Social media adoption at the American grass roots: Web 2.0 or 1.5?

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ARTICLE INFO

ABSTRACT

In this paper, we examine data from a 2011 survey of grassroots (or local) governments in the United States with respect to their adoption of social media (e.g., Facebook, Twitter, YouTube, blogs, and Flickr) especially to ascertain the drivers of local government social media adoption and whether the drivers are similar to or different from the drivers of e-government adoption. We also address whether the adoption of social media portends a move by local governments from Web 1.0 to Web 2.0.

The findings of this research show that the principal drivers of local government adoption of e-information and services are highly consistent with those of previous research: size of government, type and form of government, region of the country, education, years of e-government experience, and the existence of a separate IT department are all related to adoption. The drivers of adoption of e-transactions are consistent, but somewhat less so, with prior research. And, the drivers of adoption of social media are closer to those of e-information and services than of e-transactions.

Based on evidence from the survey (local governments use social media mainly for one-way communication) and prior studies of IT and government and e-government, we conclude that social media today do not appear to be moving local governments in the direction of Web 2.0, but perhaps in the direction of Web 1.5.

1. Introduction

In this paper, we examine data from a 2011 survey of grassroots (or local) governments in the United States with respect to their adoption of social media, especially to ascertain what drives local government adoption of social media and whether the drivers are similar to or different from the drivers of e-government adoption. We also address whether the adoption of social media portends a move by local governments from Web 1.0 to Web 2.0.

Social media – e.g., Facebook, Twitter, YouTube, blogs, Flickr and others – burst upon the scene only a few years ago. Yet, in this short period, these media have been adopted by very large numbers of persons and organizations across the world. It seems like just yesterday there were no social media (at least in the current "electronic" sense of the term), and now these media have hundreds of millions of users, and the number grows daily.

The two leading social media, Facebook, which was launched in February 2004, and Twitter, which was launched in March 2006, had more than 1.1 billion and 555 million subscribers, respectively at the end of 2011 (Facebook, 2013; Statistics Brain, 2013). Subscribers to social media include ordinary citizens, celebrities, businesses of many varieties, politicians, political campaigns, appointed and elected governmental officials, and governments themselves at all levels.

According to Boyd and Ellison (2007), the principal reason that businesses have adopted social media is their growing worldwide popularity. With so many people using social media, businesses are undoubtedly betting that there is some way to make or increase profits through the adoption of these media. We suspect that something similar has encouraged governments to adopt social media — not for profits but for contact with stakeholders. Both businesses and governments alike undoubtedly feel that they cannot avoid adopting social media if for no other reasons than their existence of these media and their millions of users.

Some observers have labeled social media as part of Web 2.0 technologies. Chun, Shulman, Sandovol, and Hovy (2010) state that there are essentially four differences between Web 1.0 and 2.0 and its application to government. These differences are related to information, services, policy, and governance. With Web 1.0 information, service, policy, and governance are one-way, going from the agency to the citizen. With Web 2.0 and social media information is co-created, citizens demand services, policy is negotiable, and governance is shared.

With Web 2.0 instead of content on a website being controlled by organizations as is true in Web 1.0, in Web 2.0 users are producers or generators of content (Bertot, Jaeger, & Hansen, 2012; Chang & Kannan, 2008). O'Reilly (2005) believes that with Web 2.0, users add value, and organizations are able to harness the collective intelligence of the public through social media. Essentially, users can organize their information in their own way and to meet their own needs. The hope of this movement to Web 2.0 is that, while the old generations of technologies were unidirectional and citizens were passive receivers

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of information (Meijer & Thaens, 2010), Web 2.0 is said to increase the level of collaboration among governments (Brainard & McNutt, 2010). Some argue that with Web 2.0 there may be the potential for providing a greater degree of transparency and accountability among governments (Bertot, Jaeger, & Grimes, 2010; Chadwick, 2009). The belief is that an increase in both of these creates greater civic engagement among citizens.

One example of social media used in government can be seen in responses to disasters by first responders. These situations change minute-by-minute and social media enable citizens to comment on a disaster and provide up-to-date information that was not possible without social media. Other examples are government using wikis for collaboration on projects and blogs to transmit and get comments on changes in government policies. With social media, Bekkers and Moody (2009, p. 258) believe that it allows citizens to be co-producers of information rather than passive information users.

