CITIZEN TRUST OF GOVERNMENT
IN THE CONTEXT OF CITIZEN-CENTERED ADMINISTRATION:
PERFORMANCE, INFORMATION TECHNOLOGY, PARTICIPATION, AND
SOCIAL CAPITAL

By

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written under the direction of
Marc Holzer
and approved by

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ABSTRACT OF THE DISSERTATION

Citizen Trust of Government
In the Context of Citizen-Centered Administration:
Performance, Information Technology, Participation, and Social Capital

By Xiang Yao

Dissertation Chair:
Marc Holzer

Drawing primarily on rational choice theory, the principal-agent model, deliberative democracy theory, and social capital theory, this study empirically investigates how local government administration performance, information transparency and technology, citizen participation in local governance, and individual-level social capital affect government trustworthiness; what roles that administration performance plays between citizen trust and other proposed predictors; and whether local government managerial process influences state and federal government credibility.

Cross-sectional online citizen survey was employed to administer questionnaires to CivicPanel registered members in July 2013. Using data from 528 valid responses, structural equation model and descriptive statistics reveal that (a) average government trustworthiness is relatively low throughout local, state, and federal levels, and decreases from local to state to federal government; (b) high administration performance, adoption of social media or electronic subscription to distribute information, and variety of citizen participation avenues boost government trustworthiness; however, the more citizens are involved in community activities or associations, the less they trust in government; (c)
reliable government information disclosure and high levels of interpersonal trust with other people directly contribute to citizen confidence in government and indirectly affect government trustworthiness through facilitating administration performance; (d) stability of the e-government system and the true influences of participation on policy making are positively associated with administration performance, which promotes government trustworthiness; (e) older people, females, and Democrats tend to have less trust in government; and (f) local government managerial process indeed has effects on state and federal government trustworthiness.

Thus the determinants of government trustworthiness are multi-dimensional, with administration performance being pivotal. Also, a joint Outcome-Process perspective is essential for a complete picture of government trustworthiness. To achieve a satisfactory level of citizen trust in government, politicians and administrators should seek a balance between citizen-centered value and institutional performance. The study indicates a need to develop collaborative administration from passive responsiveness to genuinely involving citizens and cross-government agencies in policy making and implementation. Information technology plays a key role in shaping citizen trust in government, and information technology should not only deliver managerial efficiency but also play a role in promoting democracy, e-participation, and e-governance.
I dedicate this Dissertation to

my Father, Mr. Yuefeng Yao, my Mother, Mrs. Fenghua Guo

and my Husband, Mr. Chunfeng Hao

for their constant support, encouragement, and unconditional love!
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I want to end my acknowledgement with my sincere gratitude and devotion to my motherland, China! No matter how immature the government administrative capability is and how many social problems there are right now, I appreciate our government for providing an environment in which we could do fair competition and free selection. Otherwise, I wouldn't have this opportunity to study abroad. Our government and society has progressed a lot in the past thirty years. And, I believe it do will be a much more developed, prosperous, democratic, and civilized nation in near future!
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CHAPTER ONE

INTRODUCTION

This chapter introduces, first, the background of the study. It is of enormous importance to democratic government to maintain public trust of government, and abundant studies have already investigated a variety of determinants of government trustworthiness. Nevertheless, citizen trust in government has been steadily decreasing in the past several decades, according to major public opinion studies and media news. This paradoxical phenomenon, therefore, initiates the original motivation to continue exploring the predictors of citizen trust in government from understudied perspectives, so as to discover potential theoretical and managerial implications concerning how to promote citizen confidence in government.

Next, the chapter presents the purpose of the study, which is to propose a new perspective for exploring the precursors of government trustworthiness. The third section concentrates on the significance of the study. The last section is a brief summary of the outline of the whole study.

Background of the Study

Maintaining a certain level of citizens’ trust is a core concern for democratic governance, stable political life, and public administration. Not only is maintenance of citizen trust of enormous importance for preserving the legitimacy and stability of a democratic regime, but it also enables political leadership to promote social cooperation, to obtain citizen compliance or commit resources for collective action without coercion,
and to create the environment that political leaders need to succeed (Thomas, 1998; Newton, 2001; Feldheim and Wang, 2003; Kim, 2005; Tolbert and Mossberger, 2006; Yang and Holzer, 2006; Keele, 2007; Kim, 2010). As a matter of fact, as far back as the Spring and Autumn Period of China (771 BC-476 BC), Confucius had already put forward that the faith of the people in their rulers is the most important requisite of a government (Chapter 7, Book XII Yen Yuan, *Confucian Analects*, translated by James Legge, 1893).

However, the general public trust in government has continuously declined since the 1960’s. Whereas approximately 70% of citizens trusted the federal government “Just about always” or “Most of the time” in 1958, by 2013 the percentage had dropped to around 20%\(^1\) (See Figure 1-1).

**Figure 1-1 Public Trust in Government: 1958-2013**

![Figure 1-1 Public Trust in Government: 1958-2013](http://www.people-press.org/2013/10/18/trust-in-government-interactive/)

Although suspicion of the government is part of the democratic political culture (Ruscio, 1996) and a sign of health for the political ecosystem (Nye, Zelikow, and King, 1997), the persistent decline in the public’s trust in government is a concern (Miller, 1974; Ruscio, 1996; Nye, Zelikow, and King, 1997; Orren, 1997). Hence, an immense amount of research has been conducted regarding what factors led to this persistent decrease in public trust of government (Thomas, 1998; Brewer and Sigelman, 2002; Bahry, Kosolapov, Kozyreva, and Wilson, 2005; Catterberg and Moreno, 2005; Yang and Holzer, 2006; Wang and Van Wart, 2007; Kim, 2010; Van Ryzin, 2011). The explored influential factors include national economic and political situations (Chanley, Rudolph, and Rahn, 2000; Mishler and Rose, 2001; Kim, 2010); government and public service delivery performance (Miller, 1974; Mishler and Rose, 2001; Chanley, Rudolph, and Rahn, 2000; Kim, 2005; Yang and Holzer, 2006; Vigoda-Gadot, 2007; Wang and Van Wart, 2007; Kim, 2010); public personnel ethics and competency (Chanley, Rudolph, and Rahn, 2000; Kim, 2005; Vigoda-Gadot, 2007; Wang and Van Wart, 2007); e-government and use of government websites to interact with government (Welch, Hinnant, and Moon, 2005; Tolbert and Mossberger, 2006); citizen participation in policy-making and performance evaluation processes (Berman, 1997; Wang, 2001; Beierle and Konisky, 2000; Kim, 2005; Yang and Holzer, 2006); information strategy and better communication with citizens (Berman, 1997); and citizen–state relationships (Christensen and Lagreid, 2005; Kim, 2010).

As indicated by the number of works cited in the previous paragraph, government and government performance are obviously the most studied antecedents of public trust.
Most performance-centered studies concentrate on the effects of outcome-related factors on citizens’ trust in government (Vigoda and Yuval, 2003; Kim, 2005; Kim, 2010). However, some recent studies have triggered increasing examination of assumptions regarding to what extent the “outcome” could ease citizens’ suspicion of the government (Van Ryzin, 2011). Some scholars have proposed that “process” or process-related factors also have significant impacts on the public’s trust of government (Wang and Van Wart, 2007; Van Ryzin, 2011). Van Ryzin (2011, P. 755) directly asserts that “public perceptions of the trustworthiness of civil servants depend not just on the extent to which government succeeds at delivering outcomes to citizens, but also on getting the process right by treating people fairly, avoiding favoritism, and containing corruption.” Thus it is important to study the influences of process-based factors on citizen trust of government.

The new public service theory emphasizes responsive operation of government to meet public needs and preferences, to make meaningful contributions to society, and to build trust relationships with and among citizens (Denhardt and Denhardt, 2007). Effective and responsive governance is achieved through collective efforts, collaborative processes, and the sharing of interests, responsibility, and leadership with the people who are served. The new public service theory attaches great importance to citizenship, democratic values, and service concepts, and it values public interests rather than just institutional productivity. Therefore it is important to study why citizens trust government from the perspective of citizen-government interaction processes. Most government-citizen interaction involves some form of administrative responsiveness. Applying for a welfare benefit program, pleading not guilty to a citation, asking for necessary information, or reporting a rude public official all involve administrative responsiveness.
Administrative responsiveness is an important public value and function that entails numerous factors that influence citizens’ attitudes. Public officials’ efficiency and attitude, along with the speed, accuracy, and outcome of the response, might directly or indirectly affect citizens’ interest in, experience of, and feelings about government. Even if citizens get what they expect from the procedure, an unpleasant experience can exert negative impacts on their attitudes and trust of the government.

Moreover, with the development of the Internet and mobile networks, information transparency and new technology have become inevitable influential factors in shaping citizen perceptions of government (Welch, Hinnant, and Moon, 2005; Tolbert and Mossberger, 2006). Citizens require prompt and reliable government information announcements, efficient communication avenues, and stable e-government systems that assure the efficiency of information transactions between citizens and government. Any information or communication blockage, error, or slowness might lead to citizens misunderstanding government policies and reduction in public trust.

Both the social capital theory and the civic-centered new public service theory assert the necessity of civic involvement in governance and the positive impacts of citizen involvement on shaping citizen perceptions of government (Berman, 1997; Wang, 2001; Beierle and Konisky, 2000; Kim, 2005; Yang and Holzer, 2006). The literature shows that involving citizens in the policy-making process not only contributes to citizens’ willingness to interact with government and improves the consistency between citizen expectations and government policy, but ultimately leads to a better understanding between citizens and government and improves government trustworthiness.
Social connections are another important consideration in administrative responsiveness. Especially on the local government level, it is possible for citizens to be acquainted with frontline bureaucrats through membership in the same associations. Bureaucrats might give more attention to citizens with whom they are familiar and give more support to their demands, resulting in better attitudes and more trust regarding the government. Meanwhile, good interpersonal relationships between bureaucrats and citizens might lead to better attitudes toward the bureaucrats and local governments the citizens interact with.

Finally, trust-related studies in government often focus on the correspondence between the public agencies that the citizens encounter and the governments that citizens trust. The usual rationale is that interaction with a local public agency will influence citizens’ trust in local government, and that interaction with a state or federal agency will influence trust in the state or federal government. Yet, is it really possible to rigorously cut off the interplay among governments on different levels? Why can’t we assume that factors in the administrative responsiveness of local government also impact a citizen’s trust in the state and federal governments? And what is the impact of administrative responsiveness on public trust at different levels of government?

**Purpose of the Study**

As a consequence, this study will empirically test which of the factors that citizens perceive in local government managerial processes impact the public’s trust in local, state, and federal governments, from the perspective of administration performance, information transparency and technology, citizen participation in local government
policy-making processes, and individual-level social capital. The study primarily addresses the following two questions: (1) How do performance, information technology, citizen participation, and social capital affect government trustworthiness? (2) Do the factors at the local government level have an impact on citizens’ trust in the state and federal government? If so, what is the difference among different government levels? Are the impacts on the same level, or does each have its own pattern?

The purpose of this study is to provide a comprehensive and operationalized measurement of public trust in government, to compare different causes of public trust in government in the context of citizen-centered administration, and to provide suggestions on how to improve managerial process-related factors to enhance public trust in local, state, and federal government.

**Significance of the Study**

The foundation and starting point of this study is the importance of maintaining and restoring a fairly high level of public trust in government for modern democratic governance. Only if the factors influencing public trust are determined can public agencies proactively take measures to effectively eliminate negative factors and promote positive ones, in order to prevent the decline of public trust and to restore that trust accordingly.

Second, and most importantly, this study fills previous research gaps in three aspects. Above all, it studies public trust from both process and outcome perspectives; this process-outcome joint perspective has received little attention in prior research (Van Ryzin, 2011). It cannot be denied that government performance outcomes have the most
obvious and direct impression on citizens. Outcomes that are consistent with citizens’ expectations reflect a government’s emphasis on and competency in satisfying citizens’ requests and needs. Nevertheless, process-related factors—such as administrators’ benevolence, integrity, and dedication to the common good; information transparency; e-government stability; and citizen participation in policy making—also frame citizens’ attitudes toward the government. This study situates public trust in a procedural context that combines process and outcome as an entirety and explores their impacts on public trust together.

Furthermore, this study proposes a structural causal relationship and identifies administration performance as the central point between government trustworthiness and other precursors. Although some scholars have employed the structural equation model (SEM) to explore what factors affect government trustworthiness (Morgeson, VanAmburg, and Mithas, 2010; Van Ryzin, 2011; Kim and Lee, 2012), most prior studies hypothesize a flat causal relationship between trust and its predictors, in which predictors have direct impacts on citizen trust in government. This study uses SEM to explore not only the direct influences of these predictors on trust, but also their indirect effects on government trustworthiness through administration performance. For the predictors that do not have direct effects on trust, the total effects will be employed to demonstrate statistical significance level, which is seldom presented in previous studies. Even for prior studies using SEM to test the structural causal relationship between trust and assumed precursors, few have used performance as the intermediate variable. Therefore, the advanced statistical methodology of the structural equation model fits a certain research gap and is an important contribution of this study.
In addition, this study explores the determinants of government trustworthiness from both internal managerial procedure and the external societal environment. It compares different influential factors of public trust from the performance, information transparency, e-government, and citizen participation perspectives, as well as the social capital perspective. First, the managerial procedure is a multidimensional system. Citizens’ attitude toward government is affected by a variety of factors in this procedure. Therefore, any single perspective is not sufficient to portray an overall picture of government trustworthiness. Second, the innumerable connections between government and society make societal factors inevitable in investigating predictors of citizen trust in government. Although a lot of studies have been conducted regarding how social capital affects government trustworthiness or government performance, few concentrate on empirically examining how social capital exerts indirect impacts on trust through influencing administration performance.

Finally, federalism sets up a relatively loose and independent government system rather than a stringent hierarchical superior-subordinate administrative relationship. Previous studies always assert a correspondence between public agencies and public trust in government, such as local government–citizen trust in local government, and federal government–citizen trust in federal government. It might seem, therefore, that citizens’ experience with a local or state government would have little impact on their attitudes toward the federal government. However, this study examines whether an interaction between local government and citizens would change citizens’ trust in governments on different levels, specifically local, state, and federal. It aims to explore the important functions of local governance in the State apparatus.
In essence, this is a study of which factors in the context of citizen-centered administration in local government impact citizens’ trust in local, state, and federal government. As such, it will fill current research gaps and have important theoretical and practical implications.

Outline of the Study

In six chapters, this study investigates what government trustworthiness is and how it is shaped by administration performance, information transparency and technology, citizen participation in local governance, and individual level social capital.

Chapter 1 introduces the background of the study, which is the coexistence of two contradictory phenomena: the importance of maintaining a certain level of government trustworthiness and the continuous decline of citizen trust since the 1960’s. Then, this chapter presents the purpose of the study, which is to investigate the determinants of government trustworthiness from four perspectives: performance, information transparency and technology, citizen participation, and social capital. In addition, this chapter specifically explains the significant contribution of the study and outlines the organization of the study.

Chapter 2 elaborates the literature on government trustworthiness from two aspects: summing up the definition of citizen trust in government and summarizing the antecedents of government trustworthiness from political, economic, societal, technical, and demographic perspectives. Based on the literature review and four important theories, such as the rational choice theory, principal-agent model, transparency theory,
deliberative democracy theory, and social capital theory, this chapter brings up its theoretical framework for studying the determinants of government trustworthiness.

Chapter 3 concentrates mainly on the hypotheses and methodology of this study. First, it provides 11 research hypotheses regarding what factors affect citizen trust in government. Then, it explains what research methods will be employed to collect data and test the hypotheses, and the reasons for choosing these methods. Next, this chapter introduces the unit of analysis, population, and sampling strategy of the study. In the fourth section, it presents how the survey questionnaire was developed and the specific survey procedure. The survey response rate and sample representation are presented next. The chapter ends with an explanation of how each variable is measured by survey questions, and a preliminary examination of the measurement reliability through principal component (factor) analysis and Cronbach’s alpha test.

Chapter 4 introduces the status quo of government trustworthiness to illustrate the necessity of exploring its determinants. Then it describes, respectively, the overall state of administration performance, information transparency and technology, citizen participation in policy making, and individual-level social capital, which are the major predictors of government trustworthiness assumed by the research hypotheses.

In Chapter 5, a correlation matrix is presented to examine whether regression analysis is necessary or not, and to investigate and solve the multicollinearity problem. Then, the structural equation models are used to test the research hypotheses through two steps: measurement model and structural model. After that, the findings from the results will be discussed with regard to the direct, indirect, and total effects of each variable on government trustworthiness.
Chapter 6 introduces the theoretical contributions and managerial implications of this study and discusses the limitations of the study. Based on the limitations, this chapter will make suggestions for future research directions. Finally, Chapter 6 will present an overall conclusion for the whole study.
CHAPTER TWO
LITERATURE REVIEW AND THEORETICAL FRAMEWORK

This chapter summarizes prior literature regarding the definition, significance, and determinants of citizen trust in government. Based on the literature review, it then puts forward a theoretical framework, which proposes administration performance, use of information technology, citizen participation in policy making, and social capital as four major antecedents of government trustworthiness.

**Literature Review**

*Trust* is an elusive term for a complicated and multifaceted concept (Feldheim and Wang, 2003; Grimmelikhuijsen, 2012). Although numerous scholars have studied citizen trust in government from various aspects, consensus on a generally accepted definition has never been reached. Table 2-1 displays some definitions of citizen trust in government, excerpted from prior studies. Some consistent components can be found in these definitions. First, *trust in government* is citizens’ confidence that government is operated in accordance with public interests and expectations rather than the interests of public officials or public institutions. Moreover, citizens unconditionally entrust public officials and public agencies, even if they do not have control or surveillance over them, as both public officials and public institutions are citizens’ trustees. Hence, in this study, *public trust of government* refers to citizens’ confidence in the public institution and in public officials’ ethics and competence, and the belief that they will perform in the best interests of society and in accordance with the normative expectations of society in the
absence of constant scrutiny. Honesty, fairness, benevolence, and competence are four key qualities that a trusted government and public officials should possess.

**Table 2-1 Definitions of Citizen Trust in Government in Prior Studies**

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<tr>
<td>Miller 1974, P.952</td>
<td>A basic evaluative or affective orientation toward the government</td>
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<td>Miller and Listhaug 1990, P.358</td>
<td>The judgment of the citizenry that the system and the political incumbents are responsive, and will do what is right even in the absence of constant scrutiny</td>
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<tr>
<td>Feldheim and Wang 2003, P.65</td>
<td>Public trust is…an aggregate of mutual trust, fiduciary trust, and social trust that concerns the attitude of the public toward an administration</td>
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<tr>
<td>Kim 2005, P.621</td>
<td>Public trust derived from the citizens’ willingness to be vulnerable based on a belief that government and public employees will meet the expectations of credible commitment, benevolence, honesty, competency, and fairness without regular monitoring</td>
</tr>
<tr>
<td>Tolbert and Mossberger 2006, P.355</td>
<td>Trust in government is an evaluation of whether or not political authorities and institutions are performing in accordance with normative expectations held by the public</td>
</tr>
<tr>
<td>Vigoda-Gadot 2006, P.293</td>
<td>Trust in government and in public administration is the level of faith or confidence citizens have in state authorities and in administrative branches of various kinds</td>
</tr>
<tr>
<td>Wang and Van Wart 2007, P.266</td>
<td>Public trust is the public confidence in the integrity of public officials to be fair and to uphold the public interest, as well as confidence in the competence of government to carry out its assigned duties</td>
</tr>
<tr>
<td>Newton 2008, P.242</td>
<td>Political trust is the belief that those in authority and with power will not deliberately or willingly do us harm, if they can avoid it, and will look after our interests, if this is possible</td>
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<tr>
<td>Kim 2010, P.803</td>
<td>Public trust in government can be assessed by the extent to which citizens have confidence in public institutions to operate in the best interests of society and its constituents</td>
</tr>
<tr>
<td>Grimmelikhuijsen 2012, P.54</td>
<td>There are three often-mentioned dimensions of perceived trustworthiness, competence, benevolence and honesty</td>
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</tbody>
</table>

Citizens’ trust of government plays an important role in modern democratic governance. It is the legal foundation of a democratic political system (Thomas, 1998;
Kim, 2010); it encourages citizens to accept government authority, support policy implementation, increase individual voluntary compliance with rules, and provide important resources for a government (Chanley, Rudolph, and Rahn, 2000; Kim, 2005; Yang and Holzer, 2006; Kim, 2010); it facilitates the willingness of bright young people to join public institutions (Nye, 1997; Yang and Holzer, 2006); and it helps to resolve the tension between political accountability and managerial flexibility (Kim, 2005).

The antecedents of citizen trust of government can be categorized into five aspects: political, economic, social, technical, and demographic. At the same time, trust of government can be classified into individual-level factors that concentrate on individual characteristics, and contextual-level factors that focus on organizational characteristics (Thomas, 1998; Rahn and Rudolph, 2005). Some studies have also viewed public trust from the perspectives of process-based factors and outcome-based factors (Van Ryzin, 2011). In this study, the predictors of public trust in government are organized according to the five aspects mentioned above, and each category is divided into individual and institutional factors. Each aspect of individual-level and institutional-level factors is further divided into two groups: process-related and outcome-related factors (See Table 1).

**Political Factors.** On the individual-process level, the effects of the following factors on government trustworthiness have been explored: public official ethics (Feldheim and Wang, 2003; Kim, 2005; Vigoda-Gadot, 2007; Wang and Van Wart, 2007; Van Ryzin, 2011); public official competence (Kim, 2005; Wang and Van Wart, 2007); benevolence and honesty of public officials (Kim, 2005; Wang and Van Wart, 2007); public spirit of public officials (Ruscio, 1996; Feldheim and Wang, 2003); and citizen

On the individual-outcome level, political efficacy (Rahn and Rudolph, 2005) and citizen-government interaction and government responsiveness (Tolbert and Mossberger, 2006) are important factors influencing public trust.

On the institutional-process level, organizational politics and political culture (Vigoda-Gadot, 2007); local government form, ideological polarization (Rahn and Rudolph, 2005); citizen satisfaction with direction of country, and presidential approval (McNeal et al., 2008) are associated with citizen trust of government.

On the institutional-outcome level, the national political situation, such as political reform, political corruption and scandals, and the evolution of the democratic political culture (Chanley, Rudolph, and Rahn, 2000; Mishler and Rose, 2001; Kim, 2010); public service delivery performance in environment protection, reduced unemployment, crime control, and public health (McNeal et al., 2008; Van Ryzin, 2011); managerial quality and administrative performance (Vigoda and Yuval, 2003); citizen satisfaction with public service (Van Ryzin et al., 2004; Vigoda-Gadot, 2006); performance measurement (Yang and Holzer, 2006); government transparency (Meijer, 2009; Grimmelikhuijsen, 2012; Kim and Lee, 2012); and citizen-state relationships (Christensen and Lagreid, 2005; Kim, 2010) have been shown to have significant impacts on public trust of government.

Economic Factors. On the individual level, quality of life in the community, personal economic perceptions, and homeownership have been found to be associated
with citizen trust of government (Rahn and Rudolph, 2005). On the institutional level, citizens’ perception of the national economic situation (Chanley, Rudolph, and Rahn, 2000) and income inequality in the administrative region (Rahn and Rudolph, 2005) are important influential factors in public trust of government.

**Social Factors.** According to the social capital theory, involvement in social organizations can increase citizens’ social interaction, enhance social skills, and increase interpersonal trust among citizens. Citizens’ involvement with social networks (e.g., voluntary organizations), civic education (Ruscio, 1996), and interpersonal trust (Ruscio, 1996; Newton, 2001; Catterberg and Moreno 2005; Rahn and Rudolph, 2005) have been shown to be important antecedents of public trust of government. Furthermore, Shi (2001) empirically proved that political culture, measured by hierarchical orientation and conflict avoidance, was significantly associated with political trust during the democratization of Taiwan.

**Technical Factors.** With the development of technology and the Internet, government websites are playing increasingly important roles in responding to citizens’ demands. Citizen use of government websites to interact with government (Tolbert and Mossberger, 2006); better information strategies and communication with citizens (Berman, 1997); improved government responsiveness through local government websites (Tolbert and Mossberger, 2006); and citizen satisfaction with government website transactions, transparency, and interactivity (Welch, Hinnant, and Moon, 2005) have been shown to be associated with citizen trust of government.

**Demographic Factors.** Government affiliation, such as government employee or family member of a government employee (Sigelman, 2002); education and income
(Brewer and Sigelman, 2002; Mladenka, 1981); race (Howell and Fagan, 1998); age
(Tolbert and Mossberger, 2006); ethnicity (Brewer and Sigelman, 2002; Bahry et al.,
2005; Rahn and Rudolph, 2005); gender (Brewer and Sigelman, 2002); and political party
affiliation (Brewer and Sigelman, 2002; McNeal, Hale, and Dotterweich, 2008) have
been found to be important influential factors in public trust of government.

Limitations of Previous Studies. Citizen trust in government, and the factors that
influence it, is an ongoing topic in politics, policy, and administration. A great abundance
of studies have explored numerous predictors of government trustworthiness from the
perspectives of politics, economics, society, technology, and individual demography.
However, there are still three major limitations that this study tries to address.

First, most existing literature concentrates on outcome perspectives, but few
emphasize procedural perspectives when exploring the predictors of government
trustworthiness (Van Ryzin, 2011). Although government performance outcome exerts
the most obvious and direct impression on citizens, and in turn affects citizens’ attitude
toward government, process-related factors should play an increasingly important role in
shaping government credibility. Particularly in citizen-government interaction processes,
citizens are not only concerned about the response they get from the government and how
quickly they get it; they also care about what happens in the process, such as the
benevolence of the administrators, the transparency of the information disclosure, the
stability and convenience of using e-government to do transactions with government, and
whether citizen inputs have real impacts on policy making. Hence, it is necessary to study
public trust in a procedural context that combines process and outcome factors as an
entirety and explores their impacts on public trust together.
Second, most existing literature highlights a direct causal relationship from precursors to citizen trust in government, and estimates how the hypothesized factors simultaneously influence government trustworthiness. However, predictors might have not only direct effects on citizen trust in government; they might also indirectly exert influences through another/other factor(s). Perhaps some factors only have indirect impacts on government trustworthiness through an intermediate variable. Put another way, the causal relationship between predictors and citizen trust might not be a flat one, that is, from multiple factors directly to trust, but rather a structure in which predictors influence citizen trust both directly and indirectly. Therefore, this study will explore both direct and indirect effects of predictors on citizen trust in government.

