E-Participation, Transparency, and Trust in Local Government

This article examines the relationship between electronic participation (e-participation) and trust in local government by focusing on five dimensions of the e-participation process: (1) satisfaction with e-participation applications, (2) satisfaction with government responsiveness to e-participants, (3) e-participants’ development through the participation, (4) perceived influence on decision making, and (5) assessment of government transparency. Using data from the 2009 E-Participation Survey in Seoul Metropolitan Government, this article finds that e-participants’ satisfaction with e-participation applications is directly associated with their development and their assessment of government transparency. The findings reveal that e-participants’ satisfaction with government responsiveness is positively associated with their perceptions of influencing government decision making. Furthermore, there is a positive association between e-participants’ perception of influencing government decision making and their assessment of government transparency. Finally, the article finds that there is a positive association between e-participants’ assessment of government transparency and their trust in the local government providing the e-participation program.

Over the last two decades, researchers have emphasized citizen participation in public administration decision making as a means of collaborating with citizens to promote democratic values such as responsiveness and accountability (Franklin and Ebdon 2004; Fung 2006; Irvin and Stansbury 2004; King, Feltey, and Susel 1998; Nelson and Wright 1995; Weeks 2000). The emerging literature on collaborative governance in public administration suggests that citizens should be considered not only customers, but also collaborative partners in a governance era for building democratic and effective governance (O’Leary and Bingham 2008; O’Leary, Van Slyke, and Kim 2010). Several scholars have also emphasized that government efforts to provide more opportunities for citizen participation and input into government performance evaluation and policy decision making represent an important strategy for improving trust in government (Citrin and Muste 1999; Kim 2010; Kweit and Kweit 2007).

Though scholars acknowledge the potential role of citizen participation in public administration decision making in influencing public trust in government, the specific form of the relationship between the process of citizen participation and its impact on building public trust in government is yet to be tested (Mizrahi and Vigoda-Gadot 2009). Several scholars address this concern and call for more studies on understanding citizens’ development and citizens’ perceived influence of participation on decision making in the context of political cultures in different countries (Fung and Wright 2001; Mizrahi and Vigoda-Gadot 2009). While there are various definitions of citizen participation, Verba, Scholzman, and Brady (1995) defined it as any voluntary action by citizens that is more or less directly aimed at influencing the management of collective affairs and public decision making. Arnstein (1969) introduced a ladder of participation that describes levels of interaction and influence in the decision-making process from elemental to more in-depth participation (e.g., information, communication, consultation, deliberation and decision making).

Meanwhile, the evolution of citizen participation in public administration decision making faces a new phase as many government agencies have initiated electronic government (e-government) development and taken advantage of Internet-based applications to facilitate community development and communication with constituents and to provide online application services (Heeks and Bailur 2007; Norris and Moon 2005; West 2004). A growing body of literature focuses on government efforts to utilize new technologies to enable greater citizen participation in policy formation and evaluation and to create greater information exchange between citizens and government (Komito 2005; Macintosh and Whyte 2008; Norris 1999; OECD 2001). Many governments have adopted various forms of electronic participation (e-participation) applications, including online...
The field of e-government has progressed significantly; however, the literature has left significant gaps in our understanding of the relationships among the management of e-participation applications, citizens’ experiences of e-participation, and e-participants’ trust in government. To fill some of these gaps, this article develops a theoretical model of the process of e-participation and analyzes the impact of the e-participation process on participants’ trust in government. This article explores how the impact of citizen e-participation on trust in local government is facilitated by five dimensions of the e-participation process: (1) satisfaction with e-participation applications, (2) satisfaction with government responsiveness to e-participants, (3) citizens’ development through the participation, (4) perceived influence on decision making, and (5) assessment of government transparency.

In order to examine several hypotheses, the study uses the 2009 E-Participation Survey data collected from 1,076 e-participants in a program called Cheon Man Sang Sang Oasis (hereafter Oasis) run by the Seoul Metropolitan Government (SMG) in South Korea since 2006. The Oasis program was designed to receive input from the residents of Seoul about SMG’s public policies, programs, and management practices. Based on the findings, the article discusses the managerial and policy implications of e-participation programs for building public trust in local government.

