Effects of Expectation-Disconfirmation regarding the Role of Government on Trust in Government and the Moderating Effect of Citizen Participation*

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Abstract: This study draws on expectation-disconfirmation theory to explore differences between what is expected of the government and perceptions of what the government in fact does and to determine the influence of these differences on trust in government. Confirming the applicability of contact theory, this study also reveals the moderating effect of citizen participation. The results show that the more citizens' expectations regarding the role of government are not met, the less trust they have in government. The relation between these two variables is consistently observed, regardless of ways of measuring trust in government. However, the negative relation between expectation-disconfirmation and trust in government was moderated by citizens' political participation.

Keywords: trust in government, expectation-disconfirmation theory, social participation, contact theory, moderating effect

INTRODUCTION

Nye, Zelikow, & King (1997) reported that citizen's trust in government steadily declined over the last decade of the twentieth century. Their study made trust in government an important topic in public administration and public policy. Various

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factors have been suggested for this decline, ranging from individual societal characteristics to a poor evaluation of the government, lack of support for the president, dissatisfaction with government services, concerns about fairness and administrative values, frustration over constraints to participation, and lack of transparency. Trust in government often decreases when a policy established by the government fails or when it is not accepted by the public. Trust in government is considered a factor affecting the public's acceptance of policies and how the public evaluates them.

In particular, beliefs regarding the role of government are considered a key factor affecting trust in government. However, trust in government can at the same time affect beliefs about what the government's role should be. Expectation-disconfirmation theory provides a way to accurately evaluate the public's views about what that role is. Moreover, some studies suggest that the greater the levels of political participation and the more mature a civil society is, the greater the trust (Park, Lee, & Cho, 2003, p. 46). In recent years, it has been more common for local residents to undertake community work in the spirit of community and an awareness of the importance of participation, work that is supported by a cooperative relationship they maintain with the public authorities.[1] In order for the government to utilize this trend to improve its functioning, it is necessary to first examine the role of contact with public institutions such as the government through citizen participation. The objectives of this study are to evaluate the relationship between expectation-disconfirmation with respect to the role of government and the trust in government, which is not addressed in previous studies, and to use contact theory in psychology to identify the moderating effects of citizen participation on trust.

LITERATURE REVIEW

Trust in Government

Trust is known to have a positive impact on economic growth, the provision of social goods, social integration, cooperation, life satisfaction, and the stability and development of democracy (Delhey and Newton, 2003, p. 94). In particular, public trust in government is essential for the government in its efforts to secure its legitimacy so as to be able to enforce its policies more effectively (Evans, 1996; Park, Lin, & Hwang, 2013).

1. www.fnnews.com/news/201501071738133308.

The concept of trust in government has been defined in various ways depending on the questions and objectives of the studies that draw on it, and a consensus has yet to be reached. Researchers have different ideas about how to define the limits of government, how to define a trustee, and how to specify the meaning of "trust" in order to define what counts as the public's trust in government.[2] Trust can be defined as "the basic evaluation orientation toward a government" (Stoke, 1962) or as the basis on which "a government should be operated" (Miller, 1974). Citrin (1974) breaks trust down into components, assessing collective trust in government, trust in individual government officials, and trust in policies. Some scholars have discussed trust in government as an extension of trust in society (Fukuyama, 1996; Putnam, 2000). The reason there are so many definitions of trust in government is that it is difficult to measure it using an objective index. Trust is complex psychological concept and reflects the situation, local culture, and subjective feelings of individuals. Nonetheless, it has been a key research topic because trust in government is an essential element in the realization of democratic governance (Park, Lee, & Cho, 2003).

Many scholars and policy makers are concerned about the decline in trust in government, which has been observed globally since the 1990s. Lack of trust hinders the interaction and cooperation between the public sector and the civil society, an essential factor in citizens' acceptance of government policies. Furthermore, lack of trust makes it hard for the government to govern properly. It has been observed in developed countries such as the United States as well as in developing countries. It seems like it is an unavoidable aspect of the modern democratic government.