Third, previous studies usually examine the correspondence between public agencies and public trust in government at specific levels, such as local government–citizen trust in local government, state government–citizen trust in state government, and federal government–citizen trust in federal government. Few studies examine what factors affect citizen trust in government across government levels. In particular, previous studies seldom focus on how local governance impacts state or federal government trustworthiness. Nevertheless, even in federalism, which sets up a relatively loose and independent government system, it is still of interest to examine whether local government administration influences not only local government trustworthiness but also citizen trust in state and federal government.
### Table 2-2 Antecedents of Public Trust of Government

<table>
<thead>
<tr>
<th>Category</th>
<th>Individual-Level</th>
<th>Institutional-Level</th>
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<tr>
<td></td>
<td>Process</td>
<td>Outcome</td>
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<tr>
<td><strong>Political Factors</strong></td>
<td>Public official ethics (Feldheim and Wang, 2003; Kim, 2005; Vigoda-Gadot, 2007; Wang and Van Wart, 2007; Van Ryzin, 2011); public official competence (Kim, 2005; Wang and Van Wart, 2007); public spirit of public officials (Ruscio, 1996; Feldheim and Wang, 2003); citizen empowerment and participation (Yang and Holzer, 2006; Wang and Van Wart, 2007; Kim, 2010)</td>
<td>Political efficacy (Rahn and Rudolph, 2005); citizen satisfaction with public service (Van Ryzin, etc., 2004; Vigoda-Gadot, 2006); citizen-government interaction and government responsiveness (Tolbert and Mossberger, 2006)</td>
</tr>
<tr>
<td><strong>Economic Factors</strong></td>
<td>Quality of life in community, personal economic situation, homeownership (Chanley, et. al., 2000; Rahn and Rudolph, 2005)</td>
<td>Local governmental expenditure (Titus, 1981); Income inequality (Rahn and Rudolph, 2005)</td>
</tr>
<tr>
<td><strong>Social Factors</strong></td>
<td>Association with social networks, civic education (Ruscio, 1996)</td>
<td>Interpersonal trust and social capital (Ruscio, 1996; Newton, 2001; Rahn and Rudolph, 2005)</td>
</tr>
<tr>
<td><strong>Technical Factors</strong></td>
<td>Improved government responsiveness through local Web site (Tolbert and Mossberger, 2006)</td>
<td>Satisfaction with government website transaction, transparency, and interactivity (Welch, Hinnant, and Moon, 2005)</td>
</tr>
<tr>
<td><strong>Demographic Factors</strong></td>
<td>Race, ethnicity, ideology (Howell and Fagan, 1988; Rahn and Rudolph, 2005; Bahry, etc., 2005); political party affiliation (Cook and Gronke, 2005; McNeal, etc., 2008); income, education, age (Goldfinch, Gauld, and Herbison, 2009); personal ties with government (Brewer and Sigelman, 2002)</td>
<td>Racial fractionalization, population size (Rahn and Rudolph, 2005); geographic and social characteristics of the population (Heintzman and Marson, 2005)</td>
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Theoretical Framework of the Study

This section develops the theoretical framework of this study, based primarily on the rational choice theory, principal-agent model, deliberative democracy and collaborative administration theory, and social capital theory. The study recognizes administration performance, information transparency and technology, citizen participation in local governance, and social capital as four important determinants of government trustworthiness. Of these, information transparency and technology, citizen participation, and individual-level social capital, in addition to having direct impacts on citizen trust, also indirectly contribute to government credibility through promoting administration performance (See Figure 2-1 for Theoretical Framework Diagram).
Figure 2-1 Theoretical Framework of the Study Figure
Administration Performance and Government Trustworthiness

According to the rational choice theory, the granting of trust is an economic exchange between trustees and trustors. And, whether trustors grant trust is determined by calculating the ratio of the probability the official is trustworthy and the probability the official is untrustworthy, and the ratio of potential gain and loss if the trustee is untrustworthy (Colman, 1990; Biano, 1994). The promise of a beneficial return is a critical incentive to grant trust (Colman, 1990; Biano, 1994). Hence, trust is a reflection of how well the external objective is achieved, and “political trust is expressed by people who feel that their political system and its politicians generally perform satisfactorily” (Newton, 2001, P. 211). If a government agency or its administrators can deliver services efficiently, provide public goods and services that meet citizens’ expectations, and show strong capability when interacting with citizens, it grants citizens confidence that government is capable of fulfilling its responsibilities, protecting citizens’ benefits, or even exceeding expectations.

A substantial body of research has demonstrated that citizens evaluate government trustworthiness through monitoring the performance of the president, Congress, and the administration (Bianco, 1994; Brehm and Rahn 1997; Kim, 2005; Keele, 2007). For instance, Bianco (1994) asserted that constituents tend to grant trust to representatives only under the condition that the chance of achieving favorable policy outcomes is increased. Brehm and Rahn (1997) empirically demonstrated that government economic performance, such as unemployment and inflation control, is an important precursor of government trustworthiness. If it is evident that administrators have the capacity and integrity to meet citizens’ expectations, citizens tend to grant trust
toward government in return (Keele, 2007). On the contrary, a perception of political and administration malfunction in reducing corruption and poverty exerts significant negative impacts on citizen trust in government (Kim, 2005).

Administration performance, which is one of the important components of overall government performance, has been emphasized by many scholars to be highly associated with citizen trust of government (Orren, 1997; Mishler and Rose, 2001; Vigoda and Yuval, 2003; McNeal et al., 2008; Kim, 2010; Morgeson and Petrescu, 2011; Van Ryzin, 2011). First, government service quality is a key element of administration performance. If a government agency can deliver services efficiently, and provide public goods and services that satisfy citizens’ needs, it grants citizens confidence that government is able to fulfill its responsibility, protect citizens’ benefits, or even do better than their expectations. Therefore, government service quality involves two dimensions: objective service efficiency and subjective citizen satisfaction.

On one hand, the efficiency of service delivery, which assures timely, accurate, easy service delivery, is a significant indicator of service quality and a crucial precursor of government trustworthiness. For example, public service delivery performance in environment protection, reduced unemployment, crime control, and public health (McNeal et al., 2008; Van Ryzin, 2011), along with managerial quality and administrative performance (Vigoda and Yuval, 2003), have significant positive impacts on citizen trust of government. Morgeson and Petrescu (2011) suggested that “the ease of obtaining services and the timeliness and efficiency of the delivery of services” positively promote citizen satisfaction with government, which ultimately contributes to increased citizen confidence and trust in government. Wang and Van Wart (2007) concluded that
only the participation processes that eventually lead to the improvement of public services could promote government credibility, and a trustworthy government should be result oriented.

On the other hand, not only objective efficiency manifests government service quality and affects citizen attitudes toward government; the subjective evaluation of administrative outcomes is also an important element of service quality and influences government credibility. That is, the greater the consistency between citizens’ expectations and services provided, and the more satisfied the citizens are with government services, the more citizens trust in government (Van Ryzin et al., 2004; Welch, Hinnant, and Moon, 2005; Vigoda-Gadot, 2007; Wang and Van Wart, 2007; Morgeson and Petrescu, 2011). For instance, Van Ryzin et al. (2004), using data from 2000 and 2001 telephone surveys of New York City residents, found that overall satisfaction with local government services was positively associated with citizens’ confidence in local government for all groups across income, race, and geography. Welch, Hinnant, and Moon (2005), using data from the Council on Excellence in Government, whose phone survey used a random-digit-dialed sampling technique in November 2001 to sample 806 adults including 155 Internet users, indicated that website satisfaction and e-government satisfaction were positively associated with citizen trust in government. Vigoda-Gadot (2007), using national survey data of 2,281 individuals in Israel, gathered over five consecutive years (2001–2005), pointed out that citizens’ satisfaction with 18 public services at the national level (including hospitals, schools, courts, employment and transportation services, and three government ministries) was a significant contributor to citizens’ trust in government. Wang and Van Wart (2007) indicated that government service competency, which is
measured by development of services that the public needs and the capability to achieve high citizen satisfaction, statistically significantly contributes to government trustworthiness. Morgeson and Petrescu (2011) empirically proved that the correspondence between citizen service expectations and the real services received from government, along with easily obtained, timely, efficient service provided by government, were significantly positively associated with citizen satisfaction with government service, which leads to more trust toward government.

Moreover, administrators, who structure administration process and channel public input into public decisions, remain an essential part of the governing framework. In particular, street-level administrators, “who interact directly with citizens in the course of their jobs, and who have substantial discretion in the execution of their work” (Lipsky, 2010, P. 3), have considerable discretionary power in determining whether formulated policies are implemented according to policymakers’ expectations, and in determining the amount and quality of benefits or sanctions that citizens actually experience (Keiser, 1999; Riccucci, 2005; Lipsky, 2010). Therefore, whether in traditional face-to-face interaction or in interaction through a government website, frontline administrators play an important role in shaping government impressions on citizens. Even in the online formats, polite, capable, efficient, and honest administrators will provide a more pleasant experience than ill-mannered, inept, or dishonest ones. As a consequence, administrators’ performance is an important constituent of administration performance that shapes citizens’ experience of and attitudes toward government.

Competent administrators, who possess “the knowledge and skills necessary for effective operations with the aim of maintaining or increasing organizational productivity”
tend to attain citizens’ trust (Vigoda, 2000; Kim, 2005; Wang and Van Wart, 2007). Citizens are inclined to feel more comfortable and to have less stress when confronted with skilled and professional administrators (Vigoda, 2000). For example, Wang and Van Wart (2007) concluded that service competency, which “concerns an administration’s ability to develop goods and services that the public needs and its ability to achieve high public satisfaction,” is an important mediating factor in the positive impact of public participation on citizen trust in government.

Administrators’ ethical behavior, characterized by “stress(ing) integrity, loyalty to the values of public service, and ethical competence in administrative agencies” (Wang and Van Wart, 2007, P. 269), also exerts significant impacts on citizens’ trust in government (Thomas, 1998; Shi, 2001; Feldheim and Wang, 2003; Kim, 2005; Vigoda-Gadot, 2007; Wang and Van Wart, 2007). Ruscio (1996) pointed out that “trust is one of those issues in the social sciences that is unavoidably intertwined with the values of the people involved in a relationship” (P. 473). For instance, Thomas (1998) claimed that “lying and misuse of power” erodes trust in government. Feldheim and Wang (2003) empirically tested the ethics-trust relationship, using a national survey conducted in early 2000 of chief administrative officers in cities with a population larger than 5,000. In that study, administrative ethics were measured by the dimensions of integrity, which is “a reputation for honesty and truthfulness”; openness, which refers to “the willingness to expose information or share ideas” (P. 66); loyalty, which is “both an interpersonal and an institutional aspect embodied by respect for the public interest and by acting in ways that promote it”; ethical competence, defined as “the capability to develop and implement ethical values and activities”; and service consistency, which is “the predictability of a
continual level and quality of service” (P. 67). The findings indicated that all five dimensions of administrative ethics significantly improved citizen trust in government. Public officials’ integrity (honesty), openness, and loyalty to public interests have stronger impacts on public trust than the other two factors.

In addition, Shi (2001) empirically proved that if government officials give equal and fair treatment to citizens when citizens have problems needing the help of government, and pay attention to people’s opinions when making policy, citizens tend to be more trusting of government. Moreover, Kim (2005) constructed an integrative model of the antecedents and consequences of public trust. Although it lacked empirical demonstration, this model included three important ethical factors as predictors of public trust: **credible commitment**, meaning public officials act according to action standards; **honesty**, which is avoiding or decreasing corruption and fraudulent behavior and adhering to ethical standards; and **fairness**, whereby “public officials treat citizens equally through adhering to a set of rules or principals that are consistent with the citizens’ common sense about government” (P. 627). Furthermore, Wang and Van Wart (2007), using the same dataset as that used in Feldheim and Wang’s (2003) study, empirically assessed and demonstrated that public officials’ ethical behaviors—measured by **integrity**, referring to “a reputation for honesty and truthfulness” (P. 269); **loyalty**, defined as “dedication to the common good, not personal loyalty” (P. 269); and **ethical competence**, which is “administrators’ ability to develop and implement ethical values and activities” (P. 269)—are positively associated with public trust in government. In addition, Vigoda-Gadot (2007) also showed that citizens’ perception of public officials’ ethics level,
including impartiality, honesty, equality, and fairness, is a positive predictor of citizens’ satisfaction with public services and public trust in government.

To sum up, administration performance, which comprises government service quality, administrator competency, and ethical behavior, is a key precursor of government trustworthiness. The more efficient, satisfactory, competitive, and ethical the government behavior, the more trust citizens tend to grant to the government.

Information, Performance, and Government Trustworthiness

Asymmetric information between trustees and trustors is another important influential factor in yielding a trust relationship, according to rational choice theory. For example, Bianco (1994) claimed that “Constituent trust is a rational response to asymmetric information” (P. 150) and concluded that a lack of understanding or limited access to information would cause constituents’ uncertainty about the proposals, which is one of the two factors that impact the trust relationship between representatives and constituents. As an extension of Simon’s (1972) conclusion about bounded rationality in a chess game, incomplete information about the set of alternatives, uncertainty about the consequences that would follow from each alternative, and limited cognitive capability of the environment complexity might lead to people’s bounded rationality in decision making (rather than making an optimal decision), which might result in failure to maximize self-interest. This conclusion illustrates that sufficient communication of information plays an important role in decisions to grant trust. It is expected that complete communication of information between the trustees and trustors contributes to the trustors’ mastering of the advantages and disadvantages of alternative options (so that
trustors can make optimal/self-interest-maximization decisions), and promotes mutual trust.

The principal-agent model provides a similar vision regarding information barriers and their significance, as the rational choice theory did (Moe, 1984). In this model, there is a contracting or hierarchical relationship between the principal and agent, in which the agent is “hired” by the principal to choose actions that produce outcomes desired by the principal. Nevertheless, due to the asymmetrical information distribution between principals and agents, such a relationship could result in adverse selection and moral hazard rather than principal benefit maximization. For example, in a democratic government, if citizens are seen as principals, administrators could be considered as agents. Nowadays, due to professionalism and information advantages, administration increasingly involves policy-making procedures. Administrators take on more responsibilities that used to be the realm of elected officials, and have more discretion in distributing citizen benefits, which makes the administrator-citizen relationship very similar to the principal-agent relationship. Administrators have more information about their true “type” (honesty, personal goals, policy positions) and their true performance, which is hard for citizens to acquire. The lack of internal information increases the difficulty for the public to oversee administrators’ performance and for assuring the achievement of public interest. Therefore, information disclosure and sufficient communication between administrators and citizens play an important role in shaping citizens’ attitude toward administrators and government.

Adequate information disclosure and communication between administrators and citizens is also a crucial component of Government Transparency, which implies
governmental openness to citizen scrutiny, timely and precise information disclosure, and convenient and fast citizen-government communications (Piotrowski and Van Ryzin, 2007; Kim, 2010; Park and Blenkinsopp, 2011). Government should be operated in a transparent atmosphere in which both internal and external operations and transactions are accessible to public scrutiny (Feldheim and Wang, 2003). And information transparency has been indicated as an important positive influential factor in public trust in government by prior literature (Heald, 2006; Heikkila and Isett, 2007; Park and Blenkinsopp, 2011; Kim and Lee, 2012; Grimmelikhuijsen, 2012). For example, Heald (2006) asserted that “transparency can be counterpoised with trust” and that “transparency is expected to contribute positively to trust by building credibility” (P. 62). Heikkila and Isett (2007), using data from a study of nine special districts in Texas, posited that the degree of openness and transparency in communities might nurture mutual trust between citizens and government. Based on survey data collected by the local government of Yeongdeungpo-gu in South Korea as a part of the evaluation of its Public Project Quality Management OK System, Park and Blenkinsopp (2011) empirically demonstrated that sufficient governmental information disclosure and citizen access to the progress and situations of public projects is positively associated with public trust in government. Kim and Lee (2012), using 2009 web-based survey data gathered by the Seoul Metropolitan Government, proposed an e-participation and public trust in government model, in which e-participants’ assessment of government’s transparency is positively associated with their trust in the government. Grimmelikhuijsen (2012) asserted that the comprehensibility and timeliness of the relevant information are the two important dimensions of performance outcome transparency. And it has been empirically
proven that the comprehensibility and timeliness of government performance outcome information disclosure positively affect citizens’ knowledge of government performance outcome, which leads citizens to perceive the government organization as more competent and benevolent (Grimmelikhuijsen, 2012).

Furthermore, with the development and introduction of information and communication technology (ICT) into the governmental system, or so-called e-government (Chadwick and May, 2003; Xu, 2012), advanced technology has been incorporated into the information and service delivery process. And, the involvement of information technology in the daily running of government has tremendously changed citizen-government interaction patterns and has been an unavoidable influential factor of citizen attitudes toward government.

E-government refers to the electronic delivery of government information and services, and the provision of online participation avenues via the Internet or other digital means 24 hours per day, seven days per week (Norris, Fletcher, and Holde, 2000; Norris and Moon, 2005; Tolbert and Mossberger, 2006). It is argued that the use of e-government has the potentiality to drive government performance, such as reducing the cost of information and service delivery, overcoming the barriers of time and distance to perform government responsibility, improving the efficiency and citizen perceptions of information and service provision, promoting citizen-government interaction, increasing the accessibility of underrepresented groups with government, and enhancing citizen satisfaction with government (Chadwick and May, 2003; Welch, Hinnant, and Moon, 2005; Tolbert and Mossberger, 2006; Morgeson, VanAmburg, and Mithas, 2010).
Meanwhile, the direct impacts of e-government on citizens’ trust in government have also received increasing attention in recent studies (Welch, Hinnant, and Moon, 2005; Talbert and Mossberger, 2006; Goldfinch, Gauld, and Herbison, 2009; Morgeson, VanAmburg, and Mithas, 2010). Using data from a national, random-digit-dialed telephone survey with 815 self-reported government website users, conducted by the Pew Internet and American Life Project, Tolbert and Mossberger (2006) asserted that e-government, which is measured by whether citizens visit federal, state, and local government websites and how frequently they visit, “can increase process-based trust by improving interactions with citizens and perceptions of responsiveness.” Moreover, Morgeson, VanAmburg, and Mithas (2010), using data from the American Customer Satisfaction Index study’s cross-sectional, random-digit-dialed sample of 787 end users of U.S. federal government services, found that citizens who prefer to adopt e-government as their main approach to interacting with government tend to express more confidence in that particular agency for performance excellence in service delivery.

Nevertheless, the existing studies on the impacts of e-government usage on public trust also have some negative or nonsignificant conclusions. For example, McNeal, Hale, and Dotterweich (2008) proved that citizen-initiated interaction with government in the context of e-government, which is measured by methods to “E-mail government officials, look for information on government website, and apply for benefits online,” does not have a significant impact on citizens’ trust of government. Morgeson and Petrescu (2011) also found a negative impact of e-government adoption on public trust in government.
In short, prior literature shows that information transparency and technology not only are important drivers for promoting government trustworthiness through enhancing administration performance, but also exert direct impacts on citizen trust of government.

*Citizen Participation, Performance, and Government Trustworthiness*

Citizen participation in political and administrative process is an ongoing significant research topic in politics, policy, and administration. It sits at the core of several important theories, including *deliberative democracy*, which is defined as “informed participation by citizens in the deliberative process of community decision making” (Weeks, 2000, P. 361); *participatory democracy*, which calls upon a direct association between citizens and the policy-making processes (Fischer, 1993); the *collaborative administration* theory, the nature of which is “negotiation, participation, cooperation, free and unlimited flow of information, innovation, agreements based on compromises and mutual understanding, and a more equal distribution and redistribution of power and resources” (Vigoda, 2004, P. 709), and the *new public service theory* (Denhardt and Denhardt, 2011).

Based on the Wang and Van Wart (2007) definition, citizen engagement denotes the involvement of citizens in administrative functions and decision making, and this involvement is achieved through the availability of participation models (P. 271). A plethora of studies have been conducted to explore the importance of participation (Irvin and Stansbury, 2004; Fung, 2006), the varieties of participation (King, Feltey, and Susel, 1998; Fung, 2006), participation and government performance (Kweit and Kweit, 2004; Heikkila and Isett, 2007; Nshkova and Guo, 2010), and how public participation affects
government credibility (Wang and Van Wart, 2007). The enthusiasm for incorporating citizens into administrative decision making rests on the merits of the process and its advantageous outcomes. It is asserted that the citizen participation mechanism plays an important role in increasing policy and administration representativeness, exerting popular pressures that compel authorized administrators to act justly, and enhancing political equality (Fung, 2006); promoting organizational performance (Neshkova and Guo, 2010); expert administrators obtaining knowledge, competence, or resources to make good judgments and decisions (Fung, 2006); educating citizens to understand technically difficult situations and educating administrators about citizen preferences, so as to reduce the rifts between public administrators and the public, and to obtain more cooperation from the public (Irvin and Stansbury, 2004; Fung, 2006); citizens gaining some control over the policy process (Irvin and Stansbury, 2004); and reducing citizen cynicism toward government (Irvin and Stansbury, 2004).

Although the traditional perspective of the participation–performance nexus holds that “the engines of bureaucracy and democracy run on different tracks, leaving from different stations and heading for different destinations” (Gawthrop, 1997, P. 205), a few efforts have explored the positive impacts of citizen engagement on government performance (Neshkova and Guo, 2010). It is argued that citizens possess local knowledge that is a complement to administrators’ specialized expertise, and can propose innovative solutions that would lead to better resource allocation decisions; besides, citizen input allows public officials to better understand public priorities and reduce wasteful projects, which in turn leads to better efficiency (Neshkova and Guo, 2011). For example, through comparing citizen participation mechanisms in post-flood recovery in
Grand Forks, North Dakota, and East Grand Forks, Minnesota, Kweit and Kweit (2004) concluded that citizen beliefs—that the cities attempted to involve citizens into local governance and that citizens had an effect on government decisions—had a substantial influence on citizen evaluations of recovery success. Using data from a large survey within the 2005 Government Performance Project, Neshkova and Guo (2010) contended that there is not necessarily a trade-off between the values of democracy and bureaucracy. And, public participation in administrative decision making is positively and significantly associated with better service in terms of both efficiency and effectiveness. Therefore, citizen participation in the administrative process is considered to contribute to government performance.

Furthermore, there is another argument that citizen participation plays an important role in directly ameliorating government trustworthiness (Yang and Holzer, 2006; Wang and Van Wart, 2007; Kim, 2010; Van Ryzin, 2011). To maximize citizen interest through highly efficient government operation is crucial to maintaining citizen trust toward government. And, in order to accurately acquire citizen interest, it is essential to establish an effective participation mechanism to encourage citizen expression and input in administration and policy making. For instance, Yang and Holzer (2006) asserted that involving citizens in the government performance evaluation process or improving citizens’ perception of government performance could increase citizen trust in government. Similarly, based on a national survey conducted in early 2000 of chief administrative officers in cities with a population larger than 5,000, Wang and Van Wart (2007) empirically proved that under the intermediation of public officials’ administrative integrity and service competencies, the general public participation index (an aggregated
variable combining participation models, participation function, and participation in decision making) significantly contributes to citizen trust in government. Furthermore, based on the 2003, 2004, and 2006 Asia Barometer Survey data collected from citizens in Japan and South Korea, Kim (2010) claimed that citizen empowerment significantly contributes to citizen trust in government in both countries. In addition, using World Bank WGI data, Van Ryzin (2011) concluded that process-related indicators such as “Voice and Accountability [which] measures the extent to which a country’s citizens are able to participate in selecting their government” are significant for the formation of public trust in government.

By and large, theories and previous studies primarily contended that involving citizens in government policy-making and administrative decision-making processes contributes to the enhancement of government performance and also improves government trustworthiness. Combined with the theoretical view of the performance-trust relationship, the participation-performance-trust correlation could be summarized as follows: Citizen participation has direct positive impacts on government trustworthiness, and also indirectly promotes citizen trust in government through improving government performance.

**Social Capital, Performance, and Government Trustworthiness**

*Social capital* is a property of communities. It refers to the generalized trust and social connections that prescribe cooperation in large-scale collective action settings and improve the efficiency of society (Putnam, 1993, 1995; Boix and Posner, 1998; Knack, 1999; Keele, 2007). According to Boix and Posner’s (1998) study, there are three origins
of social capital. First, if uncooperative actors value future payoffs of a stable cooperation and are willing to interact again and again, social capital will be initiated. Second, social capital could emerge through collaboration interactions that take place in associations that produce either public goods or private goods. Third, a sufficiently powerful third party could compel untrusting individuals to facilitate cooperation and to overcome the collective action dilemmas, and social capital is generated.

Two prevailing viewpoints regarding the social capital–government trustworthiness relationship have been intensively studied in prior literature. First, social capital has an indirect contribution to citizen trust in government through enhancing government performance. The performance–trust nexus has been discussed above. As for the social capital–performance relationship, it has been widely demonstrated that social capital can improve government performance through four major pathways: increasing government accountability, facilitating agreement where political preferences are polarized and developing community-oriented concerns, enhancing rule compliance from citizens and reducing the cost of enforcing and implementing governmental policies, and bringing in greater innovation in policy making in the face of new challenges (Putnam, 1993; Brehm and Rahn 1997; Boix and Posner, 1998; Knack, 1999; Rice, 2001; Knack 2002; Kneele, 2007). For instance, Putnam (1993) concluded that citizen engagement in community affairs, which is termed as social capital, powerfully influences the performance of local government and other social institutions in Italy. Another study by Putnam (2001) also indicated that civic engagement in informal associations and social trust has significant influences on the reduction of crime rate and tax evasion, and the improvement of economic inequality and civic inequality. Furthermore, Knack (1999)
claimed that social capital, which is measured by interpersonal trust, sense of civic responsibility, and engagement in voluntary activity, significantly contributes to state government performance in financial management, capital management, and information technology. Rice (2001) also found that local governments in towns high in social capital are viewed as more responsive and effective.

In addition, Boix and Posner (1998) summarized five models to explain how social capital produces government effectiveness. First, active civic participation in community activities facilitates the articulation of citizen demands and increases citizen awareness of political issues, which exerts supervision pressure on government officials to effectively and efficiently work to achieve citizens’ expectations. Second, social capital could reduce the costs of enforcing and implementing governmental policies, and government could then invest the saved costs to deliver more public services and goods to citizens. Third, social capital could promote good governance through reaching community-oriented concerns rather than working for particularistic interests. Fourth, social capital promotes government effectiveness through encouraging government bureaucrats to compromise with one another to cooperatively carry out their duties, and increasing the capacity of government officials to manage public agencies. Fifth, social capital could “foster accommodative practices among otherwise antagonistic elites” (P. 692).

Meanwhile, some studies support the idea that social capital also makes a direct contribution to government trustworthiness that is parallel with and even stronger than the trust-performance-trust relationship. It is argued that civic engagement in social or political organizations helps to improve citizens’ skills, such as listening, forming, and
discussing political opinions with other people or institutions, and building networks with people, which could enable citizens to better communicate their demands to public institutions, obtain a satisfactory response from government, and thus improve their perceptions of government (Schyns and Koop, 2010). In addition, people with a high degree of trust toward other people would have less fear of being taken advantage of by following government policies and civic norms, tend to grant more compliance to government, and are likely to cooperate more effectively, which might lead to more trust in government (Putnam, 1995; Brehm and Rahn, 1997; Mangum, 2010). For example, Brehm and Rahn (1997), based on General Social Survey (GSS) 1972-1994 data, concluded that interpersonal trust is positively associated with citizen confidence in government, while active civic engagement in social or political organizations has a negative impact on government trustworthiness. Keele (2007) empirically demonstrated that social capital, which is measured by civic engagement in community activity and interpersonal trust, exerts a powerful effect on citizen trust in government in the long run. Using a 2004 International Social Survey Programme (ISSP) dataset, Schyns and Koop (2010) empirically demonstrated a significant bi-directional causal relationship between social trust, which is an important component of social capital, and political trust. The more respondents perceive interpersonal trust, the more likely they are to trust government. Mangum (2010), based on 1996 National Black Election Study (EBES) data, contended that “African Americans who have social capital and those involved in social networks are more trusting of government than those African Americans who are not” (P. 595).
In general, the prior studies primarily proposed two kind of impacts of social capital toward government trustworthiness: directly exerting positive effects on citizen trust in government, and indirectly contributing to government trustworthiness through enhancing government performance. Therefore, this study will focus on how social capital directly affects citizen trust of government and indirectly exerts influences on government trustworthiness through government performance.

