Enhancing transparency in government through online performance reporting

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Abstract

Currently, the use of information and communication technologies (ICTs) in government is growing at a frenetic pace. Consequently, governments are relying upon ICTs to increase efficiency, improve effectiveness and enhance service delivery to the public. To accomplish this goal, governments are infusing features of e-governance to improve government-to-citizen (G2C) communication (Gibson, et al., 2002).

Taking full advantage of available technology, many municipal governments have begun to report their performance measures online. While the activities of governments who select to communicate performance information to the public online seems as if it would be a natural progression within contemporary public administration, evidence supporting this activity is unclear. The crystallization of e-governance and performance reporting is the focus of this study. Specifically, this research examines online performance reporting to external stakeholders, thus the primary research question is: what are the factors influencing United States municipal governments to report performance measurement data online?

This research applies a mixed methodology to assess the factors that influence local governments to publish performance measurement data online. The factors studied that are expected to impact online performance reporting are socioeconomic conditions, the structure of the government and leadership characteristics. A website content analysis of the 200 most populated U.S. cities was employed to examine the municipalities that publish performance data online. To evaluate the municipalities that do report performance online, an index was constructed that assesses 30 features of the performance report. Finally, 19 semi-structured interviews with municipal managers were conducted to explore additional factors that may impact online performance reporting at the local level of government.

The study reveals that a great deal of variation exists within municipal governments that actually do report performance online. At this point, online performance reports commonly provide a great deal of general information and less substantive and exhaustive details.

The results of this research may be viewed as an indication that online performance reporting is a unique feature of local governments and it is a phenomenon deeply rooted within the culture of governments who aim to be responsive and transparent to the public.

Keywords: performance reporting, digital democracy, transparency, government-to-citizen communication
Although public administrators, elected officials, and citizens increasingly rely on performance measurement data, reporting performance to the public is still in its infancy. While efforts have been made to collect performance measurement data, an overall reluctance exists to share the collected information with external stakeholders. Why does such secrecy exist within many U.S. municipalities? One is forced to ask whether public administrators and elected officials at the local level truly value accountability, transparency, citizen engagement, and perhaps most importantly, improving government performance.

Despite the fact that the majority of U.S. municipal governments are not required to report their performance information, increasingly many municipalities are changing this trend. Moreover, many of these “trailblazing” municipal governments are utilizing the Internet to highlight and report their performance accomplishments. It is not clear if their actions have been spurred by the political motives of elected officials, shame from the fact that nearby municipalities effectively report performance, or simply because they feel it adds legitimacy to their local government. Regardless of their motivation, reporting performance online is an important step toward improving government performance.

Currently, the use of information and communication technologies (ICTs) in government is increasing at a frenetic pace. Government institutions are increasingly utilizing democratic principles in governance by exploiting ICTs to enable various practices such as e-voting, e-consultation, e-petitioning, e-discussion forums, and online registration of questions and complaints (Gibson et al., 2002). Therefore, providing relevant performance data to citizens online is a natural step in the progression of e-governance; perhaps it can even be seen as the emergence of the fifth stage of e-government. It is no longer simply an option for a municipality to have a website; it has become an expected practice. Furthermore, government websites that do not allow citizens to pay tickets or bills, obtain licenses, or do not allow users to read content in various languages besides the native language of that country are viewed as archaic. As public administrators seek new methods to improve performance it seems obvious that participation and engagement would increase if citizens were provided with more information about the government that serves them. One method to improve performance while engaging citizens is for government to simply provide performance data on their websites for users to view and provide input.

This research will examine online performance reporting (OPR) by U.S. local governments to external stakeholders. Thus, the primary research question is: What are the factors influencing United States municipalities to report performance measurement data online? Specifically, this study asks what socioeconomic conditions, organizational factors, and characteristics of leaders predict municipal reporting online. Other questions that arise out of this research are as follows: Why do municipalities choose to report certain performance measures online instead of other measures? How does the perceived value of technology—by administrators and citizens—persuade or dissuade municipalities to implement OPR? Finally, are municipalities that utilize other features of digital democracy (e.g., citizen satisfaction surveys and social media) more or less likely to then report performance online?

Review of the Literature

The innate drive of public administrators to ensure government organizations function at an optimal level while simultaneously delivering quality services to citizens is one of the primary reasons individuals seek public sector employment. People are attracted to work in public organizations that serve the public in different capacities, for various reasons, and are motivated by several factors. To determine individual and organizational effectiveness, however, employees must know what courses of action must occur to actually improve the organization and to ultimately “make a difference.” Despite individual differences in the reasons people become public administrators, one common question ultimately is asked
by all. How do I help my organization operate better? This question is important because essentially it is the underlying reason why many people become a part of the organization in the first place. How can improvement in government performance be determined or assessed without a strategy? It is difficult to imagine productivity strategies in the absence of effective performance measures (Ammons, 2007).

For this reason, many government departments and agencies have established performance measures to assess how well their organizations are meeting the needs of citizens, elected officials, legislatures and other external stakeholders, with the resources they are allocated. Performance measurement is a generic term that describes how well or how poorly government responds to the needs of its citizens and their ability to pay for services (Epstein, 1984). Hatry (2007) defines performance measurement as the “regular measurement of the results (outcomes) and efficiency of services or programs” (p. 3). The Public Performance Measurement and Reporting Network define performance measurement as “indicators of productivity, effectiveness, service quality, and timeliness” (Public Performance Measurement and Reporting Network, Key Terms. Retrieved from http://www.ppmrn.net/about/key-terms/keyterms). Holzer and Yang state as follows:

[Performance] measurement provides an opportunity to present evidence that the public sector is a public bargain, to highlight the routine but important services that public servants quietly provide and to answer the public’s sometimes angry questions and implicit suggestions on a dispassionate basis (Holzer & Yang, 2004).

Performance measurement can thus be described as the regular assessment of specific indicators critical to organizational success. For example, the city of Williamsburg, Virginia uses several key indicators to determine the overall success of their Department of Human Services that include workforce/employment programs, daycare, adult services, and foster care adoption. Each indicator relies on several performance measures to determine effectiveness. The measures used to assess workforce/employment programs are the number of referrals, number of people trained, and the number of job placements. Without such measures, how does one really know if government is performing well or poorly? Seeking the answer to such a question is akin to playing a ball game and trying to determine which team wins without keeping score (Hatry, 2007). We simply do not know the results. More importantly, external stakeholders—namely citizens—are left to assume that government is ineffective and inefficient. Consequently, the performance of public sector organizations is continuously under scrutiny by both internal and external stakeholders to demonstrate what it is actually doing (Boyne et al., 2006). If implemented properly, the pathology of poor government performance can be improved through the use of effective performance measures.

Why Do We Measure Performance?

Measuring the performance of government is keenly viewed as more important now than perhaps at any other point in history. Perrin (1998) asserts that performance measurement is immensely popular and it is widely touted as a new way of providing a focus on the results of public programs. Why has the performance measurement trend emerged? What does measuring organizational performance achieve? An established body of literature demonstrates how measurement can improve organizational performance (Ammons, 2007; Berman, 2002; De Lancer-Julnes, 2006; Kennerly & Neely, 2002; Moxham, 2010). As Epstein (1984) notes, performance measures have three specific purposes: (a) improve decision-making, (b) improve service performance, and (c) improve public accountability. Kelly and Swindell (2002) state
that governments choose to utilize performance measures because their use reflects the genuine desire of public servants to find better ways to serve the public. Additionally, the use of performance measures demonstrates that government is not ineffective and unwieldy. Finally, they claim the application of scientific methods “promises to further professionalize the field of public administration” (p. 611). The latter use, according to Kelly and Swindell, exemplifies the scientific management school of thought espoused by Frederick Taylor. According to Taylor’s *The Principles of Scientific Management* (1911), organizations and their employees should strive for optimal efficiency. “No one can be found who will deny that in the case of any single individual the greatest prosperity can exist only when that individual has reached his highest state of efficiency, that is when he is turning out his largest daily output” (Taylor, 1911, pp. 10-11).