**Literature Review and Hypotheses**

While there is little agreement on the definition of trust at the institutional level, public trust in government can be assessed by the extent to which citizens have confidence in public institutions to operate in the best interests of society and its constituents (Cleary and Stokes 2006; Inoguchi et al. 2005). Several scholars have identified that citizens’ perceptions of economic and political performance influence their trust in government (Donovan and Bowler 2004; Mishler and Rose 2001). Furthermore, scholars argue that institutional context, political culture, changing behaviors and values of citizens, and citizen–state relationships are important factors in determining the level of trust in government (Andrain and Smith 2006; Christensen and Lægreid 2005). Moreover, scholars indicate that government efforts to provide more opportunities for citizen participation and input into government performance evaluation and policy decision making can be important for improving trust in government (Citrin and Muste 1999; Kim 2010; Kweit and Kweit 2007; Wang 2001).

Meanwhile, several scholars have explored the role of e-government in public trust in government (Morgeson, Van Amburg, and Mithas 2011; Welch, Hinnant, and Moon 2005). Welch, Hinnant, and Moon (2005) found that government Web site use is positively associated with e-government satisfaction and Web site satisfaction and that e-government satisfaction is positively associated with trust in government. However, few studies have examined the process of e-participation and its impact on building trust in government. In this article, e-participation refers to citizens’ voluntary participation and involvement in public administration affairs and public decision making through the use of Web-based applications provided by the government. Diverse e-participation applications can be utilized for increasing the transparency of the political and administrative process, for enhancing citizens’ direct involvement, and for improving the quality of opinion formation by opening new spaces of information and deliberation (Trechsel et al. 2003).

This study proposes a theoretical model of the process of e-participation. As depicted in figure 1, the model emphasizes that the effect of the e-participation process on e-participants’ trust in government is moderated by the extent to which e-participants are satisfied with e-participation applications and the quality of government responsiveness to e-participants’ needs, e-participants’ development through participation, their perceived influence on decision making, and their assessment of government transparency.

This section reviews six hypotheses of the e-participation process proposed in the article, which may facilitate the impact of e-participation on e-participants’ trust in the government providing the e-participation programs.

**E-Participation Applications and Citizens’ Development**

In terms of designing e-participation applications, several scholars have found that the ease and effectiveness of using e-participation applications motivates citizens’ active use of such applications (Kim, Kim, and Lennon 2006; Parasuraman, Zeithaml, and Malhotra 2005). The purpose of citizens’ utilization of e-participation...
applications varies depending on what they need or what they expect. For example, some e-participants may visit the e-participation programs to locate public policy and program information (e.g., policy proposals, progressive reports) associated with community issues. Some e-participants may participate in the programs to propose their input or to ask about policy and community issues. Other e-participants may want to view other e-participants’ ideas or share their thoughts with others. Depending on the level of e-participation experience, e-participants may need or expect various technological supports. Accordingly, e-participation applications should be designed to meet citizen needs by offering quality application services. Quality services in e-participation programs can allow e-participants to make suggestions, to locate policy and community information, to ask government employees about policy and community issues, and to view other participants’ input, easily and effectively (Coleman et al. 2008; West 2004).

This study proposes that e-participation applications with easy-to-use and effective functions (e.g., online help desk, search engine services, or well-designed content structure) are more likely to help e-participants access and gain information about what government agencies do for their communities and to submit policy comments and ideas. Furthermore, e-participants may be able to enjoy a better opportunity to gain support and shared understanding with other participants when e-participation applications are equipped with useful technological functions that make it easy to share their thoughts with other e-participants. Finally, initiating and suggesting policy input for the community, engaging others’ thoughts and suggestions, and sharing input with others can serve as a means of individual e-participant’s learning and development (Bandura 1977). Therefore, this study proposes the following hypothesis related to satisfaction with e-participation applications and e-participants’ perceptions of individual development through e-participation:

**Hypothesis 1:** E-participants’ satisfaction with the user-friendliness of e-participation applications is positively associated with the degree of e-participants’ development through e-participation.