**Trustworthiness Transfers across Government Levels**

For most previous studies exploring determinants of government trustworthiness, there is a correspondence between the government level the influential factor is related to and its effects on citizen trust in that government. For example, if the hypothesized predictor pertains to the local government level, the study would test its influences on local government trustworthiness; if the assumed precursor pertains to the federal government level, the study would verify its effects on federal government trustworthiness. Logically, this conforms to the usual rationale that interaction with a local public agency will influence citizens’ trust in local government, and that interaction with a state or federal agency will influence trust in the state or federal government. However, people usually have a general concept of government that considers governments at different levels as a whole. Thus, citizen trust in government might be transferable among governments on different levels. For example, local government trustworthiness might lead to citizen trust in state and federal governments, and federal government trustworthiness might also cause an increase in citizen trust in local and state governments. Therefore, this study brings up a concept that government trustworthiness
is a transferable feature among local, state, and federal governments. If this theoretical assumption is supported, it is of great significance to the study of government trustworthiness, from both theoretical and practical perspectives.

In conclusion, this study will explore the determinants of government trustworthiness from four perspectives: administration performance, information transparency and technology, citizen participation in policy making, and social capital. In the course of this study it was noted that administration performance plays a mediation role between government credibility and the other three influential elements. Therefore, this study will also investigate how information transparency and technology, citizen participation, and social capital affect citizen trust of government through impacting administration performance. Meanwhile, it will also investigate whether local government performance, information technology, and participation at the local government level have significant impacts on state and federal government credibility.
CHAPTER THREE
HYPOTHESES AND METHODOLOGY

This chapter outlines the hypotheses and methodology of the study. First, it presents eleven specific research hypotheses based on the theoretical framework and respectively drawn from performance, information, participation, and social capital. A structural hypothesis model will be presented in the end of this section (See Figure 3-1 for Hypotheses Diagram).

The chapter also profiles the study’s research design; unit of analysis, population, and sample; survey questionnaire design and validation; variable measurement; and data collection procedure, response rate, and sample representation. The quantitative methodology used in this study relies primarily on a self-administered cross-sectional citizen survey and has two overall objectives: first, to describe the general status and variations in citizen trust in government and the antecedents of citizen trust in government; and second, to examine the assumed relationships between public trust and its predictors, and look for the best model fitting the data.

This chapter is organized into six subsections: (1) hypotheses of the study; (2) research design; (3) unit of analysis, population, and sampling; (4) questionnaire validation and survey procedure; (5) response rate and sample representation; and (6) measurement and reliability.
Hypotheses of the Study

Administration Performance

It is assumed that the perception of high administration performance—such as high government service quality, administrator competency, and ethical level—is positively related to citizen trust in government.

Hypothesis 1. Citizen perceived high administration performance of government is positively related to government trustworthiness.

Information Transparency and Technology

Reliable Information Disclosure. Citizens expect to have an overall view of the whole process as much as possible. For example, what are administrators’ decisions on citizens’ applications based on? What is the procedure for handling each case? What stage is my case in? Do I need to submit supplemental files? Has my case received equal treatment? Is my case being handled unfairly or inefficiently? Therefore, citizens need relevant information to estimate administrators’ and agencies’ working efficiency and outcome, so they can decide what step to take next. Timely and reliable information and communication that help resolve citizens’ problems are likely to improve citizens’ attitudes toward the government. Conversely, if responses to citizens’ requests are slow or delayed because of insufficient communication or information, or information disclosed is incorrect or irrelevant, it might mislead citizens or decrease agencies’ efficiency. And, once the error or irrelevance is uncovered, citizens’ attitudes toward
government could be lowered. Therefore, information transparency, first of all, involves reliable information disclosure.

Reliable information disclosure refers to timely, accurate, proper, and adequate dissemination of relevant information to the public, so as to let citizens correctly know what is going on inside the government. It has been found that the reliability of information disclosure is positively associated with citizens’ trust in government. For example, Welch, Hinnant, and Moon (2005) concluded that a high level of e-government information reliability positively contributes to higher e-government satisfaction, which is positively associated with citizen trust in government. Morgeson and Petrescu (2011) empirically proved that ease of obtaining and clarity of service information significantly increases citizen satisfaction with government service, which leads to more trust toward government. Hence, in this study, perceived reliable information disclosure is proposed to have positive impacts on government trustworthiness.

*Hypothesis 2a. Citizen perceived reliable government information disclosure is positively associated with citizens’ trust in government.*

*Methods of Information Disclosure.* Information transmission route is another important factor affecting information quality and citizen perceptions of government. With the development of the Internet and mobile communication technology, there are more and more alternative information distribution avenues that government can use to publicize information and interact with citizens. In particular, social media and electronic subscription have become an important optional avenue that government can take
advantage of. It has various features that make government-citizen information transactions quite convenient, such as promptness and immediacy in information release, bidirectional rather than unidirectional communication between government and citizens, open platform to collect public opinions, and portability. Therefore, government adoption of social media and electronic subscription methods to distribute information is assumed to contribute to citizen trust in government.

**Hypothesis 2b.** Government adoption of social media and electronic subscription methods to distribute information contributes to citizen trust in government.

**E-government Stability.** With the development of e-government strategy and its increasing facilitation in citizen-government interaction processes, it is necessary to maintain a stable government website system to assure the smooth operation of the e-government, 24-hour accessibility, fast download and upload capability, and a well-organized interface; as well as the ability to efficiently receive and convey citizens’ requests, applications, and demands through the website, securely store individual information and transact financial requests, and provide a positive user experience for citizens. Only the stable running of the website system could achieve the original intent of the e-government strategy to efficiently deliver services, save citizen-government interaction time, and make the government accessible 24/7. Otherwise, a slow running, unstable, insecure website could waste citizens’ time, decrease working efficiency of administrators, and lead to negative impressions of the government. As a consequence,
stability of the e-government system is proposed to be positively associated with government trustworthiness.

_Hypothesis 2c. Citizen perception of e-government system stability contributes to government trustworthiness._

Besides the direct impacts on government trustworthiness, elements of information transparency and technology, as indicated in the Theoretical Framework section of Chapter 2, are also proposed to have indirect influences on citizen trust through affecting administration performance. Therefore, it is hypothesized that citizen perceptions of reliable government information disclosure, use of social media to distribute government information distribution, and the stability of the e-government system are positively associated with administration performance, which leads to better government trustworthiness.

_Hypothesis 2d. Citizen perceived reliable government information disclosure (2d-1), government adoption of social media and electronic subscription methods to distribute information (2d-2), and stability of the e-government system (2d-3) are positively related to administration performance, which leads to the increase of government trustworthiness._
Citizen Participation

Participation Avenues. The availability and effective operation of the citizen participation avenues in the policy-making and administration process is of immense significance to truly achieving citizen empowerment. Hence, citizen involvement in the policy-making administration process is supposed to positively promote citizen trust in government. This is primarily reflected by municipal governments proactively collecting residents’ needs and wants using various participation avenues such as public hearings, community or neighborhood meetings, citizen advisory boards, citizen focus groups, citizen telephone hotlines, citizen surveys, legislative standing committees, and individual citizen representatives. The more participation avenues local government has for collecting citizens’ demands, the more citizens feel that government pays attention to them and works to benefit them. That might lead to more trust from citizens.

Hypothesis 3a: The variety of participation avenues that government provides for citizens to express their preferences and demands is positively associated with citizen trust in government.

Government Response to Citizen Participation. Deliberative democracy requires not only citizen expression and input in government policy-making and administration processes, but also authentic participation, meaning that citizen voice should have a real influence on administrative responsiveness decisions and on what actions government is going to take. According to King, Feltey, and Seseul (1998), authentic participation refers to “deep and continuous involvement in administrative processes with the potential for all
involved to have an effect on the situation” (P. 320). It is essential to ensure authentic participation, because not only does citizen participation in government decision making have advantages, but participation can also create hostility toward government if it is time-consuming for citizens, the participatory citizen group lacks representativeness and the policy proposal only stands to benefit a small group, or the participation has little authority to change policy (Irvin and Stansbury, 2004; Heikkila and Isett, 2007; Mizrahi, Vigoda-Gadot, and Cohen, 2010). For instance, Heikkila and Isett (2007) observed a certain cynicism toward government in a citizen focus group study, as citizens felt that their input into government performance management was only tokenism and box-checking. Mizrahi, Vigoda-Gadot, and Cohen (2010) also found that “citizens do not feel that they have a real say in decision-making processes and do not relate such participation with trust” (P. 122). On the contrary, if local government and public officials respond to citizens on the basis of citizen proposals and the wishes of the majority, it could improve citizens’ external efficacy and enhance citizen trust in government. Hence, it is assumed that if citizen participation in local policy-making processes has a true influence on government decisions, citizens tend to trust in government.

*Hypothesis 3b: Citizen participation that truly has the power to influence government decisions is positively associated with citizens’ trust in government.*

Furthermore, as noted in the Theoretical Framework section of Chapter 2, citizen participation not only has direct impacts on government credibility, but also affects citizen confidence in government through influencing administration performance.
Therefore, it is proposed that the variety of participation avenues that government provides for citizens to express their preferences and demands, and citizen participation that truly has the power to influence government decisions, are positively associated with administration performance, which leads to the increase of government trustworthiness.

\textit{Hypothesis 3c: The variety of participation avenues that government provides for citizens to express their preferences and demands (3c-1) and citizen participation that truly has the power to influence government decisions (3c-2) are positively associated with administration performance, which leads to an increase in government trustworthiness.}

\textit{Social Capital}

Prior studies mainly measure social capital by two dimensions: social or interpersonal trust, and social engagement in community activity (Brehm and Rahn, 1997; Knack, 1999; Putnam, 2001; Kim, 2005; Keele, 2007; Mangum, 2010). For example, Brehm and Rahn (1997) considered social capital as the “reciprocal relationship between civic participation” in associations and “interpersonal trust” (P. 1000). Knack (1999) constructed the concept of state-level social capital using three indicators: interpersonal trust, citizen response to census, and engagement in voluntary activities. Putnam (2001) contended that social capital should be measured by formal membership in associations, participation in informal networks, and social trust with others. Also, Kim (2005) measured social capital through social trust, which is the willingness to live with other people and how much sincere help one receives from neighbors in an emergent situation, and the categories of association involvement. In addition, Keele (2007)
claimed that “social capital is comprised of civic participation and trusting attitudes” (P. 242), and that it is measured by civic engagement in a community, state, or nation, and by interpersonal trust. Therefore, in this study, social capital also has two components, interpersonal trust and civic engagement in associations. Thus the social capital–government trustworthiness research question turns out to be how interpersonal trust and civic engagement affect citizen trust in government.

On the one hand, social trust, or so-called interpersonal trust, refers to “trust in other people” (Putnam, 1995). Some studies have explored social trust as an important precursor of political trust (Brehm and Rahn, 1997; Knack, 1999; Newton, 2001; Catterberg and Moreno, 2005; Keele, 2007; Back and Kestila, 2009). It has been contended that the more connection and interaction with other persons there is, the more interpersonal trust is developed, and that more trust in others leads to more trust of politicians and government. For example, Knack (1999) empirically demonstrated that the state-level social capital index, which is measured by interpersonal trust, citizen response to census, and engagement in voluntary activities, is significantly positively associated with state government performance. Also, through analyzing World Values Survey data (1991–1995) from 42 countries, Newton (2001) found a generally positive association between interpersonal trust, which is measured by the question “Generally speaking would you say that most people can be trusted, or that you can’t be too careful in dealing with people,” and political confidence in Parliament on an aggregate level. Catterberg and Moreno (2005) also empirically proved that interpersonal trust is significantly positively associated with political trust in most new and established democratic countries. It has also been empirically proved that interpersonal trust—which
is measured by belief in whether most people can be trusted, whether people try to be helpful most of the time, and whether most people try to take advantage of others—is positively associated with respondents’ confidence in government (Brehm and Rahn, 1997; Keele, 2007). Likewise, by using the first round of the European Social Survey data (2002/2003) from Finland, Back and Kestila (2009) empirically proved that interpersonal trust is significantly positively associated with public trust in politicians, parliament, and democracy. Schyns and Koop (2010), using the International Social Survey Programme (ISSP) dataset of 2004, empirically proved that social trust, or interpersonal trust, is significantly negatively associated with political distrust. Using data from the 1996 National Black Election Study (NBES), Mangum (2011) contended that interpersonal trust among African American citizens leads to more political trust of the Federal government. Therefore, interpersonal trust is presumed to directly positively affect citizen trust in government.

Hypothesis 4a: The more citizens trust other people, the more they trust in government.

On the other hand, “the same processes that suggest increased interpersonal trust leads to greater political trust at the individual level ... may be found at the group level through social networks” (Mangum, 2011, P. 591), that is, through participation in associations, voluntary organizations, religious institutions, and community groups. Social networks or civic engagement refers to “people’s connections with the life of their communities” (Putnam, 1995). It is assumed that citizen involvement in community activities and associations increases connections among members and contributes to more
trust among them. People with more trust in others tend to have more trust toward government as well. However, this assumption has not been widely confirmed by empirical studies, and the conclusions are relatively weak. Putnam (1993) did find that more civic engagement in community affairs leads to better local government performance in Italy. Keele (2007) maintained that citizen participation in community organizations, politics and public affairs, volunteering, and informal socializing is positively associated with public trust in government. On the other hand, using the cumulative combined cross-sectional data files of the General Social Survey (GSS) for 1972-1994, Brehm and Rahn (1997) found a negative impact of civic engagement (an index variable of civic participation in community) on respondents’ confidence in the executive branch of the federal government, Congress, and the U.S. Supreme Court. Back and Kestila (2009) failed to find a significant relationship between citizen organizational activity and public trust as well. Also, Mangum (2011) did not find a significant relationship between social network and political trust among African Americans. Although the conclusions of previous research do not converge, in this study, social network or civic engagement is assumed to be an antecedent to citizen trust of government. That is, the more citizens engage in social networks, the more they trust in government.

_Hypothesis 4b: At the individual level, a citizen’s involvement in community activities or organizations is positively associated with that person’s trust in government._
Meanwhile, the theoretical framework concluded that social capital not only has direct impacts on government trustworthiness, it also exerts indirect influences on citizen trust toward government through increasing government performance. Hence, both social trust and social network are presumed to indirectly contribute to citizen trust in government, with government performance as the mediator.

*Hypothesis 4c*: Citizens’ trust in other people (4c-1) and a citizen's involvement in community activities or organizations (4c-2) lead to administration performance improvement, which enhances government trustworthiness.

*Control Factors*

Aside from the targeted determinants of government trustworthiness, prior literature also indicates that several other influential factors should be involved into the empirical model. These factors include government employee experience, political efficacy, gender, age, education, race, household income, and political partisanship.

*Government Employee Experience*. Not everyone frequently interacts with local government. Some people have a lot of opportunity to deal with government, but others might not. If citizens are or have been a government employee, particularly in local government, they are more knowledgeable about the operation of government. It might be much easier and more convenient for citizens who have worked for government to interact with bureaucrats and public agencies than for those who have little experience with government. Besides, for people who have government working experience, their
public service motivation and job satisfaction might positively affect their perceptions of government.

*Political efficacy* has two facets: internal political efficacy and external political efficacy (Craig, 1979; Tedesco, 2011). *Internal efficacy* indicates the citizens’ belief that they have the means to influence government responsive processes and results, and that citizens have channels to express their willingness and requests. *External efficacy* is the citizens’ belief that local government genuinely responds to expressed demands; that is, citizens have real power to impact response and results. The effects of political efficacy on political trust have been studied for several decades (Craig, 1979; Parent, Vandebeek, and Gemino, 2004; Rahn and Rudolph, 2005; Kim, 2010). Parent, Vandebeek, and Gemino (2004), using survey data from 185 Canadian respondents, empirically proved that citizens’ perception of having an impact on political development (internal political efficacy) is significantly associated with political trust. Using data from the Social Capital Benchmark Survey (SCBS), Rahn and Rudolph (2005) empirically found that local political efficacy, which was measured by the question, “Overall, how much impact do you think people like you can have in making your community a better place to live (no impact = 1, small = 2, moderate = 3, big = 4),” is significantly positively associated with citizens’ trust in local government. However, based on the 2003, 2004, and 2006 Asia Barometer Survey data, Kim (2010) claimed that in Japan and South Korea the degree of power citizens have to influence government policy or actions does not have significant impacts on citizen trust in government.

Other important factors also exert impacts on citizen trust in government. For example, wealthier and better educated White citizens tend to have more knowledge of
the bureaucratic labyrinth and mechanism, as well as more technical skills to make contact with government, which might lead to a satisfactory responsiveness outcome and increased trust in government (Brewer and Sigelman, 2002; Mladenka, 1981). However, by conducting a quasi-experimental test of the political reality model, Howell and Fagan (1988) found that race exerts relatively weak direct impacts on political trust at the local level, and no direct impacts on political trust at the national level. Age is another possible antecedent of public trust in government. Tolbert and Mossberger (2006) claimed that older people tend to express less trust in government. However, Mangum (2011) drew a different conclusion: that among African American citizens, older people have more trust of government. In addition, male citizens have been found to have greater trust in the federal government than female citizens (Brewer and Sigelman, 2002).

Partisanship is another possible influential factor in public trust in government, but researchers have not reached a unified conclusion. McNeal, Hale, and Dotterweich (2008) found that citizens with a Republican Party affiliation tend to have more trust of government compared to those with a Democratic Party affiliation. But Brewer and Sigelman (2002) found that people with a strong Democratic Party affiliation have more trust of the federal government compared to those with a Republican Party affiliation.

In brief, the respondent’s working experience in government, political efficacy, gender, age, education, race, household income, and political partisanship will be included in the empirical model as control factors.
Research Design

This quantitative study relies on a self-administered web-based cross-sectional citizen survey to collect data. Principal component factor analysis, often called principal component analysis (PCA), and the Cronbach’s alpha estimation will be applied to construct reliable and valid measurement. Next, descriptive statistics will be used to describe the overview of government trustworthiness and its precursors, and a correlation matrix will be employed to test whether correlation and covariance exist among citizen trust and other variables, so as to provide evidence regarding whether it is necessary to conduct regression analysis. Finally, structural equation modeling (SEM) will be applied and constructed to verify whether the research hypotheses are supported or not.

Survey research “provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population” (Creswell, 2009, P. 12). Survey research on a portion of a given population can provide reliable results, “very much like censuses” (Babbie, 1973, P. 41). A cross-sectional citizen survey is used to check into the population or a representative subset of the population at one time point (Creswell, 2009). The reasons for choosing web-based survey as the primary data collection method for this study are outlined below.

First, survey research is an important quantitative design method for investigating citizen opinions toward government. By testing a selected sample, surveys can generate general propositions about the larger population. Second, citizen surveys, “especially self-administered ones—make large samples feasible” (Babbie, 2001, P. 268), which could improve the representativeness of the sample to the population. The high representativeness makes it easier to find statistically significant results. In addition, the
standardized citizen survey could increase the measurement reliability and validity to gather precise information and results, and the researcher’s and respondents’ personal biases can be eliminated as much as possible. Furthermore, a citizen survey is parsimonious, in that it focuses on a limited and accessible sample rather than studying the whole population. In particular, distributing a survey questionnaire via email is much more cost effective and convenient than distribution through face-to-face interview, phone interview, or mail. Finally, conducting a one-time citizen survey is more manageable and feasible than doing a longitudinal survey.

The regression analysis method is chosen because of the characteristics of the dependent variables and the assumed causal relationship between predictors and dependent variables. First, most independent variables are measured or generated based on 5-point Likert scale survey questions. Some control variables are categorical or dummy variables. In particular, the dependent variables—citizen trust in local, state, and federal government—are respectively created by four 5-point Likert scale indicators and are very likely numeric variables. In addition, the hypotheses have a hierarchical structure, such that administration performance is the intermediate variable between government trustworthiness and other determinants. Therefore, it is important that the statistical technique should be capable of exploring both direct and indirect influences from precursors to government trustworthiness. Hence, SEM is the best-fitted regression model to the hypotheses and dataset. Stata 13.0 software is used to construct an SEM model to retest measurement reliability and validity, and to examine the hypothesized structural causal relationships. Parameters are estimated by the maximum likelihood methods.
Confirmatory factor analysis (CFA) is used to validate the measurement model, and path analysis is applied to test the structural model.

**Unit of Analysis, Population, and Sampling**

The unit of analysis of this study is adult U.S. citizens 18 years of age and over. The questions asked about their opinions toward the federal, state, and local government, their interaction experience with local government (their perceptions regarding the local government administration performance, participation mechanism, local government transparency and information disclosure, e-government design and usage), and their sociological situations.

I surveyed the CivicPanel project (http://www.civicpanel.org/) panelists as research sample. The CivicPanel project is a university-based, nonprofit project that has more than 10 years of web-based citizen survey experience “for measuring the quality of life in communities across the US and the world and for providing citizen-driven feedback on the performance of local governments.”\(^2\) It also serves as “a cost-effective research tool for independent researchers who seek to understand what citizens think about important issues relating to government and public affairs.”\(^3\) The CivicPanel project currently has about 20,000 registered panelists who sign up over the Internet to participate in surveys. These panelists are “recruited from Craigslist postings, Google ads, web directories, and announcements sent by email to members of various nonprofit organizations that have partnered with CivicPanel (formerly eTownPanel) over the

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years.” So, it is important to point out that the panel is not a random sample and thus the results might not be scientifically projectable to the larger population. However, its experience in citizen survey and the adequate amount of registered panelists make it quite feasible and manageable for a junior researcher to reach out to survey respondents and gather sufficient valid responses for statistical analysis.

**Questionnaire Validation and Survey Procedure**

First of all, the survey instrument design adheres to theory and existing measurements to assure the measurement validity and reliability. Most questions are 5-point Likert scale questions, which, as much as possible, are clear, simple, and relevant, and avoid negative terms, biased items, and double-barreled questions (Babbie, 1973, P. 140-145). The survey instruments are primarily constructed based on the following seven sources as references: (1) 2010-2012 Evaluations of Government and Society Study of American National Election Studies⁵; (2) The American Customer Satisfaction Index⁶; (3) The 2013 National Citizen Survey⁷ by National Research Center, Inc.; (4) Pew Internet & American Life Project⁸; (5) Katz, Gutek, Kahn, and Barton (1977); (6) Herian, Hamm, Tomkins, and Zillig (2013); and (7) Wang and Van Wart (2007).

The survey was conducted from July 1st to July 31st, 2013, through two stages. On July 1st, 2013, the survey invitation letter was sent to all CivicPanel registered

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⁶ [http://www.theacsi.org/](http://www.theacsi.org/)
members. On July 10th, 2013, a reminder was sent out to those who had not completed or taken the survey. The response collection ended at midnight on July 31st, 2013.

**Response Rate and Sample Representation**

A total of 874 panelists (a response rate of approximately 4.37%) responded to the survey by July 31st, 2013. More than half of the responses (56.01%, 489) were received in the first 72 hours. Of the panelists who responded, 667 (76.32%) completed the survey. However, there were some duplicated and incomplete responses, which were invalid for final data analysis.

Duplicated responses are defined as two completed responses having the same email address (even if the IP address is different). If both responses answered more than 50% of the questions, I kept the earlier response. If only one response answered more than 50% of the questions, I kept the response that answered more questions. If neither answered more than 50% of the questions, I removed both. After this step, 622 (71.17%) responses remained.

The target population of this survey is U.S. citizens. Therefore, the 19 noncitizens’ responses were removed, resulting in a total of 603 (68.99%) valid responses. After dealing with missing data, there are ultimately 528 (60.41%) valid observations to be used in the descriptive analysis.

Among the 528 valid responses, only 19.51% (103) respondents have been government employees, while 80.49% (425) have never worked for any government. Working experience in government is almost evenly distributed among government levels. Of the 103 respondents who reported what government they worked for, 39
respondents (37.86%) have worked for a local government, 31 (30.10%) have worked for a state government, and 31 (30.10%) have worked for the federal government. Two respondents did not indicate what level of government they have worked for.

**Age.** 40.52% (214) respondents are 18-44 years old, 47.53% (251) are 45-64 years old, and 11.93% (63) are 65 or older. The specific percentage for each age group is as follows: 2.27% (12) are 18-24 years old, 17.23% (91) are 25-34, 21.02% (111) are 35-44, 23.48% (124) are 45-54, 24.05% (127) are 55-64, and 11.93% (63) are 65 or older. Compared to the 2010 National Census age distribution data (approximately 48% 18-44 years old, 35% 45-64 years old, and 13% 65 or older), the percentage of respondents in the 45-64 age range is a bit higher in the current survey. It is interesting to find that people in middle age, rather than younger people, show higher participation in this citizen survey. It might be because young people have less interest in political issues or in taking online surveys, even though they have more access to the Internet.

**Gender.** Most respondents (62.12%, 328) are female; males comprise only 37.88% (200) of the respondents. The female to male ratio is 164.00%, which is much higher than that of the 2010 National Census sex ratio of 103.25%. It should be noted that this biased sex distribution might lead to an error in analysis. So, female is coded as “1” so as to control its effects on government trustworthiness in regression models.

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Ethnicity. In this survey 84.09% (444) of respondents are White, about 12.09% higher than in the 2010 National Census (74.8%). The remaining 15.91% of respondents identified as members of other races, including 1.33% (7) American Indian or Alaska Native, 3.41% (18) Asian, 8.14% (43) Black or African American, 0.19% (1) Native Hawaiian or Pacific Islander, and 2.84% (15) Some other race. The overwhelmingly large number of White respondents would be another bias affecting analysis results. Hence, White is coded as “1,” and other choices are coded as “0” to control the effects of ethnicity on government trustworthiness in regression models.

Education. 27.84% (147) of respondents have a high school diploma or equivalent, 22.35% (118) have an Associate’s degree or equivalent, and almost half of the respondents have a Bachelor’s degree or above: 29.55% (156) have a Bachelor’s degree or equivalent, 17.61% (93) have a Master’s degree or equivalent, and 2.65% (14) have a Ph.D. or equivalent.

Partisanship. 42.99% (227) of respondents were Democrat, 19.13% (101) were Republican, 27.08% (143) were Independent, and 10.79% (57) belonged to another party or had no preference. Considering that almost half of respondents were Democrat, partisanship is controlled in regression estimations.

Household Income. In 2012, 42.80% (226) of respondents had a household income of less than $49,999, which is similar to the median income ($49,777) of the 2009 Census of Money Income of Households. 35.61% (188) had a household income

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between $50,000 and $99,000, and 21.60% (114) had a household income greater than $99,999.

In sum, as discussed above, the respondent selection primarily relies on self-interest in taking part in a citizen survey, rather than on a strict statistical selection technique such as random and stratified selection, leading to a somewhat uneven distribution for some demographic factors. Thus this sample has more White, female, and Democrat respondents than the general population. Accordingly, ethnicity, gender, and partisanship should be controlled as White, Female, and Democratic in regression models so as to mitigate the biased effects.

**Measurement and Reliability**

The generation of each index variable is based on the Principal Component (factor) Analysis (PCA) and Cronbach’s Alpha estimation results. If the number of suggested retained factor is 1, only one factor eigenvalue is larger than 1, and each factor loading is larger than .60 in PCA; and together with the alpha score larger than 0.7, the index variable is considered as a reliable measurement (Kline, 2000; Costello Costello and Osborne, 2005; Acock, 2008 & 2013). Table 3-1 shows the summary of variable measurement and reliability.

