the population mean differences between respondents and nonrespondents were significant for cities and counties, respectively. Responding and nonresponding counties also had a similar level of managerial professionalism: Twelve percent of responding counties and 16% of nonresponding counties had professional managers or administrators. There was a relatively bigger difference among city respondents and nonrespondents in professionalism. Whereas 76% of city respondents had city managers or administrators, only 55% of city nonrespondents had one.

6. 6. We benefit from an anonymous referee's comments about this argument.

7. 7. The logistic model assumed that the probability of having concrete plans (*P*) was a logistic function, which is specified as follows:$P=F(\alpha+\beta x)\ e^{\alpha+\beta x}/1+e^{\alpha+\beta x}$ (1)

   Equation 1 can be transformed to estimate the odds of having concrete plans, *P*/(1- *P*), in a natural logarithm. The result is as follows:$\log(P/1-P)=\alpha+\beta x$ (2)

   This method is better than using ordinary least squares regression to calculate the predicted probability of having concrete plans because the linear prediction may lay outside the 0 to 1 range. It is also better than the constrained regression method (constraining the prediction to be between 0 and 1), which may give biased estimates. For more discussion of the methodology of logistic modeling, please refer to Pindyck and Rubinfeld (1998) and Greene (1993).

8. 8. Among the independent variables, the only significant correlation was found between population size and the use of professional administrators. The Pearson's correlations were 0.73 for counties and 0.27 for cities; both were statistically significant. Because it was most likely that population size was the causal factor for having a professional administrator, we used a two-step method to "purge" the population effect. First, we ran a logistic regression on the use of professional administrators and estimated the population effect for cities and counties respectively. Then, we estimated the predicted probability of having professional administrators based on the population estimate and calculated the residuals from the prediction. These residuals, being free of the population effect, were used in the logistic models. We also found that senior management attitudes toward the Y2K problem (measured on a scale ranging from 1 [*very serious*]to5[*very not serious*]) and population size were slightly correlated (the Pearson's correlations were -0.26 for counties and -0.15 for cities). The result is consistent with the findings by Fletcher et al. (1992) that top officials in larger counties tend to be more sensitive to IT concerns. We also found a weak correlation between senior management attitude, the centralization of IT management, and the consideration of new technology in budgeting (the absolute values of the Pearson's correlations between these variables are less than 0.20). Because the correlation of these variables was not very strong, we did not include any statistical remedies to purge the correlation.

9. 9. The calculation assumed the following: mainframe servers = 0, percentage of direct purchase of PCs = 29% (mean), central staff = 2, Y2K fix by contractors = 1, senior management attitude = 2.29

(mean), professional administrator = 0, staff members per PC = 0.17 (mean), and log (population) = 9.56. For the details of the calculating methodology, please refer to Pindyck and Rubinfeld (1998).

10. 10. The change represented a decrease from 3 (*neutral*)to1(*very serious*). The assumptions of the calculation are similar to those in Note 9 except that the mean assumption of senior management attitude is taken away, and the value of technology availability consideration is assumed to be positive (i.e., 1).

11. 11. We confirmed that the population effect was not correlated with the impact of other variables. For example, the correlation between population size (in natural log) and other independent variables in the logistic models was not significant after we corrected for the population effect on the presence of professional administrators. We also tested the population effect on other variables by omitting the population variable from the models. The change had no significant impact on the parameters and statistical significance of other variables.

12. 12. We assumed the following: mainframe servers = 0, percentage of direct purchase of PCs = 29% (mean), consideration of new technology availability = 1, central staff = 2, Y2K fix by contractors = 1, senior management attitude = 2.29 (mean), professional administrator = 0, and staff members per PC = 0.17 (mean).

13. 13. The details of the results are available from the authors on request.

14. 14. We suspect that the significant relationship between the ratio of staff members to PCs and the odds of having any action planning in cities may be a residual, indirect effect of population size, because the ratio of staff members to PCs was negatively correlated to population size among cities with populations between 5,000 and 10,000 (with Pearson's correlation at -0.39 and statistically significant at the 5% level). Due to the small number of observations (n = 26), this potential problem was not easily correctable.