**Government Responsiveness, Citizen Development, and Influence on Decision Making**

Prior studies have emphasized that participants’ satisfaction with citizen participation programs is affected by government employees’ responsiveness to participants’ needs and quality feedback to participants’ input (Kweit and Kweit 2004; Parasuraman, Zeithaml, and Malhotra 2005; Webler and Tuler 2000). Halvorsen (2003) found that participants who perceive a high quality of interactions and communications with government employees are more likely to believe that the agency in charge of managing the participation program is responsive to public concerns. Because citizens’ input is processed through electronic transactions in the e-participation applications, e-participants’ satisfaction also depends on the extent to which the participation process is managed to deal with participants’ input securely and fairly (Webler and Tuler 2000) and deliver them to key decision makers accurately (Halvorsen 2003; King, Feltey, and Susel 1998; Parasuraman, Zeithaml, and Malhotra 2005). This research proposes that e-participants’ satisfaction with the quality of government responsiveness can be positively related to e-participants’ individual development through e-participation. E-participants who receive quality feedback and responses through the interaction with government employees are likely to perceive that they gain useful policy information that helps them better understand government agencies and community issues (Blackburn and Bruce 1995; Sabatier 1988; Yankelovich 1991). Tajfel and Turner (1986) found that the quality of government response to the citizen participants facilitates participants’ self-esteem by reinforcing their sense of being an important part of the community, which increases identification with the community. Moreover, the quality of feedback and responsiveness often motivates e-participants to participate frequently (Moon and Sproull 2008), which may increase interaction with other e-participants and, in turn, enhance the opportunity to gain support from other e-participants and shared understanding with others.

This study further notes that the quality of government response to e-participants can be positively associated with e-participants’ perceived influence on decision making through e-participation. Scholars have highlighted that citizen participation serves as a means of affecting and controlling government bureaucracy and, in turn, enhancing a sense of ownership and empowerment (Box 2007; Roberts 2004). Also, participation introduces citizen monitoring, which increases the likelihood of catching deception and ensures the government’s commitment to openness and honesty (Yang and Holzer 2006). As a result, e-participation may enhance the opportunity for e-participants to have a greater monitoring role over public administration. Based on this argument, this research proposes the following hypotheses:

**Hypothesis 2:** E-participants’ satisfaction with the quality of government responsiveness is positively related to the degree of e-participants’ development through e-participation.

**Hypothesis 3:** E-participants’ satisfaction with the quality of government responsiveness is positively associated with their perceived influence on decision making.

**Citizens’ Development, Influence on Decision Making, and Government Transparency**

Another important question that has not been explored in the field of citizen participation and e-participation is how e-participants’ development and perceived influence on decision making through their e-participation experiences is associated with e-participants’ assessments of government transparency. This study proposes that e-participants’ perceptions of individual development that emerge from satisfaction with the quality of government responsiveness and with the user-friendliness of e-participation applications are likely to be associated with their positive assessment of government...
transparency. For example, e-participants who learn more about community issues (thanks to easy-to-use e-participation applications and the quality of government responsiveness) are likely to perceive that the government agencies offering the e-participation program are capable of improving transparency, two-way communication with citizens, and participatory governance.

Roberts (2004) argued that citizens’ ownership and empowerment are the essence of citizen participation values. One can argue that e-participants’ perceived influence in decision making through their e-participation experiences may lead to reduced conflicts regarding public policy and programs between e-participants and government agencies. Also, e-participants who perceive greater influence on public administration decisions and governance issues may show positive assessments of government transparency. In order to measure e-participants’ assessments of government transparency, this study focuses on openness, corruption, two-way communication with citizens, and fair and increased opportunities to participate in the rulemaking process in the government that provides e-participation programs. This study suggests the following hypotheses:

**Hypothesis 4:** The degree of e-participants’ development through e-participation is positively associated with their assessment of transparency in the government.

**Hypothesis 5:** E-participants’ perceived influence on decision making through e-participation is positively associated with their assessment of transparency in the government.

**Government Transparency and E-Participants’ Trust in Government**

Several studies have suggested that citizens’ evaluation of government performance is positively associated with trust in government (Chang and Chu 2006; Kim 2010; Mishler and Rose 2001; Orren 1997). For example, Chang and Chu (2006) and Kim (2010) revealed that citizens’ perceptions of government performance on the economy and control of political corruption are positively associated with their trust in government institutions in several East Asian countries. Furthermore, several studies have argued that government reform efforts emphasizing more democratic and citizen-centered transformation have promoted public trust in government (Kweit and Kweit 2007; Vigoda-Gadot 2007; Wang and Wan Wart 2007). For example, several scholars reported that those who believe that bureaucracy has made efforts to involve citizens in the administrative process have greater trust in the government (Kim 2010; Kweit and Kweit 2007). Scholars have also paid attention to the association between political corruption and the degree of public trust in government (Della Porta 2000; Pharr and Putnam 2000; Seligson 2002). Using the European Commission’s Eurobarometer data, Della Porta (2000) found that the degree of perceived corruption is negatively associated with trust in government in Italy, France, and Germany.