Scholars have argued that the long history of studying the institutional context of IT adoption in the public sector indicates that organizational pathologies often impede any real reform (Bekkers & Moody, 2009; Mergel, Schweik, & Fountain, 2009). Essentially, public sector officials and agencies may not want to share information because they fear loss of control, which prevents real transformative change. Bannister (2005, p. 161) argues that because of issues of territories and power, joined-up government is very difficult to achieve with information technology (IT). Bekkers and Moody (2009, p. 267) believe that e-government is said to reinforce the positions of those in organizations that are already in power. In an extensive review of the literature about information technology (IT) in government, Kraemer and King (2006) concluded that IT has not produced administrative reform in governments. They argued that one lesson from this finding was that e-government would be an unlikely engine of governmental reform. Might this not also be true of social media?

As scholars who study e-government, the rapid worldwide diffusion of social media caused us to wonder about governmental adoption of these media. To what extent, if any, have grassroots or local governments in the U.S. joined the throng of adopters of these media? What are the principal drivers of social media adoption for local governments and are those drivers different from or similar to those typically associated with local government adoption of e-government? Has adoption of social media moved local governments in the direction of Web 2.0?

Thus, this paper has two purposes. First, we examine the adoption of social media at the American grass roots (that is, by American local governments) and compare the drivers of adoption of social media against the drivers of grassroots government adoption of more traditional forms of e-government, namely the provision of governmental information and services, including transactions, electronically 24/7/365. By adoption we mean whether, and the extent to which, local governments have implemented one or more social media via their websites.

The three dependent variables that we analyzed in this study are information/services, transactions, and social media. We examine each of these against common factors found in the IT and public administration literatures. Among other things we ask is whether some or any of the key drivers of e-government adoption are related to social media adoption.

Therefore, our first research question is: *Are the variables associated with local government adoption of social media technology similar to or different from those associated with local government adoption of traditional forms of e-government (e.g., information/services and transactions)?*

Second, using evidence from the survey and the broader e-government literature, we seek to determine if their adoption of social media really does portend, as advocates claim, a movement from Web 1.0 to Web 2.0 among American local governments. What we mean here is whether local governments have gone beyond merely adopting social media, and, instead, are actively using social media in ways predicted by advocates — not simply for the one-way delivery of information and services to citizens but to enable citizens to participate in and interact and collaborate with the governments via these media.

Therefore, our second research question: *As the result of social media adoption, are local governments moving in the direction of Web 2.0 versus Web 1.0?*

The remainder of this paper is structured as follows. First, we briefly discuss social media. Then, we review the literature related to the adoption of e-government, and, from that literature, we identify variables that have been found to be associated with e-government adoption. We use those variables in our analysis of social media adoption later in the paper. Next, we discuss the research methods employed in the paper to collect our data as well as the techniques we used to analyze the data.

Then we discuss the results of our analysis. We are especially interested in whether these results are consistent with the prior literature on e-government adoption. That is, are the drivers of local government adoption of social media different from or similar to the drivers of adoption of IT in government and e-government? Based on our reading of the literature, which we will explain in due course, we expect to find that the drivers are much more similar than different. Following this, we summarize our findings and address the question of Web 2.0 versus Web 1.0.

2. Social media

Prior to the advent of the current (or what we briefly call the "electronic") social media, people and organizations used a wide variety of means to connect and communicate with one another — although, given the attention garnered by today's electronic social media, one would be hard pressed to think so. Earlier, more traditional means of communication (many of which continue to be used today) included at least the following: 1) face to face contact in a wide variety of venues; 2) writing and receiving letters via the mail; 3) reading newspapers and discussing their contents and writing letters to editors; 4) attending public meetings of various sorts (town hall meetings, etc.) to discuss various matters coming before public authorities; 5) public assembly; 6) writing and distributing treatises and pamphleteering (e.g., Martin Luther and Tom Payne and many besides them); 7) conversing via the telephone; 8) corresponding via email; and probably many more.

Through these means of communication, people and organizations sought to initiate contact with, stay in contact with, network with, understand, influence and even change the course of others' lives. Well before the advent of electronic social media, great ideas diffused around the world and revolutions were fomented using these methods (e.g., before the use of Facebook and Twitter help to advance the recent "Arab Spring"). What sets electronic social media (we now drop the word "electronic" and for the remainder of this paper use the simpler term social media) apart from more traditional methods of human interaction are at least the following: low cost, rapid mass adoption, ease use, and speed of transmission. Hundreds of millions of people and organizations, using social media, can and do send words and images via those media that others access instantly. No single medium or any combination of media prior to the contemporary social media had diffused so rapidly, nor has any medium or combination of media approached the ability of social media to transmit words and images so quickly.

At their core, social media are about two things: communication and networking (Boyd & Ellison, 2007). Because these media are fully interactive and two-way in their method of communication, it is easy to understand why they have been so attractive to so many users, especially young people, who use these media to connect and stay connected (i.e., network) with their "friends" instantly and seemingly constantly.

Since social media are communication and networking tools, why would local governments adopt these media and, once adopted, how