CIVIC ENGAGEMENT AND TRUST IN NATONAL AND LOCAL GOVERNMENTS

A Dissertation

by

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ABSTRACT

This dissertation project tries to answer the following question: How is collective political trust generated from individual political trust across federal and local levels? As a function of maintaining democracy, political trust has been examined since survey research started. The extant literature has discovered the mechanisms shaping trust in government but focuses only on trust in federal government. To grasp the entire picture of trust in government, it is important to analyze the interaction between trust in subnational and national governments.

Specifically, I focus on a puzzle in the literature on a relationship between political trust and civic engagement. Despite the expectations of the extant theoretic work on social capital, there is little empirical evidence of a relationship between individual political trust and civic engagement. To solve this puzzle, I examine the effects of social trust on individual political trust not only at the federal level but also at the local level.

The central argument of my dissertation is that the mechanisms shaping citizens' trust in each level of government are different. I argue that trust in local government largely stems from civic engagement while trust in federal government is mainly a function of citizens' perception of government performance.

The dissertation starts by constructing a formal model and demonstrates that other information sources available to citizens prevent the government from manipulating information. This suggests that civic engagement works as another information source in local politics differently than in national politics. Following this model, I examine the effects of civic engagement on trust in national and local government. The first empirical chapter demonstrates the different effects of aggregate civic engagement on trust in the national

and local governments using Bayesian vector autoregression models. The second empirical chapter examines the relationship between civic engagement and trust in the national and local government at the individual level using a multivariate multilevel model. This chapter also tries to explain the covariance between national and local political trust at the individual level.

The results presented in the dissertation lead to the following conclusions: (1) Civic engagement does not affect political trust. (2) The movement of civic engagement affects the movement of trust in local government more strongly than trust in the federal government. (3) Community-level civic engagement affects individual's trust in local and national government. In sum, civic engagement collectively affects trust in local government more closely than trust in the federal government.

By examining the relationship between political trust in each level of government and civic engagement using time-series and multivariate-multilevel models, we can learn how the hierarchical structure of democracy contributes to its stability.

DEDICATION

To all who have waited for my *second* dissertation

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1.   INTRODUCTION

1.1   Overview

Political trust matters in light of democracy. Massive classic works emphasize the importance of political trust. Political trust legitimates governance (Easton 1965*a*). Citizens' trust in government is necessary for political leaders to make binding decisions (Gamson 1968) and secure citizen compliance without coercion (Barber 1983; Scholz and Lubell 1998; Levi 1998).

Conversely, the lack of political trust undermines the democratic political system. As citizens withdraw support for government and become less willing to comply with government decisions, the legitimacy of a democratic regime may be called into question (Easton 1965*a*, 1975), Low confidence can threaten the stability and legitimacy of government (Bianco 1994). In short, a democratic political system cannot survive for long without the support of a majority of its citizens (Miller 1974).[1]

Political trust, thus, represents the interaction between citizens and political leaders. It serves as a lubricant of this relationship, which means that political trust should be examined in the relationship between citizens and political leaders. In addition to these two actors, according to Hardin (2002, 9), trust is defined in a three-part relation in the form, "A trusts B to do X." Consistent with this definition, recent scholars in the study of political trust pay attentions to not only what people trust but also what people expect by trusting.

Basically, trust is built on the belief that others will act beneficially rather than maliciously towards us (Warren 1999). In other words, trust is to believe that those involved

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[1] In this paper, I treat confidence as the equivalent of trust.

will act as they should (Barber 1983) or to assume that a person or institution will observe the rules of the game (Citrin and Muste 1999). In light of politics, political trust is that people expect political actors to abide by the same social norms acknowledged by ordinary Americans (Mutz and Reeves 2005) or "the degree to which people perceive that government is producing outcomes consistent with their expectations" (Hetherington 2005, 9).

This definition holds only when people know who brings which policy outcomes. Given citizens' limited ability (Delli Carpini and Keeter 1996), it is implausible that people know the exact connection between political actors and polity outcomes. Instead, scholars in the study of political trust use general survey questions. The National Election Studies ask respondents whether to trust governments by referring "the government in Washington to do what is right." Trust in government in this question does not require respondents to know who in Washington implements which policies exactly and is meant to be about people's trust in the government in general. Most of the recent work on the topic moves from this starting point.

This is problematic because, in the American system of government, there is not *a* government. There are governments which are not in Washington. We live in a multi-layered federal system with important differences between the levels. Citizens may develop different attitudes about the different levels of government they interact with. These distinctions are often ignored in the extant literature, with a few notable exceptions. The focus on the vast majority of the work is on individuals' perceptions of the national government and treats this as synonymous with the notion of the government.

The previous literature failed to appreciate this difference between trust in subnational and national government.[2] First, the previous literature pays little attention to the interaction between trust in subnational and national governments (see Jennings 1998; Us-

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[2] In this paper, the national government and the federal government is used interchangeably and local government is included in subnational government. The reason I do not deal state government is partly

laner 2001, for exceptions). A wide range of literature continues to discuss the mechanisms shaping trust in the federal government (Hetherington 1998, 2005; Hetherington and Rudolph 2008; Brehm and Rahn 1997; Keele 2005*a*, 2007), and some works examine the determinants of trust in local governments (Tyler and Degoey 1995; Rahn and Rudolph 2005). While these two streams have developed over the past decade, they have been independently discussed.

Because most literature on trust in the federal government ignores the relationship between local and national political trust, little scholars control the effect of trust in subnational governments. On the other hand, Rahn and Rudolph (2005) examine political trust in local governments while controlling trust in national government to ensure only modeling the local dimension of political trust. Controlling the other governmental trust does not only mean to see the genuine effects of the determinants of trust in the government but also mean to take into consideration the interaction between local and national political trusts. To examine the difference between both political trusts, thus, I need model both trust simultaneously.

Second, little but the extant literature paying attention to the comparison of trust in local and national government has failed to demonstrate its difference or similarity mainly because of the dearth of the appropriate data. Among the few works that compare local and national political trust, Jennings (1998) suggests that local political trust moves independently from national political trust over time (also see Conlan 1993). The movements may not be exactly the same, but trust in local governments and trust in the federal government are highly correlated at an individual level. Its causal relationship and how one affects another, however, have not been demonstrated. That is, the mechanisms of the relationship between local and national political trust is unclear despite their respective importance.

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because of the availability of the data and mainly to find a clear distinction by comparing national and subnational governments.

The distinction between local and national political trust when analyzing either of them matters because local and national political trust are "distinct attitudes and do not share an identical set of determinants at the individual or contextual level" (Rahn and Rudolph 2005, 547). For example, the relationship between civic engagement and trust is universal. It spans across all levels of government. Focusing on the structure of the layered government system, however, does civic engagement work in the same way in local and national politics? To examine how civic engagement works, we should take into consideration the relationship between trust in local and national governments. Because civic engagement stems from local activities, the way it works on trust in governments should be different between local, state, and federal governments.

I argue that civic engagement works differently in local and national politics when taking into consideration the relationship between multiple governments and discuss the different mechanisms shaping trust in subnational and national governments. Because my focus is on the variation of civic engagement both in the individual and local community level and in the dynamic structure of the federalism, I examine the relationship between political trust in each governmental level and civic engagement using vector autoregression model and multilevel model. In so doing, this project gives a clue to understanding the dynamics of layered political trust, which also brings some implications to understand how the hierarchical structure of democracy forms its stability.

My claim is that by exploring the link between trust in the national government and trust in subnational levels of governments in our federal system, we can learn about citizens' attitudes about government broadly, their ability to make distinctions between the levels of government, and the contextual factors that help or hinder people from being able to see these distinctions. Moreover, to the extent that trust in local government is related to

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and to the extent that it is independent from trust in national government can help explain the antecedents and consequences of trust in national government as a whole.

1.2 Concept of Political Trust

1.2.1 Why Political Trust Matters

The study of political trust has waxed and waned. The research motivation has shifted dramatically in the last half century. First, scholars and politicians found a steep decline of the political trust in the 1960s (Miller 1974; Citrin 1974). Second, scholars in sociology and political science found a decline of social trust in the 1990s (Putnam 2000), which is considered to be related to political trust.

From the late 1950s to the early 1970s, trust in government in the United States fell precipitously, declining by over 30 points (Miller 1974; Citrin 1974). President Carter made a speech about crisis of confidence in July 1979, recognizing a crisis of confidence, at least in part, rested upon public opinion data. By the end of 1984, however, the long decline in trust in government has ended in most surveys and polls.

Another motivation to study political trust stems from the movement of social capital. The decline of social trust in the 1990s was observed in various areas such as sociology, psychology, and comparative politics (Newton 2000). It was Putnam who connected social trust to political trust and suggested that the lack of social capital affects the decline of political trust.

The decline of political trust and social trust as a determinant of political trust matters because political trust among the mass public has important implications for government activities and political representation. High public confidence can governments to engage in greater policy innovation and risk-taking, while low confidence can threaten the stability

of legitimacy of government (Bianco 1994). Political trust is "the basis of future growth and stability" (Citrin 1974, 973).

Thus, scholars care about the decline of political trust because it possibly reflects a withdrawal of support for the political community or regime and is not merely a rejection of the incumbents. If the decline of political trust means disaffection with incumbents, it can be remedied through the electoral process. It is important to know what and why people support or not.

Despite the importance of political trust and the immense literature about political trust, little is known about mechanism shaping trust in government because of some difficulties in conducting empirical analyses of political trust. There are many ways to explain where political trust comes and what it affects. We have no agreed on theory about political trust. The theories about political trust start from different assumptions and reach different conclusions.

1.2.2 Definition of Political Trust

When scholars study political trust, we realize the conceptual problem. The concept of political trust is vague and, consequently, we face the data limitation because most existing data are not appropriate to the concept. The controversy over the concept and measurement creates a string of arguments since 1970s (Citrin 1974; Abramson and Finifter 1981; Feldman 1983; Cook and Gronke 2005).

The argument over the distinction between diffuse trust and specific trust is old but important (Miller 1974; Citrin 1974). In terms of Easton (1965*b*), specific support refers to satisfaction with government outputs and the performance of political authorities, while diffuse support refers to the public's attitudes toward regime-level political objects regardless of their performance. According to this distinction, if the decline of political trust

stems from the decline in specific trust such as disaffection with incumbents, it is of some-what limited consequence because we can replace the incumbents through the electoral process. To the contrary, the decreasing diffuse support ultimately challenges regime legitimacy because it possibly reflects a withdrawal of support for the political community or regime. The distinction between diffuse and specific trust carries different interpretations and implications of the observed decline in political trust. Scholars, thus, place importance on this distinction between diffuse and specific trust.

This distinction, however, is difficult to test. Because both types of trust are mutually endogenous, we cannot easily disentangle the diffuse and specific trust by a simple observation. According to Craig (1993, 9), any measure of affect found to covary with short-term performance satisfaction cannot be diffuse support because diffuse support refers to people's attitudes toward regime-level phenomena regardless of the government's performance. Also any loss of affect leading to mass mobilization and demands for systemic change cannot be specific support. In other words, to measure diffuse support, we need to strictly eliminate what makes specific support such as short-term performance satisfaction, and to measure specific support, we need to eliminate the leading factors for the consequences of diffuse support such as mobilization. What makes the distinction infeasible is that both orientations are defined largely in terms of their antecedents and consequences. Diffuse support is measured as what is not specific support; specific support is measured as what is not diffuse support. In short, the tautological definition makes its measurement difficult.

Despite the vague relationship between definition and measurement of political trust, we have many surveys asking political trust questions even if we do not realize what we measure by the surveys. For example, the trust measure in National Election Studies (NES) contains elements of both diffuse and specific type of support, and the objects of support

are difficult to separate in practice. Additionally, there is the ambiguity of the referents of the standard questions such as "the people in the government," "the government in Washington," and so on (Abramson and Finifter 1981). What do we measure by asking these questions in widely-used surveys? In other words, what do people express by answering to the political trust questions?

While political trust is a vague concept for political scientists to examine, it is a simple question for respondents to answer, as opposed to ideology which Converse (1964) discussed. Almost all people will express political trust as an attitude and can intuitively answer the question about political trust. To trust or not is a daily action for most people, and it does not require us to know well about politics or governments. Trust is more affective than cognitive (Hetherington 2005). It is easy for people to respond to questions about political trust.

Recent scholars pay attention to what is lying behind people's responses to survey questions when defining political trust. In other words, they find the compromise to examine political trust using these existing survey data. They define trust by explaining what people trust and what people expect by trust. Political trust is that people expect political actors to act as they should. More specifically, people trust government or officials to implement a set of policies or a specific policy (Hetherington 2005; Hetherington and Husser 2012).

What we miss in this definition is the assumption that people know who implements which policies. When we focus only on the federal government, it does not matter given that the NES question batteries do not require people to have specific knowledge. In actuality, American government does not consist of a single federal government. When it comes to the relationship of trust in each level of government, this definition is problematic in that whether people distinguish three levels of government. If they do, the definition

should be that people expect political actors in each level to act as they should in each level. To examine the entire mechanism of political trust in the United States, our survey questions should ask if people trust not only "government in Washington" but also state or local governments.

In terms of this distinction, this study focuses on the distinction between trust in national and subnational governments. We need to pay attention to the distinction depending on which political institutions and/or members people trust. Most scholars examine citizens' trust in the federal government as political trust both in terms of diffuse support and specific support or approval. There is a massive literature about trust in the presidents or presidential approval (See Gronke and Newman 2003). A few scholars examine trust in bureaucracy and bureaucrats or "Washington people" (Hibbing and Theiss-Morse 1995), trust in Congress and its members (Durr, Gilmour and Wolbrecht 1997), trust in the Supreme Court and its members (Mondak and Smithey 1997; Durr, Martin and Wolbrecht 2000), and trust in local/state government (Rahn and Rudolph 2005).

These distinctions are important in exploring the causes and consequences of the trust. Due to the scant literature about trust in political institution other than the trust in federal government, little is known about the relationship between trust across institutions and its members (except for Hibbing and Theiss-Morse 1995; Chanley, Rudolph and Rahn 2000), and, consequently, we do not know the complete picture of political trust.

In sum, (1) the debate between diffuse trust and specific trust is overcome by the recent definition of political trust derived from the survey questions. (2) The widely-used survey questions, however, is mostly limited in federal government, and the extant literature misses the entire picture of political trust under the federalism.

Consequently, we need to keep in mind the following. First, what we know about political trust mainly comes from the examination of trust in the federal government. This

means most of the empirical evidence about political trust based on the federal government does not always hold true with political trust at the state and local level. Neither does theory. It may be inappropriate to apply the same theory at the federal level to political trust at the subnational level. We need to construct a theory for explaining political trust at the subnational level.

Second, because of the ambiguous concepts of political trust in terms of diffuse/specific support and trust in various governmental institutions, we have no empirical evidence about a big picture grasping the connection of each political trust. We do not know how diffuse and specific trust interacts and how political trust in each institution connect each other (except for Chanley, Rudolph and Rahn 2000). Furthermore, because of the scant works of political trust at local level, we do not know the relationship between trust in each level of government. Mainly due to the vague concept of political trust, the extant empirical evidence about political trust tells us several puzzles when considering the entire mechanism shaping trust in government.

1.2.3 Linkage between National and Local Political Trust

The importance of political trusts should hold true with both trust in subnational and national government. Citizens' trust in government supports its legitimacy across all levels of government. Because the purpose of this study is the comparison between local and national political trust, political trust should be defined in the context of this importance. In other words, trust in government can be defined as general trust which brings the stability and legitimacy of government regardless of government levels. Then the subsequent analysis focuses on the relationship between the general trust in each level of government. What matters is the distinction between trust in subnational governments and trust in national government.

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We need to confirm the difference between local and national political trust because this should be related to why previous literature ignores the difference and interaction between them. To begin with, is there any difference between local and national political trust at aggregate level? While the determinants of these two types of trust are not identical (Rahn and Rudolph 2005), do people distinguish the trust in national and local government? That is, the puzzle is where the difference to be examined lies between trust in subnational governments and trust in the federal government.

At the aggregate level, Jennings (1998) demonstrates that local political trust moves independently from national political trust using data from the 1960s through the 1990s. Because local governments implement their own programs in everyday politics such as schooling, local taxes, land use, and crimes and because citizen find themselves in relationships with respective government of the multiple government system, he maintains that "most people have the general notion that there are multiple levels and that they perform different functions" (Jennings 1998, 219). That is, Jennings assumes that people differentiate trust in national and local governments to examine the different movements between local and national political trust.

On the other hand, at the individual level, Uslaner (2001) argues that people may lack sufficient information to draw meaningful distinction between and across governments. He notes that "people either like government, both in Washington and in their states, or they don't. The choice between the nation's capital and the state capital is bogus" (Uslaner 2001, 119). That is, people may not distinguish political trust between governments, and what we measure as trust in governments regardless of government level may reflect a more general trust of both governments.

In sum, the problems of political trust in terms of three levels of government are as follows; (1) political trust matters in light of democratic legitimacy across governmental

level, (2) the definition of political trust is murky and limited to the federal level, (3) the citizens' distinction between local and national government is unexamined.

1.3 Theory

1.3.1 Puzzles and Questions

The causes of political trust are mainly government performance and social trust (Keele 2007). Immense literature demonstrates the relationship between trust in government and government performance, the relationship between political trust and social trust, or the relationship of those three at individual and aggregate level.[3] We need keep in mind that most of the evidence comes from examining trust in the federal government. When trying to combine those empirical results, the literature over trust in government shows one big puzzle.

Classic theories placed trust, and voluntary association as the mechanism for creating it, at the center of the understanding of stable democracy (Tocqueville 1994). Social capital theory basically follows this classic thought (Coleman 1990; Putnam 1994; Lubell 2007). Trust between citizens makes it easier, less risky and more rewarding for them to participate in community and civic affairs, and helps to build the social institutions of civil society upon which peaceful, stable, and efficient democracy depends. According

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[3] There is a massive evidence of the relationship between political trust and citizens' perception of government performance. Empirical evidence in the study of trust in the federal government tells us that support for government in general is rooted in how responsive people think incumbents are (Citrin 1974; Feldman 1983; Williams 1985; Citrin and Green 1986; Craig 1993; Chanley, Rudolph and Rahn 2000; Hetherington 2005), that citizens' evaluation of federal government's economic performance affect political trust (Feldman 1983; Citrin and Green 1986; Hetherington 1998), and that the powerful determinant of support is the extent to which the process by which decisions are made is perceived to be efficient and equitable (Hibbing and Theiss-Morse 1995; Tyler and Degoey 1995; Hibbing and Alford 2004). These results are bolstered by the evidence at the aggregate level. For example, negative perceptions of the economy, scandals, associated with Congress and increasing public concern about crime each lead to declining public trust in government (Chanley, Rudolph and Rahn 2000). Also, the expectation of government performance affects people's political trust. For example, political trust increases when more people identify international problems as most important (Chanley 2002; Hetherington 2005; Hetherington and Rudolph 2008).

to the social capital theory, social and political trust are closely associated and mutually supportive (e.g. Putnam 1994; Levi 1998; Uslaner 2002).

Scholars, hence, think people who trust others have greater confidence in political institutions. Empirical evidence, however, tells us the relationship between political trust and social trust is found only in aggregate level, not in individual level, though the greatest theoretical promise of social capital lies at the individual level (Coleman 1990; Uslaner 2002). This is the puzzle. Why are the relationships between social and political trust different between individual and aggregate level?

In the aggregate level, there is a significant relationship between political and social trust. A positive correlation has been found fairly consistently at the cross-national comparative level, where countries are treated as the units of analysis (Zmerli and Newton 2008). A good deal of individual-level survey research, however, suggests that social and political trust are rather weakly correlated, if at all (Craig 1993; Orren 1997; Mischler and Rose 2001; Uslaner 2002). There is little evidence to support that membership of voluntary associations affects social and political trust although many major social theorists and social capital literature emphasize it. To rephrase, the puzzle is that the relationships between social and political trust are different between individual and aggregate levels.

The key to solving this puzzle lies in examination of political trust across three levels of government under federalism. First, it is known that people know less about subnational politics than politics at the federal level (Delli Carpini and Keeter 1996). While there is no puzzle about the effect of citizens' evaluation of government performance affects trust in the federal government both at the macro level (Keele 2007) and at the individual level (Hetherington 1998), we do not know how and which government performance affects trust in local and state government. Also, individual citizens do not distinguish between the performance of national and subnational government unless the issues are

salient (Areceneaux 2006). These observations lead as to a basic question, how citizens trust government with less information. In order to answer to this question, I re-model the role of civic engagement as the source of information when citizen trust in government.