15. 15. The survey results and remarks about the survey can be obtained from the State of California, Department of Information Technology (1998).

16. 16. New York's guidebook is available from the New York State Office for Technology (n.d.). Texas's local guidebook is available from the State of Texas, Department of Information Resources (1998). Finally, New Jersey's information is available from the New Jersey Department of Community Affairs, Division of Local Government Services (1999).

17. 17. We appreciate the comments of an anonymous reviewer about this point.

18. 18. In our nonsystematic phone follow-ups, we found that many survey respondents referred to senior management as city mayors, county commissioners, and city and county administrators. These responses are consistent with the definition of local top management in Kraemer et al. (1989). A few of our respondents also suggested that department heads were the senior management, but their opinions were not the majority opinion.

References

Andersen, D. F., & Dawes, S. S. (1991). *Government information management: A primer and casebook*. Englewood Cliffs, NJ: Prentice Hall.

Google Scholar

Andersen, D. F., Belardo, S., & Dawes, S. S. (1994). Strategic information management: Conceptual frameworks for the public sector. *Public Productivity and Management Review*, 17(4), 335-353.

Google Scholar

Barrett, K., & Greene, R. (1999, February). Grading the states: A management report card. *Governing*, 17-90.

Google Scholar

Beath, C. (1991). Supporting the information technology champion. *MIS Quarterly*, 15(3), 355-372.

Google Scholar

Bellamy, C., Raab, C., Dutton, W. H., & Peltu, M. (1996). Innovation in public service delivery. In W. H. Dutton (Ed.), *Information and communication technologies: Visions and realities* (pp. 265-282). New York: Oxford University Press.

Google Scholar

Bozeman, B., & Bretschneider, S. (1986). Public management information systems: Theory and prescription. *Public Administration Review*, 46, 475-487.

Google Scholar

Bretschneider, S. (1990). Management information systems in public and private organizations: An empirical test. *Public Administration Review*, 56(5), 536-545.

Google Scholar

Bretschneider, S., & Wittmer, D. (1993). Organizational adoption of microcomputer technology: The role of sector. *Information Systems Research*, 4(1), 88-108.

Google Scholar

Caudle, S. L. (1994). Managing information and technology for results. *The Public Manager*, 23(1), 48-50.

Google Scholar

Caudle, S. L, Gorr, W. L., & Newcomer, K. E. (1991). Key information systems management issues for the public sector. *MIS Quarterly*, 15(2), 171-188.

Google Scholar

Collins, F. (1994). *Cost-benefit analysis for information technology projects*. Washington, DC: International City/County Management Association.

Google Scholar

Dawes, S. S. (1996). Interagency information sharing: Expected benefits, manageable risks. *Journal of Policy Analysis and Management*, 15(3), 377-394.

Google Scholar

De Looff, L. A. (1998). Information systems outsourcing: Theories, case evidence and a decision framework. In L. P. Willcocks & M. C. Lacity (Eds.), *Strategic sourcing of information systems* (pp. 249-281). New York: Wiley.

Google Scholar

Dye, T. R. (1997). Metropolitics: Conflict in the metropolis. In T. R. Dye (Ed.), *Politics in states and communities* (9th ed., pp. 348-374). Upper Saddle River, NJ: Prentice Hall.

Google Scholar

Ein-Dor, P., & Segev, E. (1978). Strategic planning for management information systems. *Management Science*, 24(15), 1631-1641.

Google Scholar

Fletcher, P. T., Bretschneider, S. I., Marchand, D. A., Rosenbaum, H., & Bertot, J. C. (1992). *Managing information technology: Transforming county governments in the 1990s*. Syracuse, NY: School of Information Studies, Syracuse University.

Google Scholar

Fletcher, P. D., & Foy, D. O. (1994). Managing information systems in state and local government. *Annual Review of Information Science and Technology*, 29, 243-275.