The majority of the earlier literature on trust in government, starting with Nye, Zelikow, and King's (1997) analysis of the cause of the decline of trust in government, are theoretical and empirical studies investigating factors affecting trust in government. They mostly argue that individual characteristics influence a person's the trust in government (Shin & Lee, 2016, p. 2). Specifically, a person's sociodemographic background (e.g., Christensen & Laegreid, 2005; Citrin & Luks, 2001; Uslander, 1999), a person's evaluation of the government (Miller, 1974), a person's level of support for the president (Citrin, 1974), a person's level of satisfaction with

2. In this study, the government is defined as the encompassing the legislature, the judiciary, and the administration. Moreover, we rely on a general definition of trust as a psychological attitude that supports a trustee taking risks even in uncertain situations. That is, trust in government is defined as a psychological attitude that supports the government taking risks even in cases of incomplete information and uncertain situations.

government services (e.g., Chanley, Rudolph, and Rahn, 2000; Citrin & Green, 1986; Hetherington, 1998; Keele, 2007; Park, Lee, & Cho, 2013; Jeon, Kwon, & Jeong, 2013), a person's perception of the fairness of the government (e.g., Wahlke, 1971; Shin & Lee, 2016), the interaction between citizens and the government (Rho, 2011), public perceptions of administrative values (Hwang, Kim, & Moon, 2015), and lack of participation and transparency (Kim & Oh, 2008) have been suggested as factors.

We focus on the studies that have pointed out that it is a discrepancy between a person's expectations of the government and what the government does in practice that leads to a loss of trust in government, seeking to evaluate the effects of this discrepancy on trust in government and to determine if citizen participation moderate those effects.

Beliefs about the Role of Government

Belief about what the role of government importantly affects citizens' assessment of the public sector. In this study, we rely on the idea of "government responsibility" according to the "range and degree" criteria of Borre and Scarborough (1995) to define the role of government. Range refers to the areas the government takes responsibility for, and degree reflects the level of government intervention.

David Easton's "system theory" is most commonly used as a logical framework to assess beliefs about the role of government. Beliefs are treated as an input element of the system as a form of demand because beliefs about the role and scope of the government have a significant effect on the interaction between the government and civil society (Easton, 1965).

Beliefs about the role of government role are considered to be key factors influencing trust in government (e.g., Edlund, 1999; Hetherington, 2005; Kim & Kang, 2015). However, many previous studies have shown that the relationship between the two is not unidirectional (Rudolph & Evans, 2005; Rudolph, 2009). Experts on trust in government have pointed out that trust in government has declined because government institutions, bureaucrats, and political leaders have not met citizens' expectations (Shin & Lee, 2016, p. 2). One's ideology tends to determine one's belief as to whether individuals or the government are responsible for a policy or a service, and that belief also likely affects one's trust in government. But it is hard to exclude the possibility of a reverse relationship in such a logical structure. In other words, as shown in previous studies, people may believe the scope of the government's responsibility should be large because they trust the government.

Therefore, this study aims to mitigate the problem of trust in government affect-

ing beliefs about the role of government by using expectation-disconfirmation theory to investigate the gap between expectations and reality.

Expectancy-Disconfirmation Theory

There are two main theories that seek to explain the discrepancy between consumers' expectations with respect to a service and their level of satisfaction with the completed service: expectancy-disconfirmation theory and importance-performance analysis. They provide important theoretical background for evaluating the effects of the discrepancy between consumers' expectation and level of satisfaction. This study mainly relies on expectation-disconfirmation theory.

Expectancy-disconfirmation theory has been mainly studied in relation to the concept of consumer satisfaction in the field of business administration (Oliver, 1980; Erevelles & Leavitt, 1992; Spreng, MacKenzie, & Olshavsky, 1996). It argues that consumers are dissatisfied when a performance does not meet their expectations (negative disconfirmation) and satisfied when the performance either meets (simple agreement) or exceeds expectations (positive disconfirmation) (Oliver & Desarbo, 1988). Consumer satisfaction on this theory is a function of consumers' expectations, the end result, and disconfirmation rather than the specific characteristics of a service (Oliver, 1980). This theory is important because it takes into account how consumer expectation impacts satisfaction, in contradistinction to previous studies, which maintained that consumer satisfaction was solely determined by the attributes of a product or a service.