Second, the different evidence of social trust effects on political trust between individual and aggregate level can be explained by the following two: 1) decomposing the concept of social capital into interpersonal trust and civic engagement and 2) examining the context effects of civic engagement formed in local level.

Political scientists decompose social capital into interpersonal trust and civic engagement and find that they work differently (Keele 2005b). At the individual level, interpersonal trust affects political trust (Brehm and Rahn 1997; Claibourn and Martin 2000) while at the aggregate level only civic engagement affects political trust (Keele 2007). Given that the civic engagement is measured by citizens' involvement with local activities, civic engagement may influence local political trust instead of national political trust in individual level and affect national political trust via collective local political trust.

Nonetheless, the connection between local and national political trust is hardly explored. Some scholars report that aggregate political trust in each level government move independently (Conlan 1993; Jennings 1998). At the individual level, however, we find a large covariance between trust in local and national government (Social Capital Benchmark Survey in 2000). This seems to support the argument that confidence in local government just reflects confidence in national government and vice versa (Uslaner 2001). Hence, the third question is why trust in local and federal levels of government move independently over time while individual citizens' trust in local and federal government have a large covariance.

The research questions are (1) how citizens trust government with less information, (2) why civic engagement does not affect national political trust at the individual level,

and (3) how local and national political trust relate each other. In answering to these questions, I point out the key relationship between civic engagement and political trust. This relationship also discovers the entire relationship between trust in national and local government and how trust in multiple levels of government forms democratic stability.

1.3.2   Hypotheses

To answer the above questions, I construct the following hypotheses.

The first question is how citizen trust local government with less information. This can be explained by citizens' strategic action given the limited information. Political trust is defined that people trust government expecting them to act as what they should. In addition to this definition, trust has another role for people, which the trust literature sporadically mentions.

In the transaction cost framework, trust reduces the need to invest in costly monitoring and enforcement institutions (Kramer 1999; Levi and Stoker 2000). In situations characterized by distrust, actors invest in monitoring and enforcement institutions to ensure cooperation and prevent exploitation. In situations characterized by high levels of trust, fewer resources are required for monitoring and enforcement institutions. Given these costs and ceteris paribus, thus, people prefer to trust government to distrust it.

In this setting, there is a possibility that government strategically manipulates information to acquire citizens' trust. To avoid this, the possible explanation is that people trust local government based on the information given by civic engagement instead of obtaining the information from the government.

Second question lies in that the relationships between civic engagement and political trust are different between individual and aggregate level. There is little evidence to sup-

port that membership of voluntary associations affect social and political trust although many major theorists and social capital literature emphasize it.

The role of civic engagement has two possibilities. First, it may work only at the local level. The literature about the relationship between social and political trust comes from the examination of trust in the national government. There is little literature about the relationship between civic engagement and political trust at the local level. Especially given that the civic engagement is measured by citizens' involvement with local activities, civic engagement may influence local political trust instead of national political trust at the individual level.

According to Jennings' implication, the main reasons for most confidence in local government are related to the linkage between citizen and governments, while main reasons for most confidence in national government are related to its performance (Jennings 1998). "Confidence in the national government is highly contingent on performance," and support for local government "derives its strength fundamentally from how well they are seen to provide a link between the citizenry and public officials and decision making" (Jennings 1998, 239). Performance works stronger on national political trust while linkage between citizen and government works stronger on national political trust. The linkage is rephrased as civic engagement because civic engagement has a broad definition such as the individual and collective actions designed to get involved in communities, societies, or public. Thus,

H2a: Civic engagement affects political trust only at the local level.

Second, civic engagement may work only as a contextual effect. In addition to this individual level effect, living in a community that is more engaged may also produce greater distinctiveness among the residents of community. Even if the individual does not belong to many organizations or have much in the way of social participation, if their community

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itself is vibrant, then they may develop more distinct perceptions than a similarly isolated person who lives in a less engaging community.

Another possible explanation of the civic engagement as a context effect comes from Zaller's model. Individual citizens with more information are in ambivalent situation; individual citizens with less information are likely to respond at random (Zaller 1992). Given that civic engagement brings citizens more information, the ambivalence may explain why civic engagement has no effect on trust in government at individual level. At the same time, the amount of individual activities promotes an increase in collective information among communities. Civic engagement collectively affects trust in local government. Because the civic engagement stems from the local activities, this aggregate model only explains the collective effects of civic engagement on the local political trust. Thus,

H2b: Civic engagement collectively affects local political trust.

The third question is how local and national political trust relate each other. As noted above, some scholars report that aggregate political trust in each level government move independently (Conlan 1993; Jennings 1998), while there is a high covariance between trust in local and national governments among individual respondents. This suggests that there is really not much difference between trust in local governments and trust in national government. Given this high correlation, what remains to be discussed and what this study focuses on is the argument about the mechanisms shaping trust in local and national government. The high covariance between local and national political trust among citizens does not mean the similar mechanism among multiple political trust.

My interpretations of these basic data are that there is shared and unique variance between national and local trust. According to Zaller (1992), when a person is confronted with a survey question, they quickly canvass their memories for relevant considerations and construct a response based on the considerations that happen to be accessible. In this

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context, I would expect that the some of the considerations recalled about trust in each level should be shared. In both cases, the general diffuse, level independent sense of trust should be recalled as part of the considerations. Thus,

H3a: There is the general diffuse, level independent sense of trust.

For both cases, it is likely that some of the considerations will be unique. Some people will be able to differentiate between the levels of governments and will draw on different considerations for each of the question. The additional question is how does this vary across individuals or/and communities? If a person is more involved, he or she may see the difference in the types of government more directly. This type of social connectedness can lead people to see their local government more directly and develop a distinct perception of it separated from their perception of the national government. Thus,

H3b: Community-level civic engagement affects the variance of individual citizens' differentiating between the levels of government.

1.4   Models and Data

1.4.1   Models

First, I will construct the formal model to answer the first question about how individual citizens trust local government with less information. Second model will explain the role of civic engagement on trust in local and national government at aggregate level. Third, combining the individual and aggregate results, I will examine the collective effects of civic engagement on trust in local and national governments at individual level and also will try to explain a large covariance between national and local political trust.

Formal Model. Our question is how citizen trust local government when they know little about local politics. Possible explanation is that civic engagement works in local level

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instead of citizens' evaluation of government performance. The following formal model can explain how civic engagement works in local political trust under less information.

Formally, it is known that, when a single sender provides biased information to the receiver, the sender can manipulate the receiver (Crawford and Sobel 1982). To break this equilibrium, three solutions are offered: more extensive communication, soliciting advice from another information sources, and writing a contract with the sender (Krishna and Morgan 2001). These are the answers to how citizen avoid the information manipulation. If the citizen has another information source, the government manipulation power does not work.

In a simple setting, at the local level, citizens possibly obtain information through involvement with social activities. Civic engagement works as another information sources in addition to the government. Conversely, under the less civic engagement, citizens can be manipulated by local government.

Aggregate Model. The role of civic engagement on local political trust is important when citizens have less information about politics. I hypothesize that (1) civic engagement affects political trust only at the local level and that (2) civic engagement collectively affects local political trust.

At the aggregate level, these two hypotheses can be tested by one model. When considering the trust in three levels of government over time, civic engagement is expected to affect only subnational government. Because the series of trust in three levels of governments are possibly co-integrated, Bayesian structural vector autoregression models are appropriate to examine the dynamics.

Cross-Sectional Model. In accordance with the hypotheses noted above, my expectation is as follows: (1) only community-level civic engagement affects both national and

local political trust, while individual-level civic engagement does not affect them and (2) the community-level civic engagement also explains the variance of individual citizens' differentiating between the levels of government.

At the individual level, I conduct two attempts. First, to explain the reciprocal relationship between national and local political trust, I construct a multivariate regression model, which has two dependent variables and the set of the identical independent variables. To examine the effect of the community-level civic engagement, this model is also structured with multilevel variables.

Second, to explain the large covariance between national and local political trust, theoretically I need to construct a multivariate regressions model for each government level and extract the correlations between unobserved errors in those equations. Then, I make a multilevel model letting community-level civic engagement explain this correlation.

1.4.2 Data

The existing data have two problems. One is a gap between the concept of political trust and its measurement as described in the previous section. The other is the lack of panel data about political trust across multiple levels of government.

The available data measuring trust in government do not always suit the concept of political trust. The data do not allow us to separate diffuse and specific trust. By focusing on what is lying behind people's responses to the trust questions, when political trust is defined like that people trust governments to implement policies, the gap between concept and measurement is diminished.

Because this research focuses on the comparison between trust in the three levels of government, I need to use the data which measure political trust as diffuse trust instead

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of support for specific incumbents or employ a single question asking general trust in government at each level.

The second problem is the lack of appropriate data to discover the complete picture of political trust across government levels. The best data sets are panel data with including variables for trust in three levels of government. There is no such a data set. Instead, I have only the following data sets: (1) Time series data set and (2) Social Capital Benchmark Survey.

First, I constructed yearly or quarterly time series data set for trust in federal, state, and local governments using Stimson's recursive dyadic algorithm (Stimson 1999; Chanley, Rudolph and Rahn 2000; Chanley 2002; Keele 2007). Combining the different question batteries from 1972 to 2008, I obtain the long-term political trust data in each government level. Likewise, I constructed civic engagement and interpersonal variables. Additionally, I also include public mood, macropartisanship, index of consumer sentiment, and dummy variables for rally events such as wars and scandals. These data sets allow us to examine the macro-level causes and consequences of political trust across three levels of government.

Second, social capital bench mark survey is conducted in 2000 by the Saguaro seminar at Harvard University, the Ford Foundation, and 34 local community foundations. This data set includes both variables asking trust in local and federal government. I can extract civic engagement from this data set in addition to interpersonal trust and other possible control variables. Because the data are generated nested in around 50 places in the United States, I analyze this data-set as a multilevel data set. This data set allows us to examine contextual effects.

Given that the time-series data and cross-sectional data are separated, I need to analyze these data sets at aggregate and individual level respectively and infer the structural relationship from the results. The above models will overcome this problem.

1.5   Brief Outlines of the Dissertation

Chapter Two. "Reassessing the Effect of Civic Engagement on Political Trust: A Cheap Talk Model of Civic Engagement" provides the formal model about how people trust government. Employing a cheap talk model, I will demonstrate another information sources for citizens prevent government to manipulate information and suggest that civic engagement works as another information sources in local politics.

Chapter Three. "Dynamic Relationships between Trust in National and Local Governments and Civic Engagement" examines the relationships between multiple levels of government and the role of civic engagement on its dynamics. When considering the trust in both levels of government over time, civic engagement is expected to affect only subnational government. Because the series of trust in both levels of governments are possibly co-integrated, Bayesian structural vector autoregression models are appropriate to examine the dynamics.

Chapter Four. "Cross-Sectional Relationship between Trust in National and Local Governments and Civic Engagement" examines the reciprocal relationship between national and local political trust at the individual level and the different role of civic engagement on political trust across the individual and contextual levels. My expectation is (1) individual-level civic engagement does not affect trust in both-level governments as the extant literature suggests and (2) community-level civic engagement affects trust in both-level governments. This chapter also tries to explain the covariance between national and

local political trust and hypothesize that the community-level civic engagement affects the variance of individual citizens' differentiating between the levels of government.

Chapter Five. "Conclusions" infers the complete relationship between trust in both levels of government and draws conclusions. I also discuss the implication to democratic stability.

2. REASSESSING THE EFFECT OF CIVIC ENGAGEMENT ON POLITICAL TRUST: A CHEAP TALK MODEL OF CIVIC ENGAGEMENT

2.1 Overview

The relationship between political trust and social trust has been long discussed because trust plays a critical role in democracy. Yet the lack of analytical rigor prevents the literature from fully capturing dynamics of political trust. The literature has yet to offer the empirical evidence of a significant relationship between political trust and civic engagement at the individual level despite the theoretical expectation. This chapter aims to explain the lack of an effective relationship between civic engagement and political trust by constructing a signaling game and a cheap-talk model. The results of the models indicate that government can manipulate the information, that citizens will trust their government, and that the costless information through civic engagement does not have any impacts on citizens' decision-making. Lastly, I will try to characterize the conditions which will move the equilibrium.

2.2 Introduction

Scholars in political science and practitioners in politics have long understood that political trust plays a critical role in political science and politics. Yet the 1960s witnessed a steep decline of political trust (Miller 1974; Citrin 1974). President Carter made a speech about the plunge in confidence in July 1979, recognizing a crisis of confidence. Although this long decline in trust in government has ended in most surveys and polls by the end of 1984, another motivation to study political trust has been raised. Scholars in various areas such as sociology, psychology, and comparative politics, have reported a decreased social trust in the 1990s (Newton 2000). Putnam connected social trust to political trust

and suggested that the lack of social capital affects the decline of political trust, which leads a crisis of democracy (Putnam 1994, 2000).

Despite the attention paid to the mechanism behind political trust in the last half century, the lack of analytical rigor prevents the literature from fully capturing dynamics of political trust. The literature has yet to offer a clear definition of political trust, a distinction of its mechanism at the individual and aggregate level, and a bridge between the mechanisms behind political trust at the community and national level. This paper will try to provide micro foundational explanations of the mechanism shaping political trust.

The broad goal of this research is to understand the mechanism behind political trust and the role of social trust and, especially, civic engagement in citizens' trust of their government. My research will try to illuminate the dynamic relationship between political trust and civic engagement by modeling and analyzing 1) the connections between individual and aggregate levels of trust and 2) trust in local and national levels of government. Specifically, this chapter focuses on the individual and community-based effect of civic engagement on political trust. I ask why an individual citizen trusts the government in her community and how civic engagements affect her trust in the government. This study is an attempt to offer analytically rigorous investigation of the mechanism shaping individual citizens' political trust focusing on the role of civic engagement.

The findings have broader implications beyond political trust, namely in-depth understanding of the democratic stability. I also ask how political trust develops from the individual levels to the aggregate level and how democratic stability is achieved from the local level to the national level or vice versa. These research interests merge from two simple observations: that public opinion is primarily an aggregate concept and that we live in a multi-layered government system.

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Before describing formal and empirical models, it is useful to overview the literature to highlight my contribution. In the next section I will review what the extant literature has yet to provide when explaining the full mechanism behind political trust.

2.3 Literature

Political trust matters in light of democracy. Classic works emphasize the importance of political trust. Political trust legitimates governance (Easton 1965*a*). Citizens' trust in government is necessary for political leaders to make binding decisions (Gamson 1968) and secure citizen compliance without coercion (Barber 1983; Scholz and Lubell 1998; Levi 1998). Conversely, the lack of political trust undermines the democratic political system. As citizens withdraw support for government and become less willing to comply with government decisions, the legitimacy of a democratic regime may be called into question (Easton 1965*a*, 1975). Low confidence can threaten the stability and legitimacy of government (Bianco 1994). In short, a democratic political system cannot survive for long without the support of a majority of its citizens (Miller 1974).

In accordance with the importance of political trust, the mechanism behind political trust has been of interest to many scholars of public opinion. An immense literature on political trust discusses the causes and effects of political trust with plenty of data from public opinion surveys (Citrin 1974; Miller 1974; Chanley, Rudolph and Rahn 2000; Hetherington 2005, for example). The literature on political trust discusses the causes of political trust as follows. What we know is 1) that government performance affects political trust at an *aggregate* level (Keele 2007, for example), 2) that citizens' evaluation of government performance affects political trust at an *individual* level (Hetherington 2005, for example), and 3) that civic engagement affects political trust as an *aggregate* level (Putnam

2000; Keele 2007, for example). Thus, what we do not know about is the effect of *civic engagement* on political trust at the *individual* level.

Scholars on political trust and social trust find a puzzle here. We expect civic engagement has a positive effect on political trust at the individual level as well as at the aggregate level. The extant literature, however, does not provide empirical evidence of a relationship between political trust and civic engagement at the individual level (Newton 2000). The puzzle is why we cannot find a significant relationship between civic engagement and political trust at the individual level.

Two problems lie in the way of arguing political trust and civic engagement. First, civic engagement or social capital scholars in the past few decades discuss civic engagement as an exogenous factor for explaining cultural differences (Putnam 1994; Inglehart 1997). Treating trust as an exogenous factor overlooks the endogenous explanations of political trust (Jackman and Miller 1998). The recent trust arguments stem from Coleman's (1990) argument which casts in an expected-utility framework. As an endogenous explanation of trust, decisions to trust are based on weighing the potential gain if the trustee is trustworthy against the potential loss if the trustee is not. The key issue is why individuals decide to trust the government.

Second, the scholars on political trust have not made a clear distinction between citizens' community-based activities and national-level political attitudes. The empirical evidence of political trust mostly comes from the surveys about national politics, while the trust theories stem from the observations of citizens' behavior in a community (Putnam 2000). The scholars miss the bridge between citizens' community-level activities and national-level political attitudes when linking from the theories to its empirical evidence. Huckfeldt and Sprague (1995, 5) argue that "the locally specific roots of national electoral politics lie in the localized supply of political information" and that "democratic politics

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can be seen as occurring at multiple levels of meaning, where individual citizens make their choices subject to locally imposed information constrains." Similarly, the mechanisms of the relationship between political trust and civic engagement should be discussed in a community basis.

To solve these problems, we need to distinguish its mechanism at the individual and aggregate level, analyze the mechanism at the community and national level, and model political trust in an expected-utility framework. In so doing, we can understand the full picture of the mechanisms shaping political trust. In response to these two problems, I will construct a game-theory framework model explaining the trust relationship of a government and citizens at the community basis.[1]

2.4 Modeling a Trust Game between Citizens and Government

I will construct two models. One is a basic signaling game between government and citizens. In this simple model, the government can manipulate information to control citizens and can achieve her favored outcome. The second model adds a communication round (cheap-talk) between citizens before their decision making.[2] This addition corresponds to the observation that citizens can communicate with each other through their daily civic activities. The result shows that adding the cheap-talk phase does not change the outcome from the basic model.

[1] In this formal model, I focus on citizens' community-based political behavior. Because mass media has not developed considerably at the community level, we can also eliminate the possible effect of another information sources such as mass media.

[2] See Nannestad (2008) and Wilson and Eckel (2010) for other formal models of political trust.

2.4.1 A Basic Model of Trust in Government

In the basic model, a government is the sender. There are three players; citizen 1, citizen 2, and the government.[3] Citizens 1 and 2 have their own types. Citizen 2 can be either conservative or liberal while citizen 1 is always liberal.[4] The probability that citizen 2 is conservative is $p \in (0, 1]$. In this model, uncertainty lies only in the type of citizen 2. Government reports either that citizen 2 is conservative or that citizen 2 is liberal. Citizens 1 and 2 each choose either to coordinate or not to coordinate.

This game proceeds as follows (see Figure 2.1 below). At stage zero, nature chooses citizen 2's type. Only government and citizen 2 detect citizen 2's type. At stage one, government reports that citizen 2 is conservative (*C*) or that citizen 2 is liberal (*L*). The information that government has reported becomes common knowledge. At stage two, citizens 1 and 2 each simultaneously choose to coordinate (*C*) or not to coordinate (*N*). After all actions are taken, payoffs are realized.

Figure 2.1: Game Tree of Civic Engagement and Trust in Government

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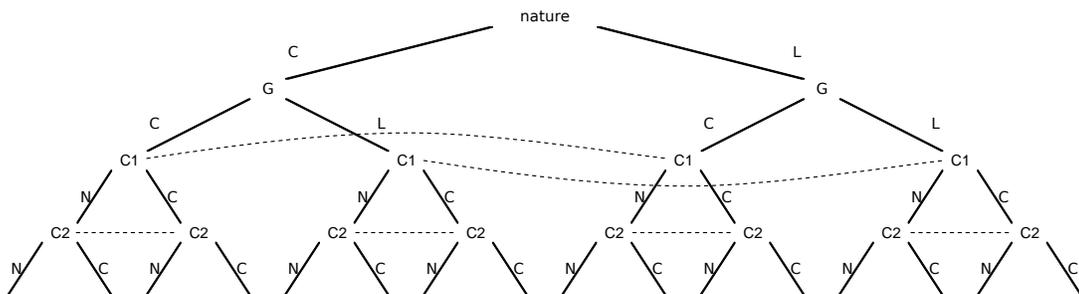
[3] Hereafter in this model, for convenience I will call government "she," citizen 1 "he," and citizen 2 "she."

