

Opportunities for Online Citizen Participation: A Study of Global Municipal Practices

Aroon Manoharan
Kent State University

Lamar Vernon Bennett
Long Island University, Brooklyn

This article highlights the results of two international surveys of municipal e-governance and the opportunities for citizen participation online. The focus of the paper is primarily on the opportunities provided for online citizen participation through municipal websites worldwide. The research determines the factors that influence such opportunities, and its longitudinal growth among global municipalities during the years 2007-2009. Based on the results, the number of cities with official websites increased in 2009; however, the potential for online citizen participation is still in its early stages of development. The study also found that cities' decisions to provide such opportunities seem to be driven primarily by the level of Internet use. Our international longitudinal study provides a critical contribution to the overall literature on e-governance, along with identifying the best practices in online citizen participation.

Over the past years, governments around the world began making the transformation to e-government, adopting information and communication technology (ICT) to provide services efficiently, as well as to improve transparency and accountability. E-government refers to the phenomenon of “utilizing the Internet and the World-Wide-Web for delivering government information and services to citizens” (UN and ASPA 2002, 1). Silcock (2001, 88) defines e-government as “the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees”. The implementation of e-government enables public administration to transform the nature of interactions, improve service delivery, and accommodate more citizens in the governing process (UNDESA 2003).

Gradually, the focus of the use of ICT began to include the aspect of citizen participation, as evidenced by the introduction of the term “e-governance”, by subsequent scholars and researchers in the field. According to Macueve (2008, 365), the objective of e-governance is to “restructure administrative functions and processes, monitor government performance, and improve the relationship between government and the citizens”. The rise of the Internet has provided governments, at all levels, the opportunity to improve services and engage the public more effectively. This use of ICT was a direct response to citizens and

policy-makers' demands to be more efficient with their resources, while simultaneously enhancing the level of transparency of government agencies (Reddick 2012). Research also indicates that the increased use of ICT by local and state governments improved government performance and citizen trust (Tolbert and Mossberger 2006). While this is an encouraging development, few scholars have examined the factors that drive governments to provide opportunities for online citizen participation. For instance, is increased citizen trust in government related to the opportunities that governments provide for citizens to be engaged via their official websites? Moreover, are such opportunities for online citizen participation related to socioeconomic factors?

Drawing on data from the 2009 Rutgers-SKKU Municipal E-Governance Survey, our paper seeks to determine which factors drive opportunities for citizen participation online. This joint study ranked municipalities worldwide, based on their scores in five categories: privacy and security, usability, content, services, and citizen participation. Similar studies in 2009, 2007, 2005, and 2003 (Melitski et. al. 2005; Holzer and Kim 2005) resulted in one of the most exhaustive studies of municipal e-governance ever conducted. This article deals with the results of the 2009 and 2007 studies with regard to the opportunities municipalities provide for online citizen participation. The paper focuses on two research questions. First, what are the factors that influence opportunities for online citizen participation among global municipalities? Second, what are the longitudinal trends in online citizen participation opportunities provided by global municipalities during the years 2007-2009? This paper seeks to answer these questions by analyzing the descriptive data from the municipal e-governance surveys. The research also uses Ordinary Least Squares (OLS) regression to test how trust, wealth, and education influence the opportunities municipalities offer for online citizen participation.

Literature Review

The adoption of ICT by governments holds promise beyond the cost-saving potential of previous reform initiatives, it also promises a democratizing effect by providing opportunities for citizens to participate in the decision-making process. In addition to the focus on adoption and implementation of e-government, research has also shown that there has been an evolution in how scholars conceptualize e-government. Along with e-government, research has also introduced other important concepts that have broadly impacted how scholars study this phenomenon, one of which is e-governance. To provide the reader clarity we argue that there is a distinction between e-government (mainly concerned with the provision of services) and e-governance (which combines the provision of services with citizen participation in the administrative process). E-governance refers to both delivery of public services and citizen participation in governance (Holzer and Kim 2008). According to Garson (2006, 19), the concept of e-governance refers to "a vision of changing the nature of the state". E-governance extends beyond e-government; e-government refers to the application of technology to improve service delivery, while e-governance is a broader framework pertaining to the integration of the ICTs with the political institutions (Rossel and Finger 2007). The focus of this paper is e-governance and more specifically, the citizen participation aspect of e-governance among the top global cities.