In recent years, government administration and policy fields have become more interested in the application of this theory. Expectancy-disconfirmation, it has been observed, can be at work in the assessment of government performance because its performance can affect the satisfaction of citizens, who are the consumers in the public sector. Related studies argue that citizens' satisfaction with the services provided by the government is determined by their comparing their expectations with respect to the service and the result (Van Ryzin, 2004a; Park & Hwang, 2010; Morgenson, 2012; Van Ryzin, 2013; Park, 2014). According to these studies, citizens are satisfied when the performance of the government is better than they expected but are less satisfied when the performance does not meet expectations. This argument has been empirically proven by previous studies on the services of local governments (Van Ryzin, 2004b), the services of the U.S. federal government (Morgenson, 2012), and the services of the South Korean central government (Park & Hwang, 2010). Moreover, when citizens have high expectations for government services, it is more likely to lead to negative disconfirmation, and this leads to the

possibility that a negative perception of the government will be formed when it does not meet the expectation of citizens.

We apply expectancy-disconfirmation theory to the public's beliefs about the role of government. Expectancy-disconfirmation is the magnitude of the gap between one's belief about the scope of responsibility of the government and one's perception of what the government is actually doing. We focus here on the magnitude of the gap itself, not the direction, hypothesizing that trust of the public in the government will decrease when the absolute value of this disconfirmation is large.

Moderating Effects of Citizen Participation: Application of Expanded Contact Theory

Social psychologists have long been interested in the idea that social contact changes between groups can change the attitudes the groups toward each other (Cook & Selltiz, 1952; Deutsch & Collins, 1951; Kramer, 1950).

According to the contact theory, social contact and interaction decrease prejudice about others and groups, inducing a more positive attitude toward them (Allport, 1954; Pettigrew, 1998). How contact can decrease negative attitudes toward a certain group can be explained as follows. First, the knowledge about an opposing group that one gleans from face-to-face encounters corrects stereotypes (Stephan & Stephan, 1985). Second, even if one has a negative perception about a given group, contact will make the one feel comfortable with and friendly toward the group. This familiarity can decrease negative attitudes (Jackman & Crane, 1986; Levin et al., 2003). Alternatively, it can reduce anxiety about an unknown group and increase sympathy. Therefore, it can mitigate prejudice or undermine stereotypic beliefs (Dixon et al., 2005; Pettigrew & Tropp, 2006).

Contact theory has expanded in two ways since it was first introduced. First, initially, the decrease in prejudice was seen as the only effect of contact. However, other effects have subsequently been proposed. One of them is the effect on outgroup trust. Trust is formed on the basis of a cognitive and emotional response to people, institutions, and government agencies (Shim et al., 2017). Putnam (1993), a representative scholar of social trust, has argued that mutual communication improves as the frequency of interaction increases and that mutual trust increases with each experience of exchanging honest information. Mutual trust is increased between strangers who meet and collaborate when they participate in a voluntary organization or a social meeting (Putnam, 1993, 2001).

Other scholars who have treated social relationships from the viewpoint of contact theory make a similar argument. A person can have a vague prejudice or a neg-

ative perception about a group to which he or she does not belong. The contact experience provides an opportunity for one's stereotypes about the group to be challenged, and through a psychological reconciliation process, one begins to process new information in a way that leads to a more favorable view of the group or institution (Tam et al., 2009). Considering that trust is defined as "a positive bias in the processing of imperfect information about an outgroup or institution" (Yamagashi & Yamagashi, 1994), it is expected that contact can consequently increase trust. In fact, studies on people with political conflicts provide relevant empirical evidence for this speculation (Hawstone et al., 2008; Tam et al., 2009).

Secondly, there are the effects of indirect contact. According to the extended contact theory, people's negative attitude toward a group can be decreased just with the knowledge that their acquaintances have closely interacted with the group (Wright et al., 1997, 74). The interaction between a friend and a member of an external group can create a positive impression about the group (Wright et al., 1997). Vicarious contact theory is based on Albert Bandura's social cognitive theory and argues that all human learning can occur indirectly just by one's observing others' behavior and the results of it (Bandura, 1989, p. 21). Observing an acquaintance who has effective contact with an external group can provide a vicarious learning experience, thereby reducing the psychological threat that the external group presents and leading the person to develop a positive attitude toward the group.