[4] I label the type of citizens as conservative or liberal in order for making the model easier to understand.

The payoffs to government depend on her own reports as well as the citizens' actions. That is, given a report $r \in \{C, L\}$ of government and actions a_1 and $a_2 \in \{C, N\}$ of the citizens, a real number $u_{ra_1a_2}$ denotes the payoff to government when government reports r and citizens 1 and 2 choose a_1 and a_2, respectively. For example, u_{CCN} denotes the payoff to government when government reports that citizen 2 is conservative, citizen 1 chooses to coordinate, and citizen 2 chooses not to coordinate.

Preferences of government are as follows. The primary preference of government is to make citizen 1 not to coordinate;[5] *i.e.* $u_{rNa_2} > u_{r'Ca_2}$ for any $r, r' \in \{C, L\}$ and $a_2, a'_2 \in \{N, C\}$ in which the left side term of the inequality denotes the payoff to government when citizen 1 does not coordinate and the right side term of the inequality denotes the payoff to government when citizen 1 coordinates. Government might have a particular preference on citizen 2's actions. In this model, however, such a preference does not affect results as long as the primary preference of government is to make citizen 1 not to coordinate. So the preference of government on citizen 2's action is omitted.

In addition, when government is unable to influence citizen 1 not to coordinate, the conditional preference of government is to preserve her credibility. In this model, these are two possible cases in which government might lose her credibility. In one case, government might lose her credibility related to truthfulness. Suppose that a conservative player has a dominant action, not coordinating. So if government has reported C and citizen 2 chooses to coordinate, then citizen 1 is certain that government has lied, and thus government would lose its credibility. Hence if government cannot affect citizen 1 not to coordinate and expects citizen 2 to coordinate, then government prefers to choose saying that citizen 2 is liberal; *i.e.* $u_{LCC} > u_{CCC}$. In the other case, government might lose her credibility related to accurate warning. If government expects citizen 2 to play

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[5] Government wants citizen 1 to trust herself more than citizen 2.

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not coordinating and reports that citizen 2 is liberal, then government would fail to warn citizen 1 of the danger that citizen 2 would not coordinate and thus lose her credibility. Hence if government cannot affect citizen 1 not to coordinate and expects citizen 2 to play not-coordinating, then government prefers to report that citizen 1 is conservative; *i.e.* $u_{CCN} > u_{LCN}$

Among the inequalities stated above about the preferences of government, the following four inequalities influence the outcomes in equilibrium.

- Primary preferences

    $u_{CNN} > u_{LCC}$

    $u_{LNN} > u_{CCC}$

- Credibility preferences

    $u_{LCC} > u_{CCC}$

    $u_{CCN} > u_{LCN}$

The payoffs to citizens 1 and 2 are given by the following matrices (see Table 2.1). In these matrices, citizen 1 chooses a row and citizen 2 a column, such that $\omega > 2$ where the first entry in each cell is citizen 1's payoff for the corresponding actions and the second entry citizen 2's. Citizen 1 is always liberal. Suppose that a liberal citizen prefers to match the action of the other and prefers the *CC* outcome to the *NN*. For a conservative citizen, *N* is a dominant action. So the *NN* outcome is the only pure-strategy equilibrium in the left side matrix. Moreover, when both citizens 1 and 2 are liberal, they want to match the action of the other. Consequently, in the right side matrix there are two pure-strategy equilibria, the *CC* outcome and the *NN*.

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Table 2.1: Payoff Matrix

When citizen 2 is conservative

		citizen 2 C	citizen 2 N
citizen 1	C	ω \ 3	0 \ 4
	N	2 \ 0	1 \ 1

When citizen 2 is liberal

		citizen 2 C	citizen 2 N
citizen 1	C	ω \ ω	0 \ 2
	N	2 \ 0	1 \ 1

The game without government could have two pure-strategy perfect Bayesian equilibrium outcomes. Citizens can achieve the *NN* outcomes regardless of citizen 2's type in which citizens' expected payoffs are ones. Also, if the probability p that citizen 2 is conservative and the payoff ω in the *CC* outcome satisfy that $\frac{\omega-2}{\omega-1} > p$, then the *CN* outcome when citizen 1 is conservative and the *CC* when citizen 2 is liberal is a possible outcome combination in equilibrium. In this outcome, citizens 1 and 2 have their expected payoffs $(1-p)\omega$ and $4p+(1-p)\omega$, respectively, and therefore both citizens prefer the latter outcome combination to the former because of the higher expected payoffs in the latter.

Now, introducing government into this game changes the results as follows: Pure-strategy perfect Bayesian equilibria exist, and in the equilibrium outcomes citizens 1 and 2 choose *N*s. To prove this, I will examine four pure strategies of citizen 1.

Strategy 1 (N,N) Let citizen 1 play not-coordinating always; *i.e.* (N,N). Note that a liberal citizen prefers to match the action of the other citizen. On the other hand, a conservative citizen has the dominant action N. Thus only citizen2's strategy under which she always plays *N*, *i.e.* (N,N,N,N), satisfies the best response to citizen 1's strategy in each continuation game. Finally, citizen 1's strategy (N,N) satisfies the best response to (N,N,N,N) in each continuation game. In this case, if $u_{CNN} > u_{LNN}$, then government

prefers to always report that citizen 2 is conservative, *i.e.* (C,C). Accordingly, the strategy profile $\{(C,C),(N,N),(N,N,N,N)\}$ is an equilibrium. Similarly, the following strategy profiles are equilibria; if $u_{CNN} < u_{LNN}$, then $\{(L,L),(N,N),(N,N,N,N)\}$; and if $u_{CNN} = u_{LNN}$, then $\{(r_C,r_L),(N,N),(N,N,N,N)\}$ for $r_C,\ r_L \in \{C,\ L\}$, where $(r_C,\ r_L)$ specifies that government reports r_C when it detects a conservative type and r_L when it detects a liberal type. In all the cases, citizens always choose Ns in the outcomes. Therefore, there exists a pure-strategy equilibrium of which citizens choose Ns in the outcome.

Strategy 2 (N,C) Let citizen 1 play N only when government has reported C; (N,C). Then only citizen 2's strategy under which she plays C only when citizen 2 is liberal and government has reported L, *i.e.* (N,N,N,C), satisfies the best response in each continuation game. Next, the best response of government to these strategies is to report C when government detects a liberal type because $u_{CNN} > u_{LCC}$, which denotes the primary preference of government. In this case, first, let government report L when it detects a conservative type. Then government would report L when it detects a conservative type and would report C when it detects a liberal type. So citizen 1 knows that citizen 2 is conservative when government has reported L. Hence citizen 1 has an incentive to change his action from C to N when government has reported L. Consequently, the strategy profiles that contain citizen 1's strategy (N,C) and government's strategy under which government reports L only when it detects a conservative type, *i.e.* (L,C), cannot be an equilibrium. Second, let government report C when it detects a conservative type, then the citizen 1's strategy (N,C) satisfies the best response in each continuation game. Hence citizens choose Ns in this outcome. Therefore, if a strategy profile in which citizen 1 plays the strategy (N,C) is an equilibrium, then citizens choose Ns in the outcome of this equilibrium.

Strategy 3 (C,N) Let citizen a play N only when government has reported C; (C,N). Then only citizen2's strategy under which she plays N is liberal and government has re-

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ported C, *i.e.* (N,N,C,N) satisfies the best response in each continuation game. Next, the best response of government to these strategies is to report L when it detects a liberal type because $u_{LNN} > u_{CCC}$, the primary preference of government. Similar to the previous situation, if government takes the action C when it detects a conservative type, then the strategy profiles in which citizen 1 plays (C,N) and government plays (C,L) cannot be an equilibrium. on the other hand, if government reports L when it detects a conservative type, then citizens choose Ns in this outcome. Therefore, if a strategy profile in which citizen 1 plays (C,N) is an equilibrium, then citizens choose Ns in this equilibrium outcome.

Strategy 4 (C,C) Let citizen 1 play C always; (C,C). Then only citizen 2's strategy under which she plays C only when she is liberal, *i.e.* (N,N,C,C), satisfies the best response to citizen 1's strategy in each continuation game. Next, the best response of government is to report C when it detects a conservative type because $u_{CCN} > u_{LCN}$, the conditional preference for credibility of accurate warning, and to report L when it detects a liberal type because $u_{LCC} > u_{CCC}$, the conditional preference for credibility related to truthfulness. Hence when government has reported C, citizen 1 has an incentive to change his action from C to N because he is certain that citizen 2 is conservative and thus citizen 2 will choose N. Therefore, the strategy profiles in which citizen 1 plays the strategy (C,C) cannot be an equilibrium.

The above explanation means that only the *NN* outcomes are possible in pure-strategy perfect Bayesian equilibrium and that government successfully manipulates the information. Therefore, introducing government into the game lowers the citizens' payoffs. This result is strong in that it does not depend on p, the probability that citizen 2 is conservative, and ω, the payoff to the liberal citizens in the *CC* outcome.

2.4.2   A Cheap Talk Model

In the second model, I add a cheap-talk round before citizens' decision making. The above result from the basic signaling game is stable in that any cheap-talk between citizens 1 and 2 cannot change the result because the cheap talk does not transmit meaningful information between citizens 1 and 2. I will explain this logic as follows.

By engaging in daily civic activities, the information about the type of each citizen is typically shared by costless signaling. The information acquired via civic engagement is still costless because engaging in civic activities is not an action for seeking the information about each other's type. Civic engagement therefore becomes a simple and costless way in which citizens can signal and learn about each other's type when responding to the signal from the government. The pre-play communication between citizens 1 and 2, thus, is unverifiable, costless, and non-binding.

The condition for making the cheap-talk effective or informative is that preferences of citizens 1 and 2 are aligned (Crawford and Sobel 1982). Otherwise, we know that a babbling equilibrium prevails, where a sender in the cheap-talk game randomizes her signal in space and a receiver will ignore the randomized signal for his best response. Hence, if we can suppose that the pre-play communication between citizens 1 and 2 is randomized, we can say that civic engagement is not informative without characterizing informative equilibria.

We can assume that the cheap talk between citizens 1 and 2 is randomized because they do not aim to deceive each other by sending the signal about their type. To put it other words, the exchanged signals between citizens 1 and 2 are sincere and non-strategic, which should be regarded as randomized signals.

The signal from Government, to the contrary, is not sincere because she has a preference over citizen 1's action. Government has an incentive of deceiving citizens as possible as her credibility preferences are satisfied. Thus, government transmits strategic information. This government behavior reminds us that, to make a cheap talk through civic engagement transmit information, the talks between citizens 1 and 2 should be strategic communications instead of the sincere talks. Note that Bayesian learning needs a type of a player who has a possibility of lying.

Two implications are derived from the above explanations. First, note that the purpose of formal modeling is to find parameters or conditions of equilibrium. It is important to find the conditions on which the equilibrium will change. For example, if pre-play communication between citizens 1 and 2 is biased, the cheap talk might be meaningful. This leads us to the importance of considering the contextual effects on citizens' attitudes, which Huckfeldt and Sprague (1995) argue.[6]

Second, this model assumes that civic engagement is neutral and that the communication between citizens 1 and 2 is sincere and uninformative. To put in the other way around, paradoxically, civic engagement becomes effective when citizens 1 and 2 are possibly deceitful. This implication is counter-intuitive in that civic engagement has an effect on trust if citizens will try to deceive each other.

2.5   Discussions

The model is particularly helpful because we can derive general observations regarding the effect of civic engagement on citizens' trust in government. The model illustrates 1) a citizen basically trusts government and government can manipulate the information and 2) a citizen with civic engagement will not change their choices when responding to the

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[6] I will discuss this in Chapter four.

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signal from the government. We can therefore derive the following theoretical expectations: Civic engagement (a cheap talk between citizens) does not affect interpersonal trust between citizens and their trust in the government.

First, setting the credibility preferences of government means that government wants citizens to trust her and takes actions for that purpose. The basic model illustrates that government can manipulate the information about a citizen's type and achieve her favored outcome. Additionally, even if we introduce civic engagement, the result does not change and still depends on the credibility preferences of government. Thus, we can say that civic engagement does not affect the trust in government in this model.

Second, even if a cheap-talk phase is added to the basic model, the civic engagement does not change an equilibrium from the *NN* outcome to the *CC* outcome. Citizens with civic engagement still choose not-coordinating instead of coordinating. This means civic engagement does not affect interpersonal trust between citizens.

Therefore, the model shows that civic engagement does not affect interpersonal trust and trust in government at the individual level. This should be an answer to the puzzle that there is not empirical evidence of the significant relationship between civic engagement and political trust.

This chapter produces the better explanation for the no-effect of civic engagement on trust in government at the individual and community-based level. I theorize that civic engagement does not affect trust in government if other factors are equal. The finding that civic engagement does not have an effect on individual-and community-based political trust is counter-intuitive and contradicts some of our prior conceptions of challenges. The result, however, can explain why there is not empirical evidence of a significant relationship between civic engagement and political trust at the individual level.

Note that the hypothesis is crude and is only meant to portray the general empirical expectations based on the formal model. The further research I should do is to develop empirically testable hypotheses that characterize the parameters of the model in terms of citizens' attitude toward the government at the individual level. This simple model does not rigorously answer the question: in which conditions civic engagement affects inter-personal trust and political trust. By answering this question and offering empirical tests, the derived theories can bridge the national-and community-level analyses as well as the micro- and macro-analyses of trust in government and provide implications to understand-ing the stability of democracy.

3. DYNAMIC RELATIONSHIPS BETWEEN TRUST IN NATIONAL AND LOCAL
GOVERNMENTS AND CIVIC ENGAGEMENT

3.1 Overview

This chapter aims to explain the dynamic relationships between trust in national and
local governments focusing on the effect of civic engagement. The previous literature sug-
gests that each level of trust in government is shaped differently but is related to each other.
Additionally, civic engagement is supposed to affect each level of government though the
extent of the effect is different between trust in national and local governments. Using
multiple time-series analyses, I examine the reciprocal relationships between these three
variables. The findings are (1) the movement of civic engagement drives those of local
political trust but responds to that of national political trust and (2) the movements of trust
in national and local governments are reciprocal. Uncovering these relationships gives a
clue to understanding how the hierarchical structure of democratic society forms stability.

3.2 Introduction

Political trust matters in shaping how democratic societies work. Classic theories ar-
gue that trust legitimates governance (Easton 1965*a*). More specifically, trust in govern-
ment is necessary for political leaders to make binding decisions (Gamson 1968) and to
secure citizen compliance without coercion (Barber 1983; Levi 1998; Scholz and Lubell
1998). Political trust serves as a lubricant for the relationship between citizens and politi-
cal leaders. A democratic political system cannot survive for long without the support of a
majority of its citizens. Indeed, some levels of political distrust undermine the democratic
political system (Miller 1974). Thus, the decline of American citizens' political trust since

the 1960s has had significant consequences on democratic politics. An immense literature has examined what determines the shift in citizens' trust in government.

Recent research has suggested that there are two major determinants of trust in government. First, citizens' attitudes toward the government's performance determine their trust in the government. For example, people's evaluation of the government's performance is a main determinant of citizens' trust in government (Keele 2007). From another viewpoint, people trust government when policies require some sacrifice (Hetherington 2005).

Second, trust has some additional causes that are reflected in the broader social and cultural trends. Scholars in the field of social capital have suggested that civic engagement affects political trust (Brehm and Rahn 1997; Putnam 2000; Keele 2007). People's voluntary activities in their communities develop trust in the society as a whole, which, in turn, fosters trust in government. Social capital theory says that the web of cooperative relationships between citizens facilitates resolution of collective action problems (Coleman 1990; Putnam 1994). According to these scholars, those who engage in civic activities have greater confidence in political institutions.

Not only recent scholars find the role of civic engagement. It has a long history of serving as a predictor of political trust and American democracy. Classic theory says voluntarism is central to American democracy. Tocqueville placed trust, and voluntary association as the mechanism for creating it, at the center of his understanding of stable democracy (Tocqueville 1994).

In short, trust in government is explained by two major determinants: evaluation of government performance and civic engagement. Both are important components of American democracy.

On both research agendas seeking the determinants of trust in government, a basic conceptualization of political trust has been the same. Trust in government is distinct from and more generic than the person's attitudes toward specific institutions, elected officials, or government offices. The actions of these actors may influence political trust and may be influenced by trust, but the general concept is independent from the people who are currently holding office. The National Election Studies battery on political trust, the gold standard of questions on the topic, even begins with the phrasing: "People have different ideas about the government in Washington. These ideas don't refer to Democrats or Republicans in particular, but just to government in general. We want to see how you feel about these ideas." Trust in government, then, is meant to be about people's trust in the government in general and most of the work on the topic begins the inquiry with this premise.

The general definition of trust in government often makes the following fact remain overlooked: In the American system of government, there is not *a* government. We live in a multi-layered government system with important differences between the levels. Citizens may develop different attitudes toward different levels of government they interact with. But these distinctions are glossed over in the extant literature, with a few notable exceptions (e.g. Jennings 1998). The focus of the vast majority of the work is on individuals' perceptions of the national government. This is evident in that NES phrasing above. At one point, the questionnaire is obviously referring to the national government, or the government in Washington. In the very next sentence, however, the wording shifts to frame trust in the national government as trust in the government in general.

My approach to uncovering dynamic mechanisms shaping trust in government is to pay attention to this multi-layered government system. When considering the relationship between civic engagement and trust in government, we need to break down trust in gov-

ernment into three levels: national, state, and local.[1] There are three reasons for the need of distinguishing government levels when considering political trust in government.

First, as noted above, the distinction between local and national political trust when analyzing either of them matters because local trust and national political trust are "distinct attitudes and do not share an identical set of determinants at the individual or contextual level" (Rahn and Rudolph 2005, 547). The previous literature failed to appreciate this difference. A wide range of literature continues to discuss the mechanisms shaping trust in national government (Hetherington 1998, 2005; Hetherington and Rudolph 2008; Brehm and Rahn 1997; Keele 2005*b*, 2007), and some works examine the determinants of trust in local government (Tyler and Degoey 1995; Rahn and Rudolph 2005). While these two streams have developed over the past decade, they have been independently discussed. Consequently, the previous literature pays little attention to the interaction between trust in subnational and national governments (see Jennings 1998; Uslaner 2001, for exceptions). On the other hand, Rahn and Rudolph (2005) examine political trust in local governments while controlling trust in national government to ensure only modeling the local dimension of political trust. Controlling the other governmental trust does not only show the genuine effects of the determinants of trust in the government, but also takes into consideration the interaction between local and national political trust. To examine the difference and the interaction, we need to model simultaneous equations.

Additionally, the literature on the comparison of trust in local and national government has failed to demonstrate its difference or similarity mainly because of the dearth of the appropriate data. Among the few works that compare local and national political trust,

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[1] I deal only with national and local governments in this paper because I focus on the comparison between national and local government and especially because the data for trust in state government are very limited. Also, I do not focus on the effect of citizens' evaluation of government performance on trust in government. The main reason is the difficulty to theorize and measure aggregate people's evaluation of local government performance across municipalities. Additionally, we do not know whether people clearly distinguish output of government performance at each level (Uslaner 2001).

Jennings (1998) suggests that local political trust moves independently from national political trust over time. The movements may not be exactly the same, but trust in local governments and trust in the federal government are highly correlated at an individual level. Its causal relationship, however, has not been demonstrated. That is, the mechanism of the relationship between local and national governments is unclear despite their respective importance.

Second, it is important to distinguish the concept of trust in government along with the government levels to delve into the meanings of citizens' attitudes toward governments. The past literature has long discussed the ambiguous definition and the inappropriate measurement of political trust. Miller (1974) and Citrin (1974) debate whether people trust the whole government system or specific governments such as elected officials. The NES question battery on political trust constantly explores people's general trust in government instead of their support for specific elected officials or government offices. As noted above, this question is unfit for the fact that there isn't *a* government in the United States. Hibbing and Theiss-Morse (1995) argue that we need to decompose the concept of political trust along with the apparatuses of the government system such as presidents, Congress, and Supreme Court (see also Chanley, Rudolph and Rahn 2000). Likewise, we also need to break down the trust in government into trust in national and local government.

The third reason for paying attention to subnational government in addition to national government is because the theory about civic engagement is based on community-level activities of citizens. The concept of civic engagement is citizens' voluntary participation in activities of personal and public concern in their communities, and its measurement is counting the frequency of citizens' participation in such local activities (Putnam 2000; Keele 2005*b*).[2] Civic engagement, thus, should be examined at the local level before

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[2] A community can be a neighborhood, city, county, nation or the world, but the measurement political scientists have used for civic engagement is based on a neighborhood community.

talking about the relationship between civic engagement and trust in national government. When discussing the relationship between civic engagement and trust in government, it is important to pay attention not only to the trust in national government but also to the trust in local government.