**Government Trustworthiness.** The dependent variables are citizens’ trust in federal, state, and local government. It is measured by the question, “*Regarding your trust toward federal, state, and local government, please indicate your level of agreement with the following statements*, using a 5-point scale, ‘1’ shall signify that you ‘Strongly Disagree’ and ‘5’ shall signify that you ‘Strongly Agree’: I can trust the government to
do what is right; The government is pretty much run for the benefit of all the people; People in the government don’t waste a lot of money we pay in taxes; and Hardly any of the people running the government are crooked.”

For each government trustworthiness index variable, the PCA suggests one retained factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger than .60 (to be specific, all factor loadings are larger than .80). Besides, the alpha score of the three government trustworthiness index variables are larger than .70. The alphas core of citizen trust of local government is .89; that of citizen trust of state government is .89; that of citizen trust of federal government is .92. Both PCA and alpha scores meet the cutoff values. Hence, it is a reliable measurement of government trustworthiness.

_Aadministration Performance._ Based on prior literature, administration performance in this study incorporates three dimensions, including government service quality, administrators’ competency, and ethics. The generation of administration performance is through two steps. Firstly, the three dimension of administration performance, including service quality, administrators’ competency, and ethics are respectively created; then, administration performance is generated based on the above three dimensions. PCA and Cronbach’s Alpha estimation is employed to verify measurement reliability in each step.

First step: the generation of three performance indicators.

_Government Service Quality_ is measured by four 5-point Likert scale questions: “_Regarding your most recent contact with local government, please indicate your level of agreement with the following statements:_ It is very easy to obtain services from local
government; I would rate the overall quality of local government services as very high; The services that local government provided to me exceeded my expectations; I am satisfied with the services local government provided to me”. The PCA suggests one retained factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger than .60 (all factor loadings are actually larger than .80). Besides, the alpha score of service quality index variable is .94. Both PCA and alpha scores meet the cutoff values. Hence, it is a reliable measurement of service quality.

Administrators’ Competency is measured by six 5-point Likert scale questions: “Regarding the competency of public officials during your most recent contact with local government, please indicate your level of agreement with the following statements: Most of the people running the local government are smart people who usually know what they are doing; The people in local government offices are very professional; The people in local government offices efficiently provided the services I wanted; The people in local government offices work hard and try to do a good job; The people in local government offices are careful and avoid making mistakes; The people in local government offices promptly correct mistakes.” The PCA suggests one retained factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger than .60 (all factor loadings are actually larger than .80). Besides, the alpha score of administrator’s competency index variable is .95. Both PCA and alpha scores meet the cutoff values. Hence, it is a reliable measurement of administrator’s competency.

Ethics is measured by five 5-point Likert scale questions: “Most of the people running the local government are honest”; “I feel I was treated fairly by the people I dealt with in local government”; “The procedure that the local government followed in
response to my demands was fair”; “The outcome reached by the local government in
case is fair”; and “The people in local government offices are
really willing to take responsibility for my problems”. The PCA suggests one retained
factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger
than .60 (all factor loadings are actually larger than .80). Besides, the alpha score of
ethics index variable is .91. Both PCA and alpha scores meet the cutoff values. Hence, it
is a reliable measurement of ethics.

Second step: the generation of administration performance. The administration
performance is an index variable that is created by three index indicators, government
service quality, administrator’s competency, and ethics. The PCA suggests one retained
factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger
than .60 (all factor loadings are actually larger than .90). Besides, the alpha score of
administration performance index variable is .94. Both PCA and alpha scores meet the
cutoff values. Hence, it is a reliable measurement of administration performance.

**Information Transparency and Technology.** Local government information
transparency and technology is measured from three aspects: reliable information
disclosure, methods of information disclosure, and e-government stability.

**Reliable Information Disclosure.** Reliable government information disclosure is
measured by the clarity, accuracy, relevance, and immediacy of local government
information. The questionnaire instruction was worded as follows: “Regarding the
disclosure of information during your most recent contact with local government, please
indicate your level of agreement with the following statements.” Respondents indicated
their agreement with the following statements on a 5-point Likert scale: “The information
about local government services is very clear”; “The information about local government services is very accurate”; “The information about local government services is very relevant”; “The information about local government services is up-to-date and current”; and “Local government provides a variety of methods for citizens to access to government information.” The PCA suggests one retained factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger than .60 (all factor loadings are actually larger than .80). Besides, the alpha score of reliable information disclosure index variable is .93. Both PCA and alpha scores meet the cutoff values. Hence, it is a reliable measurement of reliable information disclosure.

Methods of Information Disclosure. In this study, this predictor focuses on local government’s adoption of social network and electronic subscription to disseminate information to residents. It is measured by two 5-point Likert scale questions: “I often followed local government on Twitter or Facebook for the latest news, events, or emergency warnings”; and “I receive eNotify, RSS, or alert from local government sent directly to my cell phone, mobile device, email, or landline to hear the latest news, events, or emergency warnings.” The PCA suggests one retained factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger than .60 (all factor loadings are actually larger than .90). Besides, the alpha score of methods of information disclosure index variable is .79. Both PCA and alpha scores meet the cutoff values. Hence, it is a reliable measurement of methods of information disclosure.

E-Government Stability. E-government stability was introduced by the instruction, “Regarding local government website design and usage over the past 12 months, please indicate your level of agreement with the following statements,” and was measured by
three 5-point Likert scale questions: “Most of the time, I could get the information I wanted from local government website”; “Most of the time, I could get the information I wanted from local government website very quickly”; “Most of the time, local government website is very stable and easy to access.” The PCA suggests one retained factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger than .60 (all factor loadings are actually larger than .90). Besides, the alpha score of e-government stability index variable is .92. Both PCA and alpha scores meet the cutoff values. Hence, it is a reliable measurement of e-government stability.

**Citizen Participation in Local Government Policy-making.** It is measured from two perspectives, the variety of participation modes that local government provides to residents and local government response to citizen participation in the policy-making process.

**Citizen Participation Avenues.** This is measured by the total amount of participation modes that each respondent has used in the previous 12 months: *Please check all modes through which you have participated in local government policy making process in the past 12 months.*” The choices were Public hearing; Community or neighborhood meetings; Citizen advisory board; Online forum; Citizen focus group; Citizen telephone hotline; Citizen surveys; Legislative standing committees; Individual citizen representatives; Others, please specify; and None of the above. For each participation mode, a score of 1 was given if the respondent chose it; otherwise, a score of 0 was given. Then, the total number of participation modes was summarized for each respondent to be the citizen participation avenue variable.
Government Response to Citizen Participation. It indicates the true influence of respondents’ participation in policy-making processes, and is measured by two 5-point scale questions. “Regarding your participation in local governance over the past 12 months please indicate your level of agreement with the following statements: Most of my suggestions have been accepted and adopted by local government; and Local government has accurately responded to most of my queries.” The PCA suggests one retained factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger than .60 (all factor loadings are actually larger than .90). Besides, the alpha score of government response to citizen participation index variable is .82. Both PCA and alpha scores meet the cutoff values. Hence, it is a reliable measurement of government response to citizen participation.

Social Capital has two dimensions, interpersonal trust and citizen involvement into community activities or associations.

Social Trust. Social/Interpersonal trust is measured by three 5-point Likert scale questions: “Generally speaking, I always trust other people”; “Most of the time people try to be helpful rather than look out for themselves”; and “Most people wouldn’t try to take advantage of me even if they had the chance.” The PCA suggests one retained factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger than .60 (all factor loadings are actually larger than .80). Besides, the alpha score of social trust index variable is .80. Both PCA and alpha scores meet the cutoff values. Hence, it is a reliable measurement of social trust.

Social Network. This factor is measured by two questions. Firstly, “In the past 12 months, have you been involved in any of the following community activities? Please
select all that apply: Attended a PTA/school group meeting; Attended a community group meeting; Donated blood; Given money to a charity; Worked for a charity or your church; and Others, please specify.” Secondly, “In the past 12 months, have you actively participated in any of the following types of organizations or groups? Please select all that apply: Service club or fraternal organization (eg., Elks, Rotary); Veterans group; Religious group; Senior citizen’s center or group; Women’s group; Issue-oriented political organization; Non-partisan civic organization; School club or association; Hobby, sports team, or youth group; Neighborhood association or community group; Group representing racial/ethnic interests; Others, please specify.”

For each option of the participation in community activities and participation in organizations questions, a score of 1 is given if the respondent chose it; otherwise, a score of 0 is given. Then, community and organization scores are summed up for each respondent to generate the participation in community activities indicator, and the participation in organizations or groups indicator.

Secondly, the social network index variable is generated, based on the participation in community activities and participation in organizations indicators. The PCA suggests one retained factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger than .60 (all factor loadings are actually larger than .90). Besides, the alpha score of social network index variable is .81. Both PCA and alpha scores meet the cutoff values. Hence, it is a reliable measurement of social network.

**Control Factors.** Control factors in this study include working experience with government, age, gender, ethnicity, education, political affiliation, and household income.
Government Working Experience is measured by a dummy question: “Have you ever been a government employee”. Yes is coded as “1” and No is coded as “0”.

Political efficacy is measured by four 5-point Likert scale indicators, two of which describe respondents’ internal political efficacy. The other two indicators describe respondents’ external political efficacy. The four questions are “I am extremely interested in information about what’s going on in local government”; “I have sufficient knowledge about local government and politics”; “I affect local government a great deal”; and “Local government genuinely responds to my queries.” The PCA suggests one retained factor, only one factor eigenvalue is larger than 1, and all factor loadings are larger than .60 (all factor loadings are actually larger than .70). Besides, the alpha score of political efficacy is .76. Both PCA and alpha scores meet the cutoff values. Hence, it is a reliable measurement of political efficacy.

Moreover, respondents’ Age is measured by “In which category is your age? 18-24 years; 25-34 years; 35-44 years; 45-54 years; 55-64 years; 65-74 years; 75 years or older.” Gender is measured by “male or female.” Female is coded as “1”, and male is scored as “0”. Ethnicity is measured by “American Indian or Alaska Native; Asian, Asian Indian or Pacific Islander; Black or African American; White; Some other race.” White option is coded as “1”; other choices are coded as “0”. Political Affiliation is measured by the question, “Do you think of yourself as a Republican, Democrat, Independent, Another party, or No preference?” Respondents who are Democrat is coded as “1”; other choices are coded as “0”. Education is measured by “Which best describes your highest educational degree? High school diploma or equivalent; Associates degree or equivalent; Bachelor or equivalent; Master’s degree or equivalent; Ph.D. or equivalent.” Household
Income is measured by “Which best describes your total HOUSEHOLD income in 2012? Less than $24,999; $25,000 to $49,999; $50,000 to $99,999; $100,000 to $149,999; $150,000 to $199,999; $199,000 or more.”

Finally, for residency location, the questionnaire asked, “In which town/city and state are you living,” in order to reconfirm that the respondent is a U.S. resident. If the subject is not currently living in the United States, the responses are invalid and will not be included in the final data.
Table 3-1 Measurements and Reliability

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measurement Questions</th>
<th>Alpha Score</th>
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</thead>
<tbody>
<tr>
<td><strong>Government Trustworthiness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Government</td>
<td>1. I can trust the local government to do what is right.</td>
<td>.89</td>
</tr>
<tr>
<td></td>
<td>2. The local government is pretty much run for the benefit of all the people.</td>
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<tr>
<td></td>
<td>3. People in the local government don’t waste a lot of money we pay in taxes.</td>
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<td></td>
<td>4. Hardly any of the people running the local government are crooked.</td>
<td></td>
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<tr>
<td>State Government</td>
<td>1. I can trust the state government to do what is right.</td>
<td>.89</td>
</tr>
<tr>
<td></td>
<td>2. The state government is pretty much run for the benefit of all the people.</td>
<td></td>
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<tr>
<td></td>
<td>3. People in the state government don’t waste a lot of money we pay in taxes.</td>
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<tr>
<td></td>
<td>4. Hardly any of the people running the state government are crooked.</td>
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<tr>
<td>Federal Government</td>
<td>1. I can trust the federal government to do what is right.</td>
<td>.92</td>
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<tr>
<td></td>
<td>2. The federal government is pretty much run for the benefit of all the people.</td>
<td></td>
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<tr>
<td></td>
<td>3. People in the federal government don’t waste a lot of money we pay in taxes.</td>
<td></td>
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<tr>
<td></td>
<td>4. Hardly any of the people running the federal government are crooked.</td>
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<tr>
<td><strong>Administration Performance</strong></td>
<td></td>
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<tr>
<td>Service Quality</td>
<td>1. It is very easy to obtain services from local government.</td>
<td>.94</td>
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<tr>
<td></td>
<td>2. I would rate the overall quality of local government services as very high.</td>
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<td></td>
<td>3. The services that local government provided to me exceeded my expectations.</td>
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<td></td>
<td>4. I am satisfied with the services local government provided to me.</td>
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<tr>
<td>Competency</td>
<td>1. Most of the people running the local government are smart people who usually know what they are doing.</td>
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<td>---------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------</td>
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<td></td>
<td>2. The people in local government offices are very professional.</td>
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<td></td>
<td>3. The people in local government offices efficiently provided the services I wanted.</td>
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<td></td>
<td>4. The people in local government offices work hard and try to do a good job.</td>
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<td></td>
<td>5. The people in local government offices are careful and avoid making mistakes.</td>
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<td></td>
<td>6. The people in local government offices promptly correct mistakes.</td>
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<tr>
<td>Ethics</td>
<td>1. Most of the people running the local government are honest.</td>
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<td></td>
<td>2. I feel I was treated fairly by the people I dealt with in local government.</td>
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<td>3. The procedure that the local government followed in response to my demands was fair.</td>
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<td>4. The outcome reached by the local government in response to my demands was fair.</td>
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<td></td>
<td>5. The people in local government offices are really willing to take responsibility for my problems.</td>
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<tr>
<td>Administration Performance</td>
<td>1. Service quality</td>
<td></td>
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<td></td>
<td>2. Administrators’ competency</td>
<td></td>
</tr>
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<td></td>
<td>3. Administrators’ ethics</td>
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<tr>
<td>Information Transparency and Technology</td>
<td>1. The information about local government services is very clear.</td>
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<td></td>
<td>2. The information about local government services is very accurate.</td>
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<tr>
<td></td>
<td>3. The information about local government services is very relevant.</td>
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<td></td>
<td>4. The information about local government services is up-to-date and current.</td>
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<tr>
<td></td>
<td>5. Local government provides a variety of methods for citizens to access to government information.</td>
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<tr>
<td>Reliable Information Disclosure</td>
<td>1. I often followed local government on Twitter or Facebook for the latest news, events, or emergency</td>
<td></td>
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<tr>
<td></td>
<td>warnings.</td>
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<td>2. I receive eNotify, RSS, or alert from local government sent directly to my cell phone, mobile device,</td>
<td></td>
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<tr>
<td></td>
<td>email, or landline to hear the latest news, events, or emergency warnings.</td>
<td></td>
</tr>
</tbody>
</table>
### E-Government Stability
1. Most of the time, I could get the information I wanted from local government website.
2. Most of the time, I could get the information I wanted from local government website very quickly.
3. Most of the time, local government website is very stable and easy to access.

### Citizen Participation

**Participation Avenues**
1. Please check all modes through which you have participated in local government policy-making process in the past 12 months.
   (Public hearing, Community or neighborhood meetings, Citizen advisory board, Online forum, Citizen focus group, Citizen telephone hotline, Citizen surveys, Legislative standing committees, Individual citizen representatives, Others, please specify:, None of the above)

**Participation Influence**
1. Most of my proposals have been accepted and adopted by local government.
2. Local government has accurately responded to most of my queries.

### Social Capital

**Social Trust**
1. Generally speaking, I always trust other people.
2. Most of the time people try to be helpful rather than look out for themselves.
3. Most people wouldn’t try to take advantage of me even if they had the chance.
1. In the past 12 months, have you been involved in any of the following community activities? (Attended a PTA/school group meeting; Attended a community group meeting; Donated blood; Given money to a charity; Worked for a charity or your church; and Others, please specify)

2. In the past 12 months, have you actively participated in any of the following types of organizations or groups? (Service club or fraternal organization; Veterans group; Religious group; Senior citizen’s center or group; Women’s group; Issue-oriented political organization; Non-partisan civic organization; School club or association; Hobby, sports team, or youth group; Neighborhood association or community group; Group representing racial/ethnic interests; and Others, please specify:)

<table>
<thead>
<tr>
<th>Control Variables</th>
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</thead>
<tbody>
<tr>
<td><strong>Occupation</strong> (Government Employee)</td>
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<tr>
<td><strong>Political Efficacy</strong></td>
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<tr>
<td><strong>Partisanship</strong> (Democrat)</td>
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<tr>
<td><strong>Education</strong></td>
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<tr>
<td>Household Income</td>
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<tr>
<td></td>
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<tr>
<td>Race (White)</td>
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<td></td>
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<td>Gender (Female)</td>
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<tr>
<td>Age</td>
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</table>
CHAPTER FOUR
RESEARCH CONTEXT

This chapter introduces in detail the status quo of local, state, and federal government trustworthiness, and its major predictors, as the research context. The chapter illustrates the necessity of investigating determinants of citizen trust in government. More importantly, the results manifest the need to examine government trustworthiness predictors from the perspectives of performance, information, participation, and individual-level social capital.

Government Trustworthiness

Table 4-1 and Figure 4-1 summarize the citizen trust of government indexes. The mean of the citizen trust of local government index is 2.74, and the standard deviation is 1.08. On a 5-point scale, respondents’ average ratings were 3.06 for “I can trust the local government to do what is right,” 2.93 for “The local government is pretty much run for the benefit of all the people,” 2.39 for “People in the local government don’t waste a lot of money we pay in taxes,” and 2.57 for “Hardly any of the people running the local government are crooked.”

The mean of citizen trust in state government is 2.57, and the standard deviation is 1.07. On a 5-point scale, respondents’ average ratings were 2.89 for “I can trust the state government to do what is right,” 2.77 for “The state government is pretty much run for the benefit of all the people,” 2.22 for “People in the state government don’t waste a lot of money we pay in taxes,” and 2.67 for “Hardly any of the people running the state government are crooked.”
of money we pay in taxes,” and 2.40 for “Hardly any of the people running the state government are crooked.”

The mean of citizen trust in federal government is 2.41, and the standard deviation is 1.16. On a 5-point scale, respondents’ average ratings were 2.65 for “I can trust the federal government to do what is right,” 2.58 for “The federal government is pretty much run for the benefit of all the people,” 2.09 for “People in the federal government don’t waste a lot of money we pay in taxes,” and 2.34 for “Hardly any of the people running the federal government are crooked.”

Overall, citizen trust in government is rather low, in that all the average local (2.74), state (2.57), and federal (2.41) government trustworthiness indexes are below 3 on a 5-point scale. To be specific, only 19.32% (82) rated local government trustworthiness, 15.15% (80) rated state government trustworthiness, and 15.53% (82) rated federal government trustworthiness as equal to or larger than 4 on a 5-point scale. It is very similar to the conclusion of a study on public trust in federal government conducted and released by Pew Research Center for the People & the Press, in which approximately 19% of citizens stated that they trust the federal government just about always or most of the time, out of five choices. We can see that citizens indeed have a lot of distrust in each government level, and there is a great necessity to investigate the influential factors of this distrust, and to address them by developing effective policies to improve government credibility.

Besides, respondents have the most trust in local government (2.74 in average), followed by state government (2.57 in average), and the least trust in the federal government (2.41 on average). It seems that citizens tend to have more trust in the government closer to them (Rho, 2004). The more connections and contacts with a government, the more trust with the government citizens tend to have. It seems that there must be some important factors that impact citizen trust toward government when citizens directly deal with administrators or agencies. Thus there is a need to explore predictors of government trustworthiness in citizen-government interaction procedures.

Furthermore, among the four components of the government trustworthiness index, “I can trust the government to do what is right” and “The government is pretty much run for the benefit of all the people” received higher scores than the other two questions for all local, state, and federal governments. “People in the government don’t waste a lot of money we pay in taxes” received the lowest score. Apparently, the inefficiency in the distribution of public fiscal administration and taxation is the major negative point in evaluations of government trustworthiness. From most respondents’ perspectives, the input of public revenues did not meet their expectations and they have the impression that government is wasting their money. So, improving the use and distribution efficiency of public fiscal administration and taxation is important for enhancing government trustworthiness. In addition, for all four components of government trustworthiness, the rating of each component decreases from local to state, and from state to federal government. That is, local government has the most trust and satisfaction from citizens. The “distance” between government and citizens probably plays a role in shaping government credibility.
Table 4-1 Citizen Trust in Government Indexes

<table>
<thead>
<tr>
<th>Citizen Trust in Government</th>
<th>Government Do Right Thing</th>
<th>Government Run for the Benefit of the People</th>
<th>Government Don’t Waste Money</th>
<th>People Running Government Not Crooked</th>
<th>Index Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Government</td>
<td>3.06</td>
<td>2.93</td>
<td>2.39</td>
<td>2.57</td>
<td>2.74</td>
</tr>
<tr>
<td>State Government</td>
<td>2.89</td>
<td>2.77</td>
<td>2.22</td>
<td>2.40</td>
<td>2.57</td>
</tr>
<tr>
<td>Federal Government</td>
<td>2.65</td>
<td>2.58</td>
<td>2.09</td>
<td>2.34</td>
<td>2.41</td>
</tr>
</tbody>
</table>

Figure 4-1 Citizen Trust in Government Indexes

Administration Performance

The mean of administration performance is 3.06 on a 5-point scale, and the standard deviation is 0.97. It is slightly higher than the mean of government trustworthiness; however, it is still relatively low. Apparently, respondents evaluate local government performance far from good or excellent. Neither government trustworthiness
nor administration performance receives a good score. So, it is important to see whether performance is a key predictor to citizen trust in government.

Specifically, the mean of local government service quality is 2.95, that of administrators’ competency is 3.08, and that of ethics is 3.15. Among the three dimensions of local government administration performance, ethics is rated as the highest, while service quality is the lowest. Respondents do not have a very negative impression of administrators’ competency and ethics; however, service quality is not satisfactory. This finding is of great interest, in that good administrator competency and ethics do not necessarily lead to the same level of service quality, at least from the perspective of citizens. So, it might be assumed that when the human resource quality reaches a certain level, it is other elements, such as internal management procedure, that exert more effects on external citizen trust in government.

For Service Quality, on a 5-point scale, respondents’ average rating was 2.97 for “It is very easy to obtain services from local government,” 2.96 for “I would rate the overall quality of local government services as very high,” 2.87 for “The services that local government provided to me exceeded my expectations,” and 3.02 for “I am satisfied with the services local government provided to me” (See Figure 4-2). As stated above, local government should pay more attention to improving service quality, for example by increasing easiness to obtain services from local government and checking into citizen demands at regular intervals. By doing so, local government would have a better understanding of citizen expectations and needs, based on which local government could provide better services to the community.
For Administrator’s Competency, on a 5-point scale, respondents’ average rating was 3.07 for “Most of the people running the local government are smart people who usually know what they are doing,” 3.21 for “The people in local government offices are very professional,” 3.09 for “The people in local government offices efficiently provided the services I wanted,” 3.18 for “The people in local government offices work hard and try to do a good job,” 2.99 for “The people in local government offices are careful and avoid making mistakes,” and 2.95 for “The people in local government offices promptly correct mistakes” (See Figure 4-2). Although overall service is mediocre, it is good to see that respondents rated administrator competency better than the overall service quality provided by local government. Generally, respondents consider local government administrators to be professional and smart, working hard and trying to do a good job, and efficient in responding to citizens. However, the descriptive result indicates that citizens are very concerned about any mistakes administrators make when dealing with citizens. Another factor in measuring administration performance is whether administrators can quickly rectify mistakes they have made. Hence, administrators should try to avoid making mistakes when dealing with citizen cases, and should promptly correct any mistakes that do occur.

For Ethics, on a 5-point scale, respondents’ average rating was 3.18 for “Most of the people running the local government are honest,” and 3.32 for “I feel I was treated fairly by the people I dealt with in local government,” 3.16 for “The procedure that the local government followed in response to my demands was fair,” 3.16 for “The outcome reached by the local government in response to my demands was fair,” and 2.91 for “The people in local government offices are really willing to take responsibility for my
problems” (See Figure 4-2). Ethics is rated as the highest among the three dimensions of administration performance. In particular, the fairness that respondents perceive in government responding to citizens receives the highest rating. Respondents consider both the outcome reached by the local government and the procedure that local government followed in response to their demands as fair. But, respondents did not believe that administrators took an active interest in solving their problems. It seems that citizens expect to see more friendly administrators, rather than anonymous government staff who merely deal with their cases according to rules or regulations. So, it is advisable for government administrators, especially street-level officers, to show their genuine concern for citizens they are dealing with, and make efforts to solve citizens’ problems rather than making excuses for not handling them.

Figure 4-2 Administration Performance Indexes
Information Transparency and Technology

Information transparency and technology is measured from three perspectives, including local government reliable information disclosure, local government adoption of social media or electronic subscription method to distribute information, and the stability of the local government e-government system.

Reliable Information Disclosure. The mean of reliable local government information disclosure is 3.32, and the standard deviation is 0.97. On a 5-point scale, respondents’ average rating was 3.13 for “The information about local government services is very clear,” 3.12 for “The information about local government services is very accurate,” 3.22 for “The information about local government services is very relevant,” 3.25 for “The information about local government services is up-to-date and current,” and 3.41 for “Local government provides a variety of methods for citizens to access to government information” (See Figure 4-3).

Methods of Information Disclosure. The mean of local government employing social media and electronic subscription to circulate information is 2.52, and the standard deviation is 1.27. On a 5-point scale, respondents’ average rating was 2.46 for “I often followed local government on Twitter or Facebook for the latest news, events, or emergency warnings” and 2.58 for “I receive eNotify, RSS, or alert from local government sent directly to my cell phone, mobile device, email, or landline to hear the latest news, events, or emergency warnings” (See Figure 4-3).

E-government Stability. The mean of local government e-government stability is 3.32, and the standard deviation is 1.03. On a 5-point scale, respondents’ average rating was 3.39 for “Most of the time, I could get the information I wanted from local
government website,” 3.20 for “Most of the time, I could get the information I wanted from local government website very quickly,” and 3.39 for “Most of the time, local government website is very stable and easy to access” (See Figure 4-3).

The mean of reliable information disclosure is 3.22 and that of e-government stability is 3.32, which are comparatively higher than that of adopting social media and electronic subscription to distribute information (2.52). Still, though respondents did not rate local government information disclosure reliability and the stability of e-government system as very good, they did not find any major fault with the two aspects either. However, the responses indicate that the development of the Internet and mobile networks has not attracted the attention of some local governments, which do not take good advantage of the social and electronic platform to promote information distribution and government-citizen interaction. These local governments should take into account the benefits of social media and electronic platforms in public communication: that social media and mobile devices are a more convenient and prompt way to receive information, making it possible to have bidirectional communication between government and citizens rather than merely information disclosure from government.
Citizen Participation in Policy Making

Citizen participation in local government policy making is measured from two aspects: the variety of participation modes, and government responses to citizen participation. Table 4-2 shows the summary of citizen participation in local government indexes.