The relationship between citizens and the government can be framed in terms of contact theory. For ordinary citizens, the government is an external group that they do not know well and are not affiliated with. It follows that the level of negative disconfirmation between what citizens expect of the government and what the government in fact does may negatively affect the level of trust between the government and citizens. However, citizen participation can increase interaction with those who work in the public sector, such as public officials, and these contact experiences can lead to a change in attitude. Prejudice toward government agencies can be mitigated through contact with the members of the agency, and this intimacy may result in citizens' coming away with a favorable impression of the agency. Additionally, citizens' may come to empathize with the government, and these cognitive changes can decrease negative attitudes. Even if a person does not directly interact with a government agency, indirect contact experiences that come with observing the interactions of a fellow citizen can mitigate his or her negative attitudes. Therefore, we hypothesize that higher levels of participation will moderate the negative relationship between expectation- disconfirmation and trust in government.

METHOD

Data Sources and Sample

This study used the data of from a 2014 public perception survey on the role of government and its scope, which was designed by the Center for Survey Research at Seoul National University's Graduate School of Public Administration and conducted by Gallup Korea. This survey was conducted to gather baseline data regarding South Koreans' views about the responsibility of government the appropriateness of the government's methods. Key survey items include opinions about politics, the operation and activities of the government, government performance, and government expenditure.

Table 1. Demographic Characteristics of Respondents

Category		Samples		Category		Samples	
		N	%			N	%
Total		**5,940**	**100**	**Total**	**5,940**	**5,940**	**100**
Area of Residence	Seoul	580	9.8	age	19-29	922	15.5
	Busan	400	6.7		30s	975	16.4
	Daegu	240	4.0		40s	1,154	19.4
	Incheon	280	4.7		50s	1,176	19.8
	Kwangju	180	3.0		60s and above	1,713	28.8
	Daejun	180	3.0	sex	male	2,927	49.3
	Ulsan	180	3.0		female	3,013	50.7
	Kyounggi	700	11.8	education	elementary/middle school graduate	1,265	21.3
	Sejong	100	1.7		high school graduate	2,212	37.2
	Kangwon	440	7.4		college graduate and higher	2,463	41.5
	Chunbuk	300	5.1	religion	nonreligious	3,342	56.3
	Chungnam	380	6.4		Catholic	436	7.3
	Jeonbuk	360	6.1		Protestant / Buddhist	1,060	17.8
	Jeon-nam	520	8.8		other	1,079	18.2
	Kyungbuk	540	9.1	job	agriculture/forestry/fishery	338	5.7
	Kyoungnam	440	7.4		independent enterprise	1,281	21.6
	Jeju	120	2.0		blue collar	1,419	23.9
Ideology	progressive	1,320	22.2		white collar	1,205	20.3
	moderate	2,770	46.6		homemaker	1,132	19.1
	conservative	1,850	31.1		student/unemployed/ other	565	9.5

The survey population was made up of adult men and women (19 years or older) living in South Korea. The 5,940 samples were extracted by a multistage stratified cluster sampling method. The survey was carried out with a face-to-face interview and a structured questionnaire. It was conducted between October 2 and November 24, 2014, and the sampling error of the survey was ±1.3%p at the 95% confidence level. The proportion of female respondents was about 50.7% and the average age was 48.1. Of the respondents' 21.3% were elementary or middle school graduates, 37.2% were high school graduates, and 41.5% were college or graduate school graduates. Almost half of the respondents reported moderate political tendencies (46.6%), but nearly a third indicated they were conservative (31.1%) while almost a quarter said they were progressive (22.2%). This distribution does not differ much from the population composition of Korea, and so the sample can be seen as representative.

