In addition to e-mails posted, the site allows users to provide comments or feedback to elected officials through an online form.					0
3	Is there a subscribe option available for the newsletter or listserv?	0=No; 1=There is a subscribe option available for the newsletter or listserv. 2= There is an unsubscribe option available for the newsletter or listserv.				X	0
4	Does the site have online bulletin board for gathering citizen input on public issues? ("Online bulletin board" means a website where citizens can posts ideas, comments, or opinions without specific discussion topics)	0=No; 1=the site has online bulletin board or chat capabilities for gathering citizen input on issues; 2=the site has online bulletin board or chat capabilities which can search authors and key words.				X	0

5	Does the site offer an online discussion forum or chat capabilities on policy issues? ("Online discussion forum" or "chat capabilities" means a website where the gove't arranges public consultation on policy issues and citizens participate in discussing those specific topics)	0=No; 1=The site has no online discussion forum, but the site posts a notice of gathering citizens' opinion about policy issues through e-mail, fax, or telephone; 2=The site has online discussion forum; 3=The site has online discussion forum and posted past discussion subjects and results.					0
6	Participants on online forums (1 point for each factor, maximum=3).	+1 point: participation of public officials as discussants; +1 point: participation of experts on the issue (posting opinions about the issue or participation as discussants); +1 point: existence of a forum moderator.					0
7	Formats of online forums (I point for each factor, maximum=3.)	+1 point: e-mail notice about new messages; +1 point: provides summary of discussion at regular intervals (daily, weekly, or monthly); +1 point: provides opportunities for citizens to suggest discussion topics.					0
8	Does the site have scheduled e-meetings for discussion? ("E-meeting" means real-time discussion which takes place at the specific appointed time in a synchronized way so that participants can exchange opinions simultaneously)	0=No; 1=the site has scheduled e-meetings for discussion between citizens; 2=the site has scheduled e-meetings for discussion between citizens and public officials; 3=In addition, the site posted past e-meeting subjects and results.					0
9	Number of online discussion forums or e-meetings for the past year. (including online discussion forums and scheduled e-meetings)	0= No; 1= one time in the past year; 2= two times in the past year; 3= more than three times in the past year.					0
10	Does site site offer online surveys/polls for specific issues?	0=No; 1=the site offers online survey/polls for specific issues; 2= In addition, the site posted results of past online survey/polls; 3=The site shows real time					0

		results of current online survey/polls.					
11	Number of online surveys/polls for the past year. (including online surveys and online polls, excluding those off-line)	0= No; 1= one time in the past year; 2= two times in the past year; 3= three or more times in the past year.					0
12	Does the site offer synchronous video of public events?	0=No; 1=the site offers asynchronous or archived (not live) video of public events; 2=the site offers live or synchronous video of public events; 3= the site offers live or synchronous video of public events and has a mechanism for online users to provide comments or questions.					0
13	Does the site allow users access to an online citizen satisfaction survey?	0=No; 1=the site offers contact information about participation in a citizen satisfaction survey; 2=citizen satisfaction survey can be completed through online forms; 3=the site allows users to complete 311 citizen satisfaction surveys.					0
14	Are survey results published on the site?	0=No; 1=the site offers contact information for obtaining results to a citizen satisfaction survey ; 2=citizen satisfaction survey results can be downloaded from the website; 3=citizen satisfaction survey results are in a searchable database online.					0

#	Question	Scoring					
15	Does the site offer tools for online decision-making? (e-petition, electronic citizen juries, e-referenda) Note.E-petition or electronic petition is a formal request to a government agency, signed by a number of citizens online, to raise issues of concern.	0=No; 1= one category; 2=two categories; 3= three categories Note (continued).Electronic citizen juries consist of a group of representative citizens who take evidence about issues over an extended period, deliberate online and recommend conclusions to government. E-referenda or online referenda refer to asking the whole population to vote online on issues, thereby introducing or amending policies).					0
16	Does the site encourage citizens to post information, photos, and videos?	0=No; 1=the site encourages citizens to post information, photos, and videos.			X	X	0
17	Does the site list specific departments/agencies users can make 3-1-1 service calls to?	0=No; 1=the site lists specific departments/agencies ueser can make 3-1-1 service calls to.			X	X	0
18	Does the site allow users to engage in real-time chat or instant messaging?	0=No; 1=the site allows users to engage in real-time chat or instant messaging with the IT manager; 2=the site allows users to engage in real-time chat or instant messaging withgov't employee; 3=the site allows users to engage in real-time chat or instant messaging with elected official.					0