Measuring performance informs citizens, public managers, and other internal stakeholders, elected officials, and the media know that government is making every attempt to ensure that it is doing what is necessary to meet their needs. When citizens are included in the performance measurement process, they view themselves in partnership with government and a piece of the problem-solving solution. This can be achieved when performance information is made available to a wide group of people facilitated by the municipal government’s website. ICMA (2000) summarizes the importance of performance in local government and why it matters.

People want to live in communities that provide a high quality of life. And businesses, locked in a modern-day version of trench warfare to attract and retain valuable employees, are looking to build and expand in communities that offer a high quality of life to their employees. Furthermore, employees whose work may permit them to telecommute often can live almost anywhere they choose. That is precisely where local governments come in, and why performance matters. If a city or county develops its own set of performance measures and performance targets, individual employees, department heads, administrators, and councils can observe and measure progress. Then, the organization moves as a coherent whole toward achieving community goals and, or maintaining community standards. (ICMA, 2001, pp. 1–2)

Today, public sector organizations do not solely rely on output measures to determine effectiveness. How can an agency whose mission is to improve child care services to economically disadvantaged groups measure performance based only on the number of cases cleared by an employee in a given month? In *Reinventing Government* (1992), Osborne and Gaebler conclude that entrepreneurial governments measure the performance of their agencies and focus on outcome measures—not just output measures. Outcome measures refer to changes in communities or clients that are the result of a department or agency’s activities and outputs (Newcomer, Hatry, & Wholey, 2004). Outcome measures are the primary goals or the major results an organization seeks to achieve and should be reflected in the strategic plan or mission statement. Hatry (2006) defines outcomes as “events, occurrences, or conditions that are outside the activity or program itself and that are of direct importance to customers and the public generally” (p. 15). Charbonneau and Riccucci (2008) state that performance measurement seeks to achieve results based on a development of quantifiable indicators to track program achievement and outcomes. The primary focus of performance measurement is achieving results; the process hinges on developing measurable indicators to track program performance and, ultimately, outcomes (Callahan, 2007). Implementing performance measures that focus on outcomes, and not solely on outputs, can potentially simultaneously improve efficiency and equity in the jurisdiction being served.
The importance and overall goal of performance measurement is to develop organization-specific indicators to assess performance as well as to establish a system that can measure results of the indicators and use the information to improve management and democratic governance (Hatry, 2002; Moynihan, 2006; Wholey, 1999; Yang & Hsieh, 2007). From this perspective, performance measurement truly can transform government.

Managers that choose to adopt and implement performance measures may do so for a variety of reasons. Poister (2003) states that performance measurement initiatives are utilized by management for monitoring and reporting, strategic planning, financial management, program management and evaluation, contract management, benchmarking, communicating with the public, and managing performance. Hatry (2007) states the following as reasons why public managers choose to utilize performance measures: formulating and justifying budget requests; making internal resource-allocation decisions; examining in-depth performance issues; motivating personnel to make program improvements; formulating and monitoring contracts to grantees; supporting strategic planning; evaluating programs; communicating with the public to improve trust; and to provide improved services more efficiently. Behn (2003) suggests that managers should identify the purposes of using performance measures by asking questions. For example, regarding the budget and resource allocation, managers should ask “[O]n what programs, people, or projects should my agency spend the public’s money?” (p. 588). In terms of overall improvement strategies, managers may ask themselves “What exactly should we do differently to improve performance?” (p. 588).

Performance measures are also seen as an instrument that increases the accountability of public managers (Hatry, 2007). Poister (2003) claims performance measurement systems provide a tool for managers to utilize in an effort to maintain control over their organizations. Subsequently, internal and external stakeholders are also able to hold public organizations accountable to achieving the results they seek.

The current emphasis on performance measurement is the result of citizens demanding evidence of program and organizational effectiveness by government (Wholey & Newcomer, 1997). An essential reason to measure performance is to make program improvements that improve services to the public (Hatry, 2006).

There is no one-size-fits-all performance measurement prescription for organizations to follow for success; performance measures can be used for multiple purposes. The manner in which organizational improvement is pursued depends on the specific goals the organization seeks. Some leaders may wish to improve the level of accountability present within the organization whereas others are more interested in specific output measures, thus resulting in increased efficiency. In the public sector, it is common for organizations to seek performance improvement without a precise plan regarding the desired outcome. Measures that are used to improve performance in one setting may not be appropriate in another setting. Further, different groups have various purposes for which they intend to use the performance measures. Legislators have different purposes than the media, who have different purposes than citizens. Moreover, each of these groups may have different purposes than public managers (Behn, 2003). Stressing the importance of knowing what the results of the improvement measures will yield, Halachmi (2004) says there are two purposes for performance measurement: enhancing productivity and accountability. If performance measures are done to improve accountability, then performance should be measured annually. If, on the other hand, performance measurement is done for the purpose of improving productivity, then it should occur quarterly or monthly (Wholey & Newcomer, 1997).
Performance Reporting

Infusing the use of information and communication technologies to improve public-sector performance is occurring across all levels of government; reporting performance information online is a simple, yet important way for government to communicate with the public. Fountain et al. (2003) claim reporting results include communicating to elected and appointed officials and constituents a comprehensive set of clear, decipherable performance measures. “Reporting generally involves communicating the extent to which the governments’ goals and objectives are being achieved with the information to assist users in assessing the efficiency and effectiveness of the program(s)” (p. 24). Schwartz and Mayne (2005) state that performance reports are meant to inform legislatures, managers, stakeholders, and the general public; moreover, performance reports provide information on how well various programs within an organization are doing and whether they are accomplishing what they have set out to accomplish.

Reporting the performance of organizations may be seen as a critical element of overall performance. Performance reports generally involve communicating how effective the government achieves specified goals and objectives (Fountain et al., 2003). Hatry (2006) claims reporting performance measures to external stakeholders allows citizens, elected officials, and interests groups to see what government is doing for them with the resources it is allocated. Essentially, performance reporting serves as an accountability mechanism for stakeholders to apply to government. External reporting may encourage the organization to perform better on the measures it reports. Further, comparisons made of similar reported measures allow one organization to measure or benchmark success against another.

When reporting performance data, local governments must be mindful of for whom the information is intended. Exactly who will be the recipients of the information? According to Ridley and Simon (1948), the municipal performance report should not be based on specific departments; instead, it should be organized based on specific functions and service delivery. Municipal managers and those responsible for generating performance reports should acknowledge that citizens are most interested in gaining an overall assessment of their government instead of a detailed account of everything for which the government is responsible.