The distinction between local and national political trust when analyzing either of them matters because they are distinct attitudes at the individual level. For example, the relationship between civic engagement and trust is universal and spans across all levels of government. Focusing on the layered government system, however, leads one to ask this; Does civic engagement work in the same way in local and national politics? To examine how civic engagement works, we should take into consideration the relationship between trust in local and national governments. Because civic engagement stems from local activities, the way it works on trust in governments should be different between local and national government.

I argue that civic engagement works differently in local and national politics when taking into consideration the relationship between multiple governments and discuss the different mechanisms shaping trust in subnational and national governments. Because my focus is on the variation of civic engagement at national and local levels, a multiple time-series analysis is appropriate to examine the effect of civic engagement on trust in local and national governments. In so doing, this research gives a clue to understanding the dynamics of layered political trust.

Given the research focus of most of the work on political trust, the exclusive focus on trust in the national government is not a serious problem. I am not going to claim in this paper that the existing work is incorrect because of this focus. My claim is that by exploring the link between trust in the national government and trust in the lower levels in our federal system, we can learn about citizens' attitudes about government broadly

and their ability to make distinctions between the levels of government. Moreover, to the extent that trust in local government is related to and to the extent that it is independent from trust in national government can help explain the antecedents and consequences of trust in national government.

Exploring how trust in government is shaped across government levels also gives us a clue to understanding how the hierarchical structure of democracy remains stable. The World Bank believes that effective local government will lead to successful nation-building strategies (United Cities and Local Governments, and World Bank 2009). Additionally, the theory of social capital tells that civic engagement in communities develops effective governance and brings stability to democratic societies. If these relationships are not empirically supported, we need another theory explaining the mechanism of democratic societies. Thus, uncovering the entire relationship between civic engagement and trust in national and subnational government represents an important contribution to the research on democratic societies.

This chapter proceeds as follows. In the next section, I explain the development of the conceptualization of trust in government in general. I also review the extant work on the relationship between trust in national and subnational government and the relationship between civic engagement and trust in governments. After reviewing these works both at macro and micro levels, I will point out a gap between them. Then I move to developing a theory for explaining the gap. From this theory I develop testable hypotheses about the nature of the relationship between trust in the different levels of government. Then, I describe the data and methods, before presenting the results. I conclude by discussing the importance of the results for our understanding of trust in government and civic engagement.

3.3   Literature

First, I explain the development of the conceptualization of trust in government in general. Then, to reconstruct theories about the relationships between civic engagement and trust in national and local government, we need to review what we know and what we do not know about the following: the relationship between trust in national and local government, the relationship between civic engagement and trust in (national) government at a macro level, and the relationship at a micro level.

3.3.1   Definition

3.3.1.1   Trust in Government

The famous dispute over the conceptualization of political trust between Citrin and Miller in the 1970s is caused by a gap between the concept and measurement of political trust. Beyond this dispute over the definition, scholars of political trust have used a relatively consistent measurement for political trust in surveys, by asking respondents how much confidence they have in their government.[3] By responding to this question, almost all people express political trust as a general attitude toward their government instead of

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[3] The definition of political trust has been open to argument since Miller and Citrin (Miller 1974; Citrin 1974). One of the issues is, as Citrin (1974) claims, that we need to differentiate between satisfaction with current government policy positions, approval of the outcomes of ongoing events and policies, support for incumbent office holders and so on. Easton (1965*b*) and Abramson and Finifter (1981) also mention the need to differentiate political community, political regime, and political authorities of officials. In this study, we do not need those distinctions because we focus on general trust. The second issue is whether political trust is non-distrust in politics. Because the study of political trust has developed to target declining political trust since the 1960s, a wide range of literature has discussed political distrust among people and has defined political distrust as non-trust in the entire political system. This definition has often been criticized partly because their measurements of non-trust were not valid to examine political trust (Citrin 1974; Cook and Gronke 2005) and mainly because it is not necessarily true not only that non-trust means distrust but also that non-distrust mean trust. Whether people distinguish between trust in the president and trust in the federal government and whether non-distrust in politics exactly means political trust does not matter in this paper as far as they are within national politics or within local politics.

specific support for politicians or policies (Hetherington 2005). Thus, the arguments of political trust have dealt with general political trust.

Political trust among the mass public has important implications for government activities and political representation regardless of government level. High public confidence allows governments to engage in greater policy innovation and risk-taking, while low confidence can threaten the stability and legitimacy of government (Bianco 1994). Political trust is, as Citrin mentions, "the basis of future growth and stability" (Citrin 1974, 973). This importance should hold true with both trust in local and national governments. Generally we can assume that citizens' trust in government support its legitimacy across all levels of government.

To the political elite, citizens' trust in government is a measure of public opinion. It is difficult for the elite to determine how conservative or liberal their constituents are because ordinary Americans do not think in such terms (Converse 1964). People are much better at expressing how they feel about government. Political trust can be thought of as a measure of such feelings (Hetherington 2005). The most recent book-length treatment of political trust illustrates this well. Hetherington documents the role of trust in cultivating a conservative shift in public policy. Early in the book (Hetherington 2005, 9), he defines trust as: "the degree to which people perceive that government is producing outcomes consistent with their expectations."

The concept of political trust is important both in theory and in actuality. The literature, however, does not distinguish levels of government. There are no references to the level of government or recognition that this may vary across the levels of government. From its context, it is clear that Hetherington is focusing on trust in national government, but the definition does not make this clear. Because the purpose of this study is the comparison between local and national political trust, political trust should be defined in the context of

the above importance. In other words, trust in government can be defined as general trust which brings the stability and legitimacy of government regardless of government levels. Then, the subsequent analysis focuses on the relationship between this general trust in each level of government.

3.3.1.2   Civic Engagement

Civic engagement is derived from the theory of social capital (Coleman 1990; Putnam 1994, 2000). Putnam defines social capital as connections among individuals, "social networks, and the norms of reciprocity and trustworthiness that arise from them" (Putnam 2000, 19). The mechanism of social capital is described as follows: "The more that citizens participate in their communities, the more that they learn to trust others; the greater trust that citizens hold for others, the more likely they are to participate."(Brehm and Rahn 1997, 1001-02).

Paying attention to this mechanism, the subsequent researchers divide the causes of social capital into interpersonal trust and civic engagement. While Putnam's measurement of social capital includes social and political participation, social connections, volunteering, and interpersonal trust, Keele (2005*b*) separates interpersonal trust from civic engagement which includes political and social participation, commitments, and volunteering. Likewise, Brehm and Rahn (1997) and Rahn and Rudolph (2005) use civic involvement as civic engagement separated from interpersonal trust. They all define interpersonal trust as "generalized trust of other people" (Brehm and Rahn 1997, 1006) and I follow this definition. Hence, civic engagement can be simply defined as citizens' participation in their communities.[4]

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[4]Among these two components of social capital, I focus on civic engagement instead of interpersonal trust. First, the effect of civic engagement can be different between local and national political trust because civic engagement stems from local activities while interpersonal trust we define here does not specify the working arena. Second, interpersonal trust is a very closer concept to confidence in government. In other words, the extension of interpersonal trust can be trust in either government. Trust between citizens makes

3.3.2   Relationships

3.3.2.1   Trust in National and Local Government

First, we know little about the relationship among trust in national and local governments. Few studies examine trust in government across government levels. One or two scholars analyze the movement of trust in national and local government using a few time-point data from 1970s to 1990s and conclude that trust in national government moves independently from trust in local government (Conlan 1993; Jennings 1998). Hence, on one hand, the results from these macro analyses tell that the shift of trust in government is different between national and local levels. On the other hand, the data from Social Capital Benchmark Survey (2000) show that trust in national and local governments covary highly at the individual level. From the literature, we cannot have a strong specification in advance about the relationship between these different levels of trust.

Before discussing an analytical framework, we should make sure the difference between local political trust and national political trust because this should be related to why previous literature ignores the difference and interaction between them. To begin with, is there any difference between local and national political trust at the aggregate level? The determinants of these two types of trust are not identical (Rahn and Rudolph 2005), but do people distinguish between the trust in national and local governments? That is, the question is where the difference to be examined lies between trust in subnational government and trust in national government.

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it easier, less risky and more rewarding for them to participate in community and civic affairs, and this helps build the social institutions of civil society upon which peaceful, stable, and efficient democracy depends (Putnam 1994, 2000; Uslaner 2002). Thus, voluntary associations represent our interests in the conflicts over public policies but they also draw us into civic engagement and get us involved in our communities in a satisfying and productive manner.

Jennings (1998) demonstrates that local political trust moves independently from national political trust using data from the 1960s through the 1990s. Because local governments implement their own programs in everyday politics such as schooling, local taxes, land use, and law enforcement and because citizens find themselves in relationships with respective government of the multiple government system, he maintains that "most people have the general notion that there are multiple levels and that they perform different functions" (Jennings 1998, 219). That is, Jennings assumes that people differentiate trust in national and local governments to examine the different movements between local and national political trust.

On the other hand, Uslaner (2001) argues that people may lack sufficient information to draw meaningful distinctions between and across governments. He notes that "people either like government — both in Washington and in their states — or they don't. The choice between the nation's capital and the state capital is bogus" (Uslaner 2001, 119). That is, people may not distinguish political trust between governments, and what we measure as trust in government regardless of government level may react a more general trust of both governments.

The data from Social Capital Benchmark Survey (SCBS) supports citizens' undistinguishing attitudes.[5] The cross tabulation of between 4 point-scale local trust and national trust shows 67.2 % of the cases are on the diagonal and Spearman's rank correlation ρ, 0.574, which means there is a strong association between trust in local and national governments.[6] This seems to support the argument that confidence in local government just reacts confidence in national government and vice versa.

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[5] Social Capital Benchmark Survey is sponsored by the Saguaro seminar at Harvard University, the Ford Foundation, and 34 local community foundations. The data were collected by telephone interview from July to November 2000.

[6] The null hypothesis that ρ is equal to zero is rejected at 1% level.

The high covariance between trust in local and national governments among individual respondents suggests that there is really not much difference between trust in local government and trust in national government. Given this high correlation, what remains to be discussed and what this study focuses on is the argument about the mechanisms shaping trust in local and national government. The high covariance between local and national political trust among citizens does not mean a similar mechanism among multiple political trusts.[7]

3.3.2.2   Trust and Civic Engagement at a Macro Level

Civic engagement's effect on trust in national and local governments respectively is demonstrated by many scholars at the macro level. Citizens' activities in a community develop interpersonal trust which results in (diffuse) trust in (federal) government (Brehm and Rahn 1997; Claibourn and Martin 2000; Putnam 2000; Keele 2005*b*). Even when controlling interpersonal trust, there is a long-term relationship between civic engagement and trust in national government at the macro level (Keele 2007). These examinations, however, do not take into consideration trust in subnational government. We do not know but can expect how trust in local government affects the relationship between civic engagement and trust in national government from micro-level analyses.

3.3.2.3   Trust and Civic Engagement at a Micro Level

The third point of what we want to know from the literature is the relationship between civic engagement and trust in government at the individual level. At a micro level, there is no empirical evidence between civic engagement or social capital and trust in (national)

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[7] My interpretation of these basic data are that there is both shared and unique variance between national and local trust. In accordance with the reception-acceptance model of survey response (Zaller 1992), I would expect that some of the considerations recalled about trust in each level should be shared. I will discuss this in the next chapter.

government despite the theoretical expectation supported in the macro analyses (Newton 2000; Zmerli and Newton 2008). As to trust in local government, a relationship between interpersonal trust and trust in local government at the individual level exists even when controlling trust in national government (Rahn and Rudolph 2005), and we know interpersonal trust is strongly affected by civic engagement (Brehm and Rahn 1997; Claibourn and Martin 2000). Thus, at the micro level and local level, the literature suggests civic engagement affects trust in local government while there is no such evidence in the macro level analyses.

3.3.2.4 *What is different?*

To sum up, at the macro level, the literature tells us that there is strong evidence between civic engagement and trust in national government (A in Figure 3.1) but nothing about the relationship between civic engagement and trust in local government (B in Figure 3.1) and the relationship between trust in different levels of government (C in Figure 3.1). At the micro level, there is no evidence between civic engagement and trust in national government (a in Figure 3.1), a weak effect of civic engagement on trust in local government (b in Figure 3.1), and a high covariance between trust in the different levels of government (c in Figure 3.1).

3.4 Theory

The question is why the effects of civic engagement on trust in national government are different between macro and micro levels. Keele (2007) also recognizes this macro-micro gap and suggests two possible reasons accounting for the gap between micro and macro analyses of linkage between trust and civic engagement. First and as a typical explanation of the difference between micro and macro analytical results, micro level data on civic engagement might contain large amount of measurement errors. The survey re-

Figure 3.1: Relationship between Variables from Literature

Macro Level

Civic
Engagement — *Putnam 2000, Keele 2007* → Trust in National
Government
A

?   B   C   *?*

Trust in Local
Government

Micro Level

Civic
Engagement — *No Evidence* — Trust in National
Government
a

Rahn and Rudolph   b   c   *High Covariance*
2005

Trust in Local
Government
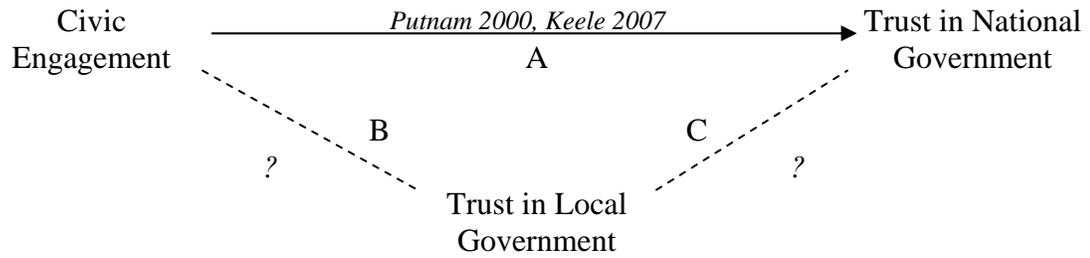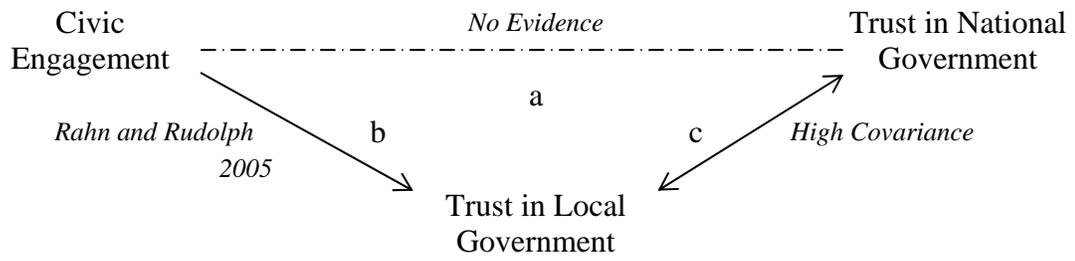
sponses to civic activities such as participating in the school board and going to church sometimes have recall effects. By aggregating a large number of micro measures, most of the measurement errors will cancel out. Thus, only macro-level analyses may allow us to observe any statistical relationship between civic engagement and trust in government. The problem of this explanation is we cannot examine how much measurement errors the micro level data contain and what biases the measurement errors in the micro-level data produce.

Second, and more importantly, civic engagement or social capital as a broader concept is defined as primarily an aggregate concept (Brehm and Rahn 1997). Although the greatest theoretical promise of social capital lies at the individual level (Coleman 1990; Uslaner 2002) and the micro foundations for the relationship between social capital and trust in governments are well established (Brehm and Rahn 1997; Putnam 2000), the concept of civic engagement is an aggregated one. Being involved in civic activities, many of which involve engagement with government or groups that are attempting to influence government, connotes a belief that there is some chance of bringing about social change or control through the established political process.

Thus, civic engagement can be not only a property of individuals but also a property of aggregated communities, states, or nations. The aggregate concept of civic engagement means we can examine two forms of variation in civic engagement. One is the variance across cities. For example, the aggregate amount of civic engagement in Boston in Massachusetts and Roswell in New Mexico are different. The other is the variation over time in civic engagement within a single unit. While macro level analyses can examine the variation over time in civic engagement, the extant micro-level studies of trust in national government do not capture the variation in civic engagement across cities (see Rahn and Rudolph 2005, for an exception).

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The above explanation for a gap between macro and micro results in the relationship between civic engagement and trust in national government brings our attention to another possibility accounting for the gap. The aggregate concept of civic engagement across cities reminds us of municipalities in addition to national government. Furthermore, civic engagement is primarily based on civic activities in local communities. Even though communication techniques have highly developed and are starting to connect people beyond geographical communities, we still live in a geographical community and participate in local activities. Civic engagement means involvement in community activities, and its measurement is mostly based on local activities. In short, civic engagement primarily matters at the local level. The third explanation of the micro-macro gap is that the existing macro-level analyses do not take into consideration trust in subnational government.

Given the local nature of civic engagement, the existing studies on the relationship between civic engagement and trust in national government may be entirely misleading. They do not take into consideration trust in subnational government. By examining the relationship between civic engagement and trust in both levels of government, we can learn the entire picture of the dynamic mechanism shaping trust in government.

The big puzzle throughout this research is why the effects of civic engagement on trust in government are different between macro and micro levels. In the previous section, I point out that the empirical evidence between civic engagement and trust in national government does not take into consideration trust in subnational government. We also know that at a micro level there is a relationship between civic engagement and trust in local government, which is also highly correlated into trust in national government.

It is reasonable to hypothesize that trust in local government may work as a mediator between civic engagement and trust in national government at macro level. In other words, if we take into consideration trust in local government, the effect of civic engage-

ment on trust in national government may not be supported. Thus, my hypothesis is *trust in national government is collectively affected by civic engagement via trust in local government* (Figure 3.2).

Figure 3.2: Hypothesis about Relationship between Variables

Macro Level

Civic Engagement — — — — — — — — — — — — — — — Trust in National Government

Trust in Local Government
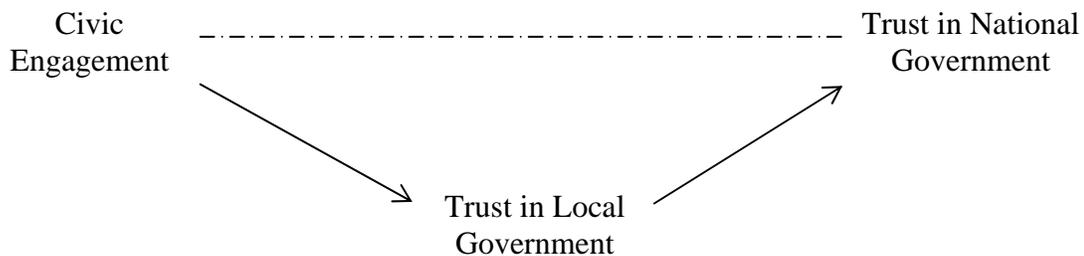
3.5 Methods and Data

3.5.1 Methods

The best way to test the above hypothesis is to directly test the mediating role of trust in local government. To test a mediator (Z) between X and Y, we need to observe the relationship between X and Y without controlling Z and demonstrate the effect of X on Z and Z on Y at the same time (Shrout and Bolger 2002). The past literature, however, does not have any evidence about the relationship between trust in different levels of government, and we cannot specify a causal ordering based on a little evidence. For instance, the causal arrows could run the other way. Instead of directly testing a mediator, a less restrictive set of assumptions about causality in the system is better.

Several ways of dealing with multiple time-series allow us to set each variable possibly to be a dependent and independent variable in the system. Vector autoregression (VAR) is often used with a less restrictive set of assumptions about causality in the system. Vector error correction model (VECM) also allows us to simultaneously examine the multiple time series. The difference between them is how to deal with the stationary of the series. On one hand, theoretically, we can assume most data sets in Political Science such as percentages of presidential approval are stationary because they are bounded between 0 to 100 and cannot be explosive (Williams 1992; Brandt and Freeman 2006). On the other hand, statistically the series bounded in a certain range still can be near-integrated and should be correctly modeled as such (De Boef 2001; De Boef and Keele 2008).