The use of ICTs provides citizens the opportunities to participate in the decision-making process (Carrizales 2008) and broadens political participation by connecting citizens with their elected representatives (Macintosh 2004; Korac-Kakabadse and Korac-Kakabadse 1999). The Internet is a convenient mechanism for citizen-users and advocacy groups to

engage their government, with the potential to decentralize decision-making. Computers, unlike other media, enable citizens to demand and obtain desired information when online (Browning 2002). The use of ICT provides citizens the opportunities for convenient, flexible, and inexpensive interpersonal communication through email, listservs, and chatrooms (MacDonald and Tolbert 2006). E-governance also allows for greater government transparency and openness, which leads to a better-informed citizenry. Frauholz and Unnithan (2006) identify two main goals for promoting e-governance – enable citizen access to information on political processes, and promote active representation through citizen participation. Apart from disseminating information to the public, websites can also be used as an effective checks-and-balances mechanism between government and citizens. Therefore, it is important to study how municipal governments address the demand for providing opportunities for online citizen participation. Such studies provide benchmarks and best practices that lead to improved performance, especially for those municipalities still in the earliest stages of development. Moreover, a global study of municipal e-governance would help us to better understand this phenomenon, and the Rutgers-SKKU Municipal E-Governance Survey is one such study.

The Rutgers-SKKU Municipal E-Governance Survey analyzed the websites in five categories: privacy and security, usability, and content of websites, the type of online services currently being offered, and citizen participation through websites established by city governments. This paper focuses on the results of the surveys in the area of citizen participation, and analyzes the emphasis placed by municipal governments on the opportunities for online citizen participation when introducing e-governance. Additionally, the study determines the factors that influence the opportunities provided by cities for online citizen participation.

The municipalities evaluated were selected based on population size, and the percentage of individuals using the Internet. Using data from the International Telecommunication Union (ITU), an organization affiliated with the United Nations (UN), the top 100 wired nations were identified, and the largest cities by population were selected for the study. Of the 100 cities selected in 2009, 87 cities had official websites, compared to 86 cities in 2007. The survey instrument utilized for the research is based on the Rutgers E-Governance Performance Index, one of the most comprehensive instruments for e-governance research, with 98 measures and 5 distinct categorical areas. Each category included 18-20 measures, which were coded on a four-point scale (0, 1, 2, 3) or a two-point scale (0, 3 or 0, 1) based on the level of opportunities available on the website. The research analysis examined several ways in which municipal governments are providing opportunities for citizen participation online, such as bulletin boards, feedback forms, policy forums, newsletters, satisfaction surveys, and performance reporting systems. The study determined whether local governments offer current information about municipal governance online or through an online newsletter or e-mail listserv. The study also looked for the use of Internet-based polls about specific local issues and examined whether communities allow users to participate and view the results of citizen satisfaction surveys online. Some municipalities use their websites to measure performance, and publish the results of performance measurement activities online. Still other municipalities use online bulletin boards or other chat capabilities for gathering input on public issues. Online bulletin boards offer citizens the opportunity to post ideas, comments, or opinions without specific discussion topics. In some cases, governments attempt to structure online discussions around policy issues or specific agencies. Our research looked specifically for such online features

that foster civic engagement and citizen participation in government.

To ensure inter-rater reliability, each municipal website was evaluated in the native language by two raters, and websites with significant variation (more than 10%) were analyzed by a third rater. Evaluators were also provided with sufficient examples to guide how the variables needed to be measured and were given comprehensive written instructions for assessing the websites. The index contained questions with both dichotomous and four-point measures; the dichotomous measures corresponded with the values of 0 or 3. Table 1 shows the scale used for the questions evaluating citizen participation.