The Public Performance Measurement and Reporting Network (PPMRN) at Rutgers University-Newark, defines performance reporting as follows:

Summarizing information on an organization’s performance results in comparison to the organization’s previously stated targets. This information may be provided in comparison to previous year's performance, specific standards, or may be benchmarked across other performance efforts. Performance reports should be accessible to the reader and include key information such as the function of the organization, accomplishment in reaching targets, input and output measures, and helpful explanatory information. (Public Performance Measurement and Reporting Network, 2008)

As government attempts to improve service delivery, reporting performance online has the potential to engage citizens in the decision-making process, especially in terms of resource allocation. According to Concepts Statement Number 1, Objectives of Financial Accounting in the 1987 Governmental Accounting Standards Board (GASB) report, “[F]inancial reporting should provide
information to assist users in assessing the service efforts, costs, and accomplishments of the governmental entity” (GASB, 2003, p. 3).

We have learned, however, that performance measures that simply examine output measures do not fully assess the function nor the complete scope of what government does—namely the outcomes of the goals of government action. Hatry (2006) defines output measures as the completed products of internal activity, specifically, the amount of work that has been completed. Output measures can be quantified; examples may include the total number of emergency calls responded to within a particular time period or the total number of arrests made by police within a particular time period.

On the other hand, outcomes are events, conditions, or occurrences external to the program considered important by citizens. They refer to the results of the output measures: what was the overall effect or impact of the output measure on the public? “While outputs are what work the organizations do, outcomes are what these outputs accomplish” (Hatry, p. 15). How safe or clean a community is interests citizens the most; thus, reporting performance measures that describe these concepts are important.

Hypotheses

Population

When examining the website content of municipal governments, it is important to assess websites that are providing a variety of services to citizens. Typically, municipalities provide various services when it has a large population with a diverse group of people who have different needs or interests. Holzer and Kim (2003) assessed website content of the 87 most-populated municipal governments around the world. Employing this methodology allows one to inspect what municipal governments are doing to meet the various needs of the people they serve. Similarly, Schwester (2009) found that municipalities with a larger population were more likely to have comprehensive e-government platforms than those that were less populated.

\[ H^1: \text{municipalities that have a larger population are more likely to provide online performance measurement reports (OPR).} \]

Income

Consistent throughout the e-government literature is the belief that income significantly impacts the use, accessibility, and acceptance of information and communication technology (Sipior & Ward, 2005). This theory is commonly referred to as the digital divide; it holds that people from lower income levels are less likely to be able to afford computers or other technology that would enable them to communicate with others who do have access to computers and other technology. Additionally, the income of a particular city may impact the resources it has to invest in information and technology.

\[ H^2: \text{Municipalities that have higher incomes are more likely to provide OPR.} \]
Gini Index

Another measure of income inequality is the Gini Index. The Gini Index measures the income inequality among the entire population of an area, in this case U.S. cities (Atkinson, 1970). The higher the Gini number is, the more income that is being taken in by a small group of the city. Lower Gini scores indicate a more equal distribution of wealth within the city.

$H^3$: Municipalities that have Gini scores closer to 0.0 are more likely to provide OPR.

Demographic Composition

Municipalities that have diverse ethnic and racial populations typically have various interest groups with competing needs (Boyne, 2002; Tillema, 2005). Furthermore, based on a user-centric approach to e-government use, the various preferences of citizens should be considered when developing innovative strategies (Verdegem & Verleye, 2009). Citizens can no longer be examined as one group or a collective whole, even when they reside in the same city. Each user has his or her own preferences, which highlights the importance for government to provide diverse delivery of services (OECD, 2005).

$H^4$: Municipalities with a high percentage of non-White residents are more likely to report performance online.

Age

Recent studies have found age to be a significant predictor of Internet use (Tillema, 2005). While older citizens are becoming more technologically savvy, it is unclear whether municipalities that have a significant portion of the population 55 and over are more or less likely to provide OPR.

$H^5$: Municipalities with a larger percentage of population 55 years old and above are less likely to report performance online.

Educational Level

Utilizing data from the British Social Attitudes Survey from 2003, Norris and Curtice (2008) found that educational level was a significant predictor of e-government use and engagement. Additionally, these researchers also found that people who were classified as managers were also more inclined to use the Internet to communicate with government. Millard (2008) found similar results in a study conducted assessing user-preferences of e-government.

$H^6$: Municipalities with a larger percentage of citizens with a BA degree are more likely to report performance online.

Region of the Country

Walker (1969) argues that public administrators constantly look at the practices of governments in nearby states to simplify their own decision-making. He refers to this as regional diffusion explanation (Walker, 1969). Building on the theory of regional diffusion explanation, Berry and Berry (1992) found state taxes are more likely to be adopted when a neighboring state has adopted a similar policy than it is when a neighboring state has not adopted that policy. Holden (2003) tested regional diffusion and found
statistical evidence supporting the belief that governments in the western region of the United States were more inclined to adopt websites than other areas of the country. Jun and Weare (2010) found that municipalities where nearby cities have implemented innovative website initiatives are also more likely to adopt innovative practices as well. The research extends regional diffusion to local governments based on regions of the country as determined by U.S. Census data demarcation.

\[ H^7: \text{Cities located in the western region of the U.S. are more likely to report performance online.} \]

**Violent Crime Rate**

One innovative IT strategy that has been used to improve productivity and service delivery has been the creation of CompStat (Bratton, 1997; Kelling & Sousa, 2001; Silverman, 1999; McDonald, 2002; Weisburd et al., 2001). CompStat is an example of the innovative utilization of IT to measure organizational performance and provide citizens with useful information. Behn (2007) asserts technology makes CompStat effective because it provides an inexpensive and highly flexible way to collect, analyze, and then deploy information to improve services to citizens.

\[ H^8: \text{Municipalities with higher violent crime rates are likely to report performance online.} \]

**Form of Government (Strong-mayor/Council-mayor)**

Boyne (2002) suggests that governments with a weak hierarchal authority may explain why they are less likely to be innovative and may also cause them to be more cautious when making decisions. On the other hand, New Public Management espoused the benefits government could reap if the structure was more horizontal than vertical. Carrizales (2009) found that strong-mayor forms of government were negatively associated with features of digital democracy. This may suggest that a city manager-council form of government is more innovative than the typical structure led by a mayor. Since the effect the form of government has on the use of online performance reporting is unclear, it was included as a variable to be analyzed.

\[ H^9: \text{Municipalities that have a council-mayor form of government are likely to provide OPR.} \]

**Government Capacity (Municipal government employees)**

A measure used to assess the capacity of government is the ratio of the number of government employees to the overall population within a municipality. Municipalities that have a higher ratio of municipal government employees to the overall population are more likely to have the necessary personnel and resources devoted to IT initiatives.

\[ H^{10}: \text{Municipalities that have a higher ratio of the number of municipal government employees to the municipalities’ overall population are more likely to report performance online.} \]
Size of Budget

The budget of an organization is an essential tool that helps public manager make decisions. Miller and Robbins (2006) state that the budget is a plan and may be considered the most important component of information of an organization. When governments develop budgets, they are forced to consider several social and equitable factors that are not present in the private sector. For example, how does a municipality justify the reduction of spending on services for particular segments of the population?

In research conducted by Schwester (2009) that examined barriers to e-government adoption, the author found that municipalities with high operating budgets were more likely to implement a comprehensive e-government platform.

\( H^1 \): Municipalities with more budget expenditures are more likely to report performance online.