**Table 4-2 Citizen Participation in Local Governance Indexes**

<table>
<thead>
<tr>
<th>Participation Avenue</th>
<th>Indicator</th>
<th>Mean</th>
<th>Index Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variety of Participation Modes</strong></td>
<td>The amount of participation avenues that respondents have taken part in</td>
<td>1.32</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Participation Influence</strong></td>
<td>Proposals accepted by local government regarding respondents’ participation in local governance</td>
<td>2.81</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Queries are accurately responded by local government regarding respondents’ participation in local governance</td>
<td>3.04</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 4-3 Information Transparency and Technology Indexes**

![Image of bar chart showing information transparency and technology indexes](image-url)
The Variety of Participation Avenues. The mean of the variety of participation avenues is 1.32, out of a total of 10 possible avenues. It appears that respondents may not have many options for participating in local governance. Or, it is possible that respondents do not have a lot of interest in participating in local affairs, even if local governments do provide several alternative participation avenues. The fact that 50.76% (268) of respondents have never taken part in any of the modes of participating in the local government policy-making process in the past 12 months is not a positive implication, no matter what the reasons are.

Among the 260 respondents who have participated in local government policy making through any of the modes, 92 (17.42%) respondents have taken part in public hearings, 121 (22.92%) have participated in community or neighborhood meetings, 52 (9.85%) have attended citizen advisory boards, 89 (16.86%) have taken part in online forums, 52 (9.85%) have participated in citizen focus groups, 40 (7.58%) have used a citizen telephone hotline to participate in a policy-making process, and 147 (27.84%) have participated in citizen surveys. In addition, 30 (5.68%) have participated in local government policy making through legislative standing committees, 54 (10.23%) through individual citizen representatives, and 20 (3.79%) through other modes. Table 4-3 and Figure 4-4 present a summary of all modes through which respondents participated in local government policy-making processes in the 12 months prior to the survey.

Citizen survey, community or neighborhood meeting, public hearing, and online forum are major avenues that citizens participated in most frequently. If it is because most local government primarily provides these four avenues to involve citizens into administration and policy making, it indicates that local government pays attention to
collecting citizen demands and needs, no matter whether the participation plays an important role in policy making and implementation. For another, if the participation avenue frequency distribution is due to respondents’ self-selection, government and administrators should be interested in the reasons behind respondents’ preferences for certain participation avenues.

We could find that the four avenues have two important features. First, these four avenues allow respondents to participate without interrupting their work or life. For example, respondents can decide when and where to take the citizen survey and participate in the online forum. They do not have to be physically in the government building and are not constrained by a time limitation. This is a great convenience for respondents with work and family responsibilities. Second, respondents have sufficient information and knowledge about the topics, and are familiar with the attendees and the environment, as is the case with community or neighborhood meetings. The comfort and easiness of the environment, intimacy with other participants, and familiarity with discussion topics are important considerations for whether citizens would like to take part. Therefore, government should provide participation avenues that are convenient for citizens to attend, and invite citizens who have adequate information and knowledge about the topic to participate in policy-making discussions and public hearings, so as to improve participation effectiveness and allow citizens to have a genuine role in policy making and implementation.
Table 4-3 Participation Avenues in Local Government Policy-Making

<table>
<thead>
<tr>
<th>Participation Avenues in Local Government Policy-making</th>
<th>Percent</th>
<th>Frequency</th>
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</thead>
<tbody>
<tr>
<td>Public hearing</td>
<td>17.42%</td>
<td>92</td>
</tr>
<tr>
<td>Community or neighborhood meeting</td>
<td>22.92%</td>
<td>121</td>
</tr>
<tr>
<td>Citizen advisory board</td>
<td>9.85%</td>
<td>52</td>
</tr>
<tr>
<td>Online forum</td>
<td>16.86%</td>
<td>89</td>
</tr>
<tr>
<td>Citizen focus group</td>
<td>9.85%</td>
<td>52</td>
</tr>
<tr>
<td>Citizen telephone hotline</td>
<td>7.58%</td>
<td>40</td>
</tr>
<tr>
<td>Citizen survey</td>
<td>27.84%</td>
<td>147</td>
</tr>
<tr>
<td>Legislative standing committee</td>
<td>5.68%</td>
<td>30</td>
</tr>
<tr>
<td>Individual citizen representative</td>
<td>10.23%</td>
<td>54</td>
</tr>
<tr>
<td>Others</td>
<td>3.79%</td>
<td>20</td>
</tr>
</tbody>
</table>

Figure 4-4 Frequency Distribution of Participation Avenues

Government Response to Citizen Participation. The mean of government response to citizen participation index is 2.92, and the standard deviation is 0.96. On a 5-point scale, respondents’ average rating was 2.81 for “Most of my proposals have been accepted and adopted by local government” and 3.04 for “Local government has
accurately responded to most of my queries” (See Table 4-2). Respondents do not seem to have a powerful influence in policy making through participation processes. Or perhaps in some cases local governments do provide responses to citizen queries but citizen inputs do not necessarily affect policy making; that is, participation is more a formality than a real response to citizen needs. However, to have real impacts on policy making is the purpose of citizen participation, and such effectiveness exerts important influences on citizen attitudes toward participation. Therefore, government and administrators should let citizens have more powerful impacts on policy and administration through participation, so that their voices are heard, their demands are met, and their expectations are satisfied.

**Individual-Level Social Capital**

*Social Trust.* The mean of the personal trust index is 3.24, and the standard deviation is 0.92. On a 5-point scale, respondents’ average rating was 3.23 for “Generally speaking, I always trust other people,” 3.39 for “Most of the time, people try to be helpful rather than look out for themselves,” and 3.10 for “Most people wouldn’t try to take advantage of me even if they had the chance.” Generally, respondents’ personal trust in other people is relatively good. The mean scores for social trust are higher than the median. Respondents’ personal trust with other people is better than their trust in government. From this perspective, the individual-level social capital is good.

*Social Network.* The mean of the personal network index is 1.45, and the standard deviation is 1.42. On a 7-point scale, respondents’ average rating was 1.47 for involvement in community activities, and 1.43 for participation in organizations or
groups. Apparently, respondents do not have a great interest in taking part in community or association activities. This result is similar to the citizen participation avenues in local governance. Respondents do not have much interest in participating in local government policy making either. From this perspective, the individual-level social capital is not good in the research samples.

**Table 4-4 Social Capital Indexes**

<table>
<thead>
<tr>
<th>Social Capital</th>
<th>Indicator</th>
<th>Mean</th>
<th>Index Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Trust</strong></td>
<td>Trust other people</td>
<td>3.23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>People are helpful</td>
<td>3.39</td>
<td>3.24</td>
</tr>
<tr>
<td></td>
<td>People wouldn’t take advantage of me</td>
<td>3.10</td>
<td></td>
</tr>
<tr>
<td><strong>Social Network</strong></td>
<td>Involvement in community activities</td>
<td>1.47</td>
<td>1.45</td>
</tr>
<tr>
<td></td>
<td>Participation in organizations or groups</td>
<td>1.43</td>
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**Figure 4-5 Social Capital Indexes**

![Graph showing social capital indexes for personal trust and social network](image-url)
<table>
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<tr>
<th>Variable</th>
<th>Obs.</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Min. Value</th>
<th>Max. Value</th>
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<tr>
<td><strong>Trust in Government</strong></td>
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<tr>
<td>Trust in Local Government</td>
<td>528</td>
<td>2.74</td>
<td>1.08</td>
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<td>5</td>
</tr>
<tr>
<td>Trust in State Government</td>
<td>528</td>
<td>2.57</td>
<td>1.07</td>
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<tr>
<td>Trust in Federal Government</td>
<td>528</td>
<td>2.41</td>
<td>1.16</td>
<td>1</td>
<td>5</td>
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<td><strong>Performance</strong></td>
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<tr>
<td>Administration Performance</td>
<td>528</td>
<td>3.06</td>
<td>0.97</td>
<td>1</td>
<td>5</td>
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<tr>
<td><strong>Information Transparency &amp; Technology</strong></td>
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<tr>
<td>Reliable Information Disclosure</td>
<td>528</td>
<td>3.23</td>
<td>0.97</td>
<td>1</td>
<td>5</td>
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<tr>
<td>Methods of Information Disclosure</td>
<td>528</td>
<td>2.52</td>
<td>1.27</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>E-Government Stability</td>
<td>528</td>
<td>3.32</td>
<td>1.03</td>
<td>1</td>
<td>5</td>
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<tr>
<td><strong>Citizen Participation in Local Governance</strong></td>
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<tr>
<td>Variety of Participation Avenue</td>
<td>528</td>
<td>1.32</td>
<td>1.81</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Participation Influence</td>
<td>528</td>
<td>2.92</td>
<td>0.96</td>
<td>1</td>
<td>5</td>
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<tr>
<td><strong>Social Capital</strong></td>
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<td>0.92</td>
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<td>5</td>
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<tr>
<td>Social Network</td>
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<td>0</td>
<td>7</td>
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CHAPTER FIVE
RESULTS AND FINDINGS

First, this chapter presents the correlation matrix to indicate the feasibility of constructing regression models and to test the multicollinearity problem. Next, the chapter will explicate in detail the structural equation model (SEM) of how the proposed determinants impact on citizen trust in local, state, and federal government. The SEM model is employed to display the regression analysis in two steps. The first step is to verify the reliability and validity of variable measurement through the confirmatory factor analysis (CFA) models; the second step is to empirically test whether the research hypotheses are supported or not. The chapter concludes with findings from the SEM and discusses its meanings.

Correlation Matrix

First, all proposed predictors are significantly correlated with local, state, and federal government trustworthiness. And, most correlation coefficients fall into the .50–.70 range, which indicates a moderate to strong correlation. Hence, it is necessary to further conduct regression models to test the statistical significance of the linear relationships between predictors and government trustworthiness.

Second, another important function of the correlation matrix is to examine if there are multicollinearity problems among independent variables. Most correlations between independent variables are smaller than .70, with three exceptions: performance and reliable information disclosure (.80), reliable information disclosure and e-government
stability (.72), and the variety of participation avenues and social network (.71). Generally, this kind of multicollinearity problem is a negative indicator about the model construction. However, according to Grewal, Cote, and Baumgartner (2004), a multicollinearity issue in a structural equation model is acceptable in two circumstances: (1) multicollinearity is between .6 and .8, but composite reliability is high (.80 or higher) and explained variance $R^2$ reaches .75, and sample is relatively large; (2) multicollinearity is between .4 and .5, but composite reliability is relatively high (.7 or higher) and explained variance $R^2$ is more than .25.

Five variables are incorporated in the three correlations that are larger than .70, four of which are index/latent variables: administration performance, reliable information disclosure, e-government stability, and social network. According to the data in the Measurement Model section of this chapter, the composite reliability of the four index/latent variables are always larger than .80 throughout three SEM models, and the composite reliability scores of each variable stay the same in different SEM models. To be specific, in all three SEM models, the composite reliability of administration performance is .93, that of reliable information disclosure is .93, that of e-government stability is .92, and that of social network is .84.

Furthermore, the explained variance $R^2$ of local, state, and federal government CFA models, respectively, are very close to 1. In addition, the sample size of SEM models is 528, which is good. Therefore, it is believed that the multicollinearity issue is insignificant.

*Local Government Trustworthiness* (See Table 4-6). Local government administration performance (Performance, $r = .74$), reliable information disclosure
Reliability, $r = .64$), e-government stability (Stability, $r = .52$), and government response to citizen participation (Influence, $r = .53$) are strongly positively correlated with citizen trust in local government (LG_Trust), and both the positive linear correlations are significant at the .001 level. The adoption of social media and electronic subscription to distribute information (Methods, $r = .40$), and social trust in other persons (Social_Trust, $r = .47$) are moderately positively correlated with citizen trust in local government, and all the positive linear correlations are significant at the .001 level. The variety of participation avenues (Participation, $r = .17$) and citizen involvement in community activities or associations (Social_Network, $r = .17$) have weak correlation with citizen trust in local government, and both the positive linear correlations are significant at the .001 level.

For control variables, respondents' education (Education, $r = .16$) and household income (Income, $r = .19$) have weak positive correlation with trust in local government, and the positive linear correlations are significant at the .001 level. Respondents’ gender (Gender, female = 1, male = 0, $r = -.19$), age (Age, $r = -.21$) is negatively correlated with citizen trust in local government, and the negative linear correlation is significant at the .001 level. However, respondents’ work experience with government (Gov_Emp, $r = .02$), partisanship (Partisan, Democrat = 1, others = 0, $r = -.04$), and race (Race, White = 1, others = 0, $r = -.03$) has little correlation with local government trustworthiness.

State Government Trustworthiness (See Table 4-6). Local government administration performance ($r = .66$), reliable information disclosure ($r = .57$), and government response to citizen participation ($r = .51$) are strongly positively correlated with citizen trust in state government (SG_Trust), and the positive linear correlation is
significant at the .001 level. The adoption of social network and electronic subscription to
distribute information \( (r = .43) \), e-government stability \( (r = .46) \), and interpersonal trust
with other people \( (r = .47) \) are moderately positively correlated with citizen trust in state
government, and all the positive linear correlations are significant at the .001 level. The
variety of participation avenues \( (r = .19) \) and citizen involvement in community activities
or associations \( (r = .19) \) have weak correlation with citizen trust in state government,
and both the positive linear correlations are significant at the .001 level.

For control variables, respondents’ education \( (r = .14) \) and household income \( (r
= .19) \) have weak positive correlation with trust in state government, and the positive
linear correlations are significant at the .01 and .001 levels, respectively. Respondents’
gender \( (\text{female} = 1, \text{male} = 0, r = -.19) \), and age \( (r = -.21) \) are negatively correlated with
citizen trust in state government, and the negative linear correlation is significant at
the .001 level. But, respondents’ work experience with government \( (r = .04) \), partisanship
\( (\text{Democrat} = 1, \text{others} = 0, r = -.09) \), and race \( (\text{White} = 1, \text{others} = 0, r = -.03) \) have little
correlation with state government trustworthiness.

**Federal Government Trustworthiness** (See Table 4-6). Local government
administration performance \( (r = .53) \), reliable information disclosure \( (r = .47) \), adoption
of social network and electronic subscription to distribute information \( (r = .44) \), e-
government stability \( (r = .41) \), government response to citizen participation \( (r = .44) \), and
personal trust in other people \( (r = .44) \) are moderately positively correlated with citizen
trust in federal government (FG_Trust), and all the positive linear correlations are
significant at the .001 level. The variety of participation avenues \( (r = .24) \), and citizen
involvement in community activities or associations \( (r = .19) \) have weak correlation with
citizen trust in federal government, and both the positive linear correlations are significant at the .001 level.

For control variables, respondents’ education \((r = .17)\) and household income \((r = .20)\) have weak positive correlation with trust in federal government, and the positive linear correlations are significant at the .001 level. Respondents’ gender (female = 1, male = 0, \(r = -.12\)), and age \((r = -.23)\) are negatively correlated with citizen trust in state government, and the negative linear correlation is significant at the .01 and .001 level, respectively. But, respondents’ work experience with government \((r = .08)\), partisanship (Democrat = 1, others = 0, \(r = -.08\)), and race (White = 1, others = 0, \(r = -.10\)) have little correlation with state government trustworthiness.

By and large, the correlation coefficients between influential factors and citizen trust in government diminish from local government to state government to federal government. It appears that local government administration performance, information transparency and technology, citizen participation in local policy-making processes, and individual social capital have more powerful correlations with citizen trust in local government than with trust in state and federal government. The overall level of correlation between each proposed influential factor with citizen trust in government and its significance level is good. Therefore, it is necessary to construct regression models to test the causal relationships accordingly.
Table 4-6 Correlation Matrix

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<tbody>
<tr>
<td>[1]LG_Trust</td>
<td>1.00</td>
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<td></td>
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<td>[2]SG_Trust</td>
<td>0.87***</td>
<td>1.00</td>
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<tr>
<td>[3]FG_Trust</td>
<td>0.74***</td>
<td>0.85***</td>
<td>1.00</td>
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<tr>
<td>[4]Performance</td>
<td>0.74***</td>
<td>0.66***</td>
<td>0.53***</td>
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<tr>
<td>[5]Reliability</td>
<td>0.64***</td>
<td>0.57***</td>
<td>0.47***</td>
<td>0.80***</td>
<td>1.00</td>
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<tr>
<td>[6]Methods</td>
<td>0.40***</td>
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<td>0.44***</td>
<td>0.38***</td>
<td>0.37***</td>
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<tr>
<td>[7]Stability</td>
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<td>0.41***</td>
<td>0.67***</td>
<td>0.72***</td>
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<tr>
<td>[8]Participation</td>
<td>0.17***</td>
<td>0.19***</td>
<td>0.24***</td>
<td>0.16***</td>
<td>0.13**</td>
<td>0.32***</td>
<td>0.11*</td>
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<td>0.51***</td>
<td>0.44***</td>
<td>0.65***</td>
<td>0.55***</td>
<td>0.35***</td>
<td>0.49***</td>
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<td>[10]Social_Trust</td>
<td>0.47***</td>
<td>0.47***</td>
<td>0.44***</td>
<td>0.46***</td>
<td>0.44***</td>
<td>0.26***</td>
<td>0.34***</td>
<td>0.24***</td>
<td>0.42***</td>
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<tr>
<td>[11]Social_Network</td>
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<td>0.19***</td>
<td>0.19***</td>
<td>0.18***</td>
<td>0.15***</td>
<td>0.28***</td>
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<td>0.71***</td>
<td>0.21***</td>
<td>0.32***</td>
<td>1.00</td>
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<td>[12]Gov_Emp</td>
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<td>0.04</td>
<td>0.08</td>
<td>0.03</td>
<td>0.04</td>
<td>0.04</td>
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<td>0.03</td>
<td>0.08</td>
<td>0.06</td>
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<td>[13]Gender</td>
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<td>-0.19***</td>
<td>-0.12**</td>
<td>-0.14***</td>
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<td>-0.11**</td>
<td>-0.17***</td>
<td>-0.15***</td>
<td>-0.10*</td>
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</tr>
<tr>
<td>[14]Age</td>
<td>-0.21***</td>
<td>-0.21***</td>
<td>-0.23***</td>
<td>-0.11*</td>
<td>-0.06</td>
<td>-0.27***</td>
<td>-0.13**</td>
<td>-0.08</td>
<td>-0.17***</td>
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<td>-0.06</td>
<td>0.12**</td>
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<td>[15]Partisan</td>
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<td>0.01</td>
<td>0.04</td>
<td>-0.03</td>
<td>-0.04</td>
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<td>-0.06</td>
<td>-0.03</td>
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<tr>
<td>[16]Education</td>
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<td>0.14**</td>
<td>0.17***</td>
<td>0.13**</td>
<td>0.11*</td>
<td>0.09*</td>
<td>0.06</td>
<td>0.36***</td>
<td>0.12**</td>
<td>0.18***</td>
<td>0.39***</td>
<td>0.19***</td>
<td>-0.19***</td>
<td>-0.04</td>
<td>0.01</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>[17]Race</td>
<td>0.00</td>
<td>-0.03</td>
<td>-0.10*</td>
<td>-0.03</td>
<td>0.02</td>
<td>-0.12**</td>
<td>0.00</td>
<td>-0.04</td>
<td>-0.03</td>
<td>0.03</td>
<td>-0.05</td>
<td>-0.03</td>
<td>0.02</td>
<td>0.14**</td>
<td>0.07</td>
<td>-0.02</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[18]Income</td>
<td>0.19***</td>
<td>0.19***</td>
<td>0.20***</td>
<td>0.15***</td>
<td>0.16***</td>
<td>0.20***</td>
<td>0.14**</td>
<td>0.31***</td>
<td>0.16***</td>
<td>0.22***</td>
<td>0.35***</td>
<td>0.10*</td>
<td>-0.17***</td>
<td>-0.09*</td>
<td>-0.04</td>
<td>0.47***</td>
<td>0.03</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>[19]Efficacy</td>
<td>0.47***</td>
<td>0.46***</td>
<td>0.43***</td>
<td>0.57***</td>
<td>0.49***</td>
<td>0.45***</td>
<td>0.46***</td>
<td>0.40***</td>
<td>0.60***</td>
<td>0.45***</td>
<td>0.40***</td>
<td>0.06</td>
<td>-0.19***</td>
<td>-0.12**</td>
<td>-0.08</td>
<td>0.21***</td>
<td>-0.09*</td>
<td>0.20***</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Measurement Model

As outlined in the Measurement section of Chapter 3, the principal component (factor) analysis (PCA) and the Cronbach’s alpha estimation have been used to examine measurement reliability. Each tested variable has only one component’s eigenvalue larger than 1, all factor loadings are larger than .70 (the minimum criterion of factor loading is .40 or above; Costello, Costello, and Osborne, 2005; Acock, 2008, 2013), and only one dimension has been concluded, which assures that all components are tapping a single dimension. Second, all alpha scores are .70 or above and most are larger than .80, which indicates very good internal consistency (Kline, 2000).

In this section, SEM offers an alternative factor analysis method, confirmatory factor analysis (CFA), to provide a better measure of the latent variable through allowing each factor to have its own unique variance (Acock, 2013). First, the ratio of chi-square and degree of freedom ($\chi^2$/df < 3), p-value of the model (> .05), Room mean squared error of approximation (RMSE<.05), Standardized root mean squared residual (SRMR<.08), Comparative fit index (CFI >.95 is preferable, >.90 is acceptable), and Tucker-Lewis index (TLI >.95 is preferable, >.90 is acceptable) are used to assess overall goodness of the CFA model (parentheses contain each indicator’s criterion, Acock, 2013). The results are displayed in Table 5-1. Then, the significance level of each coefficient/factor loading will be examined (<.05 level is acceptable). Furthermore, the scale reliability, average variance extracted (AVE), and composite reliability (CR) will be calculated manually to investigate the reliability and validity of each latent variable (the equation to calculate these three indicators comes from Fornell and Larcker, 1981; and Acock, 2013). At the end of this section, a table containing PCA factor loading,
Cronbach’s alpha score, scale reliability, AVE, and CR scores presents the reliability and validity of the measurement.

To begin with, for the aim is to investigate the effects of the proposed determinants on local, state, and federal government trustworthiness respectively, the CFA models on local, state, and federal government are run separately. The only difference among the three models is the Trust variable, and the measurements of all other variables stay the same. Second, the CFA model exactly uses factors that have been examined by the PCA and Alpha test, since the PCA and Alpha test indicate good reliability. Therefore, more precisely, the CFA models are used to further verify whether or not the measurement, which has been examined by PCA and Cronbach’s alpha, is supported by the SEM measurement model.

<table>
<thead>
<tr>
<th>Table 5-1 Measurement Model Goodness Fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2/df$</td>
</tr>
<tr>
<td>LG CFA Model</td>
</tr>
<tr>
<td>SG CFA Model</td>
</tr>
<tr>
<td>FG CFA Model</td>
</tr>
<tr>
<td>Cutoff Value</td>
</tr>
</tbody>
</table>

**Local Government CFA Model.** Primarily, most of the goodness of model fit indicators meet the cutoff value. For example, the $\chi^2/df$ is 1.49 (309.02/207), which is smaller than 3, CFI (.990) and TLI (.987) are larger than .95, and RMSEA (.030) and SRMS (.024) are smaller than .05. The only problem is that the chi-square is still statistically significant at the .001 level. However, for a complex model that has a large
dataset and a lot variables, it is not a big impairment to the model fit and the measurement. Therefore, it is confident to say the overall model fit of local government CFA model is good.

Furthermore, each observed factor’s standardized coefficient/factor loadings are statistically significant at the .001 level; 70.83% (17 out of 24) of standardized coefficient/factor loading is larger than .80. In addition, the scale reliability of latent variables ranges between .73 and .90, 75% (6 out of 8) of which is larger than .80. The construct reliability (CR) scores are .79 to .93, 87.5% (7 out of 8) of which is larger than .80. And, the average variance extracted (AVE) scores range between .58 and .82. This indicates that the measurement of latent variables in local government model is reliable and grants sufficient confidence to construct a structural model to verify the hypotheses on local government trustworthiness.

### Table 5-2 Local Government Measurement Model Reliability and Validity

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Scale Reliability</th>
<th>Average Variance Extracted</th>
<th>Construct Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust in Local Government</td>
<td>0.81</td>
<td>0.63</td>
<td>0.87</td>
</tr>
<tr>
<td>Administration Performance</td>
<td>0.90</td>
<td>0.82</td>
<td>0.93</td>
</tr>
<tr>
<td>Reliable Information Disclosure</td>
<td>0.90</td>
<td>0.72</td>
<td>0.93</td>
</tr>
<tr>
<td>Methods of Information Disclosure</td>
<td>0.73</td>
<td>0.65</td>
<td>0.79</td>
</tr>
<tr>
<td>E-Government Stability</td>
<td>0.89</td>
<td>0.79</td>
<td>0.92</td>
</tr>
<tr>
<td>Gov. Response to Participation</td>
<td>0.79</td>
<td>0.71</td>
<td>0.83</td>
</tr>
<tr>
<td>Social Trust</td>
<td>0.81</td>
<td>0.58</td>
<td>0.80</td>
</tr>
<tr>
<td>Social Network</td>
<td>0.85</td>
<td>0.72</td>
<td>0.84</td>
</tr>
<tr>
<td><strong>Cutoff Value</strong></td>
<td><strong>&gt;0.50</strong></td>
<td><strong>&gt;0.50</strong></td>
<td><strong>&gt;0.50</strong></td>
</tr>
</tbody>
</table>
**State Government CFA Model.** Primarily, most of the goodness of model fit indicators meet the cutoff values as well. For example, the $\chi^2/df$ is 1.61 (334.27/208), which is smaller than 3, CFI (.987) and TLI (.983) are larger than .95, and RMSEA (.034) and SRMS (.027) are smaller than .05. Also, the only problem is that the chi-square is statistically significant at the .001 level. However, as stated in the local government CFA model, for a complex model that has a large dataset and a lot of variables, it is not a big impairment to the model fit and the measurement. Therefore, it is confident to say the overall model fit of the state government CFA model is good.

As in the local government CFA model, each observed factor’s standardized coefficient/factor loadings is statistically significant at the .001 level, and 70.83% (17 out of 24) of the standardized coefficient/factor loading is larger than .80. In addition, the scale reliability of latent variables ranges between .72 and .91, 75% (6 out of 8) of which is larger than .80. The construct reliability (CR) scores are .79 to .93, 87.5% (7 out of 8) of which is larger than .80. And, the average variance extracted (AVE) scores range between .58 and .82. This indicates that the measurement of latent variables in the state government model is reliable and grants sufficient confidence to construct a structural model to verify the hypotheses on state government trustworthiness.
Table 5-3 State Government Measurement Model Reliability and Validity

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Scale Reliability</th>
<th>Average Variance Extracted</th>
<th>Construct Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust in State Government</td>
<td>0.81</td>
<td>0.63</td>
<td>0.87</td>
</tr>
<tr>
<td>Administration Performance</td>
<td>0.91</td>
<td>0.82</td>
<td>0.93</td>
</tr>
<tr>
<td>Reliable Information Disclosure</td>
<td>0.90</td>
<td>0.72</td>
<td>0.93</td>
</tr>
<tr>
<td>Methods of Information Disclosure</td>
<td>0.72</td>
<td>0.65</td>
<td>0.79</td>
</tr>
<tr>
<td>E-Government Stability</td>
<td>0.89</td>
<td>0.78</td>
<td>0.92</td>
</tr>
<tr>
<td>Gov. Response to Participation</td>
<td>0.78</td>
<td>0.70</td>
<td>0.83</td>
</tr>
<tr>
<td>Social Trust</td>
<td>0.80</td>
<td>0.58</td>
<td>0.80</td>
</tr>
<tr>
<td>Social Network</td>
<td>0.85</td>
<td>0.72</td>
<td>0.84</td>
</tr>
<tr>
<td><strong>Cutoff Value</strong></td>
<td><strong>&gt;0.50</strong></td>
<td><strong>&gt;0.50</strong></td>
<td><strong>&gt;0.50</strong></td>
</tr>
</tbody>
</table>

Federal Government CFA Model. Primarily, most of the goodness of model fit indicators meet the cutoff values as well. For example, the $\chi^2/df$ is 1.58 (333.31/211), which is smaller than 3, CFI (.988) and TLI (.984) are larger than .95, and RMSEA (.033) and SRMS (.026) are smaller than .05. Also, the only problem is that the chi-square is statistically significant at the .001 level. However, as stated in the local and state government CFA models, for a complex model that has a large dataset and a lot variables, it is not a big impairment to the model fit and the measurement. Therefore, it is confident to say the overall model fit of federal government CFA model is good.