Which method is appropriate also depends on the data set. Because of the data I will describe below, I employ vector autoregression (VAR) for modeling the dynamic system between trust in national and local government and civic engagement. VAR approach accounts for the dynamics of all the variables without making an identification assumption and specifying the dynamic structure before testing for the appropriate lag length using the sample data. In short, VAR is data-based dynamic specification.[8]

3.5.2 *Variables*

The main variables in the VAR model are trust in national government, trust in local government, and civic engagement. Trust in government represents how much people *generally* trust in national and local government respectively. I do not include support for

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[8] VAR models have a few limitations. VAR models are non-causal. The conditional predictions about the effect of an endogenous variables (X) on another variable (Y) requires that X be weakly exogenous or predetermined with respect to Y. Otherwise, the feedback and related dynamics of the two variables cannot be determined in terms of the structural model (Granato and Smith 1994). That is, VAR or Granger causality is not relevant for testing assumptions of weak exogeneity or predeterminedness. In order to deal with this problem, there are two ways: Using Bayesian methods place probabilistic restrictions on the model parameters. Structural VAR models also have an identification of the contemporaneous innovations in a VAR model based on theories. Because of the small samples, I do not use the Bayesian VAR. Also, because this research does not have a specific identification based on theories, I do not use Structural VAR models.

specific policies or politicians in the concept of trust in government. Also, in this paper, I assume people distinguish these two levels of governments and believe this assumption is valid by the measurement using survey questions which refers to trust in federal government in Washington and trust in local government in communities where one lives. Civic engagement represents how much citizen engaged in civic activities in communities.

As control variables which may affect the relationship between civic engagement and trust in government, I include the following variables. *Interpersonal Trust* should be controlled because it is affected by civic engagement at a macro level (Keele 2005*b*, 2007) in addition to at a micro level (Brehm and Rahn 1997). People's evaluation of government performance also should be controlled as one of two major determinants of trust in government (Feldman 1983; Hetherington 2005; Keele 2007). For controlling this, I include *Index of Consumer Sentiment (ICS)* and *Congressional Approval* following Keele (2007) (see also De Boef and Kellstedt 2004, for ICS). Congressional approval is known as being different from general trust in Washington (Hibbing and Theiss-Morse 1995; Uslaner 2001). I assume ICS represents people's evaluation of both government performances because it is hard to measure people's evaluation of local government across municipalities and especially because citizens' economic satisfaction affects trust in local government (Rahn and Rudolph 2005). I also include *Macropartisanship* which is a rate of all partisan identifiers who identify with the Democratic Party to those with the Republican Party over time (MacKuen, Erikson and Stimson 1989). Macropartisanship could affect trust in government and the dynamic relationship between civic engagement and trust in government (Chanley, Rudolph and Rahn 2000).[9] Lastly, the possible effects of political scandals or events should be accounted for.

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[9] Macropartisanship is known as a factor affecting trust in national government based on its ideological feature (Uslaner 2001; Hetherington 2005).

3.5.3 Measurement

The measurement of these variables basically follows Keele (2007) and other scholars (MacKuen, Erikson and Stimson 1989; Durr, Gilmour and Wolbrecht 1997; Stimson 1999; Keele 2005*b*). Except for index of consumer sentiment, there are not uniform indices representing these concepts over time. Political scientists, however, make time-series data using close but not the same survey questions asking about these concepts.

Trust in national and local government is measured by the survey questions asking about people's general trust in the government at each level.[10] CBS News/New York Times Poll, for example, asks people "how much of the time do you think you can trust the government in Washington to do what is right?" for trust in national government and "how much of the time do you trust your local government in the community where you live to do what is right? " for trust in local government. I collected the aggregate answers to these questions from the currently available surveys asked in the US over the last few decades and combined them into one series of each government using Stimson's recursive dyadic dominance algorithm (Stimson 1999). This method is now commonly used in the field of macro politics study (e.g. MacKuen, Erikson and Stimson 1989; Durr, Gilmour and Wolbrecht 1997; Stimson 1999; Kellstedt 2003; Keele 2005*b*, 2007). The series of trust in national government is made of 347 marginals from 22 kinds of questions up to the year 2009 and explains 82% of the variance.[11] The series of trust in local government comes from 78 marginals from 14 kinds of questions from 1972 to 2009.[12] Because of the small sample, I made yearly data for trust in local government, which explains 84% of the

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[10] I describe the details of measurement in Appendix A.

[11] The series I made for trust in national government is basically the same as trust in government in Keele (2007) but is updated to 2008 by adding new survey marginals. The correlation between the previous and new series is 0.94.

[12] The series of trust in local government is very similar to the data used in other's work about trust in the local government (Wolak and Kelleher 2005).

variance. In accordance with the yearly series of trust in local government, the other series and dummy variables are yearly too.[13]

Civic engagement is measured by collecting the amount of citizens' voluntary activities in communities from the available surveys and combining them into one series. I employed the data set from Keele (2005*b*) and updated it to 2008 in the same way as the data of trust in government.[14]

To measure the control variables, interpersonal trust, congressional approval, and macro-partisanship are collected in the same way as the above variables. Interpersonal trust is employed from the data in Keele (2005*b*) and updated to 2008.[15] Congressional approval are employed from the data in Durr, Gilmour and Wolbrecht (1997) and Ramirez (2009) and updated to 2008.[16] Macropartisanship is available from Stimson (MacKuen, Erikson and Stimson 1989), which is widely used in macro politics studies. Index of consumer sentiment is available from Michigan University.

Lastly, to account for the effect of political scandals and events, I use the following dummies[17]: Watergate (1973-74), Abscam (1980), Jim Wright (1989), Keating 5 (1990), impeachment of Bill Clinton (1998), September 11th attacks (2001), and Hurricane Katrina (2005).

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[13] I could also make a series of trust in state government but the available survey marginals are less than 60 and its explanation power of the variance is not high.

[14] The correlation between the previous and new updated series is 0.71. The failure to derive a series perfectly correlated with the previous measure is probably because the additional survey marginals have more information about the relationship among the different indicators to civic engagement and especially because the updated series covers the year 2001 when September 11th attacks occurred.

[15] The correlation between the previous and new quarterly data is 0.81. Because interpersonal trust is highly correlated with civic engagement, I purged interpersonal trust of the civic engagement components by regressing interpersonal trust on civic engagement and using the residuals from that equation (see Erikson, MacKuen and Stimson 2002).

[16] The correlation between the previous and new quarterly data is 0.99. Following Keele (2007), I purged congressional approval of the economic components due to a high correlation with ICS.

[17] I follow a parsimonious model in Keele (2007) and include three more dummies.

3.5.4   Checking the Data Set

When dealing with time series data, it is important to observe and describe the properties of the data and series. The series in the trust in government and civic engagement range from 0 to 100 because they are the percentage of respondents who answer they always/mostly trust their local government for trust in local government, for instance, and the percentage of respondents who answers they participate in civic activities for civic engagement. Figure 3.3 plots the three series of yearly data from 1972 to 2008. The Y axis shows the percentage of respondents though they are combined series through Stimson's algorithm. Two series of trust in government appear to have similar movements. Roughly speaking, they move down in the late 1970s and the early 1990s. The series of civic engagement gradually decreases until 1993 and increases after that. Only by observing the plot, however, we cannot tell how these three variables are related each other and whether they have unit roots.

To test whether the series have stationary or nonstationary, we usually employ common unit root tests such as augmented Dickey-Fuller (ADF) test or Phillips-Perron (PP) test. The results from the unit-root test are in Table 3.1. The test scores suggest that there may be unit roots in the three variables. These tests, however, are based on asymptotic properties while the time points in this yearly data set are only 37. Also, the correlations between y_t and y_{t-1} are less than 0.8 in trust series. From these results, I can deal with these series in two ways. One is that I assume the data are stationary and the other is I assume the data are generated in long-memory processes.

The stationary assumption is based on the fact that these tests tend to place too much probability on the likelihood of an explosive or nonstationary model (Sims and Uhlig 1991; Williams 1992). Furthermore, Williams (1992) argues that if theory or prior information

Figure 3.3: Data Plot: Yearly, 1972-2008

Trust in Government, Yearly
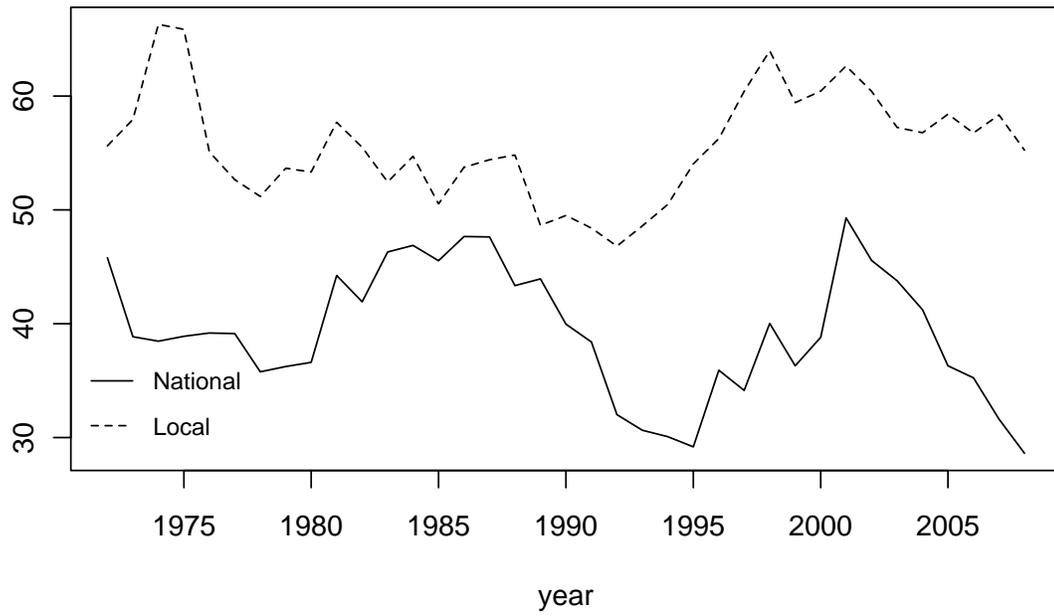

Civic Engagement, Yearly
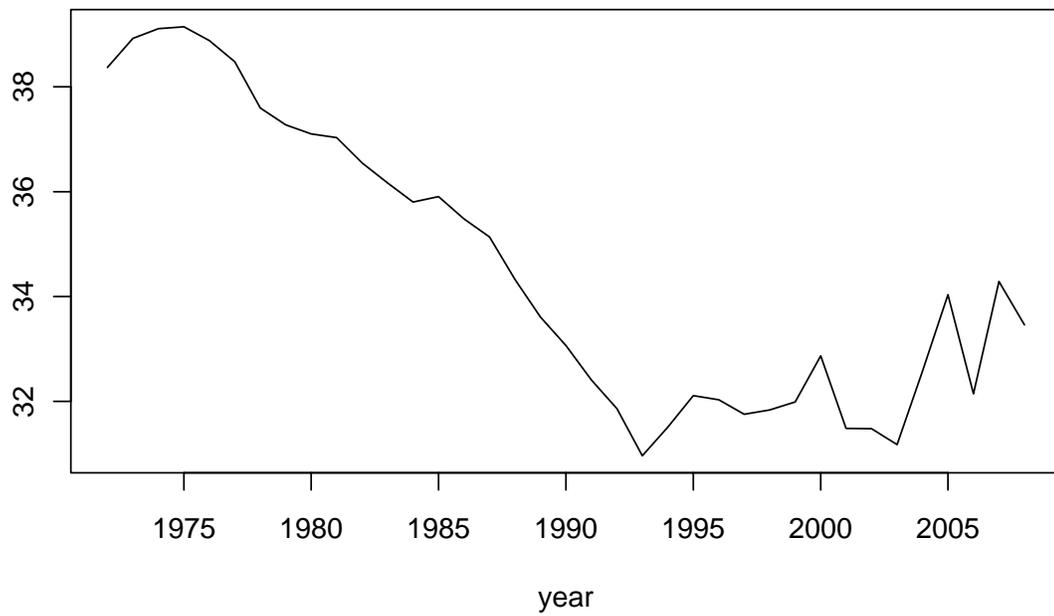
Table 3.1: ADF and PP tests

	ADF	PP
Trust in National Gov.$_{t-1}$	-0.98	-2.27
Trust in Local Gov.$_{t-1}$	-0.20	-2.32
Civic Engagement $_{t-1}$	-1.16	-0.80
Δ Trust in National Gov.	-6.46	-6.39
Δ Trust in Local Gov.	-5.52	-5.34
Δ Civic Engagement	-7.14	-7.96
5% Critical values	-1.95	-3.54

suggests that the data are likely to be stationary, they should be modeled as such. The series used here are bounded with the range of 0 to 100, which means that theoretically they cannot be explosive and that there is not likely to be nonstationary over longer time horizons. Thus, I assume that the data are stationary and posit the VAR model is appropriate to model these series. [18]

Before modeling VAR, I need to choose a lag length for three variables. I use the common lag-length tests such as Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC). Table 3.2 indicates the lag length diagnosis. The test statistics for VARs with 1 to 4 lags describe the improvement in the log-likelihood, penalized for the additional lags. Thus, smaller values of these fit statistics are better. From the diagnosis, I use a lag length of 1 and conduct VAR(1).[19]

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[18] On the other hand, the non-stationary assumption comes from the test statistics. The series do not have permanent memory (unit roots) but are likely to have long-term memories. If I take this assumption, I should put a restriction to model error correction between equations as such (De Boef 2001; De Boef and Keele 2008). For modeling this, however, the data set only has 37 time points. Thus, I conclude a VAR model is better for this project.

[19] One should check serial correlation in the residuals for VAR because the VAR estimation is robust as long as the residuals are uncorrelated over time (not across variables). The appropriate lag length selected based on the above criteria should ensure that a VAR has white noise residuals.

Table 3.2: AIC, BIC, and HQ Values for Lag Length

Lags	AIC	BIC	HQ
1	4.051	4.600	4.233
2	4.187	5.149	4.506
3	4.535	5.909	4.990
4	4.314	6.100	4.906

Although VAR models are atheoretical and do not have an assumption about the correct structure of the underlying relationship that generated the multiple time series, I have a hypothesis about the role of civic engagement. Here again, my hypothesis is trust in national government is collectively affected by civic engagement via trust in local government (Figure 3.2). If this hypothesis is correct, (1) the movement of civic engagement should affect the movements of trust in local government, (2) the movement of civic engagement should not affect the movement of trust in national government controlling for local government, and (3) the movement of trust in local government should affect the movement of trust in national government.

3.6   Results

Table 3.3 shows the fit of the reduced form VAR(1) model for the three endogenous variables in the system. The model has three coefficients for trust in national and local governments and civic engagement in addition to a constant and coefficients for control variables per equation. Each column represents each equation. For example, trust in national government is only affected by its past value, this holds with trust in local government and civic engagement. The three coefficients in the dynamic system, however, do not tell us about the dynamics of the system because those coefficients and the error terms

in the reduced form include the contemporaneous relationships between variables.[20] We

need to decompose the contemporaneous relationships and serial relationships between

variables in the reduced form shown in Table 3.3 in order to interpret the dynamics. Al-

though we can interpret the coefficients of control variables, there is no significant effect

of these control variables in all equations.[21]

To interpret the dynamics from the VAR results, I use impulse response functions

(IRFs). The residuals or shocks to each of the equations in VAR model are white noise.

Thus, a residual is an exogenous shock to the equations in the system. This allows us to

interpret VAR in a way of assessing a marginal effect of changing one of the variables

in the model. Given that the data are yearly and one-lag order, I look at four years of

responses.[22] To see whether the shock is significantly from zero, I add the error bands

at 90% level by using Monte Carlo simulation with the posterior distribution of the VAR

coefficients.[23]

The results are shown in Figure 3.4, where the ordering of the variables is trust in na-

tional government, trust in local government, and civic engagement. The IRFs depend on

the ordering of the variables because of the sequence nature of Cholesky decomposition.

In this IRF, the shocks from the preceding variables to the other variables in the order of

variables are initially zero (in the right-off-diagonal). To make it easy to observe them, I

add another ordering shown in Figure 3.5 so that we can focus only on the diagonal and

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[20] The reduced from VAR(1) for two variables is written as $y_t = \Pi_{11}y_{t-1} + \Pi_{12}x_{t-1} + \mu_{1t}$ and $x_t = \Pi_{21}y_{t-1} + \Pi_{22}x_{t-1} + \mu_{2t}$. The primitive or structural form VAR(1) is written as $y_t = \alpha x_t + \delta_{11}y_{t-1} + \delta_{12}x_{t-1} + \varepsilon_{1t}$ and $x_t = \theta y_t + \delta_{21}y_{t-1} + \delta_{22}x_{t-1} + \varepsilon_{2t}$. We cannot identify α and δ from the reduced VAR coefficients such as $\Pi_{12} = \frac{\alpha\delta_{22}+\delta_{12}}{1-\alpha\theta}$ due to a less number of parameters.

[21] To confirm correctly modeling VAR above, I conduct VAR diagnosis. The eigenvalues from each equation have modulus less than zero, which means each variable is stationary, $I(0)$. Portmanteau test for serial correlation indicates there is no serial correlation. Also, autoregressive conditional heteroskedasticity test shows residuals from each equation and VAR are all homoskedastic.

[22] The time horizon is said to be preferably 1.5 or 2 times of the lag number (Pfaff 2006).

[23] I used R package MSBVAR to estimate the error bands. The error bands are based on percentiles with eigendecomposition for each response equation. The MC error bands are better than other intervals like bootstrap method which often fails to show confident intervals (Brandt and Freeman 2006).

Table 3.3: VAR(1) Estimates of Trust in National and Local Governments and Civic Engagement

	VAR(1)		
	National	Local	C.E.
Trust in National Gov. $_{t-1}$	0.667*	-0.180	0.008
	(0.150)	(0.144)	(0.036)
Trust in Local Gov. $_{t-1}$	0.041	0.612*	0.010
	(0.161)	(0.156)	(0.039)
Civic Engagement $_{t-1}$	1.170	0.187	0.801*
	(0.575)	(0.556)	(0.140)
(Exogenous Variables $_t$)			
Interpersonal Trust	-0.079	0.179	0.019
	(0.244)	(0.236)	(0.060)
ICS	0.087	0.038	0.013
	(0.064)	(0.062)	(0.016)
Macropartisanship	-0.522	-0.171	0.112
	(0.412)	(0.400)	(0.101)
Watergate (1973-74)	-3.068	6.821*	0.960
	(2.582)	(2.496)	(0.629)
ABSCAM (1980)	0.902	0.650	0.387
	(3.401)	(3.288)	(0.829)
Jim Wright (1989)	0.480	-5.912	-0.309
	(3.272)	(3.162)	(0.797)
Keating 5 (1990)	-2.034	-0.671	-0.038
	(3.337)	(3.226)	(0.813)
Impeachment (1998)	5.816	4.109	-0.444
	(3.378)	(3.265)	(0.823)
September 11th (2001)	11.747*	2.501	-1.507
	(3.662)	(3.540)	(0.892)
Katrina (2005)	-3.326	2.626	1.540
	(3.183)	(3.077)	(0.776)
Constant	-8.734	28.054	-1.525
	(14.525)	(14.039)	(3.539)
	Error Covariance		
	National	Local	CE
Trust in National Gov.	5.669		
Trust in Local Gov.	2.500	5.300	
Civic Engagement	0.210	0.307	0.336

standard errors in parentheses. * $p < .05$

left-off-diagonal results.[24] The values of Y axis are the responses of trust in government to shocks to its values with approximately 1 standard deviation of the trust in national government equation residuals in the case of the top left plot in Figure 3.4. Both Figure 3.4 and 3.5 indicate the response of the variables to change in its values are significant over years and decay slowly as shown in the error covariance in VAR (Table 3.3).