A recent study on citizens’ satisfaction with e-government and its association with trust in the federal government in the United States found that if citizens find e-government transparent, they are more likely to return to the site, recommend it, use it, and express more trust in the government agency (Sternstein 2010). Citizens’ positive assessment of government performance toward more transparency can also serve as a key variable that affects public trust in government (Kweit and Kweit 2007; Vigoda-Gadot 2007; Wang and Wan Wart 2007). This study proposes the following hypothesis:

**Hypothesis 6:** E-participants’ assessment of government transparency is positively associated with their trust in the government that provides the e-participation programs.

**Research Methods**

Seoul Metropolitan Government (SMG) has been working on how to use information technology to expand citizen participation in government affairs beyond traditional methods of citizen engagement since the administration of former Mayor Goh Kun in 1998. The evolution of e-government development and e-participation applications at the local level in South Korea should be understood in the context of (1) the South Korean Self-Governance Act 1988, which encouraged local governance and decentralization, and (2) national government reform efforts aimed at e-government development to promote transparency, participation, and anticorruption (Kim 2009).

This research focuses on Oasis, which is one of the e-participation programs within the SMG portal site that provides well-organized and systematic opportunities to participate in government processes. The Oasis has provided citizens with an opportunity to submit their ideas and suggestions on proposed specific policies via policy forums in the Web portal since October 2006. It further provides e-participants an opportunity to propose new ideas that may contribute to enhancing government effectiveness and resolving community issues related to any public policy and programs in the SMG and governance issues in the city of Seoul. Since 2006, 50,896 members have joined the Oasis (as of February 2011), and they have made 122,211 proposals and comments on Seoul government policies, projects, and practices (as of February 2011).

**Data collection.** To test our research hypotheses, we designed a survey questionnaire and implemented a Web-based survey in 2009. The sample frame was 10,136 members of the Oasis who had posted at least one suggestion last three years. As of June 2009, 34,792 citizens had joined the Oasis. The Oasis serves as an electronic channel of citizen participation in the decision-making processes of the SMG. Using the Oasis, citizens view, submit, and share their ideas and suggestions on SMG policies and programs associated with community and governance issues.

Of 10,136 members, we collected survey data from 1,076 participants (for a response rate of 10.6 percent). Because of the voluntary nature of Web-based surveys and the low response rate, we performed nonresponse bias test to see whether samples of the population had an equal opportunity to respond to the survey (Moon 1999; Rainey, Pandey, and Bozeman 1995). We found that the respondents and nonrespondents were not significantly different in terms of age, gender, or living location. Nonresponse bias therefore was not a concern for the validity of the data.

Table 1 shows the characteristics of the samples. It should be noted that female samples are underrepresented.
Measurement. Public trust in government is measured by the single item adopted from the Asia Barometer Survey (Inoguchi et al. 2005): “To what extent do you trust Seoul Metropolitan Government to operate in the best interests of society?” The item was rated on a five-point Likert scale ranging from 1 (“don’t trust at all”) to 5 (“trust a lot”), with a higher score indicating greater trust. While the one item may not capture different aspects of public trust in government (e.g., Welch, Hinnant, and Moon 2005), the item can assess the extent to which citizens have confidence in public institutions to operate in the best interests of society and its constituents (Cleary and Stokes 2006; McAllister 1995).

Satisfaction with e-participation applications (five items) and satisfaction with the quality of government responsiveness were measured by modifying the service quality index (Lee, Kim, and Ahn 2011; Parasuraman, Zeithaml, and Malhotra 2005). Those items were rated on a five-point Likert-type scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). E-participants’ development was measured by adapting the index of seven items (Irvin and Stansbury 2004; Kweit and Kweit 2004; Roberts 2004) with a five-point Likert scale. These items capture the extent of e-participants’ perceived effect of their Oasis participation on individual development. Influence on decision making was measured by using the three items developed based on previous studies (Irvin and Stansbury 2004; Kweit and Kweit 2004; Roberts 2004). Assessment of government transparency was measured by the index of five items. Table 2 presents five constructs with Cronbach’s alphas and corresponding survey items with standardized factor loadings.1 All the survey items associated with their respective constructs were found to be statistically significant ($p < .001$), providing evidence of adequate convergent validity.