Table 1. E-Governance Scale

Scale	Description
0	Information about a given topic does not exist on the website
1	Information about a given topic exists on the website
2	Downloadable items are available on the website
3	Services, transactions, or interactions can take place completely online

Data and Methods

In this study, we use OLS regression to test factors that influence the opportunities provided by governments for online citizen participation. In this paper, we argue that the level of citizen participation opportunities offered by cities implementing e-governance is driven by trust, level of Internet usage, wealth, and education. The model used in this analysis is represented by the following reduced form regression equation:

$$OCP = \{T, IU, W, E\}$$

Where:

OCP = Opportunities for Citizen Participation

T=Citizen Trust in Government

IU= Internet Use

W=Wealth

E=Education

As was mentioned earlier, when citizens trust their government, they are more likely to participate in the political and administrative process. This is related to the idea that citizens will participate more if they perceive government to be responsive and accountable. We measure trust in government using the 2009 Corruption Perceptions Index (CPI), developed by the Transparency International surveys, based on how citizens perceive the level of corruption in the respective country. This index is the preeminent measure of corruption worldwide. We use the CPI as a measure of citizen trust, because the more citizens perceive their country as being highly corrupt, the less likely they are to trust the government, and the less likely they are to participate in the political and administrative process. This is even more imperative for e-governance where scholars such as Mossberg and Tolbert (2006) have shown that e-governance initiatives enhanced citizen trust through

changing citizen perceptions of local government.

The CPI relies on polling data and other relevant data on government collected by a variety of non-governmental organizations. The CPI focuses on responses to survey questions related to the bribery of government officials, kickbacks, theft of public funds and resources, and anti-corruption initiatives (Transparency International 2012). The corruption index is measured on a ten-point scale, where one indicates that citizens perceive the government to be highly corrupt, and ten indicates that citizens perceive the government to be transparent and acting in the public interest. It is our expectation that higher scores on the CPI will be correlated to higher incidence of opportunities for online citizen participation.

Another factor we are interested in is Internet use. Since we are looking at how trust in government is related to opportunities for citizen participation in e-governance, it would be natural that Internet use would have an effect on opportunities for online citizen participation as well. This is because the number of Internet users will be related to the opportunities individuals would have to participate in the political process via the Internet. We measure Internet use by relying on data from the 2008 UN International Telecommunication Union (ITU) world telecommunication/information communication technology indicators database. Internet use is measured by the number of Internet subscribers per 100 inhabitants. Our expectation is that there is a positive relationship between Internet use and opportunities for online citizen participation.

We also include other factors that we expect to have a significant effect on citizen participation, such as wealth and education. Scholars (Rosenstone and Hansen 1993) have noted that citizens with more wealth and education are more likely to participate in the political process, as they will have the time and the intellectual capacity to participate in the political process. Wealth is measured using the natural log of the 2008 per capita gross domestic product for each country in the data set. This data is drawn from the United Nations Department of Economic and Social Affairs Report (UNDESA 2008). GDP per capita is used because it is the most accurate way to measure wealth, which divides the wealth of the country evenly by each resident. The natural log of GDP per capita is used because wealth will increase the opportunities for online citizen participation, but will occur at a decreasing rate (Studmand 2006). In other words wealth will have a positive effect on opportunities for online citizen participation but this will hold only up to a certain level, and then flatten out thereafter. We measure education using the 2009 Education Index drawn from the United Nations Development Report. The education index is measured on a scale where zero is a low level of education among citizens and one is high level of education. We expect that higher levels of wealth and education will be associated with higher incidence of opportunities for online citizen participation.

