The Effects of E-Government on Trust and Confidence in Government

Caroline Tolbert
Department of Political Science
302 Bowman Hall
Kent State University
Kent, OH 44242
Ctolber1@kent.edu

And

Karen Mossberger
Department of Political Science
302 Bowman Hall
Kent State University
Kent, OH 44242
kmossber@kent.edu

Arguments that e-government may improve citizen trust in government have not been sufficiently tested. We are interested in exploring the potential for e-government to influence citizen attitudes about government, across various population groups, including those with limited technology access and skill. This paper surveys literature relevant to e-government and its effect on civic trust, and summarizes our previous research on citizen attitudes on e-government. We propose further research using an Internet-based experiment that will expose a random sample of respondents to government web sites that are chosen to represent best practices for different types of sites. Surveys administered before and after exposure to the sites will measure any significant changes in attitudes about government in general, as well as perceptions of e-government. Oversampling of low-income and minority respondents will allow us to explore any differential impact across demographic groups.

The Effects of E-Government on Trust and Confidence in Government

Recent research suggests that e-government may have a positive effect on citizen confidence in government. Using a 2000 commercial survey, West (forthcoming) finds that knowledge about e-government does not increase citizen trust in government, but does increase perceptions of effectiveness. While intriguing, these findings are based on information provided to survey respondents about e-government, rather than actual experience with e-government. More recent surveys (Mossberger, Tolbert and Stansbury, 2003; Larson and Rainie, 2002) show that use of government information online is growing. (Our survey showed 40 percent of all respondents had looked up information on government services online, and Pew (Larson and Rainie, 2002 reported that 58 percent of Internet users have visited a government web site.) Such growth provides new opportunities to explore confidence in government based on actual experience with e-government.

At the same time, because of lower interest in government online among the poor and less-educated, e-government may only serve to magnify existing disparities in knowledge, participation, and trust. The existing e-government research (West, forthcoming) examines overall trends rather than disaggregating effects by socioeconomic status or age. There may be multiple and differing stories to tell about citizen use of e-government and its effect on civic trust.

We are interested in exploring both the potential and hazards of e-government for changing citizen attitudes about government in general. First, do attitudes and experience with e-government vary among different groups in the population? If so, how much of this variation is due to differences in information technology access and skill? How much of the variation is due to income and education levels? Stated differently, what factors shape experience with and attitudes about e-government? Second, does experience with e-government influence confidence in government more generally? How does general trust in government differ among those who have used government web sites, and those who have not? Despite a lot of promotional hype, the evidence on this topic is still tentative. Moreover, "e-government" encompasses a variety of ways in which government and citizens interact. It may be that e-government does not by itself change general perceptions of government, but may improve citizen interactions with government in specific ways.

This research builds upon our recently-completed national random-sample survey, which included questions about use of e-government and political participation on the Internet (Mossberger, Tolbert, and Stansbury, 2003). One of the unique advantages of our prior study was a large low-income sample drawn from high-poverty census tracts, which allowed us to explore attitudes about and use of e-government among different populations. The proposed research will allow us to investigate some of our most interesting findings in greater depth and with added rigor. An experimental design using an Internet survey where the treatment group is exposed to e-government web sites will allow us to answer whether technology improves the transparency of government, and political trust.

1. Political Trust and E-Government

Many scholars and political pundits argue that Americans are becoming more and more disenchanted with traditional institutions of representative government, and disillusioned with older forms of civic engagement and participation. While a "crisis of democracy" may be overstated, indicators suggest an increasing number of "critical citizens" are characterized by high expectations of democracy as an ideal and yet low evaluations of the actual performance of representative institutions (Norris, 1999; Rosenthal, 1997; Baldassare, 2000).