Measurement

Trust in government, a dependent variable, was determined by measuring trust in the institution and the trust in the agent of the institution separately. The dependent variable was also measured utilizing the average of trust in the institution and the people running it. The variables of each subject were measured by using a five-point scale. This study used the mean value of seven items about an institution and the mean value of six items about its human resources composition. First of all, trust in government was measured with reference to a broad concept that encompasses legislative, judicial, and administrative departments, as suggested by previous studies. Trust in heads of agencies was measured with reference to political officeholders in the central and local governments (political officeholders in the judicial department were not evaluated in the survey).

Expectancy-disconfirmation with respect to the role of government, an independent variable, was measured in two steps. This study estimated the subjective ideal distribution level between the government and the individual and the individual's previous experience with the government and calculated the absolute difference between them. We then standardized this measurement so as to prevent multicollinearity when we introduced citizen participation, a moderating variable, as an interaction term. The degree of participation was measured by an individual's level of activity in a public organization or group. Among various activities, the study targeted activities for political organizations such as a political party, resident organizations, charities or volunteer groups, and civic organizations. For this variable, the mean value of four items was calculated, and it was standardized using the

Table 2. Measurements

Variables		Operational Definition	Measurements	Chronbach α
Dependent Variables	trust in government (Institution/ Political Officeholders)	degree of trust in government agencies and political officeholders	1=not at all trustworthy, 5=very trustworthy (average of 13 items)	0.9203
	trust in government (institution)	degree of trust in government agencies	1=not at all trustworthy, 5=very trustworthy (average of 7 items)*	0.8812
	trust in government (political officeholders)	degree of trust in political officeholders	1=not at all trustworthy, 5=very trustworthy (average of 6 items)**	0.8527
Independent Variables	expectation-disconfirmation	difference between expectations and practice with respect to the role of government	standardized score of the absolute value of the estimated difference between expectations and practice	
Moderating Variables	civic participation	level of participation in political associations	0=not signed up, 1=no active, 5= very active (standardized score on the average of 4 items***)	0.8053
Control Variables (Socio economic Status)	age	-	-	
	income	household income (per month)	1=less than ₩1 million, 2=₩1,000,000-₩1,990,000, 3=₩2,000,000₩2,990,000 4=₩3,000,000-₩3,990,000, 5=₩4,000,000-₩4,990,000, 6=₩5,000,000-₩5,990,000, 7=over ₩6 million	
	education	educational background	1=elementary school graduate, 2=middle school graduate, 3=high school graduate, 4=collage graduate, 5=master's degree or higher	
	sex	-	male=1, female=0	
	ideology	political tendency	1=very progressive, 2=somewhat progressive, 3=moderate, 4=somewhat conservative, 5=very conservative	
	religion	whether one practices a religion	Yes****=1, no=0	
	family size	number of family members	-	
	white collar	whether respondents are white-collar workers	white collar*****=1, other=0	
	blue collar	whether respondents are blue-collar workers	blue collar******=1, other=0	

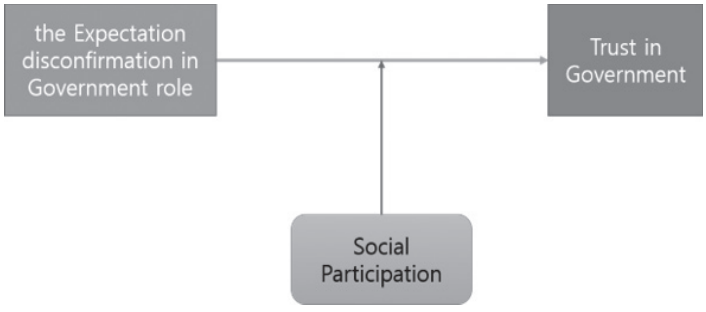
*Central administrative Agencies, local administrative agencies, prosecutory authorities, national police, National Assembly, judiciary, the Blue House.
** President, prime minister, high-ranking government officials, member of the National Assembly, local government heads, municipal or provincial government heads.
***Political party, residents' groups, voluntary organizations, civic organizations
****Protestantism, Catholicism, Buddhism or other religion.
***** Office worker, executive, professional, public official, public employee.
****** agriculture/forestry/fishery, service/sales, manufacturing.

interaction term and the expectancy-disconfirmation variable. The age of the respondents was treated as a continuous variable, and the level of household income was measured using a seven-point scale from ₩990,000 to ₩6,000,000. The highest level of education was measured using a five-point scale from elementary school to graduate school. Gender was a dummy variable based on male subjects. Family size was the number of family members including the respondent. Religion was converted to a dummy variable, as was occupation (i.e., white-collar workers and blue-collar workers).