Tenure of Mayor

According to Tillema (2007), “[T]he cycle of elections and political appointments may result in frequent changes in policy and interruptions in implementation of plans and projects” (pp. 502–503). In terms of benchmarking and performance reporting and ultimately using the Internet as a resource to report information, public-sector organizations are more likely to terminate the development or implementation of innovative action plans quicker than private organizations (Tillema, 2007). On the other hand, a mayor who has been in office for two or more terms may feel more comfortable and less inclined to demonstrate what she or he is doing ineffectively. Similarly, Gandia and Archiclona (2008) and Tolbert et al. (2008) found utilization of e-government was a larger election issue among officials who faced opposition or political rivals to remain in office.

\( H^2 \): Municipalities where the mayor has been in office longer are less likely to report performance online.

Race of Mayor

An essential variable commonly used to predict e-government and/or performance measurement initiatives is political support (Brewer, Neubauer, & Geiselhart, 2006; Callahan, 2007; Carrizales, 2008; Hatry, 2002). Carrizales (2008) and Schwester (2009) both found that political support of e-government significantly predicted a comprehensive e-government program at the local level of government. Similarly, Ammons (1985) stated that one of the primary barriers to implementing an effective performance measurement system was a lack of political support. I extend the findings of previous studies to include specific characteristics of mayors that include their race and gender.

\( H^3 \): Non-White mayors are more likely to be risk-takers and support innovative initiatives like online performance reporting.
Gender of Mayor

$H^{14}$: Female mayors are more likely to be risk-takers and support innovative initiatives like online performance reporting.

Methodology

The purpose of this study is to examine the factors that influence U.S. municipal governments to provide online performance measurement reports to citizens and other external stakeholders. The factors studied that are expected to impact online performance reporting are socioeconomic conditions, the structure of the government, and leadership characteristics. While the primary focus of this research is to examine government-wide performance reports that are on the municipality’s website, 311 and crime reports that appear online will be examined as well. This research also explores why certain reports are used instead of others and what factors promote and inhibit the use of performance data online within U.S. municipalities. For example, are municipalities more likely to publish 311 reports online than government-wide performance reports? Also, are CompStat or crime reports published online along with 311 and government-wide performance reports or are they the only type of report available? Why is this the case?

For municipalities that do report performance measures online, this research will explore the extent to which they report their information. For example, does the report allow users to disaggregate performance information? Does the report allow users to compare performance information from previous years? And, can users provide feedback or comments based on reported information?

This research utilizes a mixed-methodological approach to answer the following research question: “What are the factors that influence municipal governments to publish performance reports online?” This research begins with a website content analysis of U.S. municipal governments. To assess the municipalities’ performance report, an index was constructed that yields a maximum score of 55 points. Municipalities that do not report performance measures online did not have a report to evaluate; therefore, they received a score of zero to indicate “no online performance report.”
### Sections, definitions, and keywords of OPR Index

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<thead>
<tr>
<th>OPR Section</th>
<th>Definition</th>
<th>Keywords</th>
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<tbody>
<tr>
<td><strong>Content</strong></td>
<td>Descriptive information and the extent detailed data provide an accurate assessment of the overall performance report.</td>
<td>Purpose, scope, objectives, comparability, verification</td>
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<tr>
<td><strong>Format</strong></td>
<td>The manner and design information in the report is displayed.</td>
<td>Attractive design, colors, graphs, charts</td>
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<td><strong>Accessibility</strong></td>
<td>The level of ease users are able to locate performance reports online.</td>
<td>Ease of use, easily identified</td>
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<tr>
<td><strong>Stakeholder engagement</strong></td>
<td>The extent stakeholders are included in the development of the performance report.</td>
<td>Participation, citizen perspectives, satisfaction surveys</td>
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The index and the scores from each municipality allow the study to develop descriptive and inferential statistics for analysis. Nineteen municipal government managers have been purposively sampled. Telephone interviews were conducted to gain an understanding of the underlying reasons why their municipality chooses to report performance online or not report performance online. This research interviewed 11 managers from municipalities that score in the top third of the online performance reporting index and two from municipalities that scored in second third. Additionally, six interviews with municipal managers from cities that do not report city-wide performance online were conducted. The research focused on interviewing managers from municipalities that earned the highest scores on the index because it was believed that the most informative interviews would come from municipalities that scored the highest on the index; therefore, their practices and behaviors could serve as models for other cities. Non-probability or purposive sampling is appropriate when building theory in exploratory research (Northrop & Arsenault, 2008). Based on the fact that the majority of cities in the sample do not report performance online, it was important to understand the rationale of managers who do not report performance online for not engaging in this activity. This broad array of municipal managers has increased the study’s overall understanding of the factors that influence the use of online performance reports at the local level of government.

The unit of analysis is U.S. municipal government websites. The study chose municipal governments because they typically have the closest and most direct relationship with the public. Citizens are inclined to be most concerned with issues that are tangible (e.g., public safety, education, street cleanliness, and road repairs), which are typically handled by the municipal government. Studying municipal government also provides a large sample size with a great deal of variation. Moreover, as Haas and Grams (2000) point out, “[T]he population of web page readers does not have the years of combined ‘societal’ experience in recognizing the ‘core’ Web page structures and genres that it has for books” (p. 182). Simply stated, citizens are more likely to refer to the municipal government homepage when
seeking information than they are likely to go directly to the department or agency’s website. Consequently, researchers are forced to take greater care in the definition of units of analysis.

Content analyses of municipal government websites of the 200 most-populated U.S. cities were conducted beginning in September of 2010. The website content analyses continued through January of 2011. Research that focuses on the use of online performance reporting within U.S. municipal governments is unique; therefore, the study requires a wide sample of cities across the country that are diverse in nature, diverse in their use of online performance reporting, and employ various approaches to meet the needs of their citizens. Website content analysis of the 200 most-populated U.S. cities was chosen to ensure variation among the cities selected. Prior research evaluating government websites has typically focused on examining 100 or 150 U.S. cities (Holzer, 2008). Increasing the sample to 200 allowed for greater comparisons to be made across municipalities.

This research has 4 regression tables. The first table analyzes the impact the independent variables, socioeconomic conditions, structure of government, and leadership characteristics of online 311 reporting. The second table analyzes the impact of the independent variables on online CompStat/crime reporting. The third table analyzes the impact of the independent variables on government-wide online performance reporting, which is the primary focus of this research. Table 4 analyzes the factors that impact only the cities in the study that currently report performance online.
Findings

[TABLE 1] Probit regression analysis of factors influencing 311 Reporting

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<thead>
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<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
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<tr>
<td><strong>Socioeconomic conditions</strong></td>
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<td>Violent crime rate</td>
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<td>.0001</td>
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<tr>
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<tr>
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<td><strong>Leadership characteristics</strong></td>
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<tr>
<td>Tenure of mayor</td>
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<td>-.0014</td>
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</tr>
<tr>
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</tr>
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<td>.585</td>
<td>.585</td>
<td>.585</td>
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<tr>
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<td>.586</td>
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<td>.608</td>
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<tr>
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<td>.016</td>
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<td>.108</td>
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Note: N = 200; coefficients in table show changes in predicted probabilities; *** p < .01  ** p < .05  * p < .10.
[TABLE 2] Probit regression analysis of factors influencing CompStat Reporting