Results and Findings

Descriptive Analysis of Citizen Participation

Based on results of the evaluation of 87 municipal websites in 2009, the top 5 cities in providing opportunities for online citizen participation include Mexico City, Prague, Bangkok, Seoul, and Shanghai. Among these cities, Seoul and Bangkok also ranked in the top five in 2007. Mexico City ranks first, with a score of 13.45 out of a maximum score of 20. This is a significant improvement from its 42nd position in 2007. Prague followed in second place with a score of 11.64, again a significant improvement from 36th in 2007 with a score of 3.46. Bangkok ranked third with a score of 11.27 in 2009, similar to its ranking in

2007. Seoul and Shanghai ranked fourth and fifth, with scores of 11.09 and 10.55 respectively. The average score in this category is 3.50, slightly decreasing from 3.55 in 2007. Table 2 summarizes the results for the top 20 municipalities in this category.

Table 2. Results in Citizen Participation (2009)

Rank	City	Country	Citizen Participation
1	Mexico City	Mexico	13.45
2	Prague	Czech Republic	11.64
3	Bangkok	Thailand	11.27
4	Seoul	Republic of Korea	11.09
5	Shanghai	China	10.55
6	Singapore	Singapore	10.00
7	Johannesburg	South Africa	9.82
8	Vienna	Austria	8.36
8	Hong Kong	Hong Kong	8.36
10	Paris	France	8.00
11	Auckland	New Zealand	7.64
11	Zagreb	Croatia	7.64
13	Moscow	Russia	6.55
14	Buenos Aires	Argentina	5.82
14	Stockholm	Sweden	5.82
14	Toronto	Canada	5.82
14	Ljubljana	Slovenia	5.82
18	New York	USA	5.64
19	Bratislava	Slovakia	5.09
19	Berlin	Germany	5.09
19	Tokyo	Japan	5.09
19	Vilnius	Lithuania	5.09

Breakdown of Citizen Participation

The following section discusses the results of key aspects selected from the category of opportunities for online citizen participation by continent. For the 2009 survey, more than 70% of municipalities evaluated provided a mechanism allowing comments or feedback through online forms, compared to 64% in 2007. Most cities in Europe, Asia, North America, and South America provided such facilities. When evaluating for bulletin boards, we found that more than 35% do have these capabilities. All cities in Oceania and 46% of cities in Europe provide such facilities, compared to 35% in Asia. Apart from feedback forms, municipalities should provide online bulletin boards to gather citizen opinion on public issues. Such online bulletin boards pertain to that component of the city website where any citizen can post ideas, comments, or opinions, without requiring specific

discussion topics. The bulletin board should be user-friendly, especially for first-time users, along with effective search mechanisms. Many cities also provided advanced opportunities for online citizen participation in the form of online discussion forum on policy issues. Such online forums are often used by cities to facilitate public consultation on policy issues and citizen participation in discussing specific topics. In 2009, 33% of municipalities evaluated have a website containing forums, which increased from 21% in 2007. Additionally, the data from citywide performance measurement systems were provided online by about 40% of all municipalities evaluated, which doubled from 20% in 2007.

Table 3. Results for Citizen Participation by Continent (2009)

	Oceania	Europe	Average	Asia	North America	South America	Africa
Feedback Form	50%	74%	70%	78%	78%	67%	33%
Bulletin Board	100%	46%	35%	35%	11%	22%	22%
Policy Forum	100%	43%	33%	22%	22%	11%	44%
Performance Measurement	100%	71%	40%	17%	22%	11%	11%

When compared based on continents, cities in Oceania scored an average of 4.91, followed by European cities with an average of 3.89. Asian cities ranked third, with an average score of 3.78, followed by cities in North America (3.40), Africa (2.54), and South America (2.04), which scored below the overall average of 3.50. There was a considerable difference between cities from OECD nations and those from non-OECD nations. The OECD cities scored an average of 5.03, while cities in non-member countries scored only 2.77 in citizen participation, indicating that cities in economically advanced countries tend to place more emphasis on providing opportunities for online citizen participation. With regard to feedback to individual departments/agencies, 82% of municipalities in OECD countries provided a mechanism allowing comments or feedback through online forms. Comparatively, only 64% of municipalities in non-OECD countries provided such opportunities. With regard to online bulletin board or chat capabilities for gathering citizen input on public issues, 54% of municipalities in OECD countries provided such features online, compared to only 27% of municipalities in non-OECD countries. With regard to online discussion forums on policy issues, 50% of municipalities in OECD countries have a website containing an online discussion forum, while only 25% of municipalities in non-OECD countries, had such facilities online. Additionally, 43% of municipalities in OECD countries and 39% of municipalities in non-OECD countries offered the data from citywide performance measurement systems.