To control for the potential effects of individual characteristics on trust in government, gender, age, and income variables were included in the model (Kim 2010; Welch, Hinnant, and Moon 2005). As for gender, male was coded as 1, while female was coded as 0. To measure age, respondents were asked to indicate their year of birth, which then was transformed into their age. Income variable is measured by a survey item: “Which of the following broad categories best describe your total monthly income in 2009?” The item includes six categories: (1) $1,667 or less, (2) $1,667–$2,492, (3) $2,500–$3,332, (4) $3,333–$4,166, (5) $4,167–$4,999, (6) $5,000 or more.2

Analyses and Model Assessment

Structural equation modeling (SEM) was used to empirically test the proposed model, which appears in figure 1. SEM is a statistical technique that simultaneously assesses the reliability and validity of

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Table 1 Demographics of Oasis Survey

<table>
<thead>
<tr>
<th>Variables</th>
<th>Characteristics</th>
<th>Respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>73.9</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>26.1</td>
</tr>
<tr>
<td>Age</td>
<td>20s</td>
<td>22.1</td>
</tr>
<tr>
<td></td>
<td>30s</td>
<td>29.3</td>
</tr>
<tr>
<td></td>
<td>40s</td>
<td>27.8</td>
</tr>
<tr>
<td></td>
<td>50s</td>
<td>15.2</td>
</tr>
<tr>
<td></td>
<td>Over 60s</td>
<td>2.5</td>
</tr>
<tr>
<td>Monthly income (missing = 3)</td>
<td>Less than $1,667</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>$1,667–$2,492</td>
<td>25.5</td>
</tr>
<tr>
<td></td>
<td>$2,500–$3,332</td>
<td>23.4</td>
</tr>
<tr>
<td></td>
<td>$3,333–$4,166</td>
<td>15.2</td>
</tr>
<tr>
<td></td>
<td>$4,167–$4,999</td>
<td>9.3</td>
</tr>
<tr>
<td></td>
<td>More than $5,000</td>
<td>9.9</td>
</tr>
</tbody>
</table>

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Table 2 Constructs, Survey Items, and Standardized Factor Loadings

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Survey Items</th>
<th>Factor loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with e-participation applications ($α = .85$)</td>
<td>(1) Oasis is easy to search for content and proposals available on Oasis Web sites.</td>
<td>.780a</td>
</tr>
<tr>
<td></td>
<td>(2) Oasis provides effective functions that deal with my questions (Help desk, Q&amp;A, contact information).</td>
<td>.698</td>
</tr>
<tr>
<td></td>
<td>(3) Oasis provides well-designed content structure.</td>
<td>.808</td>
</tr>
<tr>
<td></td>
<td>(4) Oasis has content-rich services.</td>
<td>.665</td>
</tr>
<tr>
<td></td>
<td>(5) Oasis provides the functions that are easy to submit ideas and to get feedback.</td>
<td>.690</td>
</tr>
<tr>
<td>Satisfaction with government responsiveness ($α = .87$)</td>
<td>(1) SMG has provided answers and feedback to my proposal in a sincere manner.</td>
<td>.793a</td>
</tr>
<tr>
<td></td>
<td>(2) SMG has provided answers and feedback to others’ proposal in a sincere manner.</td>
<td>.772</td>
</tr>
<tr>
<td></td>
<td>(3) I found the Oasis process to be very responsive to my needs.</td>
<td>.765</td>
</tr>
<tr>
<td></td>
<td>(4) I have confidence that my proposal is delivered accurately.</td>
<td>.787</td>
</tr>
<tr>
<td></td>
<td>(5) I trust that my proposal is delivered securely.</td>
<td>.614</td>
</tr>
<tr>
<td></td>
<td>(6) The proposal is selected fairly through Oasis process.</td>
<td>.671</td>
</tr>
<tr>
<td>E-participants’ development ($α = .89$)</td>
<td>(1) increased my self-esteem.</td>
<td>.804a</td>
</tr>
<tr>
<td></td>
<td>(2) contributed to community building.</td>
<td>.704</td>
</tr>
<tr>
<td></td>
<td>(3) helped me build better civic duties.</td>
<td>.769</td>
</tr>
<tr>
<td></td>
<td>(4) provided for an opportunity to learn more about community issues.</td>
<td>.753</td>
</tr>
<tr>
<td></td>
<td>(5) helped me gain useful information through the interaction with other participants.</td>
<td>.611</td>
</tr>
<tr>
<td></td>
<td>(6) positive impact on my career development.</td>
<td>.770</td>
</tr>
<tr>
<td></td>
<td>(7) helped me gain support and shared understanding from other participants.</td>
<td>.694</td>
</tr>
<tr>
<td>Influence on decision-making ($α = .82$)</td>
<td>(1) SMG actually uses my proposal(s) for making and implementing policies and programs.</td>
<td>.823a</td>
</tr>
<tr>
<td></td>
<td>(2) My proposal is helpful for SMG to make and implement policies and programs even though they don’t use it actually.</td>
<td>.719</td>
</tr>
<tr>
<td></td>
<td>(3) SMG actually uses others’ proposal(s) for making and implementing policies and programs.</td>
<td>.781</td>
</tr>
<tr>
<td>Assessment of government transparency ($α = .89$)</td>
<td>(1) SMG’s service operation processes have been more transparent.</td>
<td>.795a</td>
</tr>
<tr>
<td></td>
<td>(2) SMG employees’ engagement in corruption has been reduced.</td>
<td>.699</td>
</tr>
<tr>
<td></td>
<td>(3) SMG has promoted two-way communication with the public.</td>
<td>.834</td>
</tr>
<tr>
<td></td>
<td>(4) SMG has provided the residents of Seoul with greater opportunities to participate in the rulemaking process.</td>
<td>.817</td>
</tr>
<tr>
<td></td>
<td>(5) SMG has provided the residents of Seoul with an equal opportunity to participate in the rule making process.</td>
<td>.807</td>
</tr>
</tbody>
</table>