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
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<tr>
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<td>.0005</td>
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<td>55 and over</td>
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<td>----</td>
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<td>----</td>
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<tr>
<td>Form of government</td>
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<td>----</td>
<td>-.0001</td>
<td>----</td>
</tr>
<tr>
<td><strong>Leadership characteristics</strong></td>
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<td></td>
</tr>
<tr>
<td>Tenure of mayor</td>
<td>----</td>
<td>----</td>
<td>-.0133*</td>
<td>-.0142*</td>
<td>-.0346*</td>
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<td>----</td>
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<td>-.0043</td>
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<td>----</td>
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<td>Observed prob.</td>
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<td>.62</td>
<td>.62</td>
<td>.62</td>
<td>.62</td>
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<tr>
<td>Predicted prob.</td>
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<td>.622</td>
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<td>.641</td>
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<td>Pseudo R²</td>
<td>.095</td>
<td>.016</td>
<td>.022</td>
<td>.115</td>
<td>.099</td>
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</table>

Note: N = 200; coefficients in table show changes in predicted probabilities; *** p < .01   ** p < .05   * p < .10.
TABLE 3 Probit regression analysis of factors influencing Online Performance Reporting

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
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</thead>
<tbody>
<tr>
<td><strong>Socioeconomic conditions</strong></td>
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</tr>
<tr>
<td>Population</td>
<td>.1867 ***</td>
<td>----</td>
<td>----</td>
<td>.2042 ***</td>
<td>.5594 ***</td>
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<tr>
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<td>-.0039</td>
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<tr>
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<td>----</td>
<td>----</td>
<td>-.0029</td>
<td>-.0101 *</td>
</tr>
<tr>
<td>55 and over</td>
<td>.0121</td>
<td>----</td>
<td>----</td>
<td>.0145 *</td>
<td>.0375 *</td>
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<td>Bachelor's degree</td>
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<td>----</td>
<td>----</td>
<td>.0002</td>
<td>----</td>
</tr>
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<td>Violent crime rate</td>
<td>.0001</td>
<td>----</td>
<td>----</td>
<td>.0001</td>
<td>----</td>
</tr>
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<td>Western region of the U.S.</td>
<td>-.0039</td>
<td>----</td>
<td>----</td>
<td>-.0051</td>
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</tr>
</tbody>
</table>

**Structure of government**

|                        |         |         |         |         |         |
| Form of government     | ----   | -.0108 | ---- | .0782   | ----    |
| Ratio of gov't w/f to population | ---- | -.0263 | ---- | -.0339 | ----    |
| Budget expenditures    | ----   | .0001  | ---- | .0001   | ----    |

**Leadership characteristics**

|                        |         |         |         |         |         |
| Tenure of mayor        | ----   | ---- | -.0040 | -.0035 | ----    |
| Race of mayor          | ----   | ---- | -.0457 | -.0502 | ----    |
| Gender of mayor        | ----   | ---- | .0503  | .1181  | ----    |

Observed prob.          | .29   | .29  | .29   | .29   | .29    |
Predicted prob.          | .271  | .289 | .289  | .267  |        |
Pseudo $R^2$             | .093  | .003 | .003  | .104  | .090   |

Note: N = 200; coefficients in table show changes in predicted probabilities; *** p < .01  ** p < .05  * p < .10.
## TABLE 4
OLS regression analysis of factors influencing Online Performance Reporting scores

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
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<tr>
<td>Population</td>
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<td>---</td>
<td>.3738 **</td>
<td>***</td>
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<td>Income</td>
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<td>---</td>
<td>-.0004 **</td>
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<td>Gini Index</td>
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<td>-.9200 **</td>
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<td>55 and over</td>
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<td>---</td>
<td>.0013</td>
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</tr>
<tr>
<td>Western region of the U.S.</td>
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<td>---</td>
<td>.6141 *</td>
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<td><strong>Structure of government</strong></td>
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<td><strong>Leadership characteristics</strong></td>
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<td>-.0150</td>
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<tr>
<td>Constant</td>
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<td>19.9</td>
<td>20.2</td>
<td>18.14</td>
<td>-28.52</td>
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<td>.016</td>
<td>.37</td>
<td>.22</td>
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</table>

Note: N = 58; *** p < .01 ** p < .05 * p < .10.

The online performance reporting index provided detailed information regarding the performance reports found on each municipality’s website. Furthermore, the index allowed the study to examine the extent to which information and details were made available to the public. Fifty-eight of the 200 cities included in the study published an online government-wide performance report in 2009 or 2010. The majority of these cities (54%) also published three or more other types of performance reports. The additional types of reports include 311 or CompStat/Crime reports. This indicates that when cities publish government-wide performance reports, they are more likely to report other performance measures online as well.

Nearly 80% of reports included information that describe its purpose and scope, which helps the user understand what he or she is actually reading. Over 50% of the reports highlight goals and
accomplishments; however, only 29% also provide information that discusses when measures fail to meet standards or criteria. Furthermore, only 15% of reports examined link goals, accomplishments, or failures to resource allocation. Interestingly, the results of the online performance index indicate that 76% of reports failed to indicate factors that impact success. Another finding from the online performance reporting index supports the contention that most municipalities are interested in highlighting success rather than acknowledging failures: over 67% of municipalities failed to provide a status index indicating whether agencies or departments are actually meeting their goals. Furthermore, only 20% of municipalities demonstrate how improvements will be made in the future. These findings demonstrate that many municipal governments are more concerned with reporting information and perhaps less concerned with making meaningful changes that will improve performance.

Affording users the opportunity to examine information related to their neighborhood or specific areas of the city is another important feature performance reports should include. The results of the online performance reporting index show that 88% of performance reports do not allow users to conduct searches or queries based on a specific location or neighborhood. Disaggregated data is an important manner to display information and show comparisons within one jurisdiction. Allowing users the capability to disaggregate data helps them identify exactly what is taking place in their own communities compared to activity taking place in another part of the city. This feature is especially important in larger cities that are more populated and cover more square miles.

Of particular concern for many citizens when reading performance reports is the haphazard nature information that is often presented. For example, measures and indicators may change from one year to the next without an explanation, thus creating confusion for the reader. To examine this issue, the online performance reporting index assessed whether changes to the report are indicated. Unfortunately, 74% of reports did not indicate if there were changes to measures or methodology. Failure to include changes to the report would not be as significant if users could locate and verify the source of data collection. The results of the index found that 55% of municipalities do not include the source of data collection and verification; 24% provide contact information to verify the report; and 21% provide the actual source data to verify details of the report.

The manner in which performance reports are displayed is an important component that should not be ignored. Format and readability helps the user interpret data that may otherwise be difficult for lay people to understand. Displaying information attractively using charts and graphs is also helpful because some people are visual learners and are more inclined to grasp complex information and data when it is presented in this manner. The results of the online performance reporting index found that 55% of reports displayed information in various colors using tables and charts. Another key measure that evaluated format found that 50% of the performance reports provided a general narrative of the report; 35% of the reports included narratives explaining each measure.

Accessibility is another important component in terms of online performance reporting. As citizens become more interested in knowing how well their government is performing with the resources it is allocated, the location of the online performance report becomes vital. Is the report easily accessed and identified? Can performance information be downloaded? Can the report be read in languages besides English? These are essential questions that must be addressed for online performance reports. The results of the index found that although 60% of reports were found via a web link, only 12% of reports were located on the homepage of the municipal government website. Twenty-eight percent of the reports had to be located by conducting a “search” on the website. To make online performance reports more useful and to gain important feedback, they should be made easily accessible for citizens and other external stakeholders. Once reports were found, 97% could be downloaded and or printed. In fact, the small percentage of reports that could not be printed or downloaded were available only as web-based reports.
The web-based reports offer users greater flexibility in terms of disaggregating data, conducting searches or queries, and making comparisons over several years. Finally, only online performance report could be read in a language besides English. The city of El Paso, Texas also allows users to read reports in Spanish.

