Factors affecting openness of local government websites: Examining the differences across planning, finance and police departments

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ABSTRACT

The use of information and communication technologies (ICTs) in public organizations increasingly holds the potential to improve transparency, accountability, and public participation, by providing a more effective and efficient disclosure of information to the citizens and organizations and by providing channels for interaction with the government. While transparency and interactivity features of government websites constitute two critical elements for public participation and democracy facilitated by web-based technologies, little research has been done to explain why some public organizations choose to deploy website technology more openly with these features. This paper aims to examine the managerial, organizational, and environmental factors that are related to variation in transparency and interactivity features of local government websites, which we believe are key dimensions to governmental website openness. The paper first develops a literature informed conceptual model of governmental website openness and then tests this model using data from a national survey of 850 government managers in 500 cities. The model results are compared across three different departments: community development, finance, and police department. Overall findings indicate that higher website openness is positively related to increased frequency of public participation in agency decision making and civil society influence, increased technical capacity, lower organizational control, and higher perceived usefulness of website technology. In addition, due to differences in the operating contexts of the departments, the effects of organizational control, technical capacity, environmental influences, and perceived usefulness of website technology on governmental website openness tend to differ by the type of department.

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1. Introduction

E-government can be defined as "the use of information and technology to support and improve public policies and government operations, engage citizens and provide comprehensive and timely government services" (Scholl, 2008). Website and web-based technologies are often regarded as the essential parts of any e-government. The use of web-based technologies in public organizations increasingly holds the potential to improve transparency, accountability, and public participation by providing a more effective and efficient disclosure of information to the citizens and organizations about the processes, structures, and products of government, and by providing channels for interaction with the government (Bimber, 1999; Jun & Weare, 2010; La Porte, Demchak, & Friis, 2001; Musso, Weare, & Hale, 2000; Tolbert & Mossberger, 2006; West, 2004). It is expected that more information delivery and interactivity through governmental websites and Web 2.0 technologies may result in increased transparency and accountability of government, and empowered citizens who know what

government is doing, are able to monitor its performance, and can provide input into decision making (Asgarkhani, 2007; Bertot, Jaeger, & Grimes, 2012; Lathrop & Ruma, 2010). In that respect, transparency and interactivity features of government websites may constitute two critical elements for public participation and democracy facilitated by web-based technologies.

On the other hand, research has shown that government websites differ in their transparency and interactivity characteristics (Armstrong, 2011; West, 2004). Although Open Government Directive laid out specific actions for agencies such as publishing government information online following President Obama's memorandum on Transparency and Open Government in 2009, open e-government practices promoting transparency, citizen participation, and collaboration are still unevenly developed across the states in the U.S. (Ganapati & Reddick, 2012). Studies have also found that while some agencies are hesitant about enabling greater public access to their materials through electronic means, others may fall behind in direct online public participation (Bonson, Torres, Royo, & Flores, 2012; Jaeger & Matteson, 2009; Tsai, Choi, & Perry, 2009). While some public organizations limit their website content to the basics, others develop websites with more complex features that enable greater information dissemination and interactivity. Government website content tends to vary in the provision of employee contact information, information

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about the decisions made in the organization, display of department documents of interest to citizens and other external stakeholders, and opportunities for citizens and other external stakeholders to interact with government officials online (Holzer, Manoharan, Shick, & Towers, 2008).

Why do some government organizations develop more transparent and interactive websites and others don't? According to one view, technology is not always used by organizations to enhance responsiveness or increase citizen participation, rather, it may serve to maintain agencies' own mission and reinforce existing social and political patterns (Davis, 1999, 146-48; Margolis & Resnick, 2000; Chadwick & May, 2001). While some studies have examined differences among government organizations in transparency and public participation levels (Meijer, Curtin, & Hillebrandt, 2012), little research has been done to explain why some public organizations choose to deploy website technology more openly with transparency and interactivity features.

This paper aims to examine the managerial, organizational, and environmental factors that are related to variation in transparency and interactivity features of local government websites, which we believe are key dimensions governmental website openness. The study asks three questions: Is website openness associated with organizational constraints such as centralization and routinization of tasks? How does technical capacity relate to website openness? Does the level of external influence from citizens and other stakeholders matter for whether the organization chooses to be more transparent and interactive in its use of website technology, or are there any push factors from inside the organization?

The paper starts off with an operational definition of website openness and develops a literature informed conceptual model. Using data from a national survey of 850 government managers in 500 cities, the study then tests the resulting hypotheses and also compares the model results for three different departments: community development, finance, and police department. The Conclusion section discusses theoretical, policy and management implications of the findings.