Trust in government is at an all time low in contemporary American politics, falling every year since the late 1970s (Putnam 2000). Declining trust has been linked to declines in political participation (Hetherington, 1998 and 1999; Abramson, 1993; Norris, 1999; Craig, 1996). Low public confidence in government and elected officials is related to the perception that the government is unable to solve problems, to spend money in an effective and efficient manner, or to represent the interests and policy preferences of average voters (Baldassare, 2000). In response, there have been calls to "reinvent" government, to increase its efficiency and effectiveness (Osborne and Gaebler, 1992), and to provide opportunities for direct participation in government decision-making (Barber, 1984; Bowler, Donovan and Tolbert, 1998; Peters, 1996). Some scholars see information technology as the most important ingredient for creating a more participatory democracy and increasing confidence in government (Norris 2001, 96). E-government has been proposed as a solution for increasing efficiency, transparency, participation, and citizen communication with government agencies, and ultimately political trust (Peterson and Seifert,2002; Chadwick, 2001; West, forthcoming; Ho, 2003; Norris, 2001; Clift, 2000; Melitski, 2001; Tapscott 1997). E-government holds the potential to transform methods of providing information and services to citizens, as well as democratic governance.

Digital government potentially transforms citizen to government interactions in two ways: by improving service delivery, including costs; and by improving communication between citizens and government (Fountain, 2001; Peterson and Siefert 2002). Both improvements in policy outcomes and the political process have been linked to increased trust in government (Hibbing and Theiss-Morse, 2001). Online public hearings and forums have the potential to permit interaction between citizens, and also between government and citizens, on a broad scale. Such participatory uses of e-government are less common, however, than either informational uses or service transactions (West, 2000; Larson and Rainie, 2002). Efficiency concerns (and therefore service delivery) appear to drive the diffusion of e-government, rather than the idea of creating a new forum for participatory democracy. According to a survey of state and federal chief information officers, 86 percent believed that e-government improved service delivery, and 63 percent felt it reduced costs (West, 2000). Our own research on the scope of implementation of e-government in the American states showed that Republican-controlled legislatures and professional networks were statistically significant explanations for more extensive use of e-government (McNeal, Tolbert, Mossberger and Dotterweich, 2003). Neither citizen demands (measured by Internet access in the state) nor political characteristics such as state use of ballot initiatives were related to greater use of e-government. This is consistent with other recent government reforms, such as "reinventing" government. At the federal level the reinvention effort emphasized cost reduction and efficiency over other stated goals such as citizen empowerment and responsiveness (Kettl, 2000).

While e-government use may not be fundamentally rooted in fostering participatory democracy, it may still have a significant impact on citizen to government interactions. On a more modest level, the Internet can facilitate more individualized communication with agencies and elected officials, especially through e-mail. Eighty-four percent of federal and state web sites include e-mail addresses, and government receipt of e-mail from constituents is increasing (West, forthcoming; Clift, 2000). Posting information on the web has often forced city agencies to streamline or coordinate procedures in various units, provide "one stop" access to city government, and present information in more user-friendly formats. A presence on the Internet can force city officials to be more outward looking and customer-oriented, as some studies of the implementation of e-government have observed (Ho, 2003). Finally, improved efficiency may have some positive effect on citizen attitudes about government as well.

2. Citizen Attitudes about E-Government

Our forthcoming research on technology experiences and attitudes (Mossberger, Tolbert, and Stansbury, 2003) contributes to further understanding of citizen attitudes and use of e-government in several ways. First, our national random sample telephone survey (n=1837) included a large sample of low-income respondents drawn from high-poverty census tracts, and another from the general population. Second, we asked respondents about their attitudes and interests as well as their current use of the Internet for government information or political participation. Finally, the survey data was analyzed using multiple statistical controls, in contrast to surveys by Pew (Larson and Rainie, 2002) and Hart Teeter.

Survey respondents expressed resounding support for putting government information online, but were more reticent about using the Internet for voting and online town meetings. More than three-quarters of respondents (78 percent) answered positively to the question, "How do you feel about looking up government information online?" This exceeded the two-thirds majorities who said they were willing to search for a job or take a class online. These attitudes confirm the popularity of e-government suggested by the Pew study of current use, but also demonstrate that some people who are not currently online would be interested in using the Internet in this way. Support for using public access computers to look up government information online was similarly high (74 percent).

After controlling for other factors, respondents most likely to support e-government *or* actually look up government information online are younger, more educated and affluent, and take part in traditional forms of political participation (voted in the 2000 election). Low-income respondents were less likely to be interested in using the Internet for e-government, or have used e-government. *The potential benefits of e-government, such as greater transparency in government and easier access to public services, could largely bypass the poor*. Since low-income people often depend upon public services for their daily needs, this is all the more disconcerting (Mossberger, Tolbert and Stansbury 2003). We find that race and ethnicity are not significant factors in predicting attitudes and use of e-government, and neither is gender. The major way in which technology augurs change in participation patterns and attitudes about government is through its popularity with the young. Younger respondents were consistently more likely to express interest in using government web sites and to have used e-government (Mossberger, Tolbert, and Stansbury, 2003).