As in the local government CFA model, each observed factor’s standardized coefficient/factor loadings is statistically significant at the .001 level, and 70.83% (17 out of 24) of the standardized coefficient/factor loading is larger than .80. In addition, the
scale reliability of latent variables ranges between .79 and .93, 75% (6 out of 8) of which is larger than .80. The construct reliability (CR) scores are .79 to .93, 87.5% (7 out of 8) of which is larger than .80. And, the average variance extracted (AVE) scores range between .58 and .83. This indicates that the measurement of latent variables in the federal government model is reliable and grants sufficient confidence to construct a structural model to verify the hypotheses on federal government trustworthiness.

Generally, it could be concluded that it is reliable and valid to construct the eight latent variables based on current measurement, and it is confident to construct structural models to verify hypotheses on local, state, and federal government trustworthiness.

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Scale Reliability</th>
<th>Average Variance Extracted</th>
<th>Construct Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust in Federal Government</td>
<td>0.84</td>
<td>0.70</td>
<td>0.90</td>
</tr>
<tr>
<td>Administration Performance</td>
<td>0.92</td>
<td>0.83</td>
<td>0.93</td>
</tr>
<tr>
<td>Reliable Information Disclosure</td>
<td>0.90</td>
<td>0.72</td>
<td>0.93</td>
</tr>
<tr>
<td>Methods of Information Disclosure</td>
<td>0.76</td>
<td>0.66</td>
<td>0.79</td>
</tr>
<tr>
<td>E-Government Stability</td>
<td>0.90</td>
<td>0.79</td>
<td>0.92</td>
</tr>
<tr>
<td>Gov. Response to Participation</td>
<td>0.78</td>
<td>0.70</td>
<td>0.83</td>
</tr>
<tr>
<td>Social Trust</td>
<td>0.80</td>
<td>0.58</td>
<td>0.81</td>
</tr>
<tr>
<td>Social Network</td>
<td>0.85</td>
<td>0.72</td>
<td>0.84</td>
</tr>
<tr>
<td><strong>Cutoff Value</strong></td>
<td><strong>&gt;0.50</strong></td>
<td><strong>&gt;0.50</strong></td>
<td><strong>&gt;0.50</strong></td>
</tr>
</tbody>
</table>
**Structural Model**

The second stage is to use a structural model to test whether or not the proposed direct and indirect causal relationships among government trustworthiness and its predictors are supported by the findings. The structural model is applied to citizen trust in local, state, and federal government respectively. Therefore, the results will be presented separately as local government model (LGM), state government model (SGM), and federal government model (FGM).

For each model, the overall goodness of model fit will be reported first. Next, standardized coefficients and p-value of each variable on government trustworthiness will be shown specifically. Then, the direct, indirect, and total effects of proposed precursors on citizen trust in government are reported to display which path (direct or indirect) has more powerful impacts, and whether the total effect is statistically significant or not.

**Local Government Model (LGM).** The model vs. saturated chi-square is not significant at the .05 level (p = .1376); the $\chi^2$/df (11.02/7) is 1.57, which meets the traditional criteria ($\chi^2$/df<3); the RMSEA and SRMR are .033 and .005, which are below .05 and .08 respectively; and the CFI (.996) and TLI (.984) are greater than .95. In addition, the model coefficient of determination is 75.52% (CD/R$^2$ = .7552) and it explains the 60.16% variance of local government trustworthiness ($R_{trust}^2$ = .6016). This indicates a very good model fit (See Table 5-5 for LGM Model Goodness of Fit Indices).
The standardized path coefficients are reported in Figure 5-1 (nonsignificant coefficient is not displayed). According to the result, the endogenous mediator variable, local government administration performance ($\beta = .52, p < .001$), is significantly positively associated with citizen trust in local government. And, it is the most powerful predictor of local government trustworthiness. The reliable information disclosure of local government and interpersonal trust not only have significant direct impacts on citizen trust in local government (info_reliability $\rightarrow$ trust, $\beta = .12, p < .05$; social trust $\rightarrow$ trust, $\beta = .14, p < .001$), but also significantly contribute to local government administration performance (info_reliability $\rightarrow$ performance, $\beta = .51, p < .001$; social trust $\rightarrow$ performance, $\beta = .07, p < .01$), which is positively associated with local government trustworthiness. And, reliable information disclosure is the most powerful positive precursor to administration performance. In addition, local government adoption of social media and electronic subscription to distribute information (info_methods $\rightarrow$ trust, $\beta = .09, p < .01$) has significant direct influences on citizen trust in local government. And, the stability of local e-government system (e-gov. stability $\rightarrow$ performance, $\beta = .14, p < .001$) and true influence of citizen participation on local government policy making (participation_influence $\rightarrow$ performance, $\beta = .26, p < .001$) have significant positive
impacts on administration performance, which is positively associated with local government trustworthiness. In addition, two demographic factors, age ($\beta = -0.12$, $p < .001$) and gender (female = 1, $\beta = -0.07$, $p < .05$), also significantly directly affect local government trustworthiness.

The direct, indirect, and total effects and the proportion of total effects of the local government model are presented in Table 5-6. Local government administration performance, respondents’ gender (female), and age only have direct and significant effects on local government trustworthiness. Therefore, the total effects of the three variables on citizen trust in local government are statistically significant as well. Moreover, the reliable information disclosure of local government and interpersonal trust with other people have both significant direct and indirect effects on local government trustworthiness, and both total effects are consequentially statistically significant. For the reliable information disclosure of local government, its indirect effects on local government trustworthiness, which is through exerting influences on administration performance, account for the major proportion of total effects on local government trustworthiness (69%), compared to 31% coming from direct effects. Nevertheless, the majority of total effects of interpersonal trust on local government trustworthiness derive from its direct influences (81%), rather than indirect impacts through promoting administration performance (19%).

Furthermore, though local government adoption of social media and electronic subscription to distribute information only has significant direct effects on local government trustworthiness, and local government response to citizen participation only has significant indirect effects on local government trustworthiness, the total effects of
the two variables on local government trustworthiness are also significant at least at the .05 level. And, it is inevitable that the direct effects of local government adopting social media and electronic subscription to distribute information (80%), and the indirect effects of local government response to citizen participation (88%), respectively, take up the primary proportion of each of the total effects on local government trustworthiness.

In addition, although the stability of the e-government system does not have significant direct effects on local government trustworthiness, its indirect effect is statistically significant and accounts for the major proportion of its total effects (123%). However, its total effects on local government trustworthiness are not statistically significant.

Finally, the variety of citizen participation avenues and citizen involvement in community activities and associations do not have any significant direct, indirect, or total effects on local government trustworthiness. And, their effects on local government trustworthiness are weak and can be ignored.
Table 5-6 Standardized Direct, Indirect, and Total Effects of Determinants on Local Government Trustworthiness

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance-&gt;Trust</td>
<td>0.58*** (100%)</td>
<td>No Path</td>
<td>0.58*** (100%)</td>
</tr>
<tr>
<td>Info_reliability-&gt;Trust</td>
<td>0.13* (31%)</td>
<td>0.29*** (69%)</td>
<td>0.42*** (100%)</td>
</tr>
<tr>
<td>Info_methods-&gt;Trust</td>
<td>0.08** (80%)</td>
<td>0.02 (20%)</td>
<td>0.10** (100%)</td>
</tr>
<tr>
<td>E-gov._stability-&gt;Trust</td>
<td>-0.014 (-23%)</td>
<td>0.076*** (123%)</td>
<td>0.062 (100%)</td>
</tr>
<tr>
<td>Partici._avenue-&gt;Trust</td>
<td>0.003 (200%)</td>
<td>-0.003 (-100%)</td>
<td>-0.000 (100%)</td>
</tr>
<tr>
<td>Authentic_partici.-&gt;Trust</td>
<td>0.02 (12%)</td>
<td>0.15*** (88%)</td>
<td>0.17*** (100%)</td>
</tr>
<tr>
<td>Social_trust-&gt;Trust</td>
<td>0.17*** (81%)</td>
<td>0.04* (19%)</td>
<td>0.21*** (100%)</td>
</tr>
<tr>
<td>Social_network-&gt;Trust</td>
<td>-0.04 (100%)</td>
<td>0.004 (0%)</td>
<td>-0.04 (100%)</td>
</tr>
<tr>
<td>Gender (Female)-&gt;Trust</td>
<td>-0.15* (100%)</td>
<td>No Path</td>
<td>-0.15* (100%)</td>
</tr>
<tr>
<td>Age-&gt;Trust</td>
<td>-0.09*** (100%)</td>
<td>No Path</td>
<td>-0.09*** (100%)</td>
</tr>
</tbody>
</table>

Parenthesis contains the proportion of direct and indirect effect in total effect
* p<0.05, ** p<0.01, *** p<0.001
Figure 5-1 Local Government Structure Model

Information Reliability

E-Government Stability

Participation Influence

Social Trust

Information Disclosure Method

Administration Performance

Local Gov. Trustworthiness

Age

Gender

$\chi^2(7) = 11.02$

$\text{p} = 0.1376$

RMSEA = .033

SRMR = .005

CFI = .996

TLI = .984

$R^2 = 0.76$

$R^2_{\text{Trust}} = 0.60$

$R^2_{\text{Performance}} = 0.72$

$N = 529$

* $p < .05$; ** $p < .01$; *** $p < .001$
State Government Model (SGM). The model vs. saturated chi-square is not significant at the .05 level (p = .1349); the $\chi^2$/df (11.09/7) is 1.58, which meets the traditional criteria ($\chi^2$/df < 3); the RMSEA and SRMR are .033 and .005, which are below .05 and .08 respectively; and the CFI (.996) and TLI (.983) are greater than .95. In addition, the model coefficient of determination is 76.4% (CD/R$^2$ = .764), and it explains the 52.60% variance of state government trustworthiness ($R_{\text{trust}} = .5260$). Overall, this indicates a very good model fit of the state government model (See Table 5-5 for Model Goodness of Fit Indices).

The standardized path coefficients are reported in Figure 5-2 (nonsignificant coefficient is not displayed). According to the result, the endogenous mediator variable, local government administration performance ($\beta = .40$, p < .001), is significantly associated with citizen trust in state government and is the most powerful predictor of state government trustworthiness. Personal trust in other people still has both significant direct impacts on state government trustworthiness ($\beta = .18$, p < .001) and on local government administration performance (social trust->performance, $\beta = .07$, p < .01), which is positively associated with citizen trust in state government. Moreover, local government employing social media and electronic subscription to distribute information ($\beta = .16$, p < .001) has significant direct and positive influences on citizen trust in state government. In addition, reliable local government information disclosure (info_reliability->performance, $\beta = .51$, p < .001), the stability of local e-government system (e-government stability->performance, $\beta = .14$, p < .001), and the true influences of citizen participation in local governance (participation_influence->performance, $\beta = .26$, p < .001) are significantly associated with local government administration
performance, which is positively associated with state government trustworthiness. And, reliable information disclosure is the most powerful determinant of administration performance. In addition, three demographic factors, age \((\beta = -0.11, p < .001)\), gender (female = 1, \(\beta = -0.07, p < .05\), and partisanship (Democrat = 1, Others = 0; \(\beta = -0.08, p < .01\)), directly and significantly affect state government trustworthiness.

The direct, indirect, and total effects and the proportion of total effects of the state government model are presented in Table 5-7. Local government administration performance, respondents’ gender (female), age, and partisanship (Democrat) only have direct and significant effects on state government trustworthiness. And therefore, the total effects of the four variables on citizen trust in state government are statistically significant as well.

Moreover, interpersonal trust with other people has both significant direct and indirect effects on state government trustworthiness, and the total effects are consequentially statistically significant. The majority of total effects of interpersonal trust on state government trustworthiness derive from its direct influences (86%), rather than indirect impacts through promoting administration performance (14%).

Furthermore, although local government adoption of social media and electronic subscription to distribute information only has significant direct effects on state government trustworthiness, and reliable local government information disclosure and local government response to citizen participation only have significant indirect effects on state government trustworthiness, the total effects of the three predictors on state government trustworthiness are also significant at least at the .05 level. And, it is inevitable that the direct effects of local government adoption of social media and
electronic subscription to distribute information (90%), and the indirect effects of local
government information disclosure reliability (69%) and local government response to
citizen participation (60%), respectively, take up the primary proportion of each of the
total effects on state government trustworthiness.

In addition, although the stability of the e-government system does not have
significant direct effects on state government trustworthiness, its indirect effect is
statistically significant and accounts for the major proportion of its total effects (200%).
However, its total effect on state government trustworthiness is not statistically
significant.

Finally, the variety of citizen participation avenues and citizen involvement in
community activities and associations do not have any significant direct, indirect, or total
effects on state government trustworthiness. And, their effects on state government
trustworthiness are weak and can be ignored.
<table>
<thead>
<tr>
<th>Outcome</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance-&gt;Trust</td>
<td>0.44*** (100%)</td>
<td>No Path</td>
<td>0.44*** (100%)</td>
</tr>
<tr>
<td>Info_reliability-&gt;Trust</td>
<td>0.101 (31%)</td>
<td>0.225*** (69%)</td>
<td>0.326*** (100%)</td>
</tr>
<tr>
<td>Info_methods-&gt;Trust</td>
<td>0.131*** (90%)</td>
<td>0.014 (10%)</td>
<td>0.145*** (100%)</td>
</tr>
<tr>
<td>Website_stability-&gt;Trust</td>
<td>-0.03 (-100%)</td>
<td>0.06*** (200%)</td>
<td>0.03 (100%)</td>
</tr>
<tr>
<td>Partici._avenue-&gt;Trust</td>
<td>0.01 (100%)</td>
<td>-0.002 (0%)</td>
<td>0.01 (100%)</td>
</tr>
<tr>
<td>Authentic_partici.-&gt;Trust</td>
<td>0.078 (40%)</td>
<td>0.117*** (60%)</td>
<td>0.195*** (100%)</td>
</tr>
<tr>
<td>Social_trust-&gt;Trust</td>
<td>0.203*** (86%)</td>
<td>0.033* (14%)</td>
<td>0.237*** (100%)</td>
</tr>
<tr>
<td>Social_network-&gt;Trust</td>
<td>-0.04 (100%)</td>
<td>0.003 (0%)</td>
<td>-0.04 (100%)</td>
</tr>
<tr>
<td>Partisan-&gt;Trust</td>
<td>-0.20** (100%)</td>
<td>No Path</td>
<td>-0.20** (100%)</td>
</tr>
<tr>
<td>Gender-&gt;Trust</td>
<td>-0.15* (100%)</td>
<td>No Path</td>
<td>-0.15* (100%)</td>
</tr>
<tr>
<td>Age-&gt;Trust</td>
<td>-0.08*** (100%)</td>
<td>No Path</td>
<td>-0.08*** (100%)</td>
</tr>
</tbody>
</table>

Parenthesis contains the proportion of direct and indirect effect in total effect

* p<0.05, ** p<0.01, *** p<0.001
Figure 5-2 State Government Structure Model

- Information Disclosure Method
  - Information Reliability
    - E-Government Stability
      - Participation Influence
        - Social Trust
  - Administration Performance
    - State Gov. Trustworthiness
      - Age
        - Gender
          - Partisan

Notes:
- $\chi^2(7) = 11.09$
- $p = 0.1349$
- RMSEA = .033
- SRMR = .005
- CFI = 0.996
- TLI = 0.983
- $R^2 = 0.76$
- $R^2_{Trust} = 0.53$
- $R^2_{Performance} = 0.72$
- $N = 528$
- $^* p<.05$; $^{**} p<.01$; $^{***} p<.001$
Federal Government Model (FGM). The model vs. saturated chi-square is not significant at the .05 level (p = .1349); the $\chi^2$/df (11.09/7) is 1.58, which meets the traditional criteria ($\chi^2$/df < 3); the RMSEA and SRMR are .033 and .005, which are below .05 and .08 respectively; and the CFI (.996) and TLI (.981) are greater than .95. In addition, the model coefficient of determination is 77.35% ($CD/R^2 = .7735$) and it explains the 42% variance of federal government trustworthiness ($R_{\text{trust}} = .4229$). This indicates a very good model fit of the federal government structural model (See Table 4-11 for Model Goodness of Fit Indexes).

The standardized path coefficients are reported in Figure 5-3 (nonsignificant coefficient is not displayed). According to the result, the endogenous mediator variable, local government administration performance ($\beta = .23$, $p < .001$), is significantly associated with citizen trust in federal government. Personal trust of other people has both significant direct impacts on federal government trustworthiness ($\beta = .21$, $p < .001$) and significant influences on local government administration performance (social trust-performance, $\beta = .067$ $p < .01$), which is positively associated with federal government trustworthiness. And, administration performance and social trust are the most powerful predictors of citizen trust in federal government. Moreover, local government employing social media and electronic subscription to distribute information ($\beta = .19$, $p < .001$), the variety of participation avenues that local government provided to residents ($\beta = .12$, $p < .05$), and respondents’ involvement in community activities or associations ($\beta = -.12$, $p < .05$) have significant direct influences on citizen trust in federal government.

In addition, reliable local government information disclosure (info_reliability-performance, $\beta = .51$, $p < .001$), the stability of local e-government system (e-gov.
stability->performance, \( \beta = .14, p < .001 \), and the true influences of citizen participation in local governance (participation influence->performance, \( \beta = .26, p < .001 \)) are found to significantly contribute to local government administration performance, which is positively associated with federal government trustworthiness.

In addition, two individual factors, age (\( \beta = -.12, p < .001 \)) and partisanship (Democrat = 1, others = 0, \( \beta = -.07, p < .05 \)), directly affect federal government trustworthiness.

The direct, indirect, and total effects and the proportion of total effects of the federal government model are presented in Table 5-8. Local government administration performance, respondents’ partisanship (Democrat), and age only have direct and significant effects on citizen trust in federal government. And therefore, the total effects of the three factors on federal government trustworthiness are statistically significant as well.

Moreover, interpersonal trust with other people has both significant direct and indirect effects on federal government trustworthiness, and the total effects are consequentially statistically significant. The majority of total effects of interpersonal trust on state government trustworthiness derive from its direct influences (93%), rather than indirect impacts through promoting administration performance (7%).

Furthermore, although local government adoption of social media and electronic subscription to distribute information, the variety of participation avenues that local government provides, and citizen involvement in community or association activities only have significant direct effects on state government trustworthiness, and reliable local government information disclosure and local government response to citizen participation
only have significant indirect effects on state government trustworthiness, the total effects of the five predictors on federal government trustworthiness are also significant at least at the .05 level. And, it is inevitable that the direct effects of local government adoption of social media and electronic subscription to distribute information (94%), the variety of participation avenues that local government provides (100%), citizen involvement in community or association activities (93%), and the indirect effects of local government information disclosure reliability (69%), respectively, take up the primary proportion of each of the total effects on state government trustworthiness. It’s interesting that the direct and indirect effects of local government response to citizen participation equally take up half of its total effects on federal government trustworthiness.

In addition, although the stability of the e-government system does not have significant direct effects on federal government trustworthiness, its indirect effect is statistically significant. However, its total effect on federal government trustworthiness is not statistically significant. In addition, the direct and indirect effects of the stability of the e-government system on federal government trustworthiness are the same (each takes up 50% of the total effects).
Table 5-8 Standardized Direct, Indirect, and Total Effects of Determinants on Federal Government Trustworthiness

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance-&gt;Trust</td>
<td>0.28***</td>
<td>No Path</td>
<td>0.28***</td>
</tr>
<tr>
<td>Info_reliability-&gt;Trust</td>
<td>0.06</td>
<td>0.14*** (70%)</td>
<td>0.20**</td>
</tr>
<tr>
<td>Info_methods-&gt;Trust</td>
<td>0.17*** (94%)</td>
<td>0.01 (6%)</td>
<td>0.18***</td>
</tr>
<tr>
<td>Website_stability-&gt;Trust</td>
<td>0.04</td>
<td>0.04** (50%)</td>
<td>0.08</td>
</tr>
<tr>
<td>Partici._avenue-&gt;Trust</td>
<td>0.08*</td>
<td>-0.001 (0%)</td>
<td>0.08*</td>
</tr>
<tr>
<td>Authentic_partici.-&gt;Trust</td>
<td>0.07</td>
<td>0.07*** (50%)</td>
<td>0.14*</td>
</tr>
<tr>
<td>Social_trust-&gt;Trust</td>
<td>0.27*** (93%)</td>
<td>0.02* (7%)</td>
<td>0.29***</td>
</tr>
<tr>
<td>Social_network-&gt;Trust</td>
<td>-0.10*</td>
<td>0.002 (0%)</td>
<td>-0.10*</td>
</tr>
<tr>
<td>Partisanship-&gt;Trust</td>
<td>-0.18*</td>
<td>No Path</td>
<td>-0.18*</td>
</tr>
<tr>
<td>Age-&gt;Trust</td>
<td>-0.10***</td>
<td>No Path</td>
<td>-0.10***</td>
</tr>
</tbody>
</table>

Parenthesis contains the proportion of direct and indirect effect in total effect
* p<0.05, ** p<0.01, *** p<0.001
Figure 5-3 Federal Government Structure Model

Chi-square (7) = 11.09
RMSEA = 0.033
SRMR = 0.056
CFI = 0.996
TLI = 0.981
R² = 0.77
R² = 0.72
N = 598; p < .001; *** p < .01; ** p < .05; * p < .1

Federal Gov. Trustworthiness

-0.12**
-0.07*

Age
Partisan

0.19***
0.12*
0.23***
-0.12*
0.21****

Participation Avenue
Administration Performance
Social Network

0.26***
0.51***
0.14***
0.07***

Information Disclosure Method
Participation Influence
Information Reliability
E-Government Stability
Social Trust
Findings and Discussions

Based on the SEM structural analysis results, this section summarizes the findings from the statistical estimations and discusses the meaning of the findings. It elaborates the influences of predictors on citizen trust of government from perspectives of local government administration performance, information transparency and technology, citizen participation in local government policy making, individual social capital, and several individual characteristics.

Administration Performance

Citizen perceptions of local government administration performance, which is measured by three dimensions—service quality, administrators’ competency, and ethics—is significantly positively associated with citizen trust in local government (β = .52, p < .001), state government (β = .40, p < .001), and also federal government (β = .23, p < .001). Therefore, Hypothesis 1, “Citizen perceived high administration performance from government is positively related to government trustworthiness,” is confirmed by all three models.

This illustrates that on the institutional level, government ought to dedicate to improving service provision capacity. Convenience of obtaining services and high quality of services reflect high performance of a government. Citizens will not rate a government as satisfactory and trustworthy if it is considered information inaccessible, saturated by red tape, and tardy in actions. This finding also illustrates that modern governance emphasizes civic-centered administration. Therefore, the consistency between citizen expectations and government provisions, and citizen satisfaction with government service,
are important indicators to measure government performance, and they are crucial considerations for improving citizen perceptions of government. In addition, both procedural fairness and outcome fairness are of great significance in shaping citizen perceptions of government performance. And, citizens are increasingly concerned about what happens in the interaction procedure when evaluating government, rather than solely or primarily what they finally get from government. Hence, paying attention to procedure when directly dealing with citizens is of great significance for government and administrators. In addition, local government ought to attach importance to advertising government performance improvement and reform strategies to the public. After all, “invisible” performance means nothing to citizens. It is what citizens “know about government” that frames their attitude toward government.

On the individual level, local government administrators’ competency, as an important component of government administration performance, is of tremendous importance to preserve citizen trust in all levels of government. Administrators’ working efficiency and effectiveness is the most visible effect of government, and it exerts a direct impact on citizens’ benefits and perceptions of government. It is hard to imagine that citizens would trust a government in which bureaucrats are slow in action, difficult to communicate with, and indolent, and often make mistakes. Therefore, government officers’ working competency is the critical influential factor to frame citizen attitudes toward government. In order to sustain a high level of administrator competency so as to efficiently serve citizens and resolve citizens’ problems, local government officers should be of high professionalism, work hard and efficiently to provide services, be careful and avoid making mistakes, and promptly correct mistakes if any are made. It is worth noting
that avoiding mistakes and immediately amending errors plays a critical role in preserving citizen trust in government. This illustrates the significance and necessity of the internal audit mechanism. The self-inspection and error correction mechanism helps administrators to immediately detect and rectify errors. Timely error correction, especially if the problems are related to citizen issues, tends to give citizens the impression that government operation and capacity are of high efficiency, and thus contributes to promoting citizen trust in government.

Furthermore, government administrators’ ethics are a critical component of administration performance and play a significant role in improving and maintaining a high level of government credibility. Thus, honesty is a key quality that citizens consider when evaluating government trustworthiness. Honesty requires administrators to completely and accurately transmit information to citizens without concealment or fraud. In addition, citizens expect to perceive administrators’ dedication to work assignments and public interests. For one thing, dedication might predict good working efficiency and effectiveness. For another, if frontline administrators make efforts to reduce their workload rather than to better accomplish their work tasks and serve citizens, they possibly “cut down” their assistance and responsive flexibility for resolving citizens’ problems. In particular, government work is sometimes portrayed as full of procedural red tape, which is used as an official excuse for bureaucrats not wholeheartedly fulfilling their tasks or delaying the processing of cases when interacting with citizens. Doing so can impair citizens’ benefit, reduce government working efficiency, and decrease citizen trust in government administrators and agencies.
Moreover, fairness rather than favoritism in decision making is required to maintain high ethical standards in government agencies. Public resources are always limited. It is impossible to meet each citizen’s requests and demands. And, inevitably, government administrators will have personal connections with some citizens, especially at the local government level where social connections among residents are more prevalent. It is critical in such circumstances that administrators behave fairly and follow ethical principles in decision making, so as to impress citizens with their integrity and fairness. More than anything else, governments ought to eliminate or avoid public perceptions that government officials running the government gain the most from it. Equity and impartiality are crucial to preserving citizen trust in government.