Regression Results

The findings from the OLS regression are displayed in Table 4. Our results show that there is a positive relationship between trust in government ($b = 0.061$) and opportunities for online citizen participation. In other words as citizen trust increases, the level of citizen participation through the municipal website also increases. This lends support to the view

that when citizens are more trusting in government and its institutions, they will be afforded more opportunities to be engaged through the municipal website. While this finding conformed to our expectation, it did not rise to the level of statistical significance ($p=0.834$). What this finding shows is that a one-unit increase in the corruption index (which measures citizen trust) is related to a 0.061 increase in the opportunities provided for online citizen participation. However, this finding does not discount the argument that, as trust in government increases, the level of citizen participation opportunities also increases. This also indicates the need for additional research to tap into the relationship between trust in government and the opportunities provided for online citizen participation. The other factor that we hypothesize as playing a significant role in providing opportunities for online citizen participation – Internet use – had a positive relationship. Our model provides evidence that Internet use ($b=0.012$) is positively related to citizen participation. What this finding shows is that, with every additional Internet user per 100 inhabitants the citizen participation score increases by 0.012. This is in line with our original contention that when citizens are connected they will be afforded more opportunities to engage government through the municipal website. This relationship was however not statistically significant ($t = 0.733$).

The remaining variables – wealth and education – both had a positive effect on the opportunities for online citizen participation. Wealth displays a positive relationship to citizen participation, which conformed to our expectations, given the long history of the relationship between wealth and political participation. What this finding indicates is that a 1% increase in GDP per capita is related to a 0.848 increase in municipal citizen participation score. Education appeared to have a positive, but not statistically significant effect on citizen participation, which conformed to our expectations. To put this finding into context, a one-unit increase in the education index is related to a 0.589 increase in the opportunities provided for online citizen participation.

Table 4. Regression Findings (Dependent Variable: Opportunities for On-line Citizen Participation)

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	p
	Beta	Std. Error	Beta		
Trust in Government	.061	.291	.044	.210	.834
GDP per capita (natural log)	.848	.723	.270	1.174	.244
Education	.589	4.63	.020	.127	.899
Internet Users	.012	.034	.092	.342	.733
Constant	-5.724	5.137		-1.114	.269

N=87

R²=.169

Discussion and Implications

Our findings provide evidence that Internet use exhibits a positive relationship to opportunities for online citizen participation in the municipalities in the survey. Our findings also show that cities have not yet realized the full potential of their websites to enhance and improve the opportunities for online citizen participation. Based on these findings one could argue that if municipalities take advantage of higher levels of Internet use, then citizens would be responsive to participating online. Second, municipalities in the survey need to provide more robust opportunities for citizens to participate via their websites. To illustrate how both of these goals could be accomplished we present and discuss two citizen

participation initiatives from two cities that were included in the survey – Seoul, South Korea and Prague, Czech Republic. Both of these cities received the highest scores for providing opportunities for online citizen participation. These experiences provide context to our findings as well as illustrate the potential of the municipal website to transform citizen participation in the administrative process.

One notable example of how a municipality in the survey has taken advantage of citizen participation via the Internet is Seoul, South Korea, which ranked highest in the levels of citizen participation in the survey. The website of Seoul has also received a high score in all five categories, along with being ranked highest overall – first in the categories of content, privacy, and services; second in usability; and fourth in citizen participation. The openness of government can lead to increased accountability and reduced government corruption. The case of Seoul's Online Procedures Enhancement for Civil Application (OPEN) system has demonstrated a successful practice of transparency and decreased corruption in government via the use of the Internet (Holzer and Kim 2008). Seoul's Cyber Policy Forum is the highlight of the municipality's efforts toward enhancing online citizen participation. The Cyber Policy Forum aims to "provide citizens with opportunities to understand policy issues and to facilitate discussions; to encourage citizen participation in public administration and to obtain feedback about policy issues; and to reflect citizens' opinions in city policies and produce more tailored policy solutions for citizens".