2. Website openness: operational definition

In order to examine the variation in local government website openness and factors that explain it, we first need to identify an operational definition for the term "website openness". It is possible to conceptualize website openness in relation to the concept of "governmental openness", because government websites are likely to be designed to reflect the degree of openness of the agency to public monitoring and participation. In reviewing the literature, Meijer et al. (2012, p. 13) conclude that the definition of "open government" needs to incorporate both transparency and access aspects and can be defined as "the extent to which citizens can monitor and influence government processes through access to government information and access to decision-making arenas". Accordingly, governmental website openness may refer to the extent to which the website provides information about government processes and decision making and also enables citizens to contact the agency on these matters.

Similarly, the Cyberspace Policy Research Group (CyPRG) in their study of the relationship between website openness and e-government accountability characterizes government website openness as a function of two interrelated elements: transparency and interactivity. In their study, transparency refers to the extent to which an organization provides explicit information about work and decision processes, procedures, events, activities, and outcomes (Cyberspace Policy Research Group (CyPRG), 2011). It is the active disclosure of information by an organization that enables external actors to monitor and evaluate its internal activities, decisions and performance (Grimmelikhuijsen & Welch, 2010). While the tools of transparency are often written formal reports, data, memos, schedules, and meeting agendas (Meijer, 2009; Piotrowski & Borry, 2009), it can also be in the form of allowing observation to decision making activity. The second component of website openness, interactivity, is defined as the quality of communication between

agency and citizen taking place on the website (La Porte et al., 2001). The level of interactivity of the governmental website indicates the ease with which users are able to access data or people (La Porte et al., 2001). The transparency and interactivity characteristics of websites may, for example, include contact information or organizational/operational information. Contact information enables the website visitor to contact individuals or positions inside the organization and reflects the organization's willingness to permit outsiders to see inside the organization in a more detailed way and start interaction (La Porte et al., 2001). While some organizations choose to provide detailed contact information of employees in the organization, others may centralize it by designating a single person for all outside contacts. Organizational or operational information, on the other hand, may include an understanding of the scope of the organization's operating and policy environment (La Porte et al., 2001). Thus, the transparency and interactivity characteristics of governmental websites together can be used to evaluate the level of website openness, which may enable the public and stakeholders to engage in public decision and the policy-making processes.

Literature identifies several reasons as to why public organizations may choose to be more or less transparent and interactive in their relations with the public and stakeholders, and provides further insights into why there may be variations in the way that they utilize website technology in this context.

The next section reviews the factors related to governmental transparency and public participation using website technology, and develops a literature informed conceptual model of website openness along with the hypotheses to be empirically tested in the study.

3. Literature and hypotheses

Governments often use the mechanisms of open interaction and engagement with citizens and external stakeholders in order to more effectively identify, prioritize, and address the needs and desires of the public and organized interests (Coursey & Bozeman, 1990; Hickson, Butler, Gray, Mallory, & Wilson, 1986). Government websites constitute one of the engagement mechanisms that can be utilized to enable access to governmental information and interaction with citizens and other external stakeholders. While website technology has the potential to improve the effectiveness of public involvement in deliberation and decision making processes by facilitating information dissemination and input from the public (Macintosh, 2004; Sanford & Rose, 2007), prior studies indicate that the utilization of this technology is not uniform across all public organizations (Welch, 2012; West, 2004).

This paper is built on two main approaches to explain variation in the level of transparency and interactivity characteristics of local government websites: technology demand approach and socio-technical approach. A key proposition of the technology demand model of the organization is that adoption of technology and how it is implemented depend upon the decisions made by managers in response to needs expressed within the external environment. The technology demand perspective asserts that managers play a central role not only in assessing the magnitude of the demand for technology but also in deploying technology to meet the demand (Welch, Pandey, & Yavuz, 2010). Technology-related decisions are based on manager awareness of external demands and their understanding of the technology available, and the constraints and opportunities that exist within the organization. The model contrasts with a more determinist supply model in which technology availability and expertise are primarily responsible for the adoption and implementation of technology in an organization. According to the technology demand model, technological outcomes in an organization result from the contextual interplay between external environmental forces (economic conditions, civil society, city, and state influence, organizational mandates) and internal organizational factors (technological capacity, organizational structure, innovativeness, focus of top management) (Bozeman & Bretschneider, 1986;