Finally, citizen perceptions of local government administration performance significantly affect their trust not only in local government, but also in state and federal government. It appears that citizens do not exactly segregate local, state, and federal government performance and their impacts on citizens’ attitude toward government. When assessing government credibility, citizens do not base their trust in one level of government solely on that government’s performance. Citizens mix perceptions of performance and trust among different governments. Put another way, when they talk about “government,” even a specific government, citizens might envision government in general—a mixed image of local, state, and federal government. The improvement of citizen trust in a government possibly involves influential factors at other government levels. Therefore, even in the federalism, which is characterized by a lack of absolute control and close collaboration among federal, state, and local government, restoring,
maintaining, and enhancing government trustworthiness is a cross-government systematic project.

Information Transparency and Technology

Reliable Information Disclosure. Citizen perceived local government information disclosure reliability, which is measured by local government information clarity, accuracy, relevancy, and immediacy, is a significant contributor to citizen trust in local government ($\beta = .51, p < .001$). Therefore, Hypothesis 2a, “Citizen perceived reliability of government information is positively associated with citizens’ trust in government,” is supported by the local government model. However, in the state government and federal government models, only the reliability of local government information disclosure is positively associated with citizen trust in the state ($\beta = .09$) and federal government ($\beta = .05$). Neither of the causal relationships is statistically significant, so the state and federal government models do not support Hypothesis 2a.

This finding illustrates that reliable information disclosure plays an important role in promoting citizen trust toward government. A trusted government should ensure the clarity, accuracy, relevancy, and immediacy of its distribution of information to the public. To be specific, the information that local government provides in responding to citizen requests should be clearly and accurately stated. The information content should be closely relevant to citizens’ demands. It should help to save time in bureaucrat-citizen communication. Otherwise, unclear, inaccurate, or irrelevant information distribution might confuse citizens, leading either to unresolved problems or to citizens continuing to communicate with officials to obtain the correct information. In addition, local
government ought to publicize and update information in a timely manner to ensure that citizens receive up-to-date information. Outdated information might mislead citizens and cause them to waste time. In addition, local government should not only provide clear, accurate, relevant, and immediate information, but also enhance citizens’ understanding of the information disclosure reliability. Only perceived government information disclosure reliability can contribute to citizen perceptions of government trustworthiness. It is noteworthy that reliable information disclosure from local government does not significantly affect citizen trust toward state and federal government. This finding indicates that for citizens there is a close correlation between which government the information comes from and their trust toward that specific government. Hence, information transparency, different from administration performance, has a specific link with government. It does not directly exert impacts on citizen trust toward another government.

Meanwhile, the study found that reliable information disclosure makes a very strong contribution to local government administration performance, through which it exerts indirect impacts on citizen trust in local ($\beta_{\text{Reliability}\rightarrow\text{Performance}} = .51, p < .001$), state ($\beta_{\text{Reliability}\rightarrow\text{Performance}} = .51, p < .001$), and federal ($\beta_{\text{Reliability}\rightarrow\text{Performance}} = .51, p < .001$) government. In addition, the direct effects of information disclosure reliability on local government trustworthiness ($\beta_{\text{Local}} = .13, p < .05$); indirect effects of information disclosure reliability on local ($\beta_{\text{Local}} = .29, p < .001$), state ($\beta_{\text{State}} = .23, p < .001$), and federal ($\beta_{\text{Federal}} = .14, p < .001$) government trustworthiness; and total effects of information disclosure reliability on local ($\beta_{\text{Local}} = .42, p < .001$), state ($\beta_{\text{State}} = .33, p < .001$), and federal ($\beta_{\text{Federal}} = .20, p < .01$) government trustworthiness are all positive
and statistically significant. The indirect effects of information disclosure reliability on citizen trust through influencing government administration performance account for 69%, 69%, and 70% of its total effects on local, state, and federal government trustworthiness, respectively.

This finding indicates, first, that reliable information disclosure not only has direct impacts on government trustworthiness, but also exerts indirect influences on citizen trust in government through affecting administration performance. Therefore, Hypothesis 2d-1, “Citizen perceived reliability of government information is positively related to administration performance, which leads to the increase of government trustworthiness,” is supported by this study. Second, reliable information disclosure has more powerful indirect than direct influences on citizen trust in government. Clear, accurate, relevant, and immediate information, and its timely disclosure, is a crucial predictor of administration performance, as it implies that government is capable of immediately grasping and taking advantage of critical information to address public concerns. The public is impressed if government is willing to publicize internal documentation and information for citizen scrutiny; this contributes to improving citizen satisfaction with government, which is a significant indicator to administration performance. Third, local government information disclosure reliability not only affects citizen trust in local government, it also makes a significant indirect contribution to state and federal government trustworthiness through promoting administration performance.

Methods of Information Disclosure. Local government adopting social media or electronic subscription to distribute government information significantly influences
citizen trust of local ($\beta = .09, p < .01$), state ($\beta = .16, p < .001$), and federal ($\beta = .19, p < .001$) government. Hence, Hypothesis 2b, “Government adoption of social media and electronic subscription methods to distribute information contributes to citizen trust in government,” is confirmed by this study.

However, no evidence indicates that local government adopting social media or electronic subscription to distribute information has significant indirect effects on government trustworthiness through impacting administration performance. Therefore, Hypothesis 2d-2, “Government adoption of social media and electronic subscription methods to distribute information is positively related to administration performance, which leads to the increase of government trustworthiness,” is not supported by this study.

This finding illustrates that the employment of modern information dissemination avenues to communicate with citizens plays a significant role in shaping citizen perceptions of government. However, it is not an important contributor to administration performance. Adoption of social media and electronic subscription is characterized by immediacy in communication, promptness in information transaction, dual direction in information transmission, and portability of hardware devices. Possibly, the reason for government adopting social media or electronic subscription to distribute information promoting citizen trust in government is because of the characteristics of the user group. Usually people who would like to use social media and government electronic subscription are in the younger age groups. They might be more interested in new technologies than older people, and more able to detect government performance improvement that is caused by initiating new technology. Interestingly, the causal impacts on government trustworthiness increase from local government to state
government to federal government. This is unusual compared to other predictors, for which the impacts on citizen trust in government decrease from local government to federal government. It is possible that residents who would like to receive government information through social media or electronic subscription have fairly high political efficacy in government; they are already highly interested in learning what is going on inside government and also have very positive perceptions regarding government.

*E-Government Stability.* The stability of the local e-government system turns out to have no significant direct impacts on government trustworthiness throughout all three models ($\beta_{\text{local}} = -.01, p = .759; \beta_{\text{state}} = -.03, p = .572; \beta_{\text{state}} = .04, p = .446$). Therefore, Hypothesis 2c, “Citizen perception of e-government system stability contributes to government trustworthiness,” is not empirically demonstrated by this study. However, citizen perceived e-government system stability has consistent significant positive indirect effects on government trustworthiness, which is mediated by administration performance (Local Model $\beta_{\text{Stability} \rightarrow \text{Performance}} = \beta_{\text{Stability} \rightarrow \text{Performance}} = \beta_{\text{Stability} \rightarrow \text{Performance}} = .14, p < .001$). Hence, Hypothesis 2d-3, “Stability of the e-government system is positively related to administration performance, which leads to the increase of government trustworthiness,” is supported by this study.

The findings indicate, first, that stability of the e-government system is an important contributor to administration performance. It also indirectly promotes government trustworthiness through affecting administration performance. As a consequence, government and administrators ought to pay close attention to the operation of the e-government system. Timely information updates, information relevance, and
stable and easy website accessibility are critical indicators of e-government stability and administration performance. Citizens could evaluate e-government/government performance simply through using the government website. So, e-government is not only a technique, but also a communication channel to transmit a message of high government efficiency.

In addition, the design and construction of the local government website, which might be restricted by the local government’s budget and e-government development strategy, varies a lot. Some local governments emphasize e-government development and allocate an adequate budget to construct a stable government website. If the e-government system is stable and fast, promptly updates information, is convenient and easy to access, and is comprehensive in content, citizens might have more satisfaction with e-government performance and usage, which would lead to more trust in government (Welch, Hinnant, and Moon, 2005). In contrast, some local governments have not initiated and constructed a full-fledged e-government system. The e-government system is relatively basic and simple, or even unstable, and citizens’ usage experience might be unpleasant. Such experiences can result in dissatisfaction with e-government and government agencies, which would lead to a decrease in government credibility.

Furthermore, with more and more local governments adopting an e-government strategy, plenty of government functions and services are accessible and delivered through government websites, such as information distribution, online application, instant dialogue with administrators, and citizen discussion boards. The development of e-government is intended to improve government performance and to promote government-citizen interaction efficiency. In such circumstances, some citizens will need to acquire
new skills in order to use the government website, particularly older citizens and those with low education levels. If local government could provide government website usage training for residents, it would contribute to improving citizens’ skills for using the government website, which in turn would enhance government accountability and promote citizen perceptions of government. Hence, local government and administrators should be aware of the necessity to launch effective training for website users in order to better serve the public through e-government.

Citizen Participation in Local Governance

**Participation Avenues.** The variety of citizen participation avenues in local policy-making processes is significantly positively associated with citizen trust in federal government ($\beta = .12$, $p < .05$). It is also positively associated with local ($\beta = .01$) and state ($\beta = .02$) government trustworthiness but not significant in statistics. Therefore, Hypothesis 3a, “The variety of participation avenues that government provides for citizens to express their preferences and demands are positively associated with citizen trust in government,” is confirmed by the federal government model, but is not empirically supported by the local and state government models. However, the variety of citizen participation avenues does not have any significant indirect effects on government trustworthiness through positively impacting administration performance. Hence, Hypothesis 3c-1, “The variety of participation avenues that government provides for citizens to express their preferences and demands is positively associated with administration performance, which leads to an increase in government trustworthiness,” is not confirmed by this study.
The findings illustrate that local government ought to employ various participation avenues so that citizens have multiple ways to express demands, requests, and complaints. Thus the government response will be more targeted toward citizen needs and citizens will tend to be more satisfied with the participation process and results, leading to better government trustworthiness.

In addition, citizens’ preference of participation modes varies greatly. For example, 28% (147) and 23% (121) of respondents, respectively, said they had answered citizen surveys and attended community or neighborhood meetings in the past 12 months. However, only 6% (30), 7% (40), 10% (52), and 10% (52) of respondents had participated in local governance through legislative standing committees, citizen telephone hotline, citizen advisory board, and citizen focus group, respectively. It is also worth noting that participation in online forums ranks fourth out of all ten avenues, which illustrates that e-government and information technology play an increasingly important role in promoting citizen participation in policy making and administration. E-participation is a crucial component and a key direction of the development of citizen participation. In particular, e-government makes it possible to participate off-site, at long distance, and without a fixed time constraint. It greatly promotes the efficiency, easiness, and convenience of participation for citizens who have work and family responsibilities.

**Government Response to Citizen Participation.** This study fails to find significant empirical evidence that government response to citizen participation in the local policy-making process is directly positively associated with citizen trust in any government. Hence, Hypothesis 3b, “Citizen participation that truly has the power to influence
government decisions is positively associated with citizens’ trust in government,” is not confirmed by any of the three models. However, the study does indicate that government response to citizen participation significantly contributes to administration performance, which is positively associated with government trustworthiness throughout the three models, and the standardized coefficients stay the same ($\beta_{\text{Authentic Participation}\rightarrow\text{Performance}} = .26$, $p < .001$). Therefore, Hypotheses 3c-2, “Citizen participation that truly has the power to influence government decisions is positively associated with administration performance, which leads to an increase in government trustworthiness,” is strongly confirmed by the models.

The findings indicate that having a true influence on policy making and administration through participation improves citizen perceptions of administration performance. It also has more powerful impacts, although indirectly through influencing administration performance, on government trustworthiness than the variety of participation avenues. First, the traditional viewpoint that citizen participation might reduce administration performance is outmoded. The reality is that involving citizens in policy-making and implementation processes has the effect of optimizing policy and administration through gathering useful information and knowledge from citizens, enhancing government-citizen communication, and obtaining community support.

Furthermore, citizens expect to have true and powerful impacts on local administration and governance through participation, particularly regarding the issues closely related to their own benefits. This means that citizens do not regard participation as episodic or a formality. They want their voice to be heard, their preferences to be considered in policy making, their requests to be satisfied, and their complaints to be
resolved. Otherwise, their so-called participation might turn out to be meaningless, fruitless, and a waste of time. A participation mechanism does little to improve government credibility if it is designed to be a formality and does not generate any actual effect. Therefore, government agencies and administrators should attach importance to citizens’ proposals and advice, and accurately respond to their queries. Once citizens perceive that they have a true influence on policy making and implementation, they tend to have a positive attitude toward government, and government credibility will increase.

Social Capital

Social Trust. Citizen personal trust in other people is significantly positively associated with their trust in local (β = .14, p < .001), state (β = .18, p < .001), and federal (β = .21, p < .001) government. Therefore, Hypothesis 4a, “The more citizens trust other people, the more they trust in government,” is confirmed. Meanwhile, interpersonal trust also makes a significant indirect contribution to government trustworthiness through positively impacting administration performance (Local β_{Social_Trust->Performance} = .07, p < .05; State β_{Social_Trust->Performance} = .08, p < .05; Federal β_{Social_Trust->Performance} = .07, p < .05). Hence, Hypothesis 4c-1, “Citizens’ trust in other people leads to administration performance improvement, which enhances government trustworthiness,” is supported by this study as well. Though social trust has both direct and indirect effects on government trustworthiness, its direct impact on citizen trust in government dominates the causal relationship. The direct effects of social trust on government trustworthiness account for 81%, 86%, and 93% of the total effects of social trust on local, state, and federal government trustworthiness, respectively.
The finding accords with the intuitional viewpoint that trust is a subjective impression and varies widely as a result of different personality characteristics. People with more trust in government might tend to have high trust in general. The main emphasis of this finding, however, is that interpersonal trust contributes to administration performance, through which it exerts indirect impacts on government credibility. This finding is in accordance with prior literature indicating that in communities that are characterized as having high social trust among residents, it is easier for government agencies to obtain rule compliance from citizens and thus reduce the cost of enforcing and implementing government policies, invest the saved cost to deliver more public services and goods to citizens, facilitate agreement among administrations and develop community-oriented concerns, and encourage administrators to cooperatively carry out duties (Putnam, 1993; Brehm and Rahn 1997; Boix and Posner, 1998; Knack, 1999; Rice, 2001; Knack 2002; Kneele, 2007).

Social Network. Citizen involvement in community activities or associations is significantly negatively associated with trust in federal government ($\beta = -0.12$, $p < .05$). It also attaches negative impacts on citizen trust in local ($\beta = -0.06$) and state ($\beta = -0.05$) government, but the causal relationship is not statistically significant. However, there is no empirical evidence that citizen involvement in community activities or associations significantly exerts indirect effects on government trustworthiness through influencing administration performance. Therefore, Hypothesis 4b, “At the individual level, a citizen’s involvement in community activities or organizations is positively associated with that person’s trust in government,” is supported by the federal government model.
only; and Hypothesis 4e-2, “A citizen’s involvement in community activities or organizations lead to administration performance improvement, which enhances government trustworthiness,” is not confirmed by this study.

It appears that increasing social involvement is not a crucial determinant of government trustworthiness. But it does have some effect, in that it makes citizens trust federal government less. This finding is consistent with that of Brehm and Rahn’s work (1997). It is possible that social involvements estrange citizens from government and administrators. Most of their demands or problems are met and resolved through community or association support, whether individual, family, affective, or economic. Social involvement takes citizens away from government and results in citizens having a vague impression of government. Hence, it appears that the more citizens are involved in social networks, the less they trust in government.

Other Influential Factors

Work Experience with Government. It is interesting that citizens’ work experience with government (whether local, state, or federal) negatively affects their trust in local ($\beta = -.02$) government, but positively influences their trust in state ($\beta = .001$) and federal government ($\beta = .05$). Neither of the causal relationships is significant in statistics, indicating that the impacts of government work experience on citizen trust in government might not be stable or consistent. Prior government work experience does not necessarily influence citizen trust toward government.

Age. Respondents’ age is significantly negatively associated with their trust in local ($\beta = -.12, p < .001$), state ($\beta = -.11, p < .01$), and federal ($\beta = -.12, p < .01$)
government. The impacts of respondents’ age on their trust in government are relatively consistent throughout the three SEM models. Older citizens tend to have less trust in government, while younger citizens have more trust in government. One possible reason to explain this situation is that older citizens might have less knowledge regarding government changes and reforms, such as the initiation and development of an e-government strategy. Hence, they are less informed about improvements in administrator working performance and service delivery efficiency. Younger citizens have more avenues through which to perceive much more government progress, and their attitude toward government agencies and administrators is inclined to change along with their knowledge. That is, if they see positive changes in government efficiency and service quality, they might tend to have more trust in government.

Gender. Another interesting finding is that female citizens tend to have less trust in local government ($\beta = -.07$) and in state government ($\beta = -.07$). Both of these impacts are statistically significant at the .05 level. Males might have more knowledge of and interest in political and government issues than females, and they might have more social connections with government employees or pay more attention to what is going on inside government, which could lead to more positive attitudes toward government.

Partisanship. Respondents claiming to be Democrat are inclined to have less trust in state ($\beta = -.08$, $p < .01$) and federal ($\beta = -.07$, $p < .05$) government trustworthiness. It is interesting that the current ruling party is Democrat, but party members tend to have less trust in the state and federal government.
Cross-Government Impact and Overall Image

Generally, the majority of proposed influential factors in this study have been empirically demonstrated, in some degree, to have significant effects on government trustworthiness, either directly, or indirectly through contributing to administration performance. See Table 5-9 and Figure 5-4 for the summary of significant direct, indirect, and total effects of determinants on government trustworthiness.

Above all, citizens perceived local government administration performance to be a powerful positive determinant of government trustworthiness. But the effect decreases from local to state to federal government. This shows, on one hand, a mixed concept of government from which citizens view the government system as a whole. Citizens do not clearly separate among local, state, and federal governments. On the other hand, it is usually assumed that local government performance has a stronger influence on local government trustworthiness than on state or federal government trustworthiness.

Local government information transparency and technology are crucial in maintaining and improving government trustworthiness. Four out of five variables in this category have significant impacts on citizen trust in government. First, citizen perceived local government information disclosure reliability is an important contributor to government credibility; it has both direct positive effect on local government trustworthiness, and indirect positive effects on local, state, and federal government trustworthiness. All the total effects of information disclosure reliability on local, state, and federal government are statistically significant. Second, local government adoption of social media and electronic subscription to distribute information is also positively associated with government trustworthiness. All its indirect effects and total effects on
citizen trust in local, state, and federal government are statistically significant. Third, the usefulness of local government sponsored website usage training positively impacts on citizen confidence in government. It has significant indirect effects and total effects on local and federal government trustworthiness, but the state model does not provide empirical support for this finding. Fourth, citizens who use primarily digital methods, such as government website and email, to contact local government tend to have less trust in government. This factor has significant negative indirect and total effects on state and federal government credibility. The only factor of information transparency and technology that does not have significant total effects on citizen trust in government is stability of the e-government system, even though it significantly contributes to administration performance, and administration performance is a significant positive influential factor in government trustworthiness. The empirical results do not support this indirect causal relation between e-government stability and citizen trust in government.

Citizen participation in local governance plays an important role in shaping government credibility. The emphasis is not on the variety of participation modes provided, but on how much influence participation in local government really has. The variety of participation modes has relatively weak and indirect positive impacts on federal government trustworthiness, and local and state government models do not support this causal relationship. But authentic participation, which citizens perceive as truly influencing local policy making and implementation through participation, has both significant indirect and total effects on citizen trust in local, state, and federal government. Therefore, authentic participation, rather than format, plays a more important role in shaping citizens’ attitude toward government.
Social capital is a crucial determinant of government trustworthiness as well. Comparatively speaking, interpersonal trust is more powerful than social network in shaping citizen trust in government. Almost all the direct, indirect, and total effects of social trust on citizen trust in government are statistically significant. The more people trust others, the more they trust in government. However, the more people are involved in community activities or associations, the less they trust in government, although this relationship is significant only at the federal government level.
Table 5-9 The Summary of Significant Direct, Indirect, and Total Effects of Determinants on Government Trustworthiness

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Local Government</th>
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<th>State Government</th>
<th></th>
<th>Federal Government</th>
<th></th>
<th>I/D/T¹</th>
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<tbody>
<tr>
<td></td>
<td>Indirect¹</td>
<td>Direct²</td>
<td>Total³</td>
<td>Indirect¹</td>
<td>Direct²</td>
<td>Total³</td>
<td>Indirect¹</td>
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<tr>
<td>Performance</td>
<td>N/A</td>
<td>+</td>
<td>+</td>
<td>N/A</td>
<td>+</td>
<td>+</td>
<td>N/A</td>
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<tr>
<td>Information Reliability</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Information Methods</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<td>+</td>
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<td>E-Government Stability</td>
<td>+</td>
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<td>+</td>
<td></td>
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<td>Participation Avenue</td>
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<tr>
<td>Participation Influence</td>
<td>+</td>
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<td>Social Trust</td>
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<td>Social Network</td>
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<td>Partisan (Democrat)</td>
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<td>4</td>
<td>6</td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

1. Indirect Effects from Determinant to Corresponding Government Trustworthiness
2. Direct Effects from Determinant to Corresponding Government Trustworthiness
3. Total Effects from Determinant to Corresponding Government Trustworthiness
4. The Ratio of the Amount of Indirect, Direct and Total Effects from Determinants to Government Trustworthiness
Figure 5-4 Summary of Significant Direct, Indirect, and Total Effects of Determinants on Government Trustworthiness
CHAPTER SIX
IMPLICATIONS AND FUTURE RESEARCH

This chapter discusses the theoretical contributions, managerial implications, and limitations of this study, and suggests future research topics at the end. To be specific, the chapter first discusses this study’s contribution to the literature of government trustworthiness and administration performance, information transparency and technology, citizen participation, and social capital. Second, it illustrates important managerial implications for administrators regarding how to restore, maintain, and improve government credibility. Third, this chapter discusses the limitations of the study and concludes with directions for future research.

Theoretical Contributions

From Passive Responsiveness to Collaborative Administration

It has been emphasized for decades by the New Public Service Theory that citizen-centered responsiveness is an essential feature of democratic administration and government. This principle has indeed promoted government efficiency and accountability, enhanced citizen-government communication, and improved citizen perceptions of government. However, responsiveness is still considered a government-led procedure that passively reacts to citizens’ and other institutions’ appeals and demands. The development of public administration requires collaboration among government institutions and between government and citizens, in which government and public
administration share ideas, knowledge, and power with citizens (Vigoda, 2004), as well as among government agencies on different levels.

First, collaboration indicates that citizens are an active and essential component of the policy-making and implementation processes. Elected politicians have the enthusiasm and time to listen to citizens, but putting a person between citizens and government might not be an efficient route, and politicians might not be well informed about specific rules and policies. Professional administrators have specialized skills and are acquainted with internal operations and rules, but they might lack knowledge and information about what is going on outside the government. Citizens are quite aware of what they need and expect from public resources and government, but they might lack channels for expression, their voice might not be seriously taken into account in policy making, and they might have very weak influences on policy and administration. So why should they trust in government? Hence, collaborative administration has the advantage of genuinely involving citizens in policy making and implementation. Such participation is not only a formality or episodic, but has true influences on governance. Collaborative administration helps to increase government credibility.

Second, to restore, maintain, and improve government trustworthiness also requires cross-government collaboration. The influential factors of citizen trust in a government do not derive solely from that government, but might also come from government on other levels and from outside government. For example, this study shows that local government’s administration performance, information transparency and technology, and citizen participation mechanisms not only significantly impact on local government trustworthiness, but also influence citizen trust in state and federal
government. In addition, the predictors of government credibility not only come from internal government, but also have societal factors. Interpersonal trust with other people and citizen involvement in community or association activities also have significant impacts on government trustworthiness. Therefore, to develop government trustworthiness should not concentrate solely on determinants from that government, but should expand the perspectives to factors from government on other levels and from the external environment as well. Government agencies on different levels should work collaboratively to efficiently deliver public services and goods, improve their responses to citizens, and promptly distribute reliable information to the public, so as to improve government trustworthiness.

Performance as the Pivot: Multi-Dimensional and Structural System of Government Trustworthiness Determinants

The study of citizen trust in government should have a macro vision that emphasizes government system complexity, the multi-dimension of trust, managerial process perspective, and significance of societal factors. This study develops an integrated model that addresses the multiple predictors of citizen trust in government. First, the precursors of government credibility comprise both government-related and societal factors, concentrate on both administration performance and democratic function, and stress both information transparency and technology advancement. Government is a complicated system that has thousands of connects with the external environment. A multi-dimensional perspective of citizen confidence in government is necessary to develop an overall causal relationship model. Second, the multi-dimensional
determinants form a structural model in shaping government trustworthiness. Different factors have different impacts on citizen trust. For example, administration performance, local government adoption of social media and electronic subscription to distribute information, the variety of participation avenues, and social network only directly influence government credibility. Some other predictors, including local government e-government stability and government response to citizen participation, only indirectly affect citizen trust in government. And, some precursors have both direct and indirect effects on government trustworthiness, such as local government information disclosure reliability and social trust with other people. In particular, administration performance is the intermediate variable between citizen trust in government and information transparency and technology (reliable information disclosure and e-government stability), citizen participation (government response to citizen participation), and social capital (social trust). Therefore, performance sits at the pivot to generate government trustworthiness. No matter how eager one might be to highlight democratic functions, civic-centered values, or collaborative relationships among government agencies or between government and citizens, and no matter how necessary these might be, maintaining a high level of institutional performance is the essential foundation for improving government trustworthiness.

Seek a Balance Between Citizen-Centered Value and Efficiency

A trusted government should give consideration to both citizen-centered democratic values and institutional performance. To debate which theoretical perspective should dominate public administration—New Public Service or New Public
Management—has little meaning. Both citizen-centered values and institutional performance, which stand for democracy and accountability, are indispensable features of a trusted government. Citizens would like to trust a government that efficiently and effectively takes account of their demands. This study proves that agency and administrator performance is the most powerful determinant of government trustworthiness. Meanwhile, citizen participation in policy making, information openness and reliability, and administrator ethical behavior also have important roles in preserving a high level of government credibility. Therefore, government should take the pragmatic route that seeks a balance between citizen-centered values and institutional performance in the era of New Public Governance.

The Key Role of Information Technology: From Delivering Managerial Efficiency to Increasing Democratic Functions

With the development of information technology and economy, information transparency and technology play a key role in shaping the citizen-government relationship. The involvement of e-government strategy and the advancement of information technology speed up information transition and distribution to the public, transcend the spatial and temporal limitations of government accessibility, enhance the reliability of government information and stability of the e-government system, and provide citizens with more choices for contacting government through digital methods rather than traditional methods, all of which have contributed greatly to the increase of government performance and trustworthiness. For instance, all three of the proposed information-related factors—reliable information disclosure, government adoption of
social media or electronic subscription to distribute information, and e-government stability—have been empirically demonstrated to have direct or indirect effects (or both) on government trustworthiness. Information technology has become an inevitable component of government and an important element to shape citizen attitudes toward government.