Analytic Model

We established our analytic model using these variables to test the hypotheses that negative disconfirmation regarding the role of government would affect trust in government and that citizen participation would moderate those negative effects. In particular, we speculated that a larger absolute discrepancy between expectations and outcome would affect trust in government negatively. But frequent contact with the government through participation in the public sector can mitigate this negative relationship.

Figure 1. Analytic Framework



FINDINGS

Descriptive Statistics

The descriptive statistics of major independent variables, dependent variables, and control variables are summarized in table 3. Variables associated with trust in government were measured on the five-point scale, and the mean and standard deviation of measured factors are shown in the table. The mean of trust in government is generally lower than the median (3) of it. However, trust in the institution itself was slightly higher than that in the agent of institutions. The descriptive statistics of expectancy-disconfirmation and citizen participation were recalculated using the standardized scores of responses (10-point scale). Before they were standardized, the mean expectancy-disconfirmation with respect to the role of government was low (1.8 out of 10). In terms of the level of participation, most people either did not participate or else participated very passively. Due to these shortfalls, we converted these variables into standardized scores to analyze them.

Table 3. Descriptive Statistics

Variables	Observation	Mean	Standard Deviation	Minimum	Maximum
Trust in Government (Institution/Political Officeholders)	5,938	2.6354	0.6349	1	5
Trust in Government (Political Officeholders)	5,938	2.6023	0.6684	1	5
Trust in Government (Institution)	5,940	2.6634	0.6831	1	5
Expectation-Disconfirmation	5,939	-0.0000001	1	-1.2095	5.5045
Civic Participation	5,940	0.000000001	1	-0.507	5.3012
Income	5,921	6.9387	2.7333	1	15
Education	5,940	4.3694	1.3335	1	8
Sex	5,940	0.4928	0.4999	0	1
Ideology	5,940	3.1010	0.8583	1	5
Religion	5,940	-	0.4961	0	1
Family Size	5,940	3.1606	1.1921	1	9
White Collar	5,940	-	0.4021	0	1
Blue Collar	5,940	-	0.4564	0	1

Empirical Results

The results of this study's analytic model are shown in table 4. First of all, the results showed that trust in government decreased as expectancy-disconfirmation with respect to the role of government increased. This result supports the hypothesis that the larger the gap between what the public expects the government do and what the government actually does, the larger the negative impact on trust in government. This relationship was observed regardless of methods for measuring trust (that is, whether the measurement concerned institutions, officeholders, or both institutions and officeholders).

The inverse relationship between expectancy-disconfirmation was alleviated through the moderating effects of citizen participation. In other words, although an individual might have a low trust in government due to a high level of expectation-disconfirmation, the individual's trust could be increased by participation.

The effects of participation on trust in government were different depending on the method for measuring the trust in government. Participation and trust in officeholders were significantly and positively correlated. However, participation did not significantly increase trust in the case of institutions.

Table 4. Results of Multiple Regression

Dependent Variables		Trust in Government (Institution/ Political Officeholders)	Trust in Government (Political Officeholders)	Trust in Government (Institution)	Trust in Government (Institution/ Political Officeholders)	Trust in Government (Political Officeholders)	Trust in Government (Institution)
Expectation-Disconfirmation (ED)	β	-0.131***	-0.136***	-0.127***	-0.130***	-0.134***	-0.125***
	SE	0.00873	0.00937	0.00926	-0.00885	-0.00952	-0.00933
Civic Participation (CP)	β	0.01370	0.0233**	0.00564	0.0111	0.0206**	0.00308
	SE	0.00902	0.00965	0.00955	-0.00898	-0.00959	-0.00954
ED*CP	β	0.0291***	0.0303***	0.0280***	-	-	-
	SE	0.00918	0.01000	0.00941	-	-	-
Income	β	0.0119***	0.00888**	0.0145***	0.0118***	0.00879**	0.0145***
	SE	0.004	0.00423	0.00430	-0.00402	-0.00424	-0.00431
Education	β	-0.0407***	-0.0459***	-0.0365***	-0.0413***	-0.0465***	-0.0370***
	SE	0.00787	0.00828	0.00848	-0.00787	-0.00829	-0.00848