Our multivariate analysis confirms (and extends) the Pew and Hart-Teeter findings that were based on descriptive statistics--studies that did not controls for other factors using multivariate regression (West, 2001; Larson and Rainie, 2002). Individuals with lower incomes, education and those currently not civically engaged are the least likely to use e-government, paralleling inequalities in traditional participation. On the down side, the data provides compelling evidence for those who argue that online politics will mirror, or exacerbate, existing disparities in the composition of the electorate based on socioeconomic status. On a positive note, our data suggests that there is even greater interest in e-government beyond current users, and that race, ethnicity, and gender are not significant, after controlling for income. While our survey did not address the question of which government web sites current users had visited, both the Pew and Hart-Teeter surveys indicated that African-Americans are somewhat more likely than whites to visit local rather than federal government web sites. This would be an interesting question to explore in further research that is more detailed and that uses multivariate controls. Finally, the fact that younger respondents are more supportive of digital democracy suggests the potential for expanding the electorate to include a group that has been traditionally under-represented (Mossberger, Tolbert and Stansbury, 2003).

3. Proposed Research: Does E-government Increase Trust in Government?

We are interested in the impact of e-government (both attitudes and experience) on government trust in general among low-income citizens and the general population. How does the digital divide mediate this hypothesized relationship? Most surveys lack representative samples of low-income respondents and minorities, and we are particularly interested in whether disparities in technology access and skill will influence attitudes and use of e-government.

The proposed research will proceed in two stages. Summer of 2003 we will apply to the Time-sharing Experiments for the Social Sciences (TESS) program, a National Science Foundation supported project, that provides opportunities for social scientists to conduct experiments. TESS pays the cost of running these experiments and has them administered by the industry-leader in Internet-based experiments, Knowledge Networks. We plan to conduct an Internet-based survey experiment, with the test group of respondents exposed to varying local, state and national government web sites (as well as information versus transaction sites), while the control group is not exposed to e-government sites. Based on the afore-mentioned web site variables, we will draw a purposive sample of sites identified as examples of best practice (see, for example, Center for Digital Government, 2001; National Association of State Chief Information Officers, 2003 for best practices; and West, 2000 and Norris et al., 2001 for variation in sites). Pre- and post-exposure surveys will probe respondents on various measures of overall trust in government (local, state and national), as well as confidence in government responsiveness (political efficacy). Standard control variables used in political science research will be used, including attitudinal and demographic factors. Control variables will control for variations in partisanship, general media consumption, economic evaluations, political knowledge and interest, as well as education, income, race/ethnicity, age and gender. We will use education and income to measure the interaction of socioeconomic status and exposure to e-government on political trust.

The findings from this pilot study will provide the basis for a grant proposal to conduct an extensive Internet survey (again using Knowledge Networks), but this time over sampling for respondents with low incomes. As in our previous study, a split-sample design will be employed, with a low-income sample and a control sample. This project will draw on an interdisciplinary team of scholars (two political scientists, one professor of composition and rhetoric, and one professor of journalism) to explore whether e-government indeed enhances transparency and general trust in government, but also to understand how individuals evaluate e-government content and credibility (human/computer interface).

Data from both the pilot study and full study will be compared to those of previous surveys, to track any obvious trends over time and differences based on our more inclusive sample. Data will be analyzed using multivariate regression in order to identify statistically significant differences based on respondent characteristics. Two-stage multivariate regression models, as well as simultaneous equation models, will be used to control for simultaneity (causality) problems.

Digital government has attracted attention as one way of improving citizen interactions with government because of the dilemmas that citizen apathy and distrust pose for democracy. There is currently a shortage of empirical information about whether e-government in fact influences citizen attitudes about government, and if it does have some effect, how or why it matters. More positive citizen attitudes might be due to increased opportunities for participation, increased ease of communication with government, greater transparency, or perceptions of improved efficiency. The impact of e-government may vary across groups within the population, and understanding the interaction between attitudes, access, and skill is an important piece to address in this empirical puzzle.