In the late 1990s the Mayor Go Geon launched the world's first Internet based citizen participation initiative - Appeal to the City Mayor (Lim 2010). This feature allows citizens to contact the mayor about any issue that relates to city services or governance. Another unique feature of this site is that it gave citizens the ability to talk in real time to the mayor. The site grew in popularity so quickly, from 314 inquiries in 1998 to 14,401 inquiries in 2003 that after a while it was impossible for the mayor to directly answer each of the inquiries and individual agencies were given responsibilities for answering citizen inquiries (Kim 2010).

In an analysis of the Seoul program (Lim 2010, 25) the author notes that the mayor or the agencies were often responsive to citizens whose concerns were not being addressed in past inquiries. The author states:

For example, a citizen had repeatedly requested the officials in the street cleaning division of the government to address the illegal dumping of trash around the citizen's apartment complex. When the officials did not respond to the request, the citizen made a direct appeal to the city mayor through the SEB. The mayor then ordered the division to address the problem and follow up on similar problems. The citizen also received feedback from the mayor's office, which detailed the measure the city had taken to address the request.

In addition to providing opportunities to participate, the Seoul city government has also tried to build on these opportunities by trying to widen Internet access and design website and feedback mechanisms that can be accessed on a mobile phone. Recently the Assistant Mayor for Information Technology, Song Jung-hee, proposed a four point program that seeks to increase access and hence the scope of e-government and citizen participation. In an interview in *Korea IT Times* Assistant Mayor Song said:

To achieve the e-government vision, which is essential in an era of mobile environment, such as smart phones, we have set four policy targets. First of all, we are propelling a project to help underprivileged people have easier access to the digital society and offer life information services to citizens through up-to-date information media, including mobile phones and IPTV. Along with this, we are pushing for GOV2.0 by providing Apple developers with development space through the Seoul App Center, and make a public life information database.

Secondly, the Seoul city plans to expand wireless Internet zones at public places and establish U-shelter, which uses sophisticated technology to collect weather & atmospheric environmental information from sensors at bus stops, then make this life information available to citizens. For safety of children, the city is also moving to establish U-Seoul children safety zones near primary schools in Seoul by using CCTV, sensor networks and mobile phones.

Thirdly, to realize convergence and green IT administration, we built a mobile office by making the best use of smart phones. By doing so, we have a comprehensive management system on budgets, accounts and personnel affairs of Seoul city-invested institutions and have optimized the business process” (“Seoul City Pushes for Citizen-Oriented E-Government” 2010).

In addition to these three initiatives the Assistant Mayor has also established a worldwide local government e-government center that will exchange information and promote best practices in developing citizen oriented e-government.

Along with Seoul, another high performing municipality in online citizen participation is the city of Prague, Czech Republic. The city has ranked first in the category of usability, and second in the areas of citizen participation and privacy. It also ranked sixth in services, and ninth in content. The official website of Prague has improved significantly over recent years in all five categories of the e-governance survey. Comparing to the previous survey in 2007, Prague has increased in ranking from 15th position to 2nd in 2009, a reflection of the city administrators’ efforts to bring Prague to global e-governance standards (Holzer et al. 2010). To enable convenient channels of communication between the citizens and the government, the Prague City Hall issues ‘intelligent’ smart cards named Opencard to its residents as well as visitors. This multifunctional smart card can be utilized for parking payment, library usages, and secure access to official website and season ticket for public transit in Prague.

The Opencard also provides citizen surveys to obtain citizen feedback on administrative services. Citizen satisfaction surveys are effective means of gauging citizen feedback on administrative actions. Providing survey mechanisms online is an effective strategy to institutionalize surveys to obtain regular feedback from citizens on the state of their governments. The website provides an Anti-Corruption Webpage to enable citizen users to report crimes, violations of administrative laws and regulations, or corruption. The website also offers opportunities for citizens to submit e-petitions as formal request to the city administration, on issues of concern such as street lights, air noise, water issues etc.