Note: Cronbach’s alpha in parentheses; Oasis (the e-participation program); SMG (Seoul Metropolitan Government).

a. For model identification purpose, loading is fixed at 1 for the indicator in unstandardized solution.
the measures of theoretical constructs and estimates the relationships among these constructs (Kline 1998). It is used to analyze measurement and structural models with multi-item constructs, and it is widely used in public administration research (Morgeson et al. 2011). Specifically, the measurement model tests the reliability and validity of the indicators for the corresponding construct (also known as latent variable or factor), while the structural model validates the hypothesized paths among constructs (Kline 1998). Confirmatory factor analysis (CFA) is used to validate the measurement model, and path analysis is applied to test the structural model. The measurement model should be validated prior to testing the structural model (Anderson and Gerbing 1988; Garson 2011; Perry et al. 2008). AMOS 7.0 was used and parameters were estimated by the maximum likelihood method. Both models are assessed with widely used goodness-of-fit indices such as the comparative fit index (CFI), incremental fit index (IFI), and root mean square error of approximation (RMSEA).

**Measurement model.** The first step was to use CFA by imposing a model in which all factors were allowed to covary. As for the data model fit criteria, a measurement model can be valid when the value of \(\chi^2/df\) is less than 3, values of CFI and IFI are equal to or greater than .90—ideally, equal to or greater than .95—and the value of RMSEA is less than .08 (Byrne 2001; Kline 1998). The overall model fit measures such as CFI (.927), IFI (.927), and RMSEA (.060) are good, indicating that the proposed CFA model can be retained as a valid measurement model. However, the \(\chi^2\) statistic is significant (1512.8, \(p = .000\), \(df = 310\), \(n = 405\)), which is not indicative of a model fit, and \(\chi^2/df\) does not meet the traditional criteria (\(\chi^2/df < 3\)). However, this rule has been considered inappropriate because the \(\chi^2\) statistic is often very sensitive to a large sample size (Byrne 2001; Kline 1998).

**Structural model.** The second step was to modify the measurement model to predict theoretically derived paths in the proposed model. Table 3 shows the goodness-of-fit indices of the hypothesized structural model. Although the parsimonious index of \(\chi^2/df\) does not support the proposed structural model, the other parsimonious fit index of RMSEA supports the model (.059) given that the threshold scores are usually lower than .08 (Byrne 2001; Kline 1998). CFI supports the validity of the model (CFI = .912), while IFT does not (IFI = .895). Those scores are considered an excellent fit if they are greater than .9.

To assess the fitness of the hypothesized model and to determine the best model to represent the data, we used the change in chi-square test (Bentler and Bonett 1980) to compare the hypothesized model with four alternative models (Seibert, Kraimer, and Liden 2001). Alternative model 1 simply assumes that all constructs are directly associated with e-participants’ trust in government. The alternative model 2 hypothesizes that the e-participation value constructs (i.e., e-participants’ social learning and influence on decision making) and e-participants’ assessments of government transparency are directly associated with trust in government. However, unlike alternative model 1, model 2 specified that the association between satisfaction constructs (i.e., satisfaction with e-participation applications and e-participants relation management) and trust in government is mediated by e-participants’ assessments of government transparency. Alternative model 3 modifies model 2 by specifying that the e-participation value constructs mediate the link between the satisfaction constructs and trust in government. That is, the satisfaction constructs are indirectly associated with trust in government through the e-participation value constructs. Finally, alternative model 4 modifies the hypothesized model by adding the direct association between satisfaction constructs and assessment of transparency.