Figure 3.4: Impulse Responses for the Reduced Form VAR with 90% Monte Carlo Error Bands

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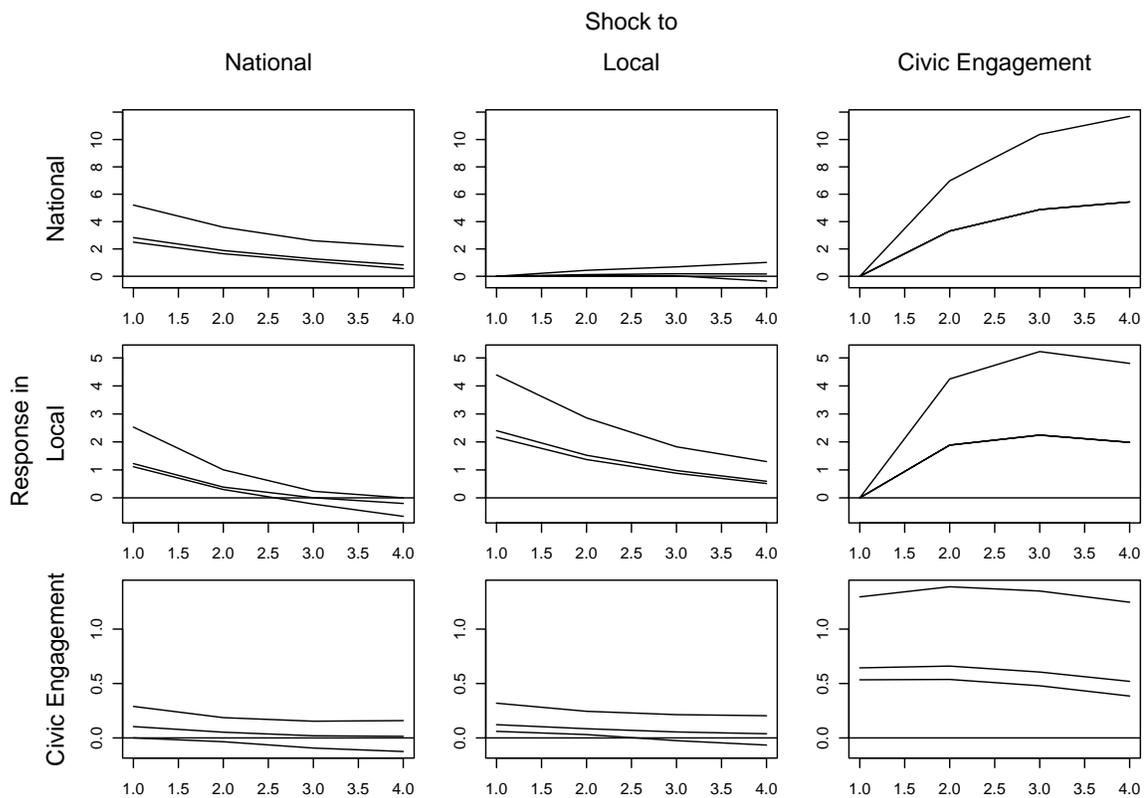
[24] Because the choice of the ordering in IRF is not derived from political theory, we actually need to examine the all possible orderings of the variables. However, we can expect the results are not very different because of the large share of the diagonal values in the matrices.

Figure 3.5: Impulse Responses for the Reduced Form VAR with 90% Monte Carlo Error Bands
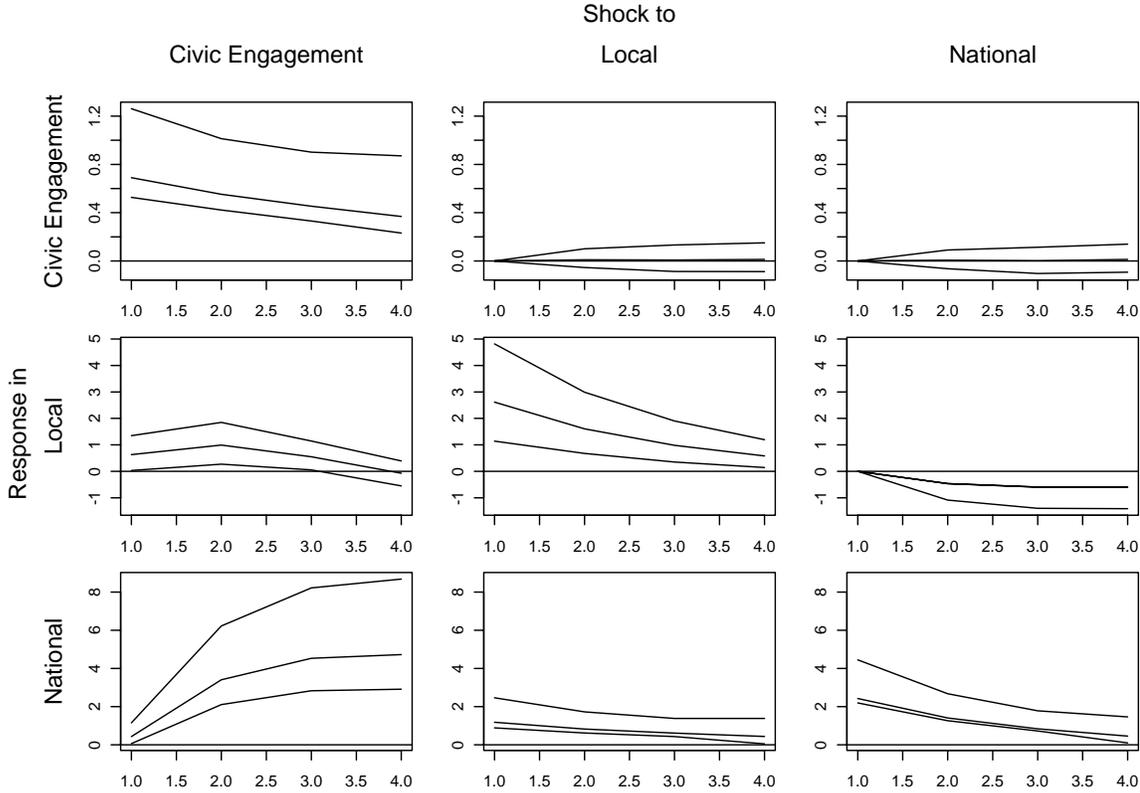
In accordance with my hypothesis, I have three expectations. First, I expected the movement of civic engagement affects the movements of trust in local government. This is supported. We can see the responses of civic engagement to shocks to trust in local government are significant for the first few years (the bottom in the second column of Figure 3.4). Second, I expected that the movement of civic engagement does not affect movement of trust in national government. This is supported too. The responses of civic engagement to shocks to trust in national government are not significant (the bottom in the first column of Figure 3.4). Conversely, we can see the responses of trust in national government to shock to civic engagement are significant after the second year (the bottom in the first column of Figure 3.5). Third, I expected the movement of trust in local government affects the movement of trust in national government. This is supported (the middle in the first column of Figure 3.4), but we can also see the responses of trust in national government to shocks to trust in local government are significant for three years (the bottom in the second column of Figure 3.5). There is a reciprocal relationship between trust in local and national governments.

The results from IRFs imply the following relationship: (1) the movement of civic engagement drives the movement of trust in local government. (2) It also responds to the movement of trust in national government. (3) The movements of trust in national and local governments are reciprocal. These results can be illustrated in Figure 3.6.

3.7 Discussions

The initial motivation of this research is to explain a gap between macro and micro analyses about a relationship between civic engagement and trust in government. The puzzle is why the effects of civic engagement on trust in government are different between micro and macro analyses. My approach to solving this puzzle is to pay attention to the role

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Figure 3.6: Results about Relationship between Variables

VAR

Civic Engagement ← Trust in National Government

Civic Engagement → Trust in Local Government

Trust in National Government → Trust in Local Government

Trust in Local Government
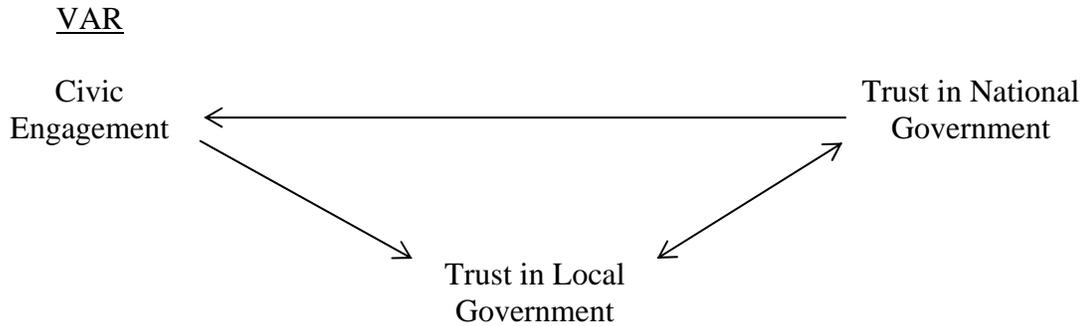
of trust in local government. By taking into consideration of the trust in local government, my hypothesis is that civic engagement collectively affects trust in national government via trust in local government. To demonstrate this hypothesis, I need to discover a causal relationship from civic engagement to trust in local government and from trust in local government to trust in national government. The hypothesis is partly supported in the portion of the effect of civic engagement on trust in local government. Trust in local government has a tighter link from civic engagement than trust in national government does. VAR/IRF results support this tighter relationship between trust in local government and civic engagement.

These results bring us further questions. First, the extant literature focuses only on trust in national government and report the causal arrow from civic engagement to trust in national government at a macro level (Putnam 2000; Keele 2007). This relationship is not necessarily supported when taking into consideration trust in local government. One of the results from the VAR model, the change in civic engagement responds to the movement of trust in national government. As one of possible explanations for this reverse relationship from trust in national government to civic engagement, individual citizens' perception of reliability or stability in national politics might affect the amount of citizens' activities in

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local communities. We can test this hypothesis using cross sectional data at individual levels.

Second, given the tight reciprocal relationship between trust in national and local governments at a macro level in addition to a micro level reported in Social Capital Benchmark survey in 2000, the remaining question is whether people really distinguish between these two kinds of trust. To the question whether trust in local government is just a reflect of trust in national government, I clearly answer no because the same attitude toward all levels of government does not necessarily mean the same mechanism shaping trust in each government and because this paper finds different mechanisms shaping trust in local and national governments. We, however, do not know whether individual citizens really distinctly recognize the different levels of government and develop attitude toward each government. The literature about local politics argues that people recognize the difference among local, state, and national government performance only when the issues are salient (Areceneaux 2006). This suggests that people may not recognize the policy outcome in each level of government and that one political condition across government levels such as economic satisfaction may affect trust in all levels of government. To answer whether people recognize trust in each level of government, now we need to investigate the trust in local and national governments at individual level by conducting a multivariate regression model with cross sectional data.

I also need to add another question to be considered when conducting the micro-level analyses. I did not answer to the plausible question whether there is a single nationwide trust-in-local government attitude like I treated aggregated trust in local government in this macro analysis. The nation-widely aggregated trust-in-local-government index may ignore an important difference across each community. To consider this question, I need

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to use data with individual responses nested in local communities and analyze them using multilevel modeling.

This chapter discovered (1) the effect of civic engagement on trust in local government is stronger than that on trust in national government and (2) there is a reciprocal relationship between the movements of trust in local and national governments. To the remaining questions as noted above, I will answer in the next chapter conducting the micro-level analysis.

4. CROSS-SECTIONAL RELATIONSHIP BETWEEN TRUST IN NATIONAL AND LOCAL GOVERNMENTS AND CIVIC ENGAGEMENT

4.1 Overview

This chapter tries to explain the relationship between civic engagement and political trust at individual and contextual levels. The formal model in Chapter 2 shows that individual's civic engagement does not affect individual's trust in government like the extant literature could not find the empirical evidence between them. The time-series analysis in the previous chapter shows 1) that civic engagement affects local political trust but does not affect national political trust and 2) that the movements of trust in local and national governments are reciprocal. The remaining question is that how we can combine the different results between individual and aggregate levels into one systematic explanation. In this chapter, I will explain the relationship between civic engagement and trust in government by introducing the community-level civic engagement and also try to explain the reciprocal relationships between local and national political trust varied by community.

4.2 Introduction

This chapter continues to solve the puzzle that the effect of civic engagement on political trust works differently between at an individual level and at an aggregate level and focuses on a cross-sectional analysis. Chapter Two illustrates how individual civic engagement works and shows that civic engagement does not affect political trust. Chapter Three deals with aggregate-level political trust and finds that aggregate-level civic engagement affects trust in local government but does not affect trust in national government and that the movements of trust in local and national governments are reciprocal. In this chapter, I examine the effect of the community-level civic engagement on trust in local and national

governments respectively and try to explain the large covariance of individual citizens' trust in local and national governments by the community-level variables. The unit of analysis is at an individual level and at the community level.

The attempt consists of two steps. First in order to explain the difference above, I introduce the community-level civic engagement and examine its effect on trust in both governments using a multilevel model. For this first purpose, I conduct a simple multivariate regression, which has multiple dependent variables and the same set of independent variables, with the community-level variables for explaining both local and national political trust at the individual level.

Second, I also focus on the correlated errors across the multivariate regressions and try to explain the covariance by the community level variables of the hierarchical-structured data. A multivariate regression model at the first step simultaneously estimates the coefficients for the predictors on each of the dependent variables and the covariance between the unobserved errors in the model. These correlations may also vary as a function of the hierarchical structure of the data. That is, they may be systematically higher in some contexts than in others. To model this expectation, I need a model that treats the correlated errors as an indicator of the perceived similarity of the survey questions. This project will model the correlated errors as a function of variables that are measured at the level of the context.

Next I will describe how the past literature fails to examine the relationship between trust in national and subnational governments and then what we can expect by introducing the community-level variables.

4.3   Literature

4.3.1   Relationship between Trust in Local and National Governments

The study of political trust has kept focusing on trust in the federal government. The National Election Studies battery on political trust begins with the phrasing: "People have different ideas about the government in Washington. These ideas don't refer to democrats or republicans in particular, but just to government in general. We want to see how you feel about these ideas." Trust in government, then, is meant to be about people's trust in the government in general and most of the work on the topic moves from this starting point.

In the American system of government, however, there is not *a* government. We live in a multi-layered federal system with important differences between the governmental levels. Citizens may develop different attitudes about the different levels of government they interact with. But these distinctions are glossed over in the extant literature, with a few notable exceptions. The focus of the vast majority of the work is on individuals' perceptions of the national government and treat this as synonymous with the notion of *the* government. This is evident in that NES phrasing above. At one point, the questionnaire is obviously referring to the national government (the government in Washington). In the very next sentence, however, the wording shifts to frame trust in the national government as trust in the government in general.

I point out two problems that the previous literature failed to appreciate this difference between trust in subnational and national governments. First, the previous literature pays little attention to the interaction between trust in subnational and national governments (see Jennings 1998; Uslaner 2001, for exceptions). A wide range of literature continues to discuss the mechanisms shaping trust in the federal government (Hetherington 1998, 2005; Hetherington and Rudolph 2008; Brehm and Rahn 1997; Keele 2005*a*, 2007), and

some works examine the determinants of trust in local governments (Tyler and Degoey 1995; Rahn and Rudolph 2005). While these two streams have developed over the past decade, they have been independently discussed.

Most literature on trust in the federal government ignores the relationship between local and national political trust and does not control the effect of trust in subnational governments on trust in the federal government. On the other hand, Rahn and Rudolph (2005) examine political trust in local governments while controlling trust in national government to ensure only modeling the local dimension of political trust. Controlling the other governmental trust does not only mean to see the genuine effects of the determinants of trust in the government but also means to take into consideration the interaction between local and national political trusts. To examine the difference between both political trusts, thus, we need model simultaneous equations.

Second, the literature paying attention to the comparison of trust in local and national government has failed to demonstrate its difference or similarity mainly because of the dearth of the appropriate data. Among the few works that compare local and national political trust, Jennings (1998) suggests that local political trust moves independently from national political trust over time. The movements may not be exactly the same, but trust in local governments and trust in the federal government are highly correlated both at an individual level and aggregate level over time. Its causal relationship and how one affects another, however, have not been demonstrated. That is, the mechanism of the relationship between local and national governments is unclear despite their respective importance.[1]

The distinction between local and national political trust when analyzing either of them matters because local and national political trust are "distinct attitudes and do not share

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[1] In Chapter Three, I demonstrate the relationship between local and national governments is reciprocal over time.

an identical set of determinants at the individual or contextual level" (Rahn and Rudolph 2005, 547). For example, the relationship between civic engagement and trust is universal. It spans across all levels of government. Focusing on the structure of the layered government system, however, does civic engagement work in the same way in local and national politics? To examine how civic engagement works, we should take into consideration the relationship between trust in local and national governments. Because civic engagement stems from local activities, the way it works on trust in governments should be different between local and national governments.

In the previous chapter, I argue that, at an aggregate level, civic engagement works differently in local and national politics when taking into consideration the relationship between multiple governments and discuss the possibility of the different mechanisms shaping trust in subnational and national governments. In this chapter, I focus on the variation of civic engagement both at individual and community levels.

By exploring the link between trust in the national government and trust in the lower levels in our federal system, we can learn about citizens' attitudes about government broadly, their ability to make distinctions between the levels of government, and the contextual factors that help or hinder people from being able to see these distinctions. Moreover, to the extent that trust in local government is related to and to the extent that it is independent from trust in national government can help explain the antecedents and consequences of trust in national government.

4.3.2 *Correlations and Distinctions*

Before discussing an analytical framework, I should make sure the difference between local political trust and national political trust because this should be related to why previous literature ignores the difference and interaction between them. To begin with, is

there any difference between local and national political trust at aggregate level? While the determinants of these two types of trust are not identical (Rahn and Rudolph 2005), do people distinguish the trust in national and local government? That is, the question is where the difference to be examined lies between trust in subnational government and trust in the federal government.

Jennings (1998) demonstrates that local political trust moves independently from national political trust using data from the 1960s through the 1990s. Because local governments implement their own programs in everyday politics such as schooling, local taxes, land use, and crimes and because citizen find themselves in relationships with respective government of the multiple government system, he maintains that "most people have the general notion that there are multiple levels and that they perform different functions" (Jennings 1998, 219). That is, Jennings assumes that people differentiate trust in national and local governments to examine the different movements between local and national political trust.

On the other hand, Uslaner (2001) argues that people may lack sufficient information to draw meaningful distinctions between and across governments. He notes that "people either like government-both in Washington and in their states-or they don't. The choice between the nation's capital and the state capital is bogus" (Uslaner 2001, 119). That is, people may not distinguish political trust between governments, and what we measure as trust in governments regardless of government level may reflect a more general trust of both governments.

Figure 4.1 presents the frequency distributions for the both government trust indexes in Social Capital Benchmark Survey (SCBS) data in 2000.[2] The distributions are similar

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[2] Social Capital Benchmark Survey is sponsored by the Saguaro seminar at Harvard University, the Ford Foundation, and 34 local community foundations. The data were collected by telephone interview from July to November 2000.

between both data sets while trust in local government is generally higher than trust in national government. Table 4.1 shows the cross tabulation between local trust and national trust. 67.2 % of the cases are on the diagonal. Though we cannot ignore the fact that 15.4 % of the respondents answer they trust local government most of the time and trust national government some of the time, Spearman's rank correlation ρ, 0.574, means there is a strong association between trust in local and national governments.[3] Both Figure 4.1 and Table 4.1 seem to support the argument that confidence in local government just reflects confidence in national government and vice versa.

Table 4.1: Cross Tabulation between Trust in National and Local Governments

		Local				
		hardly	some	most	always	
National	hardly	1,304	1,233	402	60	2,999
		(1.0)	(0.8)	(0.2)	(-1.0)	
	some	372	6,868	2,963	253	10.456
		(0.8)	(1.0)	(0.4)	(-0.8)	
	most	74	830	4,399	327	5.540
		(0.2)	(0.4)	(1.0)	(-0.2)	
	always	11	59	125	387	582
		(-1.0)	(-0.8)	(-0.2)	(1.0)	
		1,761	8,990	7,499	1,027	19,277

SCBS data, (Spearman's Rank Correlation)

The high covariance between trust in local and national governments among individual respondents suggests that there is really not much difference between trust in local governments and trust in national government. Though Figure 4.1 and Table 4.1 do not allow us to discuss the causality, there is at least a tight relationship between them. Given this high correlation, what remains to be discussed and what this study focuses on is the

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[3] The null hypothesis that ρ is equal to zero is rejected at 1% level.