Google Scholar

Flynn, J. T. (1998). *Local government year 2000 compliance survey*. Sacramento: State of California, Department of Information Technology.

Google Scholar

Greene, W. H. (1993). *Econometric analysis* (2nd ed.). New York: Macmillan.

Google Scholar

Henderson, J. C., & Sifonis, J. G. (1988). The value of strategic IS planning: Understanding consistency, validity, and IS markets. *MIS Quarterly*, 12(2), 187-200.

Google Scholar

Huffman, L. A. (1998). *The year 2000 problem: What local governments are doing* [Special Data Issue No. 6]. Washington, DC: International City/County Management Association.

Google Scholar

Jarvenpaa, S., & Ives, B. (1991). Executive involvement and participation in the management of information technology. *MIS Quarterly*, 15(2), 205-228.

Google Scholar

Keen, J. (1994). Should the National Health Service have an information strategy? *Public Administration*, 72, 33-53.

Google Scholar

Keen, P.G.W. (1988). Relationship of senior management and the IS organization. In J. J. Elam, M. J. Ginzberg, P.G.W. Keen, & R. W. Zmud (Eds.), *Transforming the IS organization* (pp. 41-54). Washington, DC: International Center for Information Technologies.

Google Scholar

Kelman, S. (1994). Taxpayer service at the IRS. In J. Fountain, L. Kaboolian, S. Kelman, & J. Mechling (Eds.), *Customer service excellence: Using information technologies to improve service delivery in government*. Cambridge, MA: Strategic Computing and Telecommunications Program, John F. Kennedy School of Government, Harvard University.

Google Scholar

Kraemer, K. L., & Dedrick, J. (1997). Computing and public organizations. *Journal of Public Administration Research and Theory*, 7(1), 89-112.

Google Scholar

Kraemer, K. L., & King, J. L. (1986). Computing and public organizations. *Public Administration Review*, 46, 488-496.

Google Scholar

Kraemer, K. L., King, J. L., Dunkle, D. E., & Lane, J. P. (1989). *Managing information systems: Change and control in organizational computing*. San Francisco: Jossey-Bass.

Google Scholar

Lederer, A. L., & Sethi, V. (1992). Root causes of strategic information systems planning implementation problems. *Journal of Management Information Systems*, 9(1), 25-45.

Google Scholar

Lowery, D., & Berry, W. D. (1983). The growth of government in the United States: An empirical assessment of competing explanations. *American Journal of Political Science*, 27(4), 665-694.

Google Scholar

McCann, Michelle . (1998, February). New York works to steer its agencies clear of date code failures. *Government Computing News—State & Local*, 4(6), 32.

Google Scholar

Mechling, J. (1991). Computers in local finance. In J. E. Petersen & D. R. Strachota (Eds.), *Local government finance: Concepts and practices* (pp. 417-433). Chicago: Government Financial Officers Association.

Google Scholar

Mechling, J., & Fletcher, T. M. (1996). *The need for new leadership*. Cambridge, MA: John F. Kennedy School of Government, Harvard University.

Google Scholar

Mechling, J., & Sweeney, V. (1997). *Overcoming budget barriers: Funding information technology projects in the public sector*. Cambridge, MA: John F. Kennedy School of Government, Harvard University.

Google Scholar

Mechling, J., & Sweeney, V. (1998). *Finding and funding IT initiatives in the public sector*. Sacramento, CA: Government Technology Press.

Google Scholar

National Association of Counties . (1998). *NACo's Y2K survey of America's counties*. Washington, DC: Author.

Google Scholar

Neef, D. (Ed.). (1998). *The knowledge economy*. Boston: Butterworth-Heinemann.

Google Scholar

New Jersey Department of Community Affairs, Division of Local Government Services . (1999). *The year 2000 and local governments* [Online]. Trenton: Author. Available: http://www.state.nj.us/dca/lgspages/y2k/y2kpg1.htm

Google Scholar

New York State Office for Technology . (n.d.) *Local government workgroup & resources* [Online]. Albany: Author. Available: http://www.irm.state.ny.us/yr2000/localgov.htm

Google Scholar

Office of Information and Regulatory Affairs . (1995). *Evaluating information technology investments*. Washington, DC: U.S. Government Printing Office.