As shown in table 3, the comparison shows that the hypothesized model provides a significantly better fit than alternative models 1, 2 and 3. However, the change in chi-square test shows that alternative model 4 performs significantly better than the hypothesized model (\(\Delta\chi^2 = 65.7, \Delta df = 1, p < .001\)). Moreover, alternative model 4 provides better RMSEA (.058) and goodness-of-fit indices (CFI = .916, IFI = .900). Therefore, alternative model 4 is retained as the revised study model because it is the best-fitting model. All of these alternative models include the control variable paths.

**Results**

Table 4 shows the means, standard deviations, and correlation statistics of latent and dependent variables. All of the 15 bivariate correlations are statistically significant at \(p < .001\). The magnitude of Cronbach’s coefficient for the multiple-item measures and trust measure ranges from .39 (between influence on decision making and trust in government) to .70 (between the quality of the e-participants’ relation management and influence on decision making).

The standardized parameter estimates for all paths in the revised model are reported in figure 2. The \(t\)-statistics for path coefficients for six hypotheses are statistically significant.
with the e-participation program run by SMG in South Korea, this collected from residents of Seoul who have hands-on experience its effect on e-participants' trust in government. Using survey data Th is study has explored the structure of e-participation process and Implications

Figure 2 Results of Revised Model

Figure 2 reveals that hypothesis 1 is supported (β = .12, p < .01). Also, the direction of the path is positive, consistently supporting the hypothesis. The revised model indicates that satisfaction with e-participation applications has a direct positive effect on e-participants’ assessment of government transparency (β = .30, p < .001). But further analysis shows no direct link to trust in government (β = .009, p < .756).

As expected, hypothesis 2 is supported by the data (β = .59, p < .001). That is, e-participants’ satisfaction with government responsiveness has a direct effect on their positive perceptions of individual development through e-participation. The results also support hypothesis 3 (β = .84, p < .001). That is, the study sample reported that satisfaction with government responsiveness is positively related to their perceptions of influencing government decision making. This structural path was the strongest and the most significant in the model. The revised model, however, suggests that there is no direct association between e-participants’ satisfaction with government responsiveness and their assessment of government transparency (β = -.04, p < .694).

In addition, the results support hypothesis 4 (β = .32, p < .001). E-participants who perceived enhanced individual development through their e-participation experiences reported positive assessments of government transparency. The results show that there is a positive relation between e-participants’ perceived influence on government decision making and their assessment of government transparency (hypothesis 5) (β = .27, p < .001). Finally, the data reveal that hypothesis 6 is also supported (β = .70, p < .001). As expected, e-participants’ assessment of government transparency is positively associated with their trust in the government that provides the e-participation programs. This structural path is the second strongest and significant in the model.

Implications

This study has explored the structure of e-participation process and its effect on e-participants’ trust in government. Using survey data collected from residents of Seoul who have hands-on experience with the e-participation program run by SMG in South Korea, this research found that citizens’ satisfaction with e-participation applications and government responsiveness has a direct and positive association with e-participants’ perceptions of individual development through e-participation. E-participants’ greater satisfaction with the quality of government responsiveness is also positively associated with their perceived influence on decision making through e-participation. And, the study observed that e-participants’ assessments of government transparency become more favorable when they perceive that individual development and influence on government decision making are enhanced through e-participation. Finally, we found that assessments of government transparency are positively associated with e-participants’ trust in the government that provides e-participation programs.

High costs for accessing policy information and engaging in administrative decision-making processes have been criticized as a barrier to citizen participation (Irvin and Stansbury 2004; Thomas and Streib 2003). As noted earlier, Web-based e-participation applications have been advocated as a crucial tool for e-government to facilitate citizen participation by offering easier and more effective access to policy information and involvement in administrative decision-making procedures (Walker 2010; Welch, Hinnant, and Moon 2005; West 2004). The results of this study suggest that e-participation applications focusing on user-friendly design are likely to create a positive perception of government transparency. Another important lesson from the study is that citizen satisfaction with e-participation applications is indirectly related to trust in government through either enhanced individual development through e-participation or positive assessments of government transparency. It is worthwhile to note that this result is inconsistent with the observations of prior studies that have examined the direct link between satisfaction with e-government applications and trust (Welch, Hinnant, and Moon 2005; Morgeson, Van Amburg, and Mithas 2011).