Figure 4.1: Trust in Government in 2000 (SCBS data)
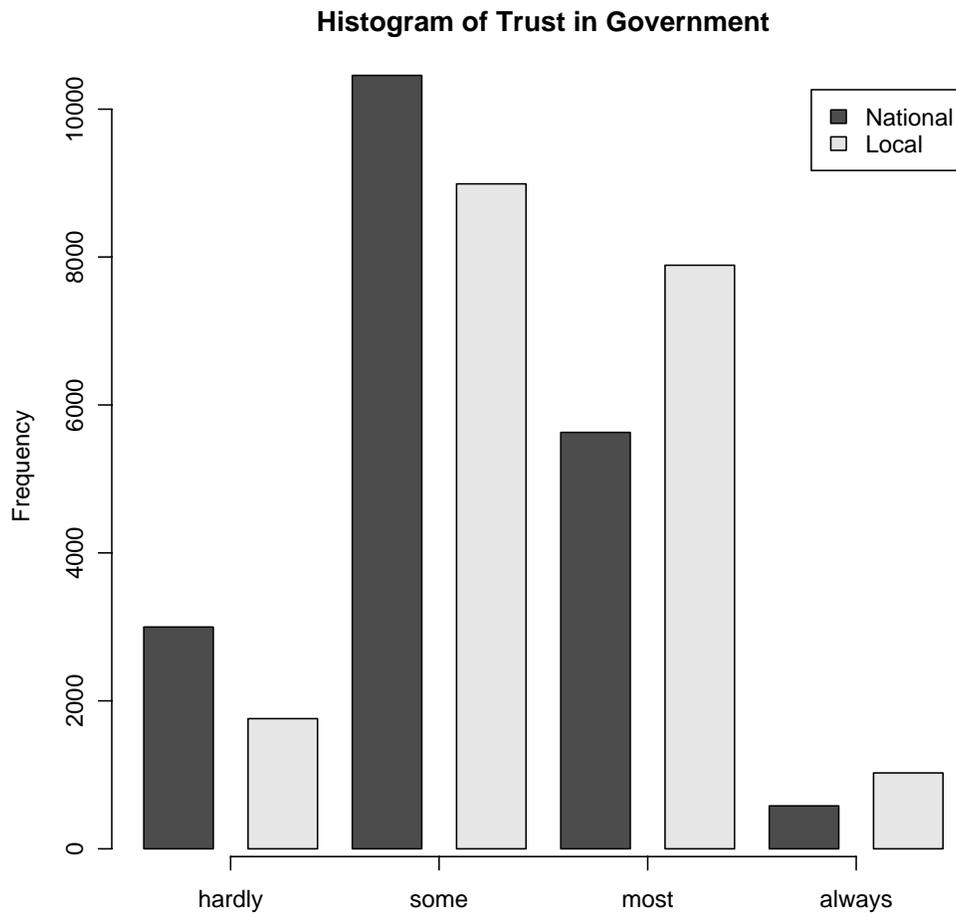
Histogram of Trust in Government

argument about the mechanisms shaping trust in local and national government. The high covariance between local and national political trust among citizens does not mean the similar mechanism among multiple political trusts.

My interpretation of these basic data is that there is both shared and unique variance between national and local trust. Both Uslaner and Jennings are probably correct. The Receive-Accept-Sample model of survey response (Zaller 1992) suggests that when a person is confronted with a survey question, they quickly canvass their memories for relevant considerations and construct a response based on the considerations that happen to be accessible. In this context, then, we would expect that the some of the considerations recalled about trust in each level should be shared. In both cases, the general diffuse, level independent sense of trust should be recalled as part of the considerations. And for both cases, it is likely that some of the considerations will be unique. Some people will be able to differentiate between the levels of government and will draw on different considerations for each of the question.

The interesting question is this: how does this vary across individuals? Do some people see some differences between the levels of government and, if so, what might explain variation in the distinctiveness of people's trust judgments? I think there are two key pieces to this. First, the ability to discern the differences probably varies as a function of the sophistication of the person. Sophistication is well known to change how people perceive survey questions and how they construct their attitudes (Zaller 1992). We expect that people who are more sophisticated are better able to understand the differences between the levels of government and will be more likely to construct independent perceptions than people who are less sophisticated. While this will be important to test, the results are not new. The second predictor of distinctiveness is the more theoretically interesting predictor.

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Civic engagement has a long history of serving as a predictor of political trust. The main determinants of trust in government are civic engagement (Putnam 1994; Brehm and Rahn 1997) and governmental performance (Feldman 1983; Hetherington 1998) as I discussed in the previous chapters.[4] Jennings's implication as to the difference between subnational and national political trust focuses on these two determinants. He implies that the main reasons for most confidence in local government are related to the linkage between citizen and governments, while main reasons for most confidence in national government are related to its performance. "Confidence in the national government is highly contingent on performance," and Jennings continues that support for local government "derives its strength fundamentally from how well they are seen to provide a link between the citizenry and public officials and decision making" (Jennings 1998, 239). According to Jennings, performance works stronger on national political trust while linkage between citizen and government works stronger on local political trust. The linkage is rephrased as civic engagement because civic engagement has a broad definition such as the individual and collective actions designed to get involved in communities, societies, or public.

Civic engagement may do more than just make one more trusting of government. If a person is more involved, he or she may see the differences in the types of government more directly. This type of social connectedness can lead people to see their local government more directly and develop a distinct perception of it separate from their perception of

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[4] Like I discussed in the previous chapters, in an aggregate concept of social capital, Putnam includes social and political participation, social connections, volunteering, and interpersonal trust (Putnam 2000). Keele (2005b) follows Putnam's definition of social capital but separates interpersonal trust from civic engagement which includes political and social participation, commitment, and volunteering. Likewise, Brehm and Rahn (1997) and Rahn and Rudolph (2005) use civic involvement as civic engagement separated from interpersonal trust. They all define interpersonal trust as "generalized trust of other people" (Brehm and Rahn 1997, 1006) and I follow this definition. Among these two components of social capital, I focus on civic engagement instead of interpersonal trust. First, the effect of civic engagement can be different between local and national political trust because civic engagement stems from local activities while interpersonal trust I define here does not specify the working arena. Second, interpersonal trust is a very closer concept to confidence in government. In other words, the extension of interpersonal trust can be trust in either government.

the national government. Thus we can expect civic engagement affects local political more strongly than national political trust like I discussed the relationship between civic engagement and local political trust is tighter than that between civic engagement and national political trust.

Like I illustrated in chapter two, however, individual civic engagement may not affect individual decisions to trust the government. Instead of the individual level effect, living in a community that is more engaged may also produce greater distinctiveness among the residents of community. Even if the individual does not belong to many organizations or have much in the way of social participation, if their community itself is vibrant, than they may develop more distinct perceptions than a similarly isolated person who lives in a less engaging community. Thus, we can expect that community-level civic engagement affect both local and national political trust.

4.4 Data and Model

4.4.1 Data

Given the way I conceptualize the problem, I have very particular data needs. First, I need a survey that contains measures of an individual's trust in both national and local government. These are surprisingly rare. Second, because I have hypotheses about the ways in which community level factors influence individuals, I need to have these individuals clustered within a large number of identifiable communities. More specifically, I need a large number of people surveyed from each of these numerous communities. Both the number of communities and the number of individuals within each of the communities are important for having the statistical leverage needed to test for the hypothesized effects.

One such dataset exists: the Social Capital Benchmark Survey (SCBS). This data set includes trust in both governments as dependent variables, civic involvement as the key

independent variable, and numerous variables which I can employ as control variables. Furthermore, the SCBS project includes survey data from 40 subnational representative samples. The unique design of this survey allows us to take into consideration the variance of community level. Since I examine that individual trust in local governments across communities, it is better to estimate the model with using a multilevel analysis.

Dependent Variables: I use trust in local government and trust in national government as dependent variables. The concept of trust in government in this paper is public general trust in the whole image of government. The question, "How much of the time do you think you can trust the local (or national) government to do what is right? Would you say just about always, most of the time, some of the time, or hardly ever?" is suitable to the concept. This question is almost the same as the corresponding question in General Social Survey (GSS) data, which is broadly employed to examine trust in governments. Moreover, these are the same dependent variables analyzed by Rahn and Rudolph (2005).

Independent Variable: The independent variable is civic engagement, one of two aspects of social capital. Civic engagement reflects strong networks in communities such as membership of community groups. Following Rahn and Rudolph (2005), I utilize the civic involvement in community organizations as the resource of civic engagement. The SCBS data include a set to indicators for membership in civic organizations such as church, sports club, PTA and so on, and I simply count the numbers of group involvement per individual respondent (see Appendix B). The measurement of civic engagement varies across survey organizations but the question set of SCBS data is similar to that in GSS data (Brehm and Rahn 1997). The relationship between civic engagement and trust in government varies not only among individual citizen but also among cities regardless of government level because average city-level civic engagement is not constant. The resources of civic engagement, time and money (Putnam 2000), depend on cities. Residents in suburban areas,

for example, have less time to spend on local activities due to the commuting time, and people in larger cities are much less likely to participate in politics (Oliver 2000). For the city level measure of civic engagement, I aggregate these individual level measures to form city-averages for civic engagement

Control Variables: The model includes several controls, at both the individual and community level. The most important of these is a measure of interpersonal trust.[5] Because civic engagement affects interpersonal trust (Brehm and Rahn 1997; Claibourn and Martin 2000; Keele 2005*b*), it may mediate the effect of civic engagements to trust in government. Without controlling for interpersonal trust, we can not precisely estimate the effect of civic engagement on political trust. I also include attitudinal measures of local political efficacy, perceived quality of life in one's community, personal economic perceptions, ideology, and policy distance from the average in a community. We need to control these effects because these factors are expected to affect trust in government (Hetherington 2005).[6] Finally, I control for education level, age, sex, income, home-ownership, length of residence, race, and media exposure. To compare between trust in local and national gov-

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[5] Previous literature suggests a reciprocal relationship between civic engagement, interpersonal trust, and political trust. There is neither a high correlation nor an orthogonal relationship between civic engagement and interpersonal trust (Keele 2005*b*) but a certain degree of reciprocal relationship between them (Brehm and Rahn 1997). The literature also argues that the effect of civic engagement on interpersonal trust is stronger than the effect of interpersonal trust on civic engagement (Brehm and Rahn 1997; Claibourn and Martin 2000; Keele 2005*b*). Paying attention only to the stronger effects among them and considering the concept about the relationship between social capital and political trust (Putnam 2000), their causality can be stated as follows: Civic engagement causes interpersonal trust, which results in political trust. To put it concretely, people who respond higher frequency to membership of community groups are likely to trust in government because mutual involvement within community breeds corporation and coordination, which leads to trust in society or institution (Putnam 1994; Brehm and Rahn 1997).Thus, even when civic engagement is the theoretic interest, interpersonal trust needs to be included in the analysis as a control variable. Otherwise, I cannot deny the possibility that the impact of civic engagement on trust in government is a spurious effect. Knack (2002) mentions that interpersonal trust have important effects on political trust, while civic engagement only indirect effects through interpersonal trust. I need to examine this possibility with controlling interpersonal trust.

[6] I describe the details of measurement in Appendix B.

ernments, all independent variables and control variables other than trust in government are common to the two models.

4.4.2 *Models*

The first concern is the effect of civic engagement on trust in the local and national governments. As discussed above, I expect that individual's civic engagement affects local political trust more than national political trust, if any. According to the results in Chapter Two, civic engagement does not affect political trust as an individual behavior. Thus I also expect that individual's civic engagement does not affect both local and national political trust. At the community level, however, I expect community-level civic engagement to affect individual's trust in the local government and also expect its weak effect on individual's trust in the national government. In short, in both local and national political trust models, I expect that civic engagement may not affect political trust at the individual level but affects political trust at the community level.

The second concern is the similarity between a person's trust in the local and national governments. This type of similarity can stem from two processes. First, if the trust judgments stem from the independent variables, then there will be similarity between the judgments. That is, if people who are more educated evaluate all levels of government more favorably, then we should expect a positive correlation between trust in the levels of government even if they are perfectly distinguished in citizens' minds. This is not the similarity I have in mind. The second source of similarity is the left over variation induced by common error variance. If there is a measurement factor that ties these two trust judgments together, then we should expect to see a correlation in the unobserved portions of the equations predicting trust judgments. These correlated errors are due to

common omitted factors that affect all of the dependent variables, and these in the trust assessments will be my measure of the shared variance.

To model the above expectation, I will estimate a multilevel-multivariate-regression model which also specifies the error covariance to vary as a function of second-level Z variables in a two-step simple regression approach. First, I use a single multivariate regression for each trust. Multivariate regression models have multiple dependent variables and the same set of independent variables predicting the models. These models simultaneously estimate the coefficients of the predictors on each of the dependent variables and the covariance between the unobserved errors in the model. Second, after capturing the error correlation, I then treat that correlation as a known quantity and use it as the dependent variable in a regression model.[7] My argument is that these correlated errors can serve as an indicator of the perceived similarity of the trust questions. Ultimately, this is my dependent variable of interest.

The model can be estimated with a simple model using a two-step simple regression approach. First I use the simpler, tractable approach of estimating a single multivariate regression for each community and capturing the error covariance for that community. The first set of equations present the basic model predicting trust in local government:

$$LocTrust_{ij} = \beta_{0j} + \beta_{1j}X_{kij} + \varepsilon_{1ij} \tag{4.1}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}Z_j + \mu_{0j} \tag{4.2}$$

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[7] The more sophisticated model will be needed for future research when we want to explain relationships between variables which are correlated *and* differentiated and when we want to explain the correlation by its higher-level context. This research, however, just uses a single multivariate regression model.

where the i subscript indexes the observations by the i different observations, the j subscripts indexes the observations by the community in which the individual is located, X_{kij} indicates the matrix of K individual level independent variables, and Z_j are the community level independent variables.

Similarly, the following set of equations presents the basic model for the national trust model:

$$NatTrust_{ij} \quad = \quad \beta_{0j} + \beta_{1j}X_{kij} + \varepsilon_{2ij} \tag{4.3}$$

$$\beta_{0j} \quad = \quad \gamma_{00} + \gamma_{01}Z_j + \mu_{0j} \tag{4.4}$$

The remaining notations are the ε terms. These are the individual level unobserved errors. The multivariate regression model estimates the correlation between these two terms. My hypothesis is that these correlations vary as a function of the community level variables. I then treat that correlation as a known quantity and use it as the dependent variable in regression models.[8] Specifically I estimate the following equation:

$$\rho(\varepsilon_{1ij}, \varepsilon_{2ij})_j \quad = \quad \kappa_0 + \kappa_1 CE_j + \zeta_j \tag{4.5}$$

These κ terms indicate how the shared covariance of the dependent variables varies as a function of the community level civic engagement.

[8] This method is suboptimum, though there are examples of treating hierarchical data in this fashion (Gelman and King 1993).

4.5 Results

My hypotheses center on the effect of civic engagement at the individual and community level and the conditional nature of the correlations between the errors in the multivariate regression model predicting trust in two levels of government. Before I present those results, it is important to begin by presenting the results from a single multivariate regression pooling all of the communities in the data. I need to be certain that the results from the pooled data conform to my expectations. Additionally, these results will offer a baseline of the correlated errors. If this correlation is low, then there is little similarity in people's assessments of trust in the local government and the federal government once I control for the systematic variation in the dependent variables. If this is true, then there the conditional nature of these correlations is a moot point.

4.5.1 Effect of Civic Engagement

Table 4.2 presents the results from this multivariate regression. The first column reports the coefficients from the trust in national government model, the second the local government model, and the third is the F-statistic for the test of the equality of these coefficients across the two equations.

The effects of civic engagement at the individual level are not significant in both trust in local and national governments. These results conform to the extant literature (Newton 2000; Rahn and Rudolph 2005) and the argument I did in chapter two. Of central interest in my analysis is the community-level civic engagement. This has strong effects on trust in local and national government, but the directions are negative. Citizens who live in a community with large amounts of voluntary activities do not trust governments more than those who live in an inactive community.

Table 4.2: Effect of Civic Engagement on Trust in National and Local Governments

Variable	National trust		Local trust		Equality
	coef	(se)	coef	(se)	F-stat
Individual-Level					
Interpersonal Trust	0.11	(0.01)*	0.10	(0.01)*	3.62
Local Political Efficacy	0.06	(0.01)*	0.09	(0.01)*	10.19*
Quality in Life in Community	0.10	(0.01)*	0.16	(0.01)*	41.56*
Personal Economic Perception	0.10	(0.01)*	0.10	(0.01)*	0.01
Civic Engagement	-0.001	(0.003)	0.0002	(0.003)	0.33
Ideology (Liberal)	0.02	(0.01)*	-0.01	(0.01)	25.95*
Hispanic	0.23	(0.03)*	0.16	(0.03)*	5.81*
Black	0.01	(0.02)	-0.09	(0.02)*	21.46*
Asian	0.19	(0.05)*	0.08	(0.04)*	7.57*
Native American	-0.05	(0.08)	-0.13	(0.08)	1.49
Other Racial Category	-0.11	(0.05)*	-0.09	(0.05)	0.31
Education	0.01	(0.01)*	0.01	(0.01)	2.53
Male	0.01	(0.02)	-0.003	(0.02)	0.46
Age	0.001	(0.01)	0.001	(0.001)	0.01
Income	-0.01	(0.01)*	-0.01	(0.01)	0.07
Read Newspaper	0.01	(0.003)*	0.01	(0.003)*	0.39
Watch TV	0.01	(0.003)*	0.004	(0.003)	1.12
Years in Community	-0.01	(0.01)*	-0.01	(0.01)	0.38
Own Home	-0.02	(0.02)	-0.06	(0.02)*	4.36*
Policy Distance	-0.05	(0.01)*	-0.04	(0.01)*	1.03
City-Level					
Nonpartisan Elections	-0.02	(0.02)*	-0.03	(0.02)	0.08
Black Mayor	0.01	(0.02)*	0.03	(0.02)	0.79
Mixed Representation System	-0.01	(0.02)*	0.03	(0.02)	3.98*
At-Large Representation System	-0.01	(0.03)	0.02	(0.03)	1.98
Racial Fractionalization	-0.02	(0.13)*	0.03	(0.13)	0.16
Ideological Polarization	-0.09	(0.14)*	-0.20	(0.14)	0.71
Income Inequality	-0.24	(0.38)	-1.44	(0.38)*	11.62*
Mayoral Government	1.82	(0.28)*	2.47	(0.28)*	6.55*
Manager Government	1.78	(0.27)*	2.48	(0.27)*	7.59*
Commission Government	1.94	(0.27)*	2.69	(0.27)*	4.64*
Percent Hispanic	0.10	(0.16)	0.41	(0.15)*	4.64*
Percent Anglo	-0.13	(0.13)	0.34	(0.13)*	14.87*
Percent Native American	0.19	(0.83)	-1.71	(0.82)*	6.27*
Violent Crime Rate	0.01	(0.003)*	0.01	(0.003)*	5.37*
Population (logged)	-0.004	(0.01)	-0.04	(0.01)*	9.12*
City-Level Civic Engagement	-0.09	(0.03)*	-0.10	(0.03)*	0.00
R-square	0.09		0.14		
Correlation of residuals:	0.57				
N	8030		8030		

The other results in the table look similar to the standard models predicting trust in government. Interpersonal trust, efficacy, perceived quality of the community, some racial, and some city level factors all predict trust in both levels of government. There are some differences in the explanations across the levels as well. Owning a home, efficacy, and perceptions of quality of life all have stronger effects on trust in local government than trust in the federal government.

4.5.2   *Explaining the Correlated Errors*

My second concern in the table is the correlation of the residuals. The errors in the two models correlate at 0.57, and this coefficient is highly significant. There is a tremendous amount of shared variance between the equations, even after accounting for the systematic forces driving the dependent variables. Admittedly, the R-square is low for both equations, but I have included a large number of parameters and almost all of the standard predictors in the extant literature. Even while recognizing this shortcoming, there is a lot of shared variance between the questions. It is reasonable, then, to ask if this shared variance varies systematically.

To test that, I run the same basic model (omitting the community level factors obviously) separately for each of the communities in the data set. I capture the correlation in the residuals for each of the communities and will, in a moment, attempt to explain the variation in these correlations. Before I explain them, Figure 4.2 presents a histogram of these correlations. They have a mean of 0.56 and a standard deviation of 0.12. They range from 0.23 (Mesa, AZ) to 0.87 (Parma, OH). My read from this figure is that there is some variation. The question is, can we explain it?