One of the primary focal points of this research was to examine the extent to which citizens and other stakeholders are included in the development of the online performance reports. The results of the online performance index indicated that only 24% of municipalities include stakeholders in the process of developing the performance report. Furthermore, only 7% of municipalities specify the extent of stakeholder involvement. After carefully reviewing the content of the performance reports, the stakeholders involved typically referred to internal stakeholders—not external stakeholders. Including various departments and agencies in the development of specific indicators and performance measures is extremely important, yet neglecting external stakeholder involvement may be seen as a missing element to performance improvement efforts. A comparison between citizens’ perceptions of results and the department or agency’s perception was found in only 10% of the reports evaluated. Admittedly, aligning citizen perspectives with the perspectives of government in a meaningful manner is challenging. To address this issue, some municipal governments allow citizens to provide feedback and comments to the performance report. This research indicated that 10% of municipal governments allow the public to provide feedback or comments to the performance report. Moreover, 17% of municipalities allow citizens to complete satisfaction surveys. The use of citizen satisfaction surveys is an integral component toward achieving symmetry between government and citizens. When the results of the surveys are used to inform decision makers, they become yet more powerful.

Table 1 analyzed the impact the independent variables have on online 311 reporting. In the first model, population significantly impacted online 311 reporting in U.S. municipalities. The data shows that a 1% increase in population increases the probability of online 311 reporting by nearly 22% \( (\frac{dF}{dx} = .2178, p < .01) \). Because the observed and the predicted probabilities are nearly 60, you can interpret the findings to mean that a 1% increase in population increases the probability of online 311 increasing by nearly 22%. The first model also shows that a 1% increase in the percentage of people over the age of 55 increases the probability of online 311 reporting by approximately 2% \( (\frac{dF}{dx} = .0157, p < .10) \). Model two shows that as the form of government shifts from strong mayor to council-manager, the probability of online 311 reporting decreases by 15% \( (\frac{dF}{dx} = .1535, p < .05) \). Also, as budget expenditures increase by 1%, the probability of online 311 reporting also increases by less than 100% \( (\frac{dF}{dx} = .0001, p < .10) \). None of the leadership characteristic variables were found to be significant in model three. When all of the variables were combined in model four, the only variable that remained significant was population. A 1% increase in population increased the probability of online 311 reporting by 21% \( (\frac{dF}{dx} = .2126, p < .01) \). The results from model five were consistent with the results from models one and two, respectively. Here, population, the percentage of people over the age of 55 and budget expenditures were found to be significant predictors of online 311 reporting.

Table 2 – Factors influencing CompStat Reporting

Table 2 shows the factors that impact municipalities to engage in CompStat reporting. In model one, three variables were found to be significant: population \( (\frac{dF}{dx} = .1919, p < .01) \), the percentage of the population with a Bachelor’s degree \( (\frac{dF}{dx} = .0393, p < .05) \), and income \( (\frac{dF}{dx} = -.0001, p < .05) \). None of the variables were found to be significant in model two. In the third model, leadership characteristics, the tenure of the mayor is negatively associated with CompStat reporting. A 1% increase
in the tenure of the mayor results in a 1% \((dF/dx = -0.0133, p < .10)\) decrease in the probability that the municipality utilizes CompStat. In model four, the full model, population \((dF/dx = 1.867, p < .01)\), income \((dF/dx = -0.0001, p < .05)\), education \((dF/dx = .0350, p < .10)\), and the tenure of the mayor \((dF/dx = -0.0142, p < .10)\) each remain significant. Similarly, population \((b = .5065, p < .01)\), income \((b = -0.0001, p < .10)\), education \((b = .0440, p < .05)\), and tenure of mayor \((b = -0.0346, p < .10)\) are also significant in model five.

The findings from Table 2 are interesting because it indicates that as income increases by 1% the probability of CompStat reporting decreases. This signifies that municipalities with lower incomes are more likely to use CompStat reporting. Perhaps, in these cities, a greater need exists for police and citizens to be vigilant about crime, therefore resulting in government feeling the need to assist the public in crime reduction efforts. Another interesting finding from Table 2 indicates mayors with longer tenures are also less likely to implement CompStat reporting in their cities. This may be an indication that elected officials who have more time in office do not want to make information available that can possibly cast them in a negative light. They are more likely to want to keep the status quo and less likely to want to bring negative attention to themselves.

Table 3 – Factors influencing Online Performance Reporting (OPR)

Table 3 analyzes the factors that influence whether a municipality utilizes government-wide online performance reporting. In model one, population is highly significant indicating that a 1% increase in population increases the probability that the municipality utilizes online performance reporting by 19% \((dF/dx = .1867, p < .01)\). Model one also shows that a 1% increase in the percentage of non-White residents decreases the probability that the municipality utilizes online performance reporting by less than three-hundredths of a percent \((dF/dx = .0034, p < .10)\). None of the variables were found to be significant in models two and three. In the fourth model, population and the percentage of the population 55 and over were found to be significant. Model four shows that a 1% increase in population increases the probability of the municipality using online performance reporting by 20% \((dF/dx = .2042, p < .01)\). Model four shows that a 1% increase in the percentage of the population 55 and over increases the probability that the municipality uses online performance reporting by 1% \((dF/dx = .0145, p < .10)\). Model five also shows that population \((b = .5594, p < .01)\), the percentage of non-White residents \((b = -0.0101, .10)\), and the percentage of the population 55 and over \((b = .0375, p < .10)\) to be significant predictors of online performance reporting.

The results from models four and five yield interesting results as they show that cities that have a larger percentage of the population 55 and older are more likely to use online performance reporting. This finding is contrary to the belief that older citizens are less engaged with using the Internet. Furthermore, it may point to the fact that this group of the population is simply more engaged with government and wishes to receive more information of what government is doing.

Table 4 - Factors influencing Online Performance Report Scores

Table 4 displays the factors that impact cities who report performance online. Table 8 uses OLS regression to examine the factors that impact cities to report performance online. Population \((b = .3583, p < .05)\), income \((b = -.0001, p < .05)\), Gini Index \((b = -.0821, p < .05)\), percentage of the population with a Bachelor’s degree \((b = .1815, p < .01)\), and municipalities in the western region of the United States \((b = .0375, p < .10)\) to be significant predictors of online performance reporting.
.5257, p < .10) were all found to be significant predictors in the decisions of administrators in those cities to report performance online. Table 8 shows that a 1% increase in population increases the probability that a city publishes online performance reports by 36%. Another interesting finding from Table 8 shows that income and income inequality impact online performance reporting. Table 3 examined factors predicting whether or not a municipality publishes performance data; and income and income inequality were not statistically significant predictors. When we closely inspect cities that do report performance online, income and income inequality impact the score a municipality receives on the online performance reporting index. In other words, as income increases, the probability that the municipal government publishes online performance reports decreases. Similarly, as the Gini Index score moves closer to one, the less likely it is to publish performance reports online. The variables in models two and three were not found to be statistically significant predictors of the cities that publish online performance reports.