References

Abramson, P. 1993. *Political attitudes in America: Formation and change.* San Francisco: Freeman.

Baldassare, M. 2000. *California in the new millenium: The changing social and political landscape.* Berkley: University of California Press.

Barber, B. 1984. *Strong democracy.* Berkeley, CA: University of California Press.

Bowler, S., Donovan, T., and Tolbert C., eds. 1998. *Citizens as legislators: Direct democracy in the United States.* Columbus: Ohio State University Press.

Center for Digital Government. 2001. 2000 Digital State Survey. Available [online]: http://www.centerdigitalgov.com/center/00digitalstates.html.

Chadwick, A., with C. May. 2001. Interaction between states and citizens in the age of the Internet: E-government in the United States, Britain, and the European Union. Present at the annual meeting of the American Political Science Association, August 30-September 2, 2001, San Francisco, California.

Clift, S. 2000. The e-democracy e-book: Democracy is online 2.0. Available [Online]: http://www.e-democracy.org.do.

Craig, S. 1996. *Broken contract? Changing relationships between Americans and their government.* Boulder, Col.: Westview Press.

Fountain, Jane E. 2001. *Building the virtual state: Information technology and institutional change.* Washington, D.C.: The Brookings Institution.

Hetherington, M. 1998. The political relevance of political trust. *American Political Science Review* 92: 791-808.

Hetherington, M. 1999. The effects of political trust on the presidential vote, 1968-96. *American Political Science Review* 93: 311-26.

Hibbing, J. and E. Theiss-Morse. 2001. Process preferences and American politics: What the people want government to be. *American Political Science Review* 95: 145-53.

Ho, A. T. 2003. Reinventing local governments and the e-government initiative. *Public Administration Review*.

Kettl, D. 2000. *The global public management revolution: A report on the transformation of governance.* Washington, DC: The Brookings Institution.

Larsen, Elena and Lee Rainie. 2002. The rise of the e-citizen: How people use government agencies' web sites. *Pew Internet and American Life Project*. Available [Online]: http://www.pewinternet.org/reports/toc.asp?Report=57.

McNeal, R., C. Tolbert, K. Mossberger, and L. Dotterweich. 2003. "Innovating in digital government in the American states." *Social Science Quarterly:* In press.

Melitski, J. 2001. The World of e-government and e-governance. Available [Online]: http://www.aspanet.org

Mossberger, K., C. Tolbert and M. Stansbury. 2003. *Virtual inequality: Beyond the digital divide.* Washington, DC: Georgetown University Press. In press.

National Association of State Chief Information Officers. 2002. Best practices in the use of information technology in state government. Lexington, KY: National Association of State Chief Information Officers.

Norris, D., P. Fletcher, and S.H. Holden. 2001. Is your local government plugged in? Highlights of the 2000 Electronic Government Survey. ICMA.

Norris, P. 1999. *Critical citizens: Global support for democratic governance.* Oxford: Oxford University Press.

Norris, P. 2001. *Digital divide: Civic engagement, information poverty, and the Internet worldwide.* New York: Cambridge University Press.

Osborne, D., and T. Gaebler. 1992. *Reinventing government: How the entrepreneurial spirit is transforming the public sector.* Reading: Addison-Wesley.

Peters, B. G. 1996. *The Future of governing: Four emerging models*. Lawrence: Kansas University Press.

Peterson, E. and J. Seifert. 2002. Expectation and challenges of emergent electronic government: The promise of all things E? *Perspectives on global development and technology*. In press.

Putnam, R. 2000. *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.

Rosenthal, A. 1997. *The decline of representative democracy*. Washington, DC: CQ Press.

Tapscott, D. 1997. The digital media and the reinvention of government. *Canadian Public Administration* 40, 2:328-45.

West, Darrell M. Forthcoming. E-government and the transformation of service delivery and citizen attitudes. *Public Administration Review.*

West, Darrell M. 2000. *Assessing e-government: The internet, democracy, and service delivery by state and federal governments*. World Bank. Available [Online]: http://www1.worldbank.org/publicsector/egov/EgovReportUS00.htm

West, Darrell M. 2001. E-government and the transformation of public sector service delivery. Presented at the annual meeting of the American Political Science Association, August 30-September2, 2001, San Francisco, California.