Conclusion

The study of online citizen participation at local government level is an increasingly important component of e-governance research. Our research contributes to the e-governance literature on citizen participation by highlighting the increased emphasis placed by municipalities globally, as well as the factors influencing municipalities to provide more opportunities for citizens to participate in the decision making process. Although the study results did not show a statistically significant relationship, they clearly provide support that municipalities do not invest appropriately in citizen participation practices online while simultaneously upgrading other features of e-governance. Most notably, cities are yet to utilize the potential of websites in providing opportunities for citizen participation online.

Nevertheless, certain cities are taking a comprehensive approach to e-governance by simultaneously enhancing citizen participation features online. The experiences of Seoul and Prague city governments provide evidence of how our findings link to what municipalities are doing in practice. Both of these examples show that the key to enhanced participation on the web is fundamentally about increasing the number of Internet users as well as having mechanisms that allow for citizens to participate in a substantive way. Providing information and conducting surveys alone are not sufficient to have effective participation, but methods that allow for two-way communication over Internet provide a more effective approach. Moreover, as stated by Chang and Kannan (2008, 83) "governments will have to engage citizens at sites where they are (e.g., social network sites and online communities) rather than expect them to approach government portals".

While the findings point to the important implications for Internet use and citizen participation, there are few limitations to the study. The measures of citizen participation do not fully capture the volume and the quality of online participation in each municipality in the study. Second, the study only measures citizen participation in large municipalities. It does not show how rural and suburban areas are employing strategies to engage citizens through the Internet. Nevertheless, the measures still provide sufficient explanatory power because the majority of the populations in many of the countries in the survey live in or around the municipality in question.

Another limitation is that the citizen participation measures do not capture how enhanced citizen participation affects the decision-making process. This question speaks to the idea of whether or not policymakers are using citizen input to change processes or address their concerns. In the "Appeal to the City Mayor" example above, nearly half of the citizens' suggestions were rejected (Kim 2010). This leaves open the possibility that citizens' views are not being given serious consideration, which may undermine citizens' willingness to participate in the future. Future research should delve into how online citizen participation is used in the decision-making process. Linking the opportunities for online citizen participation to its role in influencing the administrative process will provide scholars and policy makers with insight into whether municipal websites are a valuable tool to promote substantive citizen participation in government.

Aroon Manoharan Ph.D., is an Assistant Professor of Public Administration at Kent State University. His research focuses on e-governance, performance measurement and reporting, strategic planning, organization theory, and intergovernmental relations. He holds an MPA from Kansas State University and a PhD from the School of Public Affairs and Administration, Rutgers University - Newark.

Lamar Vernon Bennett Ph.D., is an Assistant Professor of Public Administration at Long Island University-Brooklyn School of Business, Public Administration and Information Sciences. His research interests are: E-government, Public Governance, and Citizen Participation and Engagement. Dr. Bennett received his Ph.D. from American University and MPA and BA degrees from Rutgers University-Newark.