The results from model four remain consistent with the first three models and indicate population ($b = .3738, p < .05$), income ($b = -.0004, p < .05$), Gini Index ($b = -.9200, p < .05$), the percentage of the population with a Bachelor’s degree ($b = .0181, p < .01$), and cities located in the western region of the United States ($b = .6141, p < .10$) are all significant predictors of publishing performance data online. In model five, population ($b = .3317, p < .01$) and the percentage of the population that has a Bachelor’s degree ($b = .8618, p < .01$) were both found to be significant predictors of the cities that publish performance data online. These findings indicate that population, education, and income equality are the primary factors impacting cities to publish high-quality performance reports online.

**Test of Hypotheses**

Hypothesis testing was conducted by analyzing each of the independent variables in relation to online performance reporting (Table 3).

Population was found to be a significant predictor of online performance reporting in U.S. municipalities. Model one indicates that a 1% increase in population increases the probability of online performance reporting by nearly 19%. Population has been a consistent predictor of e-government; yet it has not always predicted performance measurement or performance reporting in U.S. municipalities. The results of this finding suggest that municipalities with a large population are more likely to have a diverse group of citizens with varied needs. Providing online performance reports may be viewed as a method for government to demonstrate how it is meeting its citizens’ needs. Therefore, we fail to reject Hypothesis One.

It is commonly understood that income is a significant predictor of e-government around the world (Bekkers & Homburg, 2007; Calista & Melitski, 2007; Carrizales, 2009). Moreover, lack of access to technology in general is described as the digital divide (Sipior & Ward, 2005). The results from Table 3 of this research, however, indicate that income is not a significant predictor of online performance reporting within U.S. municipalities. Furthermore—and perhaps even more interesting—in Table 8, where factors that impact cities to report performance online are displayed, income negatively predicts online performance reporting. Specifically, a 1% increase in income decreases the probability of online performance reporting. Although the effect is extremely minimal, it is interesting that income was not found to have an impact on online performance reporting in the United States. Therefore, Hypothesis Two is rejected.

The Gini Index is a measurement of income inequality where the lower the score, the larger distribution of wealth exists. The closer the score moves toward one, the greater the existence of income
inequality. Table Three shows that the Gini Index is not a significant predictor of online performance reporting. When factors that impact municipalities who report performance online are examined, an inverse relationship between the Gini Score and online performance reporting exists. Table 8 demonstrates a 1% increase in the Gini Index score decreases the probability a municipality publishes performance information online by 82%. The results indicate that as the Gini Index decreases (or travels closer to 0) the probability of online performance reporting increases. Although we reject Hypothesis Three based on the results from Table 3, Table 8 shows that income inequality impacts municipalities who do report performance online.

Boyne (2002) and Tillema (2005) found that municipalities that have a diverse ethnic and racial population are more likely to provide various services to meet the needs of those citizens. Hypothesis Four extends this finding and examines the relationship between online performance reporting and the racial composition of a municipality. The results from model one indicate that a 1% increase in the percentage of non-White residents decreases the probability that a municipality utilizes online performance reporting by less than 1%. Model five finds a similar result and is contrary to the theory espoused. As the demographic composition of municipalities becomes more homogenous, the less likely it is to provide online performance reports. Hypothesis Four is rejected.

To determine whether the digital divide regarding age is actually increasing or decreasing, Hypothesis Five examines the impact the percentage of residents 55 and older have on whether a municipality uses online performance reporting to communicate with citizens. Recently, age has been analyzed as a factor impacting the digital divide (Tillema, 2005). As a result of the analysis, model four and model five indicate that as the percentage of the population increases, so does the probability that a municipality uses online performance reports. Model four indicates that a 1% increase in the percentage of the population 55 and above increases the probability that the municipality uses online performance reports by approximately 1%. Model five indicates that a 1% increase in the percentage of the population 55 and above increases the probability that a municipality published performance data online by 3%. The findings from this research are contrary to previous studies; therefore, Hypothesis Five is rejected.

Norris and Curtice (2003) found that education was a significant predictor of e-government use; however, the findings from this study do not support previous research. As the percentage of the population with a Bachelor’s degree increased the likelihood that a municipality reported performance online did not increase. Hypothesis six is rejected.

Walker (1969) argues that public administrators constantly examine the practices of governments in nearby states to simplify their own decision-making. He refers to this as regional diffusion explanation (Walker, 1969). Holden (2003) tested regional diffusion and found statistical evidence from the 2000 ICMA survey supporting the theory that governments in the western region of the United States were more inclined to adopt websites than other areas of the country. Based on the theory of regional diffusion, it was hypothesized that cities in the western region of the United States were more likely to use online performance reporting than cities in other parts of the country. The western region of the United States was used as a dummy variable because several cities in Arizona, California, and Washington earned high scores on the online performance reporting index. As a result of the analysis, it was found that cities located in the western region of the United States were less likely to use online performance reporting. Hypothesis Seven is therefore rejected.

CompStat and similar online crime reports were introduced as strategies to improve service delivery and the allocation of police resources to decrease crime. Hypothesis Eight espouses the theory that cities with a higher incidence of crime are more likely to have implemented online performance reporting to decrease the perception that crime is an issue in their city and to promote the notion that the
government is performing well. As a result of the analysis, the violent crime rate did not impact whether a municipality reported performance online or not. Hypothesis Eight is rejected.

Form of government was introduced as a variable that may predict the use of online performance reports based on previous research that indicates cities with a council-mayor form of government are likely to be horizontally structured with less red tape and administrative constraints (Carrizales, 2009). The results from this study, however, indicate that council-mayor forms of government do not impact the use of online performance reporting. Hypothesis Nine is therefore rejected.

A measure of government capacity is the ratio of the government workforce relative to the overall population of a municipality. This exploratory variable was not found to be statistically significant; therefore, Hypothesis Ten is rejected.

Schwester (2009) found that the adoption of e-government was positively influenced by municipal governments with large operating budgets. Model three assesses the municipal government budget in relation to online performance reporting. Specifically, the total amount of budget expenditures is analyzed to explore if that has an impact on online performance reporting. The results of this research indicate that cities that have a greater amount of budget expenditures are not more likely to report performance online than cities that have less budget expenditures. Hypothesis Eleven is therefore rejected.

Previous research indicates that e-government use is significantly impacted by elected officials who face political opposition than it is by long-tenured politicians. This research hypothesis that mayors who have been in office longer are less likely to feel external political pressure and are less likely to support initiatives that may cast them negatively. This research found that the tenure of a mayor was not found to be statistically significant in terms of predicting whether or not a municipality publishes online performance reports. Hypothesis Twelve is rejected.

Non-White mayors were not found to be more likely to publish performance data in the cities in which they governed. Hypothesis Thirteen is rejected.

Female mayors were not found to be more likely to publish performance data in the cities in which they governed. Hypothesis Fourteen is therefore rejected.