The study results show that satisfaction with the quality of government responsiveness (e.g., ongoing feedback to e-participants and credibility for the security of e-participation management) is positively associated with e-participants’ perceptions that they can
influence government decision making through e-participation. These findings support prior studies regarding the important role of empowerment in delivering effective participation programs (Moon and Sproull 2008; Kim, Kim, and Lennon 2006). However, e-participants’ satisfaction with government responsiveness is not directly linked to their perceptions of government transparency. Rather, e-participants’ perceptions of individual development and influence on government decision making mediate the link between satisfaction with the quality of government responsiveness and perceived government transparency. Moreover, the study participants show greater trust in the local government that provides e-participant programs when they have a more favorable assessment of government performance toward more transparency. The results are consistent with prior observations (Wang and Wan Wart 2007; Kweit and Kweit 2007; Vigoda-Gadot 2007).

The proposed e-participation process model and the results of a structural equation analysis found in the study indicate that government leaders need to pay more attention to the process and apply a management capacity-building approach to effectively manage e-participation programs in local government. Scholars in public administration and government agencies have also stressed the need to understand the ways in which management capacity and processes can contribute to improved innovation and performance (Ingraham, Joyce, and Donahue 2003; Walker and Boyne 2006). The results of this study indicate that in order to effectively manage e-participation programs, government leaders should emphasize a formal evaluation tool for assessing the user-friendliness of specific e-participation applications, the quality of government responsiveness to e-participants’ needs, and government performance on transparency.

Inviting citizens’ and employees’ input to enhance the quality of e-participation process management and to assess the effectiveness of the e-participation programs should be considered. When government leaders adopt a system of managing for results for e-participation programs, they should consider three key components (Ingraham, Joyce, and Donahue 2003): (1) clear objectives of specific e-participation applications, (2) performance measurement of the applications, and (3) continuous monitoring of the effectiveness of the e-participation applications. In order to continuously improve the effectiveness of e-participation programs, government leaders should send a report of e-participation effectiveness to major stakeholders and solicit feedback. Government leaders also need to pay attention to the investment in human resource capacity for enhancing the quality of government responsiveness. Recognizing the accomplishments of teams and individuals that help improve e-participation effectiveness through the high quality of government responsiveness should be considered. Finally, for effective and efficient communication between e-participants and government employees, government leaders need to emphasize management capacity building for government agencies to coordinate and enable integration, sharing, and transfer of information and knowledge within agencies and governmental networks.

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Conclusion
This exploratory study contributes to the public trust literature by uncovering several dimensions of e-participation’s role in influencing public trust in government. Instead of a simple and direct link between e-participation and public trust, the study proposed and tested the structural model of the e-participation process, citizens’ development and empowerment, government transparency, and public trust in government. Furthermore, few empirical studies have been conducted to examine how e-government technologies and management of e-participation shapes participants’ perceived influence on decision making and their assessments of government transparency.

There are important gaps in the discourse of public administration when it comes to the effectiveness of citizen participation and e-participation programs in various countries. The study model and findings raise a bigger and important question regarding how to conduct local e-participation research in the context of decentralization in different regions and countries. How to design e-participation programs and how to evaluate the effectiveness of the programs could be affected by different cultures, different national values, and different institutional needs in different countries. The results of this study could be outcomes of unique citizenship evolution that has been affected by South Korea’s historical, political, and cultural evolution for the last several decades. Accordingly, more in-depth case studies in various regions and countries may help develop e-participation models, and scholarly efforts to perform rigorous testing of the models with valid data would facilitate theory building about e-participation effectiveness in public administration.

While it has several theoretical and practical implications, this study has limitations to address. First, the study findings are based on one sample of citizens who experienced one e-participation program run by one city government. The study sample may limit the external validity of the research. The results may not apply equally to a different context such as e-participation in urban local governments in other countries. Further studies need to examine whether the findings can be applied in different contexts. Also, it should be noted that sampling bias could be involved in this study because the response rate was low and female samples were underrepresented. We call for future research to use a more representative sample to verify the findings. Second, as noted earlier, we measured public trust in government using a single survey item. As it is more sensitive to measurement error than multiple-item measures, the results associated with public trust should be interpreted cautiously. We suggest that future studies use multiple items to broadly and comprehensively capture the public trust in government.

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Notes
1. Maximum likelihood estimation technique is used to calculate the factor loadings (λ) between observed indicators and the corresponding construct (Shumacker and Lomax 2004, 66–69).
2. 1,200 Korean won was equal to approximately US$1 as of September 1, 2011.

References