Sex	β	-0.02400	-0.02170	-0.02580	-0.0245	-0.0222	-0.0262
	SE	0.01680	0.01760	0.01820	-0.0168	-0.0176	-0.0183
Ideology	β	0.0962***	0.109***	0.0860***	0.0962***	0.108***	0.0860***
	SE	0.01040	0.01080	0.01120	-0.0104	-0.0108	-0.0112
Religion	β	0.0429***	0.0422**	0.0434**	0.0435***	0.0427**	0.0439**
	SE	0.01640	0.01720	0.01780	-0.0164	-0.0173	-0.0179
Family Size	β	-0.0224***	-0.0234***	-0.0215**	-0.0226***	-0.0236***	-0.0217**
	SE	0.00815	0.00847	0.00886	-0.00816	-0.00848	-0.00886
White Collar	β	0.01060	0.01260	0.00908	0.0113	0.0132	0.0097
	SE	0.02270	0.02390	0.02460	-0.0228	-0.0239	-0.0247
Blue Collar	β	0.0470**	-0.03120	-0.0615***	-0.0478**	-0.032	-0.0623***
	SE	0.01880	0.01980	0.02050	-0.0188	-0.0198	-0.0205
Constant	β	2.510***	2.479***	2.534***	2.513***	2.482***	2.537***
	SE	0.05290	0.05480	0.05750	-0.0531	-0.0549	-0.0576
Observations		5918	5918	5920	5,918	5,918	5,920
R-squared		0.084	0.088	0.064	0.081	0.086	0.062

Robust standard errors ****p=0.01; **p=0.05; *p=0.1*

Additional Analysis

The results of this study may have a common method bias because the variables used for the analytic model were derived from a single survey (Podsakoff & Organ, 1986). An additional analysis was conducted to reduce the possibilities of error that the survey data may have introduced. The results of the analysis are as follows.

First, we carried out Harman's single-factor test to look for evidence of common method bias. The results showed that there were five factors with an eigenvalue of one or more. These factors explained more than 58% of the total variances. Moreover, the main factor explained 23% of the total variances. We concluded, therefore, that the possibility of a common method bias was not serious.

Second, when the same individual is asked a series of questions, the individual may give similar positive or negative responses owing to his or her personality and regardless of the content of a measuring variable. In order to account for this, we conducted another analysis after adding a question asking if the respondent was satisfied with life in general. The results revealed that the interaction with the results of major variables was robust. We tried to minimize the possibility of the common method bias, which may cause tendency problems such as a social desirability bias, using these additional analyses.

Table 5. Verification of Social Desirability Bias

Dependent Variable		Trust in Government (Institution/ Political Officeholders)	Trust in Government (Political Officeholders)	Trust in Government (Institution)
Expectation-Disconfirmation (ED)	β	-0.131***	-0.136***	-0.127***
	SE	0.00873	0.00937	0.00926
Civic Participation (CP)	β	0.01370	0.0233**	0.00564
	SE	0.00902	0.00965	0.00955
ED * CP	β	0.0291***	0.0303***	0.0280***
	SE	0.00918	0.01000	0.00941
Constant	β	2.224***	2.198***	2.244***
	SE	0.060	0.063	0.065
Observations		5,918	5,918	5,920
R-squared		0.1	0.102	0.078

Robust standard errors: ****p=0.01; **p=0.05; *p=0.1*

Implications and Discussion

This study evaluates the effects of citizen's expectancy-disconfirmation regarding the role of government on trust in government, reviewing theories about the relationship between the public attitudes toward the government and trust in government and expectancy-disconfirmation theory, predicting that the larger the expectancy-disconfirmation, the larger the negative impact on trust in government, and speculating that the inverse relationship between these two factors can be moderated by citizen participation.