**Conclusion and Implications**

This research has increased our understanding of the factors that impact online performance reporting in U.S. municipalities. In terms of local governments, providing performance reports online is still dismal; only 29% of municipal governments included in this study provide city-wide performance data online. Therefore, it must be asked, what are the driving factors that would persuade more municipal governments to provide performance measurement data online? Based on the results from the interviews, fiscal issues are the primary factors impacting municipalities from publishing performance. The development of a worthwhile performance system that assists improvement efforts is a difficult undertaking. Aside from the initial cost, employee support is an integral component of its overall success. Second, either some person or some group must be available to provide management expertise. Finally, elected official support will inevitably help sustain a performance measurement system. Once these elements are in place, publishing performance data online is much easier. It must be noted, however, that publishing performance information online is also a delicate issue that must be done carefully. When the costs of implementing a performance measurement system are secured, staff and management support are achieved and capable personnel are present, elected officials may be wary because of the potential negative outcomes that may result.
Interestingly, the results of the municipal manager interviews indicate that performance improvement efforts seem to be an ingrained component of the culture of the organizations who publish performance reports online. Based on several of the municipal manager comments, it may be assumed that measuring performance and reporting that information to citizens is a practice that has occurred and will likely continue to occur in the future. Some managers stated, “Performance measurement and reporting results have been a part of the budget since the 1990s; online reporting is encouraged by the current mayoral administration and they advocate public transparency and public reporting.” Another manager interviewed stated that the city manager has been the driving force behind their performance efforts. “Since he’s been here we’ve been publishing reports on a quarterly basis.” The findings indicate that performance reporting is not another fad or something that will come and go in the near or distant future. For these municipalities, enhancing and improving their performance efforts will be the goal.

The study has shed light on the fact that population and less diverse communities impact the publishing of online performance reports. Furthermore, when we examine the factors that impact cities to publish comprehensive performance reports online we find in addition to income, income inequality, education, and region of the country play a role as well as population and diversity.

OECD guiding principles for successful e-government initiatives include a citizen-centric focus and responsiveness. While many of the municipalities interviewed agreed that the needs of citizens are paramount, few took proactive measures to actually include the views of citizens in the development of the performance report. The cities studied may be accused of “flying blind” because, in many cases, they have developed measures that may be most important to citizens. However, without formally including them in the process, we simply are not certain.

Performance improvement of public organizations requires effective leadership and communication, clearly defined goals and objectives, and innovation. Managers and leaders of organizations often forget the need to collaborate with front-line employees; in many cases, these employees are street-level bureaucrats. Government agencies may be interested in becoming more efficient and effective; they are seeking methods to achieve those goals. For example, a municipal ambulatory service may believe that by implementing sophisticated technology that utilizes Geospatial Information Systems (GIS) is improving performance. Such technology tracks all incoming calls and the time it takes to respond to those calls, as well as other essential information. Indeed, this may be true. However, a key component to any change are the employees and how effectively their input is relied on. Moreover, leaders who take a proactive approach to organizational performance can influence the use of online performance reporting and make it a valuable tool to improve productivity efforts. This requires the leader to be adverse to risk; inevitably, a department will show a decline in performance from one point to the next.

Some of the challenges associated with this research were simply finding the performance reports online. It often took more time locating the report than it did to evaluate the information contained in the report. For longer reports, the challenge was sifting through all of the details to make sure the evaluation was coded properly. Also, the content and format of the reports evaluated varied greatly across municipalities. Some reports presented only highlights and accomplishments of their government; consequently, these reports lacked structure and coherence.

Another challenge to this research occurred during the interview process. I had to ensure that the person I spoke with was exceptionally familiar with performance measurement, the performance report, and had supervisory capabilities. Aligning these three requirements was more difficult than I initially imagined. Several managers were most interested in discussing the accomplishments of their online performance report and were less inclined to discuss methods to improve the performance report. Self-
reporting the positive aspects of performance reports was a concern if surveys were to be conducted, but this issue also presented itself during the purposive interviews.

Finally, although the sample size of 200 municipalities was sufficient, only 29% of those municipalities report performance. The fact that only 29% of those sampled report performance online is perhaps indicative of poor productivity at the local level of government in the United States.

Future research on this topic is definitely necessary and should include a survey of municipal government managers. To eliminate self-reporting to highlight the accomplishments of municipalities who report performance (or who report performance online), the study should analyze the factors that impact performance measurement, in general. Select questions can then be geared toward performance reporting, online performance reporting, citizen engagement, and decision-making based on feedback from citizens. This method will increase the sample size and facilitate a broader analysis. While conducting several of the interviews, respondents suggested that a survey of municipal managers would assist in understanding their overall perceptions of technology, performance measurement, and online performance reporting. Surveying municipal government managers may yield important results for public management that have not been uncovered in this research. Public managers may be interested in performance measurement and keenly attentive to reporting performance to the public but also must be aware of the external environment along with meeting administrative requirements of their organization. The effects of balancing these two indelible factors are difficult to assess yet crucial to improvement efforts necessary to affect performance.

Additional research should also include the voting characteristics of the municipality in local elections as an independent variable. Do citizens’ political party affiliation and the political party affiliation of the mayor impact online performance reporting? Is political affiliation a feature that is more common among Democrats, Republicans, or Independents?

**Implications for Performance Management**

As the service delivery responsibility of local government continues to grow, so do the demands of citizens. Increasingly, the public seeks effective and efficient provision of services (Ammons, 2007). Online performance reporting is an effective method for government to demonstrate what it is actually doing with the resources allocated to them, thus simultaneously improving accountability and transparency.

Another implication of this research on government performance is the effective utilization of performance information. A common question many have regarding the collection of performance data is, “What will happen with the large amount of information produced by these management systems?” One of the managers interviewed stated that their city collects an inordinate amount of information but that it is not used. This seems to beg the question, “Why collect this information in the first place?” Perhaps some municipalities collect performance information and do not utilize it because they are convinced that their government is operating effectively. When online performance reports are utilized to inform decision-makers, then they are not simply measuring performance but managing performance. Specifically, when online performance reports are used effectively, they may serve as a manner to assist the agency or program achieve performance goals. When used in this manner, performance measurement can be utilized as an administrative tool that is considered performance management.

A final implication of online performance reporting stems from the fact that they provide a method to track resource allocation and actually help monitor costs better. A common barrier to any performance measurement system or e-government initiative is the initial outlay of cost during implementation. Although these costs can be substantial, future costs savings as a result typically outweigh what is
required at the onset. Several managers stated that performance measurement have placed them in a better position to withstand fiscal crises. “We have been affected like many other cities, but the performance measures allow us to make better decisions and show people why those decisions were made.” When government and managers, alike, begin to support online performance reporting, they are also improving the long-term sustainability of departments, agencies, and various programs. If financial sacrifices are not initially made then service delivery is likely to be compromised in the future.

Implications for Public Administration

This study has attempted to integrate the fields of performance measurement and reporting with e-government. Intuitively, it seems like a probable relationship especially when one considers that performance reporting is geared toward informing the public of what government is doing with the resources it is allocated. Coupled with the frenetic pace information and communication technologies are being utilized by government and citizens alike, this merger is bound to occur with greater frequency in the near future. Several managers said that citizens are genuinely interested in viewing performance data, and they believe that it should be made available to them: “They are interested—they expect to be able to obtain it.” Another manager stated that citizens like performance information and like to be able to manipulate it to meet their needs. Clearly, the public is interested; it is now time for public administration to meet the needs of citizens.

What is missing is the ability of many governments to decide how exactly to increase citizen participation to facilitate worthwhile feedback and thought. If performance reporting is going to be used as a management tool to enhance the administrative capabilities of government and improve service delivery, then government must become more receptive to relying on citizen feedback. Online performance reporting can effectively be utilized to increase citizen participation to inform decisions, thus improving performance. Because government is different, perhaps it is time that the public is no longer considered an external stakeholder, but an internal stakeholder whose real participation is long overdue.
References