Furthermore, information technology, or e-government, should evolve from primarily enhancing managerial efficiency to taking more responsibility in democratic governance, such as e-participation and e-governance. The key point is whether to primarily use an e-government system to distribute information, or to deliver government services as a major avenue for participation and for ultimately achieving authentic participation. With more than two decades of developing their e-government strategy, most governments, from local to federal, have initiated and set up a rather well-fledged e-government system to transmit and collect information to/from the public, and through which citizens can make appointments, do financial transactions, upload forms, and so on. However, it is time to move e-government forward, from improving managerial efficiency to playing a greater role in promoting democratic functions. Information distribution and collection are not enough to achieve authentic participation or citizen-government collaboration. For one thing, in the policy-making process administrators should take into serious account citizen proposals and initiatives collected through e-government. For another, governments and administrators ought to make use of information technology and e-government as a major participation avenue. E-participation has a lot of advantages that traditional avenues do not have. For instance, the online citizen discussion board could be used to collect citizen proposals with a
flexible time and location restriction. Live online broadcasts of public hearings could draw more participation, as they make long-distance participation possible. Hence, information technology and e-government should take on a bigger role, not only delivering managerial efficiency but also increasing democratic functions.

*From Outcome/Process-Oriented to Outcome-Process Joint Perspective*

The prevailing perspectives for studying the antecedents of citizen trust include economic, political, managerial, societal, and cultural viewpoints. Economic and rational analyses of citizen trust have dominated the trust literature. Such analyses stress the impacts of outcome-related factors on citizen trust, and predict trust through input-output ratio. The influential factors explored by outcome-oriented studies of government trustworthiness predictors include President and Congress performance, economic development, and municipality service quality. Other studies focus on the important effects of process-related factors on citizen trust in government. It has been claimed that not only is citizens’ attitude toward government affected by what they receive, but citizen trust in government is significantly influenced by the processes they encounter, including government/administrator ethical and political behaviors such as treating people fairly, avoiding favoritism, and containing corruption (Vigoda-Gadot, 2007; Van Ryzin, 2011). This study predicts citizen trust by taking into account government and administrator performance, reliability and methods of information disclosure, e-government stability, citizen participation avenues and having a true influence on local governance, and citizen social trust with other people and social network involvement. The synthetic trust model highlights both outcome-related factors and process-related factors and claims that the
managerial process is an important research perspective of trust. This perspective considers government as a complex administrative process in which multi-dimensional predictors determine citizen trust in the process.

**Managerial Implications**

*Performance and Measurement.* First, government should take effective measures to improve the easiness of obtaining services from government. A high level of easiness in obtaining government services could reduce citizens’ time spent in citizen-government interactions, make government easy to access, and provide promptness in information transactions and high efficiency in service provision. Second, government agencies and administrators should be very careful to avoid making mistakes when dealing with citizens, and immediate error correction is required once any problems are detected. Therefore, a periodic internal audit and investigation mechanism is needed to explore, rectify, and reduce mistakes, especially when the mistakes impact citizen benefits and interests. Third, government human resource departments should set up high standards of administrator professionalism, ethics, and work performance, and conduct rigorous bureaucrat performance appraisals. Government could also use citizen surveys and evaluations to assess frontline bureaucrats’ work performance and ethical behavior, to help motivate administrators to provide high quality services to citizens and uphold high ethical standards when interacting with citizens. Furthermore, subjective indicators used to evaluate administration performance, such as citizen satisfaction with government services, are essential measures of performance. Government ought to emphasize such indicators and regularly investigate citizen satisfaction levels, as well as government
trustworthiness, so as to track whether government performance meets citizen expectations.

*Information Transparency.* Government should distribute information as much and immediately as possible. Integrated and fast information disclosure helps enable citizens to learn the truth and what is going on inside the government; it also helps government elicit more understanding, support, and compliance from the public. Reliable information disclosure is another important concern government should take into account. Government should assure the clarity, accuracy, relevance, and immediacy of information distributed to the public. Moreover, government ought to diversify information disclosure methods. There are a variety of information transmission channels to choose from, including both traditional methods such as in person, by phone, and by letter; and digital approaches through government website, TV, radio, and email. In particular, government ought to pay more attention to adopting social media and electronic subscription to promptly deliver important messages to citizens. Social media and electronic subscription are characterized by immediacy, promptness, and bidirectionality in information communication, which contribute to information disclosure reliability, transaction rapidness, and communication convenience. Social media and electronic subscription facilitate the efficient resolution of misunderstandings between government and citizens as well as the correction of wrong information, and also help increase information transparency. With the development of the Internet and smartphones, social media and electronic subscription has become an indispensable channel in government-citizen information transmission and communication.
Also, the social media provides an effective avenue for dialogue between government and citizens so that citizens can make public comments on matters they are concerned with or involved with. It is a practical and convenient method for government to collect public opinion and promote public willingness. Through recording and analyzing citizen messages on social media, officers can become aware of what citizens are complaining about and what they expect from their departments. Through taking targeted actions based on citizen input collected from social media, government can satisfy citizen demands and improve government performance, which leads to enhancement of government trustworthiness. Hence, the adoption of social media and electronic subscription to distribute information and communicate with citizens is of great significance in influencing and forming citizen trust in government. Government agencies and administrators should place more emphasis on employing modern electronic information technology to manage government information, and to promote information transactions between government and citizens.

**E-Government Strategy.** E-government has become an indispensable component of the government entity. Government should continuously initiate and push forward e-government strategy and policy. In the first place, government should employ a reliable technical and administrative team to insure e-government system stability, information update timeliness, and usage convenience and easiness, which could improve e-government usage efficiency and user experience. Second, government could sponsor informative and useful website usage training for residents to involve more people in using e-government to contact government. Moreover, administrators could initiate
policies to broadcast new functions of e-government to engage more citizens in using e-government.

*Citizen Participation.* Civic-centered governance and citizen participation in governance constitute an important feature of a responsive government and a significant policy in New Public Governance and New Public Service theory. “The challenge is to shift the paradigm of the political system from the ‘expert/professional’ model with institutional and functional separation of powers, roles, responsibilities and duties to one that integrates the citizen into every aspect of governance.” (Gibson, Lacy, and Dougtherty, 2005). First, government and administrators should initiate a variety of avenues for citizens to participate in government administration and policy making. Second, citizen participation is not episodic or a mere formality. Citizens expect to have true and powerful influences on government administration and policy initiations. Administrators should carefully refer to citizen proposals in policy making and implementation. Finally, but most importantly, government could take advantage of e-government to expand citizen participation channels and make it possible for citizens to join public hearings and policy discussions at any time, anywhere that Internet is accessible. Hence, e-participation is one of the key directions of the development of citizen participation.

**Limitations and Future Study**

Despite the theoretical and managerial implications, this study has some limitations that might influence the robustness of the statistical analysis and the generalizability of the findings. Future research can overcome these limitations by
designing more sophisticated research models, improving the data collection strategy, creating more reliable measurements, and conducting follow-up qualitative research.

Research Model. This study devises a relatively simple structural model of citizen trust in government, in which administration performance is the intermediate variable between government trustworthiness and other proposed determinants. First, all causal relationship arrows unidirectionally point from proposed precursors to government trustworthiness, and this study does not attempt to explore whether trust conversely exerts impacts on the so-called determinants. However, Goldfinch, Gauld, and Herbison (2009), using survey data from 548 telephone interviews in Australia and 500 in New Zealand, claimed that it is less citizen trust in government that increases political participation, rather than more political participation leading to increased government credibility. Therefore, it will be of great interest in future research to investigate whether and how government trustworthiness influences administration performance, information transparency and technology, citizen participation in local governance, and individual-level social capital. Second, it is also of great importance to inquire into whether mutual effects occur among information transparency and technology, citizen participation, and social capital when they influence government trustworthiness.

Data Collection. Subject to resource limitations and lack of financial support, the sample respondents are not randomly selected. The demographic distribution has several biases, such as gender, race, and partisanship, and the sample representativeness might not be very good. This is possibly adverse to the statistical analysis validity and reliability. In addition, although the valid sample size (valid obs. = 528) is sufficient to conduct quantitative research, the survey response rate is relatively low at approximately 4.37%.
Even if the online survey response rate usually is lower than mail survey and phone survey response rates, a response rate larger than 30% would be much better. Therefore, future research could initiate an advanced data collection strategy, such as stratified randomly selected samples in a given population through mail or telephone survey, which would help to increase response rate and improve sample representativeness.

**Measurement.** Several variable measurements might not be reliable. For example, the participation avenues provided by local government are measured by the number of participation modes a respondent has attended in the local government policy-making process. However, the participation modes citizens have attended do not necessarily correspond to what local government provides. It is possible that local government provided more participation modes than citizens have attended. In addition, this study employs citizen perceived government performance to measure performance, but subjective perceptions might not truly reflect the real situations, and this might impair the validity and reliability of statistical analysis. Hence, future research ought to develop more reliable measurements for each factor and use objective performance data as much as possible. However, whether objective government data is applicable depends on the research design. If the unit of analysis is individuals, it is hard to use objective performance data. If the unit of analysis is organizations, governments, districts, or countries, it is better to use objective performance data.

Furthermore, this study generally involves fifteen factors from three dimensions—government service quality, administrator competency, and ethics—to measure administration performance. However, there are two weaknesses in the measurement of performance. First, although the government service quality dimension is
measured by four factors—easiness of obtaining services, service quality, consistency between citizen expectation and service provision, and citizen satisfaction—a variety of other features and components should be studied, such as responsive flexibility and timeliness. The indicators used to measure the ethics dimension have the same problem. This study addresses only administrators’ honesty and fairness in treating citizens, and the perceived fairness of response process and outcome to indicate administrators’ ethics. But other aspects are not included, such as integrity and benevolence. Hence, future studies should develop a more integrated measurement of citizen perceived (local) government administration performance. Second, although the measurement of administration performance has three dimensions, they are generated into one variable in this study. Future studies could independently examine how the proposed determinants affect each of the three dimensions. Also, studies could be conducted to explore whether causal relationships exist among the three dimensions.

Moreover, this study stresses the important impacts of government information disclosure reliability on citizen trust in government. However, reliable government information disclosure is only one aspect of information transparency. Information transaction and interactivity mechanisms between government and citizens are also important indicators of transparency. Therefore, future studies should develop an overall conception and means of measuring transparency. The same can be said for measurement of information technology or e-government; more indicators to measure e-government stability and more aspects of e-government, such as e-government security and usability, should be involved to assure a more comprehensive measurement of e-government.
Follow-up Qualitative Research. The survey method has some weaknesses that could be remedied by other research methods. Above all, the survey questions are standardized to accommodate the general population. So, the method might not be appropriate or efficient to investigate the reasons for each individual’s attitude regarding some issues. The quantitative survey used in this study stresses objectivity in the answers, and mathematical statistics. It uncovered citizens’ opinion of government and other investigated variables, but it could not explore the reasons for the choices. This limitation constrains the depth and breadth of the study. Besides, where responses are collected by survey only, it is difficult to ensure that respondents are giving their true and unbiased opinions. In addition, respondents might have language limitations or lack a good understanding of the questions. Therefore, other approaches are needed to remedy the weaknesses of the citizen survey. The case study, as an important qualitative inquiry strategy, is an important option. Case studies “are a strategy of inquiry in which the researcher explores in depth a program, event, activity, process, or one or more individuals” (Creswell, 2009, P. 13). A case study could provide a lot of description, as well as detailed and in-depth information regarding interviewees’ choices. Investigators could ask follow-up questions about answers that are of interest. In particular, a case study would allow the researchers to explore solutions and reasons for complex issues. Therefore, follow-up qualitative research is an important future research option.

Implications for Chinese Government Administration. Government credibility is a major concern for the Chinese government as well. For example, according to a survey regarding citizen trust in the Chinese government, conducted and released by
Wenjuanxing\textsuperscript{14} in 2012, 83.27\% of respondents considered \textit{Government Transparency and Openness} and 76.29\% considered \textit{Ethics and Efficiency of Government} to be important indicators of government trustworthiness, 64.52\% of respondents expressed some distrust regarding government information, and only 19.49\% of respondents would believe in government information when facing emergencies. Hence, it would be of great significance and meaning to extend this dissertation study to explore what factors affect Chinese government trustworthiness and how to improve it accordingly.

Two kinds of studies could be conducted in the future. First, comparison studies of the differences between the U.S. and Chinese governments with regard to information transparency and e-government strategy, citizen participation in government policy making, and individual-level social capital. U.S. governments and society have a lot of successful experience in these aspects that Chinese government could learn from. Second, researchers could apply the implications and conclusions of this study to the Chinese government to test whether the significant influential factors in the U.S. context are still important predictors of Chinese government credibility. For example, researchers could investigate whether high standards for public officials’ ethics, good administration performance, information transparency and e-government stability, the variety of citizen participation avenues in policy making and its true influences on policy, and the influences of individual-level social capital are significant factors in government trustworthiness in China. If so, what are the implications for Chinese government and society? If different, what are the reasons leading to the different impacts on government trustworthiness in the two countries?

\textsuperscript{14} Chinadaily News: \url{http://www.chinadaily.com.cn/hqcj/zgjj/2012-02-16/content_5159519.html}. 
Conclusion

What determines government trustworthiness is an ongoing research question in contemporary public administration. Examining citizen trust in government is of crucial importance to preserving the legitimacy and stability of a democratic regime, and is necessary in order for political leadership to obtain citizen compliance or commit resources for collective action without coercion, promote social cooperation, and create the environment that political leaders need to succeed. Drawing on the rational choice theory, principal-agent model, deliberative democracy and collaborative administration theory, and social capital theory, this study develops and empirically tests an integrated model that investigates how local government administration performance, information transparency and technology, citizen participation in local governance, and individual level social capital affect citizen trust in local, state, and federal government; what roles administration performance plays between citizen trust and other proposed predictors; and whether local government managerial processes exert influences on state and federal government credibility.

A cross-sectional online citizen survey was employed to administer questionnaires to approximately 20,000 CivicPanel project registered members in July 2013. Using data from 528 valid responses, structural equation modeling reveals that all proposed precursors have somewhat significant direct or indirect effects on local, state, or federal government trustworthiness. Major findings include the following: (a) the average government trustworthiness is relatively low throughout local, state, and federal levels, and it decreases from local government to state government to federal government; (b) administration performance is the most powerful direct and positive predictor of
government trustworthiness; (c) reliable government information disclosure and interpersonal trust with other people both directly impact and indirectly exert influences on citizen trust in government through positively affecting administration performance; (d) the adoption of social media and electronic subscription to distribute information, and the variety of citizen participation avenues in local policy making, directly contribute to government trustworthiness; however, citizens primarily employ digital methods to contact government, and citizen involvement in social associations or community activities directly reduces citizen trust in government; (e) the stability of the e-government system and the true influences of participation significantly contribute to administration performance, which is positively associated with government trustworthiness, but the total effects of the stability of the e-government system on citizen trust in government are not significant; (f) it is noteworthy that older people, females, and people with Democrat partisanship tend to have less trust in government; (g) finally, local government managerial processes indeed have effects on state and federal government trustworthiness.

The findings, although only suggestive, have both theoretical and practical value for scholars and administrators by suggesting several performance, transparency, e-government, citizen participation, and societal focused strategies for enhancing government trustworthiness. The study concludes that the determinants of government trustworthiness constitute a structural model comprising multi-dimensional factors, with administration performance being pivotal. Also, rather than simply focusing on either outcome or process, an Outcome-Process joint perspective is essential to acquire a complete picture of government trustworthiness. Furthermore, in order to achieve a
satisfactory level of citizen trust in government, politicians and administrators ought to seek a balance between citizen-centered value and high performance. In addition, the study indicates a need to develop collaborative administration from passive responsiveness to genuinely involving citizens and cross-government agencies in policy making and implementation. Lastly, information technology plays a key role in shaping government trustworthiness. It is also necessary to enrich the function of information technology from primarily delivering managerial efficiency to playing roles in promoting democracy, e-participation, and e-governance.

Generally speaking, in terms of both breadth and depth, this dissertation merely takes one small step forward. Future endeavors will require a much more sophisticated research model that investigates mutual effects among proposed determinants and the impacts of trust on determinants, an advanced data collection strategy characterized by stratified randomly selected samples in a given population through mail or telephone survey, more reliable and valid measurement of each variable, and well-designed follow-up interviews.
References


Brainard, Lori A. and John G. McNutt (2010). Virtual Government-Citizen Relations:
Informational, Transactional, or Collaborative? Administration & Society, Volume 42, Number 7, P. 836-858.,


Vigoda-Gadot, Eran (2007). Citizens’ Perceptions of Politics and Ethics in Public Administration: A Five-Year National Study of Their Relationship to Satisfaction with


Appendix I Survey Invitation Letter

(This was sent via email to panelists)

Dear panel member,

You're invited to participate in our latest survey, which asks a few questions about your attitude toward local governance.

Go here to begin the survey <https://rutgers.qualtrics.com/SE/?SID=SV_eERd8TdZMr7Vpc1>

ABOUT THIS SURVEY: This survey is part of an academic study about citizen trust in government and its drivers in local governance. Summary results will be published in a public administration journal.

HOW LONG WILL IT TAKE? The estimated time to complete this survey is about 15 minutes.

ABOUT THE INCENTIVES: One Amazon gift certificate worth $100 and ten Amazon gift certificates worth $20 will be awarded to randomly selected participants after the survey closes.

ABOUT YOUR RIGHTS AND PRIVACY: Your participation is entirely voluntary, and you do not have to answer any questions that you do not want to. Your survey responses are confidential and will be reported only in the aggregate.

QUESTIONS? If you have questions at any time about this survey or your participation in CivicPanel, please send us an email at civicpan@rutgers.edu

Thank you for your participation!

The CivicPanel Team
School of Public Affairs and Administration
Rutgers University
111 Washington Street
Newark, NJ 07102
Appendix II Informed Consent Form

(This was on the first page of the online survey)

Your name will not be recorded and all responses will be entirely anonymous. Any information collected from you will be strictly confidential. Results will only be reported in group format and the data itself will only be used for academic purposes.

There is no risk of physical injury from participation in this study. However, participants may become more aware of your own personal feelings and beliefs by answering questions. Please be aware that participation is voluntary, you may stop at any time, or you may decide not to answer a specific question. If you would like to know more about your participation as a research subject, you may contact the IRB Administrator at Rutgers University at:

Rutgers University Institutional Review Board for the Protection of Human Subjects
Office of Research and Sponsored Programs
3 Rutgers Plaza
New Brunswick, NJ 08901-8559
Tel: 848 932-4058
Email: humansubjects@orsp.rutgers.edu

☐ I have read and understand the information above and consent to participate.
Appendix III Survey Questionnaire

1. Have you ever been a government employee? Yes No

If Yes, which level of government have you worked for the longest?
A. Local Government B. State Government, C. Federal Government
How many years have you worked for it? ___________ Years

2. Have you contacted a local government official or agency about an issue that is important to you in the last 12 months (including police, receptionists, planners, or others) in person, by phone, by letter, by email, or through a government website?
A. Never B. 1-2 times C. 3-5 times D. 6-10 times E. More than 10 times

<table>
<thead>
<tr>
<th>Contact Method</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Person</td>
<td>A B C D E</td>
</tr>
<tr>
<td>By Phone</td>
<td>A B C D E</td>
</tr>
<tr>
<td>By Letter</td>
<td>A B C D E</td>
</tr>
<tr>
<td>By Email</td>
<td>A B C D E</td>
</tr>
<tr>
<td>Government Website</td>
<td>A B C D E</td>
</tr>
<tr>
<td>Other methods, Please Specify:</td>
<td>A B C D E</td>
</tr>
</tbody>
</table>

3. Regarding your trust toward government, please indicate your level of agreement with the following statements by filling in the blank boxes. Using a 5-point scale, “1” shall signify that you “Completely Disagree” and “5” shall signify that you “Completely Agree.”

<table>
<thead>
<tr>
<th>Citizen Trust of Government</th>
<th>Federal Government</th>
<th>State Government</th>
<th>Local Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can trust the government to do what is right.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The government is pretty much run for the benefit of all the people.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People in the government don’t waste a lot of money we pay in taxes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardly any of the people running the government are crooked.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Regarding your most recent contact with local government, please indicate your level of agreement with the following statements. Again using a 5-point scale, “1” means “Completely Disagree” and “5” means “Completely Agree.”

1) It is very easy to obtain services from local government.
2) The procedure that the local government followed in response to my demands was fair.
3) The outcome reached by the local government in response to my demands was fair.
4) The services that local government provided to me exceeded my expectations.
5) I am satisfied with the services local government provided to me.
6) I would rate the overall quality of local government services as very high.

5. Regarding the attitude of public official during your most recent contact with local government, please indicate your level of agreement with the following statements. Using a 5-point scale, “1” means “Strongly Disagree” and “5” means “Strongly Agree.”

1) The people in local government offices are courteous.
2) The people in local government offices treat me considerately.
3) The people in local government offices are really willing to take responsibility for my problems.

Regarding the competency of public officials during your most recent contact with local government, please indicate your level of agreement with the following statements. Using a 5-point scale, “1” means “Strongly Disagree” and “5” means “Strongly Agree.”

1) Most of the people running the local government are smart people who usually know what they are doing.
2) The people in local government offices are very professional.
3) The people in local government offices efficiently provided the services I wanted.
4) The people in local government offices work hard and try to do a good job.
5) The people in local government offices are careful and avoid making mistakes.
6) The people in local government offices promptly correct mistakes.

Regarding the ethical behavior of public officials during your most recent contact with local government, please indicate your level of agreement with the following statements. Using a 5-point scale, “1” means “Strongly Disagree” and “5” means “Strongly Agree.”

1) Most of the people running the local government are honest.
2) I feel I was treated fairly by the people I dealt with in local government.
3) The people in local government pay more attention to reducing their workload than better serving my requests.
4) Favoritism rather than professionalism determines the decisions made by local government officials.

5) The people who gain the most from local government are the officials who run the agencies.

6. **Regarding the disclosure of information during your most recent contact with local government, please indicate your level of agreement with the following statements. Using a 5-point scale, “1” means “Strongly Disagree” and “5” means “Strongly Agree”.

   1) The information about local government services is very clear.
   2) The information about local government services is very accurate.
   3) The information about local government services is very relevant.
   4) The information about local government services is up-to-date and current.
   5) Local government provides a variety of methods for citizens to access to government information.
   6) I often followed local government on Twitter or Facebook for the latest news, events, or emergency warnings.
   7) I receive eNotify, RSS, or alert from local government sent directly to my cell phone, mobile device, email, or landline to hear the latest news, events, or emergency warnings.

7. **Regarding local government website design and usage over the past 12 months, please indicate your level of agreement with the following statements. Using a 5-point scale, “1” means “Strongly Disagree” and “5” means “Strongly Agree”.

   1) Most of the time, I could get the information I wanted from local government website.
   2) Most of the time, I could get the information I wanted from local government website very quickly.
   3) Most of the time, local government website is very stable and easy to access.

   Does local government provide any kind of government website usage training for residents?
   A. Yes     B. No     C. I don’t know

   If Yes, please indicate your perception of the usefulness of the training using. On a 5-point Scale, “1” means “Not Useful At All” and “5” means “Very Useful”.

8. Please check all modes through which you have participated in local government policy making process in the past 12 month.
How many times have you attended in the above participation modes in the past 12 months?
A. Never   B. 1-2 times   C. 3-5 times   D. 6-10 times   E. More than 10 times

Regarding your participation in local governance over the past 12 months please indicate your level of agreement with the following statements. Using a 5-point scale, “1” means “Strongly Disagree” and “5” means “Strongly Agree”.
1) Most of my proposals have been accepted and adopted by local government.
2) Local government has accurately responded to most of my queries.
3) Participation in local governance is merely a formality and it doesn’t generate any actual effect.
4) Participation in local governance is to waste of my time.

9. Regarding your interests in, and influences over, local governance, please indicate your level of agreement with the following statements. Using a 5-point scale, “1” means “Strongly Disagree” and “5” means “Strongly Agree”.
1) I am extremely interested in information about what’s going on in local government.
2) I have sufficient knowledge about local government and politics.
3) I affect local government a great deal.
4) Local government genuinely responds to my queries.

10. Regarding your trust toward other people, please indicate your level of agreement with the following statements. Using a 5-point scale, “1” means “Strongly Disagree” and “5” means “Strongly Agree”.
1) Generally speaking, I always trust other people.
2) Most of the time people try to be helpful rather than look out for themselves.
3) Most people wouldn’t try to take advantage of me even if they had the chance.

11. About how often, if at all, do you talk to or visit with your immediate neighbors (people who live in the 10 or 20 households that are closest to you)?
1) Just about every day   3) Several times a month
2) Several times a week   4) Less than several times a month
In the past 12 months, have you actively participated in any of the following types of organizations or groups? Please select all that apply:

- Service club or fraternal organization (e.g., Elks, Rotary)
- Veterans group
- Religious group
- Senior citizen’s center or group
- Women’s group
- Issue-oriented political organization
- Non-partisan civic organization
- School club or association
- Hobby, sports team, or youth group
- Neighborhood association or community group
- Group representing racial/ethnic interests
- Others, please specify:
- None of the Above

How many times have you participated in any activities of the above organizations or groups in the past 12 months?

A. Never  B. 1-2 times  C. 3-5 times  D. 6-10 times  E. More than 10 times

In the past 12 months, have you been involved in any of the following community activities? Please select all that apply:

- Attended a PTA/school group meeting
- Attended a community group meeting
- Donated blood
- Given money to a charity
- Worked for a charity or your church
- Others, please specify
- None of the Above

How many times have you participated in the above community activities in the past 12 months?

A. Never  B. 1-2 times  C. 3-5 times  D. 6-10 times  E. More than 10 times

12. Did you register to vote in the 2012 National Election?
- Yes, I registered to vote at my present address
- Yes, I registered to vote at a different address
- No, I did not register to vote

13. Generally speaking, do you feel things in this country
- Are generally going in the right direction
- Have gotten off on the wrong track

Do you think of yourself as a
- Republican
- Democrat
Independent
Another party, please specify: ______

14. Do you think of yourself mostly as
- Extremely liberal
- Liberal
- Moderate, middle of the road
- Conservative
- Extremely Conservative

15. Which best describes your current employment status?
- Full time working
- Not working
- Part time working
- Retired
- Disabled
- Other

16. Which best describes your highest educational degree?
- High school diploma or equivalent
- Associates degree or equivalent
- Bachelor or equivalent
- Master’s degree or equivalent
- Ph.D. or equivalent

17. Which best describes your total HOUSEHOLD income in 2012?
- Less than 24,999
- $25,000 to $49,999
- $50,000 to $99,999
- $100,000 to $149,999
- $150,000 to $199,999
- $200,000 or more

18. Which best describes the building you live in?
- Owned by you or someone in your household with a mortgage or free and clear
- Rented for cash
- Occupied without payment of cash rent

19. Which best describes your resident status?
- Born a U.S. citizen
- Naturalized U.S. citizen
- Permanent Resident
- Resident Alien
- Nonresident

20. What race(s) you consider yourself to be?
- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Pacific Islander
- White
- Some other race

21. What is your Gender? Male Female
**In which category is your Age?**

- 18-24 years
- 25-34 years
- 35-44 years
- 45-54 years
- 55-64 years
- 65 years or older

**Your residency Zip Code:**

☐ I would like to receive a copy of the survey report via email.
Your email address is:

**Greatly Appreciate Your Participation!**
Curriculum Vitae

1983 Born June 28 in Zaozhuang, Shandong Province, P.R.China

2001-2005 Bachelor of Management, Major in Public Administration
University of Science and Technology Beijing, Beijing, P.R.China

2005-2007 Master of Management, Major in Public Administration
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2008-2011 Teaching Assistant
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2008-2012 Secretary to Section for Chinese Public Administration (SCPA) of American Society of Public Administration (ASPA)

2011-2012 Dissertation Fellow
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2011 Intern, United Nations Headquarter, New York, New York


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