Google Scholar

Pindyck, R. S., & Rubinfeld, D. L. (1998). *Econometric models and economic forecasts* (4th ed.). New York: McGraw-Hill.

Google Scholar

Rubin, B. M. (1986). Information systems for public management: Design and implementation. *Public Administration Review*, 46, 540-552.

Google Scholar

Sacco, J. F., & Ostrowski, J. W. (1991). *Microcomputers and government management: Design and use of applications*. Pacific Grove, CA: Brooks/Cole.

Google Scholar

Sartore, A. B., & Kraemer, K. (1977). Research on impacts of computers on local government personnel and organization. In K. L. Kraemer & J. L. King (Eds.), *Computers and local government* (pp. 129-190). New York: Praeger.

Google Scholar

SAS Institute . (1990). *SAS/STAT user's guide, version 6, volume 2* (4th ed.). Cary, NC: Author.

Google Scholar

Sparrow, M. K. (1996). *Illinois Department of Revenue: A case study report*. Cambridge, MA: Strategic Computing and Telecommunications Program, John F. Kennedy School of Government, Harvard University.

Google Scholar

State CIOs share strategies to overcome date code problems . (1998, June). *Government Computing News—State & Local*, 4(6), 1.

Google Scholar

State of California, Department of Information Technology . (1998). *First survey of California city, county Y2K readiness released* [Online]. Sacramento: Author. Available: http://www.Year2000.ca.gov/documents/county_readiness_survey.asp

Google Scholar

State of Texas, Department of Information Resources . (1998). *Texas guidebook 2000: About time: Managing the Y2K problem in local government* [Online]. Austin: Author. Available: http://www.dir.state.tx.us/y2k/resources/guidebook2000.html

Google Scholar

Stevens, J. M., & LaPlante, J. M. (1986). Factors associated with financial-decision support systems in state government: An empirical exploration. *Public Administration Review*, 46, 522-531.

Google Scholar

Stevens, J. M., & McGowan, R. P. (1985). *Information systems and public management*. New York: Praeger.

Google Scholar

Swain, J. W., White, J. D., & Hubbert, E. D. (1995). Issues in public management information systems. *The American Review of Public Administration*, 25(3), 279-296.

Google Scholar

U.S. Department of Energy, Office of Information Management . (1995). *Information management strategic plan: Information: The fuel for success*. Washington, DC: U.S. Government Printing Office.

Google Scholar

U.S. Government Accounting Office . (1992). *Strategic information planning: Framework for designing and developing system architectures*. Washington, DC: U.S. Government Printing Office.

Google Scholar

U.S. House of Representatives, Committee on Government Reform and Oversight, Subcommittee on Government Management, Information, and Technology . (1996). *Is January 1, 2000 the date for a potential computer disaster?* Washington, DC: U.S. Government Printing Office.

Google Scholar

U.S. House of Representatives, Committee on Science, Subcommittee on Technology, and Committee on Government Reform and Oversight, Subcommittee on Government Management, Information, and Technology. (1996). *Solving the year 2000 computer problem*. Washington, DC: U.S. Government Printing Office.

Google Scholar

Walters, J. (1996, August). Cry, the beleaguered county. *Governing*, 31-37.

Google Scholar

Wexelblat, R. L., & Srinivasan, N. (1999). Planning for information technology in a federal organization. *Information and Management*, 35, 265-282.

Google Scholar

Willcocks, L. (1994). Managing information systems in UK public administration: Issues and prospects. *Public Administration*, 72, 13-32.

Google Scholar

Wonnacott, T. H., & Wonnacott, R. J. (1990). *Introductory statistics for business and economics* (4th ed.). New York: Wiley.

Google Scholar

Yu, P. J., & Bretschneider, S. (1998). Executive perceptions of innovativeness in information management. *Korean Journal of Public Administration*, 3, 179-213.

Google Scholar

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