Appendix G: E-Participation Evaluation Results

Ranking	Municipality	County	E-Participation
1	Maplewood	Essex	6.67
2	Springfield	Union	5.83
3	Morris Township	Morris	5.63
4	Bernards Township	Somerset	5.42
5	Montgomery	Somerset	5.42
6	Newton	Sussex	5.42
7	Fair Lawn	Bergen	5
8	South River	Middlesex	5
9	West Windsor	Mercer	5
10	Morristown	Morris	4.79
11	Branchburg	Somerset	4.58
12	Hopewell Township	Mercer	4.58
13	Spring Lake	Monmouth	4.58
14	Union Township	Union	4.58
15	Voorhees	Camden	4.58
16	Roselle	Union	4.42
17	East Brunswick	Middlesex	4.17
18	Harrison Township	Gloucester	4.17
19	Linden	Union	4.17
20	Lumberton	Burlington	4.17
21	Rahway	Union	4.17
22	Toms River	Ocean	4.17
23	Roxbury	Morris	3.96
24	Fair Haven	Monmouth	3.75
25	Franklin lakes	Bergen	3.75
26	Freehold Township	Monmouth	3.75
27	Hamilton	Mercer	3.75
28	Hammonton	Atlantic	3.75
29	Lacey	Ocean	3.75
30	Millburn	Essex	3.75
31	Mount Holly	Burlington	3.75
32	Piscataway	Middlesex	3.75
33	Stone Harbor	Cape May	3.75
34	Monroe Township	Gloucester	3.54
35	Teaneck	Bergen	3.54
36	Watchung	Somerset	3.54
37	Kingwood	Hunterdon	3.5
38	Audubon	Camden	3.33

39	Bloomfield	Essex	3.33
40	Delran	Burlington	3.33
41	Elizabeth	Union	3.33
42	Maple Shade	Burlington	3.33
43	North Haledon	Passaic	3.33
44	Oakland	Bergen	3.33
45	Orange City	Orange	3.33
46	Randolph	Morris	3.33
47	Raritan	Somerset	3.33
48	Lake Como	Monmouth	3.21
49	Longport	Atlantic	3.13
50	Montville	Morris	3.13
51	Rockaway Township	Morris	3.13
52	Willingboro	Burlington	3.13
53	Hillsdale	Bergen	3.04
54	Tewksbury	Hunterdon	3.04
55	Beach Haven	Ocean	2.92
56	Bogota	Bergen	2.92
57	Denville	Morris	2.92
58	Ocean Gate	Ocean	2.92
59	Paramus	Bergen	2.92
60	Sea Bright	Monmouth	2.92
61	Sea Girt	Monmouth	2.92
62	Waldwick	Bergen	2.92
63	Kenilworth	Union	2.83
64	Lambertville	Hunterdon	2.71
65	Mountainside	Union	2.71
66	River Vale	Bergen	2.71
67	South Toms River	Ocean	2.71
68	Spotswood	Middlesex	2.71
69	Edgewater	Bergen	2.58
70	Atlantic Highlands	Monmouth	2.5
71	Bloomsbury	Hunterdon	2.5
72	East Hanover	Morris	2.5
73	Englewood	Bergen	2.5
74	Florham Park	Morris	2.5
75	Garfield	Bergen	2.5
76	Gloucester City	Camden	2.5
77	Maywood	Bergen	2.5
78	Pine Hill	Camden	2.5
79	Scotch Plains	Union	2.5

80	Sea Isle City	Cape May	2.5
81	Upper Freehold	Monmouth	2.5
82	Wantage	Sussex	2.5
83	Pompton Lakes	Passaic	2.42
84	Hopatcong	Sussex	2.29
85	Hopewell	Mercer	2.29
86	Hopewell Township	Cumberland	2.29
87	Bedminster	Somerset	2.21
88	Prospect Park	Passaic	2.21
89	Byram	Sussex	2.08
90	Delanco	Burlington	2.08
91	Dennis Township	Cape May	2.08
92	Green Brook	Somerset	2.08
93	Raritan Township	Hunterdon	2.08
94	Weymouth Township	Atlantic	2
95	Northfield	Atlantic	1.96
96	Pilesgrove	Salem	1.92
97	Mine Hill	Morris	1.88
98	Saddle Brook	Bergen	1.88
99	Netcong	Morris	1.79
100	Beverly	Burlington	1.67
101	Boonton Township	Morris	1.67
102	Burlington Township	Burlington	1.67
103	Califon	Hunterdon	1.67
104	Gibbsboro	Camden	1.67
105	Knowlton Township	Warren	1.67
106	Liberty Township	Warren	1.67
107	Lower Alloways Creek	Salem	1.67
108	New Hanover	Burlington	1.67
109	Palisades Park	Bergen	1.67
110	Pleasantville	Atlantic	1.67
111	Mannington	Salem	1.5
112	Cresskill	Bergen	1.46
113	Deerfiled Township	Cumberland	1.46
114	Greenwich Township	Cumberland	1.46
115	Laurel Springs	Camden	1.46
116	Dunellen	Middlesex	1.38
117	Oldmans Township	Salem	1.33
118	Carneys Point	Salem	1.25
119	Downe Township	Cumberland	1.25
120	Stanhope	Sussex	1.25

121	Woodstown	Salem	1.25
122	Estell Manor	Atlantic	1.04
123	Hampton Township	Sussex	1.04
124	Neptune City	Monmouth	1.04
125	Belvidere	Warren	0.83
126	East Newark	Hudson	0.83
127	Englishtown	Monmouth	0.83
128	South Bound Brook	Somerset	0.83
129	Deal	Monmouth	0.75
130	Hope	Warren	0.63
131	Stockton	Hunterdon	0.54
132	Alexandria Township	Hunterdon	0.42
133	Folsom	Atlantic	0.21
134	Harrington Park	Bergen	0.21