My hypothesis is that this variation across communities is explained by the level of civic engagement in the community. In a more active community, people should be able

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Figure 4.2: The Variation in the Correlations of the Residuals for Each Community
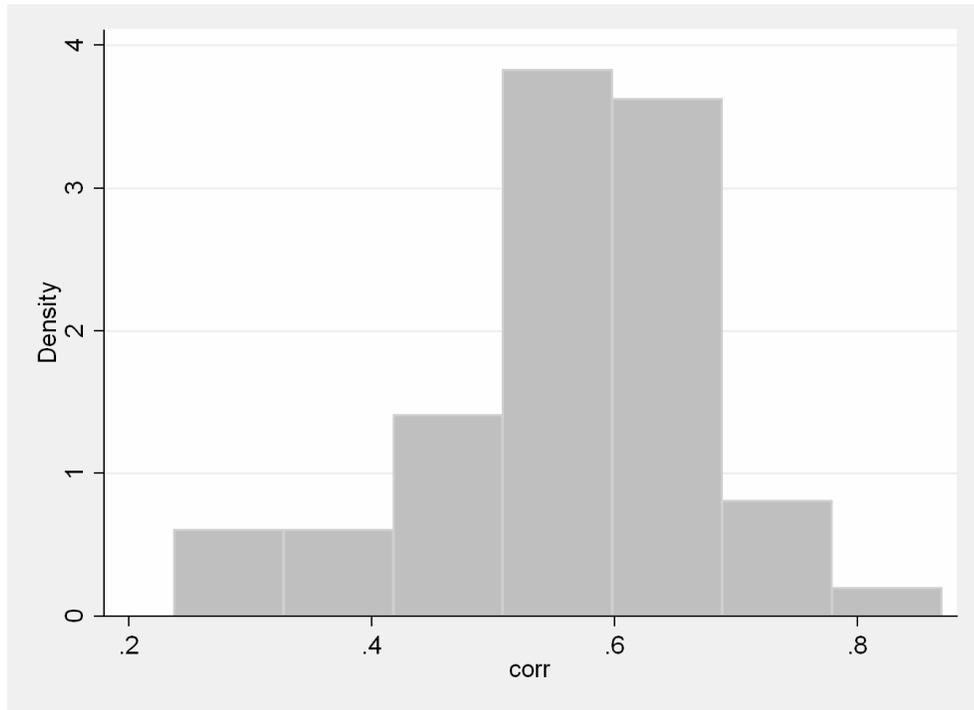

to discern the differences between the levels of government more concretely. The simplest test of this is to regress the level of civic engagement in the community on this correlation. In this simple bivariate model, the results are unambiguous. There is no relationship. The coefficient for civic engagement is 0.01, with a standard error of 0.04. In this model, the adjusted R-square is negative. There is no link between the community level of civic engagement and the strength of the connection between trust in the local and federal governments amongst its citizens.

Perhaps the relationship exists only at the individual level. To test for this, I ran the same analyses, but instead of dividing the sample by community, I divided the sample by the level of civic engagement of the individual. The measure of civic engagement is an additive scale indicating the number of groups the individual belongs to. The number

ranges from zero to 19. Because there are very few people who are in more than 10 groups, I collapse all of those into a single category. I am left with 11 different possible levels of civic engagement. I ran the multivariate regressions on these 11 sub-samples and collected the correlations. These correlations are plotted in Figure 4.3. There is clearly no relationship.

Figure 4.3: Relationship between Civic Engagement and Trust in National and Local Governments
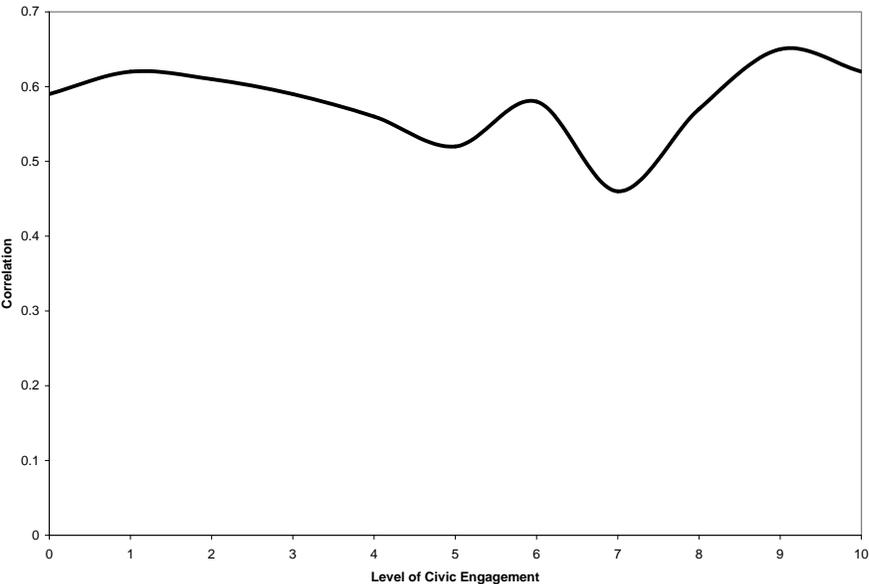
4.6 Discussions

My expectations were only partially met, and the interesting expectations were wrong. First, the simple multivariate regressions tell us that the community-level civic engagement certainly but negatively affects individual citizen's trust in local and national governments while individual citizen's civic engagement does not affect both. The relationships between civic engagement and trust in local and national trust are essentially null at the

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individual level like the extant literature could not find the empirical evidence of them (Rahn and Rudolph 2005). What we found instead is that the community-level civic engagement negatively affects individual citizen's trust in local and national governments. Civic engagement, thus, works collectively either at the community level or over time as the previous chapter demonstrated.

Second, I expected that the degree of similarity between people's trust in the local and federal government would depend on the level of civic engagement at either the community or individual level. It doesn't. While the amount of similarity does vary across communities, it does not vary as a function of civic engagement.

What else might explain these differences? I have begun some exploratory analyses of these data. My first reaction to the pattern of results is that the dominant explanation of why the link between local and federal trust varies appears to be race. The only correlate of the community level correlation is the level of ethnic fractionalization of the community. At the individual level, there are sizable differences between the levels of trust amongst African Americans, Latinos, and Asian Americans. In each case, the racial or ethnic group has smaller difference relative to Anglos at the local level then at the federal level. I expect that this is due to the local governments' history of mistreatment of ethnic minorities, but this is purely speculation. It is an idea I will explore more in the future.

My initial expectations were wrong, but the idea I am trying to make here would be useful for modeling the following types of multilevel data. One is the pooled data from multiple surveys with several correlated dependent variables (e.g. National and Local Trust data in this paper). Another is panel data with multiple dependent variables and the structure of the inter-correlations between them changing over time. To make further contributions, I will keep estimating the models.

5.   CONCLUSIONS

5.1   Purposes

This research attempted to draw the entire picture of political trust and especially examined the relationship between civic engagement and trust in local and national politics. As I wrote repeatedly, trust in government matters in terms of democracy. Without trust from citizens, political leaders cannot implement their policies. Thus, the decline of political trust observed in the United States has been a major problem in the late twentieth century.

Accordingly, what determines political trust has been well analyzed since 1970s, and we know there are two main determinants; (1) evaluation or expectation about government's performance and (2) social capital and especially civic engagement. Although the massive literature shows the empirical evidence that people's evaluation or expectation about government's performance affect their political trust at both individual and aggregate level, the effect of civic engagement on political trust remains on hold and leaves a puzzle.

This dissertation tackled this puzzle. In so doing, I attempted to illuminate the mechanisms shaping trust in government across governmental levels and moreover to give a clue to understanding how democratic stability achieved in this multi-layered government system where we live.

5.2   A Puzzle and Models

The definition of political trust in the past literature was vague, and thus the empirical results about political trust was murky. Among them, one big puzzle is that we do not have

empirical evidence of a significant relationship between civic engagement and political trust at the individual level while many scholars reported the strong evidence between them at the aggregate level as classical theories expected.

In order to solve this puzzle, I focus on the composition of political trust. Going back to the definition of political trust, like the classic debate between diffuse and specific trust, we notice political trust should be defined in terms of outputs of policies. That is, under the multi-layered government system, there is not only *one* government. In the United States, we have local and state governments in addition to the federal government. By decomposing the political trust in accordance with government levels, I pay attention to trust in local government and discuss trust analyses should include both local and national levels. Focusing on the local level is important also because civic engagement is primarily measured by community-level activities. Civic engagement might affect only local political trust and thus may not affect national political trust as we have no-evidence between them.

By focusing on the local level political trust, I derived the following three questions: (1) how citizens trust government with less information, (2) why civic engagement does not affect national political trust at the individual level, and (3) how local and national political trust relate each other.

To answer these questions, first I construct a formal model explaining the effect of individual civic engagement on political trust (Chapter 2). Second, to demonstrate that civic engagement works differently between trust in local government and trust in national government, I utilize a vector-autoregression model and examine these three variables (Chapter 3). Third, to examine the effect of community-level civic engagement on trust in local and national government and to model how local and national political trust re-

late each other, I employ a multivariate regression model with community-level variables (Chapter 4). The findings are as follows.

5.3   Findings

First, civic engagement does not affect political trust. The model illustrates 1) a citizen basically trusts government and government can manipulate the information and 2) a citizen with civic engagement will not change their choices when responding to the signal from the government. We can therefore derive the following theoretical expectations: Civic engagement (a cheap talk between citizens) does not affect interpersonal trust between citizens and their trust in the government.

Second, aggregate civic engagement affects national political trust via local political trust. The results from VAR and IRF models imply the following relationship: (1) the movement of civic engagement drives the movement of trust in local government. (2) It also responds to the movement of trust in national government. (3) The movements of trust in national and local governments are reciprocal. In short, trust in local government has a tighter link from civic engagement than trust in national government does.

Lastly, contextual Civic engagement affects individual trust in both local and national governments. The multivariate models show that there is no effect of individual-level civic engagement on trust in local and national governments as the extant literature did not find it, while community-level civic engagement affects trust in both local and national governments. Also the examination of the correlated errors between two models brings us no clear relationship.

5.4 Discussions

Individual-level civic engagement does not affect individual citizen's decision to trust in both local and national governments. The formal and empirical models in this research suggest that there is *not* a significant relationship between civic engagement and trust in both governments at the individual level. The findings in the individual-level analyses conform to the extant empirical literature about no-evidence between them despite the theoretical expectation. We tend to expect that citizens who are involved in community activities are more likely to trust in government across government levels, but this is not supported in this research.

What happens in the individual level? In chapter two, I assume the communication between citizens is unbiased. By getting involved in the community activities, people obtain various information about various actors. Even if one is more often engaged in community activities and has more information about the community than one who is not, she is not necessarily likely to trust in the government. The information one will receive, as a practical matter, may be balanced out and thus unbiased. This should be examined in the further research.

The counterintuitive findings at the individual level are explained by the aggregate-level analyses. At the aggregate level, there *is* a relationship between civic engagement and political trust. Civic engagement is primarily an aggregate based concept, and it works as an aggregate or contextual effect. People who live in a more vibrant period are more likely to trust their governments regardless of the amounts of individual civic activities. One result against the expectation in chapter four is that community-level civic engagement affects trust in both local and national governments negatively. That is, one who lives in a more vibrant community is more likely to distrust the government regardless of the amount

of her civic activities. Whether this unexpected result is due to the time point around 2000 will remain open to the further examinations using time-series-cross-sectional data.

For an attempt to find the different mechanisms shaping trust in local and national government, chapter three demonstrated that civic engagement affects trust in local government more tightly than trust in national government over time. This finding gives us a clue to understanding how the hierarchical structure of democracy forms its stability. According to this finding in the macro-level analysis, democratic stability with higher level of confidence in the nationwide government is derived from civic engagement via confidence in local government. Like Tocqueville discussed in the nineteenth century (Tocqueville 1994), community-based activities and aggregated confidence in the local government bring the stability in the nationwide democratic society.

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Trust in Federal Government (correlation), 82.94%.

1. How much trust and confidence do you have in our federal government in Washington when it comes to handling...domestic problems–a great deal, a fair amount, not very much, or none at all? N=12 (0.97)

2. And how much trust and confidence do you have in our Federal Government when it comes to handling domestic problems in general? N=3 (0.98)

3. How much of the time do you think you can trust the government in Washington to do what is right–just about always, most of the time, or only some of the time? N=32 (0.94)

4. Same as above, but SUBPOP=registered voters N=3 (1.00)

5. How much of the time do you think you can trust the government in Washington (federal/national government) to do what is right–just about always, most of the time, or only some of the time, or hardly ever? N=11 (0.92)

6. How much of the time do you think you can trust the government in Washington, D.C. to do what is right: just about always, most of the time, only some of the time, or almost never? N=7 (0.83)

7. How much of the time do you think you can trust the government in Washington to do what is right–just about always, most of the time, only some of the time, or never? N=4 (0.36)

8. Thinking about the government in Washington, how much trust do you have in the federal government to do what is right? N=2 (1.00)

9. How much of the time do you think you can trust the government in Washington to do what's right–just about always, most of the time, only some of the time, or none of the time? N=4 (0.96)

10. How much of the time do you trust the government in Washington to do the right thing? Just about always, most of the time, or only some of the time? N=2 (1.00)

11. Would you say you basically trust the federal government, or don't trust it? N=2 (1.00)

12. How much trust and confidence do you have in the federal government? ...A great deal, a fair amount, not that much, none at all. N=2 (1.00)

13. Overall, would you say you generally trust the federal government, or not? N=2 (1.00)

14. How much trust and confidence do you have in the federal government? A great deal, quite a lot, some, or very little confidence. N=3 (1.00)

15. Overall, how much trust and confidence do you have in the federal government to do a good job in carrying out its responsibilities... a great deal, a fair amount, not very much, none at all. N=3 (0.97)

16. How much of the time do you trust the government to do what is right: Just about always, most of the time, or only some of the time? N=2 (1.00)

17. How much of the time do you think you can trust the government to do what's right...just about always, most of the time, only some of the time or none of the time? N=3(0.83)

18. You really can't trust the government to do the right thing. Do you agree or disagree with the statement? N=2 (1.00)

19. Would you say the government is pretty much run by a few big interests looking out for themselves or that it is run for the benefit of all the people? N=28 (0.96)

20. Do you think that quite a few of the people running the government are crooked, not very many are, or do you think hardly any of them are crooked? N=24 (0.88)

21. Do you think that people in the government waste a lot of money we pay in taxes, waste some of it, or don't waste very much of it? N=23 (0.78)

22. Now thinking about some groups and organizations...Is your overall opinion of...the federal government in Washington in Washington very favorable, mostly favorable, mostly unfavorable or very unfavorable? N=8 (0.98)

Trust in Local Government (correlation), 84.34%.

1. As far as the people in charge of running local government are concerned, would you say you have a great deal of confidence, only some confidence, or hardly any confidence at all in them? N=9 (0.95)

2. (I'm going to read to you a list of groups and people and I'd like you to tell me how much confidence you have in each of them: a lot of confidence, only some confidence, or hardly any confidence at all)?our local government. N=2 (1.00)

3. (I am going to read you a list of institutions in American society. Please tell me how much confidence you, yourself, have in each one-a great deal, quite a lot, some, or very little.)?ocal government. N=11 (0.92)

4. How much of the time do you trust your local government in the community where you live to do what is right? just about always, most of the time, or only some of the time? N=4 (0.77)

5. How much of the time do you trust your local government to do what is right? just about always, most of the time, only some of the time, or hardly ever? N=3 (0.92)

6. (Now I'd like to get your opinion of some organizations and institutions.) Do you have a very favorable, mostly favorable, mostly unfavorable or very unfavorable opinion of your local government? N=6 (0.94)

7. (Now, I'd like to rate your feelings toward some people and organizations, with one hundred meaning a very warm, favorable feeling, zero meaning a very cold, unfavorable feeling, and fifty meaning not particularly warm or cold. You can use any number from zero to one hundred, the higher the number the more favorable your feelings are toward that person or organization.)?ocal government. N=2 (1.00)

8. How much trust and confidence do you have in your local government to do a good job in carrying out its responsibilities? a great deal, a fair amount, not very much, none at all. N=6 (0.94)

9. How much trust and confidence do you have in your local government when it comes to handling local problems? a great deal, a fair amount, not very much, or none at all? N=10 (0.86)

10. How would you rate yourself in how up to date you are on?hat is going on the local government-excellent, pretty good, only fair or poor? N=8 (0.87)

11. (Using a ten-point scale on which '10' is very high quality service and '1'is very poor service how would the rate the following?)?ow would you rate local government service? N=3 (0.99)

12. As far as people in charge of running local government are concerned, do you feel they really know what most people they represent or serve really think and want, or do you feel they are mostly our of touch with the people they are supposed to lead or help? N=2 (1.00)

13. How much do you trust the following people and groups? Do you trust them a lot, some or don't you trust them at all? Your own local government? N=2 (1.00)

APPENDIX B

Civic Engagement. (1) Are you a MEMBER of a local church, synagogue, or other religious or spiritual community? (2) Now I'd like to ask about other kinds of groups and organizations. I'm going to read a list; just answer YES if you have been involved in the past 12 months with this kind of group. (a) Besides your local place of worship, any organization affiliated with religion, such as the Knights of Columbus or B'nai B'rith (BA-NAY BRITH), or a bible study group? (b) An adult sports club or league, or an outdoor activity club. (c) A youth organization like youth sports leagues, the scouts, 4-H clubs, and Boys and Girls Clubs. (d) A parents' association, like the PTA or PTO, or other school support or service groups. (e) A veteran's group. (f) A neighborhood association, like a block association, a homeowner or tenant association, or a crime watch group. (g) Clubs or organizations for senior citizens or older people. (h) A charity or social welfare organization that provides services in such fields as health or service to the needy. (i) A labor union. (j) A professional, trade, farm, or business association. (k) Service clubs or fraternal organizations such as the Lions or Kiwanis or a local women's club or a college fraternity or sorority. (NOTE: Includes Alumni Organizations) (l) Ethnic, nationality, or civil rights organizations, such as the National Organization for Women, the Mexican American Legal Defense or the NAACP? (m) Other public interest groups, political action groups, political clubs, or party committees. (n) A literary, art, discussion or study group or a musical, dancing, or singing group. (0) Any other hobby, investment, or garden clubs or societies. (p) A support group or self-help program for people with specific illnesses, disabilities, problems, or addictions, or for their families. (q) Are you involved in any group that meets only over the Internet. (r) And do you belong to any other kinds of clubs or organizations? [simple count of group involvement]

Trust in National Government. How much of the time do you think you can trust the NATIONAL government to do what is right? [Hardly ever=0, Some of the time=1, Most of the time=2, Just about always=3]

Trust in Local Government. How much of the time do you think you can trust the LOCAL government to do what is right? [Hardly ever=0, Some of the time=1, Most of the time=2, Just about always=3]

Interpersonal Trust. Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people? [Can't be too careful=0, Depends=1, People can be trusted=2]

Local Political Efficacy. Overall, how much impact do you think PEOPLE LIKE YOU can have in making your community a better place to live? [No impact at all=1, A small impact=2, A moderate impact=3, A big impact=4]

Quality of Life in Community. Overall, how would you rate your community as a place to live? [Poor=0, Good=1, Only Fair=2, Excellent=3]

Personal Economic Perceptions. So far as you and your family are concerned, would you say that you are very satisfied, somewhat satisfied, or not at all satisfied with your present financial situation? [Not at all satisfied=0, Somewhat satisfied=1, Very satisfied=0]

Ideology. Thinking politically and socially, how would you describe your own general outlook–as being very conservative, moderately conservative, middle-of-the-road, moderately liberal or very liberal? [1 Very conservative=1, Moderately conservative=2, Middle-of-the-road=3, Moderately liberal=4, Very Liberal=5]

Policy Distance. Absolute value of the difference between an individual's ideological position and the mean ideological position of all respondents in the city in which that individual resides.

Read Newspaper. How many days in the past week did you read a daily newspaper? [0-7]

Watch Television. How many hours per day do you spend watching TV on an average weekday, that is Monday through Friday?[0-12]

Education. What is the highest grade of school or year of college you have completed? [Less than high school=1, High school diploma=2, Some college=3, Associate degree or specialized technical training=4, Bachelor's degree=5, Some graduate training=6, Graduate or professional degree=7]

Age. Respondent's age in years.

Gender. A dummy variable was used to denote gender. [Female=0, Male=1]

Income. If you added together the yearly incomes, before taxes, of all the members of your household for last year would the total be [$20,000 or less=1, $20,001-$29,999=2, $30,000-$49,999=3, $50,000-$74,999=4, $75,000-$99,999=5, $100,000 or more=6]

Years in Community. How many years have you lived in your community? [Less than one year=1, One to five years=2, Six to ten years=3, Eleven to twenty years=4, More than twenty years=5, All my life=6]

Own Home. Do you or your family own the place where you are living now, or do you rent? [Rent=0, Own=1]

Race. Dummy variables were used to denote whether respondents were Hispanic, black, Asian, Native American, or other. The baseline category was whites.