Participation of citizens has long been considered a variable that is related to trust in government (e.g., Almond & Verba, 1963; Fennema & Tillie, 1999, 2001; Putnam, 1993). The results of this study have likewise indicated that citizen participation is positively related to trust in government. The results of this study support the Rothstein's (2001) argument that participation in the form of joining a union or a political party increases trust in government. Furthermore, as suggested by contact theory, the negative effects of expectancy-disconfirmation regarding the role of government on trust in government are mitigated by citizen participation, providing support for Fennema and Tillie's (2001) argument that civic community building generates and increases trust between organizations.

These results have policy implications for enhancing trust in government. First,

clarifying the scope of government could improve trust in government. Citizens do not want the government to do everything. If the government were to do what citizens asked it do rather than trying to do everything, and the public's trust in government would likely increase.

Second, since active citizen participation can mitigate the problem of decreased trust in government, the government should seek ways to boost citizen participation. As contact theory suggests, negative perceptions about the government may be mitigated by citizens' meeting people who work for government agencies and observing how they work. We can also expect an increase in trust owing to greater intimacy and emotional connection. Moreover, as citizens participate in policy making, they learn how hard it is for the government to solve problems. Therefore, they may see that there is a good explanation for the discrepancy between their expectation and the reality or let certain problems slide.

The results of this study indicate that improving trust between citizens and the government is important because the government requires compliance with its policies. Encouraging citizen participation is good way to enhance trust in government. At the same time, it is valuable because it makes polices more effective and contributes to the realization of democratic governance.

Despite the usefulness of this study, it has limitations that can be addressed by future studies. First of all, it is necessary to closely analyze how the direct effects of citizen participation and the moderating effects of citizen participation vary according to whether the object of the trust in government is an institution or a person. Moreover, the cause of this discrepancy calls for an in-depth examination. Additionally, data prepared by measuring expectation-disconfirmation regarding the role of government, an independent variable of this study, in more specific areas would be valuable. It is possible that different trends would emerge if respondents were asked about specific policy areas (e.g., the economy, national security, and culture), instead of about the government in general. In particular, since the magnitude of the effects of expectation-disconfirmation on trust in government may vary by areas, further policy implications would follow from such analyses. Future studies should address these shortfalls.

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APPENDIX

Appendix Table. Correlations of Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Trust (Institution/ Political Officeholders)	1													
Trust (Political Officeholders)	0.9267***	1												
Trust (Institution)	0.949***	0.761***	1											
Expectation-Disconfirmation	-0.2189***	-0.2179***	-0.1948***	1										
Civic Participation	0.0157	0.028	0.0039	-0.0261**	1									
Age	0.1682***	0.1815***	0.1383***	-0.0499***	0.0413***	1								
Income	-0.0401***	-0.0599***	-0.0187	0.0462***	-0.0073	-0.421***	1							
Education	-0.1193***	-0.135***	-0.0927***	0.0689***	0.0591***	-0.6491***	0.5161***	1						
Sex	-0.0528***	-0.0495***	-0.0495***	0.0238*	0.0221*	-0.0712***	0.0466***	0.1919***	1					
Ideology	0.1649***	0.1769***	0.1369***	-0.0705***	-0.0213	0.2854***	-0.1311***	-0.236***	-0.036***	1				
Religion	0.066***	0.0658***	0.0585***	-0.0431***	0.0946***	0.1656***	-0.0657***	-0.1165***	-0.1664***	0.0603 ***	1			
Family size	-0.0686***	-0.0792***	-0.0517***	0.0274**	0.013	-0.3872***	0.5057***	0.3541***	0.0285**	-0.1712***	-0.0451***	1		
White collar	-0.0352***	-0.0437***	-0.0238**	0.0405***	0.0478***	-0.2715***	0.2302***	0.3736***	0.13***	-0.1535***	-0.0414***	0.1452***	1	
Blue collar	-0.0201	-0.005	-0.0311**	-0.0377***	-0.0249**	0.0146	-0.1012***	-0.153***	0.1278***	0.0209	-0.0636***	-0.0533***	-0.3269***	1