References

- Browning, G. 2002. *Electronic democracy: Using the Internet to transform American politics*. Medford: CyberAge Books.
- Carrizales, T. 2008. Critical factors in an electronic democracy: A study of municipal managers. *Electronic Journal of e-Government*, 6(1): 2-30.
- Chang, A-M, and Kannan, P. K. 2008. *Leveraging Web 2.0 in government*. IBM Centre for the Business of Government, Washington, D.C.
- Fraunholz, B., and Unnithan, C. 2006. E-governance. Inhibitor or facilitator for democracy and citizen empowerment? In *E-government: Macro Issues*, ed. R.K. Mitra. New Delhi: Global Institute of Flexible Systems Management.
- Garson, G. D. 2006. *Public information technology and e-governance: Managing the virtual state*. Sudbury, MA: Jones and Bartlett Publishers.
- Holzer, M., Carrizales, T., Melitski, J., and Manoharan, A. 2010. *Prague e-governance: A study of best practices*. The E-Governance Institute, Rutgers University, National Center for Public Performance. Newark.
- Holzer, M., and Kim, S.T. 2005. *Digital governance in municipalities worldwide*. The E-Governance Institute, Rutgers University, National Center for Public Performance. Newark.
- Holzer, M., and Kim, S.T. 2008. *Digital governance in municipalities worldwide*. The E-Governance Institute, Rutgers University, National Center for Public Performance. Newark.
- International Telecommunication Union. 2008. ICT Indicators, 2008. <http://www.itu.int/ITU-D/icteye/Indicators/Indicators.aspx#> Accessed March 25, 2010.
- Korac-Kakabadse, A, and Korac-Kakabadse, N. 1999. Information technology's impact on the quality of democracy: Reinventing the 'democratic vessel.' In *Reinventing government in the information age: International practice in IT-enabled public sector reform*, ed. R. Heeks. London: Routledge.
- Lim, J. H.. 2010. Empowering citizens' voices in the era of e-government: Implication from South Korean cases. *Theoretical and Empirical Researches in Urban Management*, 7(16): 19-31.
- MacDonald, J. and Tolbert, C. 2008. Something rich and strange: Participation, engagement, and the tempest of online politics. In *Civic Engagement in a Network Society*, eds. K. Yang & E. Bergrud. Charlotte: Information Age Publishing.
- Macintosh, A. 2004. Characterizing e-participation in policy-making. In *Proceedings of the 37th Hawaii International Conference on System Sciences*. <http://csdl2.computer.org/comp/proceedings/hicss/2004/2056/05/205650117a.pdf>.
- Macueve, Gerteudes. 2008. Assessment of the outcomes of e-government for good governance: a case of the land management information system in Mozambique. *International Journal of Electronic Governance*, 1(4): 363-384.

- Melitski, J., Holzer, M., Kim, S.-T., Kim, C.-G., and Rho, SY. 2005. Digital government worldwide: An e-government assessment of municipal websites. *International Journal of E-Government Research*, 1(1): 1-19.
- Reddick, C. J. 2012. *Public administration and information technology*. Burlington, MA: Jones and Bartlett Publishing.
- Rosenstone, S. J, and Hansen, J. M. 1993. *Mobilization, participation, and democracy in America*. New York: MacMillan Publishing Company.
- Rossel, P., and Finger, M.. 2007. Conceptualizing e-governance. In *Proceedings of the 1st International Conference on Theory and Practice of Electronic Governance*, eds, T. Janowaki & T.A. Pardo. New York: The Association for Computing Machinery.
- Lee, K.-M. 2010. Seoul City Pushes for Citizen-Oriented E-Government. *Korea IT Times*, October 1.
- Silcock, R. 2001. What is e-government? *Parliamentary Affairs*, 54:88-101.
- Tolbert, C. J. and Mossberg, K. 2006. The effect of e-government on trust and confidence in government. *Public Administration Review*, 66(3): 354-369.
- Transparency International. 2009. Corruptions Perception Index. Berlin. http://www.transparency.org/policy_research/surveys_indices/cpi/2009. Accessed March 5, 2009.
- United Nations & ASPA. 2001. *Benchmarking E-government: A Global Perspective, Assessing the Progress of the UN Member States*.
- United Nations. 2005. Department of Economic and Social Affairs (UNDESA), UN Global E-government Readiness Report 2005: From E-government to E-inclusion, Division for Public Administration and Development Management UNPAN/2005/14, 2005.
- United Nations Department of Economic and Social Affairs. 2003. e-Government Readiness Assessment Survey. http://www.cabinet.gov.jm/docs/pdf/eGov_Readiness_Intro.pdf. Accessed March 16, 2009.
- United Nations Department of Economic and Social Affairs. 2008. United Nations Statistics Division Social Indicators. <http://unstats.un.org/unsd/Demographic/Products/socind/inc-eco.htm>. Accessed May 23, 2009.

