

Julia Melkers

University of Illinois–Chicago

Katherine Willoughby

Georgia State University

Models of Performance-Measurement Use in Local Governments: Understanding Budgeting, Communication, and Lasting Effects

While attention has been paid to a few cities and counties exhibiting effective performance-measurement systems, most U.S. local governments have been active in the development and use of performance measurement for several decades. This research examines the effects of performance-measurement information on budgetary decision making, communication, and other operations of U.S. local governments. Data are drawn from a national survey of city and county administrators and budgeters that included nearly 300 governments. Findings indicate the use of performance measurement by local departments is pervasive, although survey respondents are less enthusiastic about measurement effectiveness. Study results show subtle distinctions between city and county officials in their use of performance measurement for budgetary purposes and processes. Research findings indicate the consistent, active integration of measures throughout the budget process is important in determining real budget and communication effects in local governments.

The distinctions within and across levels of government in the United States and their success with regard to performance-measurement implementation are many. At the federal level, for example, agencies are scrutinized regarding their adherence to the Government Performance and Results Act of 1993, as well as to recent governmentwide and program-specific performance-related initiatives of the President's Management Agenda. The Government Performance and Results Act holds agencies accountable for performance and results reporting within a performance-budgeting process. The Bush management agenda calls for more substantive attention to performance measurement and its integration with budgeting decisions: a more realistic and long-term perspective of what government agencies do, how to measure what they do, and how to attribute costs to specific results. Today's federal agencies are held to higher standards as far as the level of transparency of performance information they afford internally and to the public, as well as how this information contributes to program results and eventually the community at large (Ellig 2000).

Selected state and local governments are often cited for their advanced practices related to results-oriented systems.¹ While most governments at these levels have adopted some sort of application of performance measurement, successful or effective implementation of a performance-based system has been recognized as much less comprehensive. This research examines the perceptions of local administrators and budgeters about performance-measurement effectiveness and its applicability to management and budgeting practices in their governments. Our study is based on the premise that performance-measurement ap-

Julia Melkers is an associate professor of public administration at the University of Illinois–Chicago, where she teaches and conducts research on performance measurement and public management. She has worked with numerous governments on the development and use of performance measures and strategic planning processes. **E-mail:** jmelkers@uic.edu.

Katherine Willoughby is a professor of public administration in the Andrew Young School of Policy Studies at Georgia State University, where she teaches and conducts research on public budgeting, public management, and public policy. She has trained and consulted with local, state, and federal government officials on public budgeting, financial management, and audit practices in the United States. **E-mail:** kwilloughby@gsu.edu.

plicability in government, when it is routinized, improves communication within and across branches, advances learned discussions about the results of government activities and services, and enlightens budgeting decisions by providing additional and relevant information (Chackerian and Mavima 2001; Ingraham and Moynihan 2001; Pettijohn and Grizzle 1997; Willoughby and Melkers 2000). In this study, we asked survey respondents whether performance measures are used by departments and programs in their government and whether they consider measurement use effective in various processes and for the activities and decisions typically required in their government.

The following is a discussion of performance-measurement applicability to budgeting practices and decisions in governments. Next, several propositions about performance-measurement utility that are specific to local budgeting practices are introduced. Study methodology and findings are then presented. The concluding section summarizes results and offers suggestions for future research on how the decisions of local government officials, managers, and budgeters can be better supported through the use of performance measurement.

Advancing Performance in Local Governments

For any initiative to be successfully implemented in an organization, an environment for change must exist (Streib and Willoughby forthcoming). Local government officials currently endure tremendous pressure to couple service-delivery demands with limited revenue-generating options. Further, like officials at all levels of government, local administrators must advance and advertise the performance of their agencies and departments in the face of a dramatically and continually weakened economy.

Resources must also exist to support the introduction of change. In the present environment, slack fiscal resources are rare, if not extinct. Resources may be in the form of pro bono work provided from the business community, additional time provided for service delivery, or greater flexibility with personnel for getting jobs accomplished. Also, funds and other resources may not be plentiful or even declining, but they can be redirected toward new practices (Berman and Wang 2000; Jordan and Hackbart 1999).

Sustained leadership within the executive and legislative branches of government must support a culture of change in order for innovations to successfully become institutionalized within a government. This necessitates a leadership commitment to recognizing the performance-related work of agency heads and department directors, in addition to simply requiring performance measurement as part of budget and management reporting. Such recognition is especially important on behalf of council and com-

mission members in local governments. If agency personnel do not believe the performance information they prepare is carried successfully forward across branches to the appropriating body, they will have much less incentive to inculcate the information within and across staff in the executive branch (Melkers and Willoughby 1998; Willoughby and Melkers 2000). Essentially, leadership encouragement and good communication throughout government must confirm new behaviors and the acceptance of fresh information or reform requirements. Flexibility in the implementation of adopted practices helps to sustain employee action toward the eventual institutionalization of new practices.

Literature that focuses specifically on performance-measurement implementation suggests these characteristics are often missed or applied inconsistently, and they may compromise the successful application of performance measurement to budgeting practices in particular (Grizzle and Pettijohn 2002; Julnes and Holzer 2001; Lee and Burns 2000). Consistent executive support, acknowledgment of new information in the legislative branch, and organizational capacity are most often mentioned as vital components of an effective performance-measurement system (Berman and Wang 2000; Franklin 2002). Jordan and Hackbart (1999, 85) focus on the subtle contributions that performance measurement can make to budgetary decision making. While it is difficult to link information about performance to allocations, they note, spending changes to support the maintenance or improvement of performance does happen when such information is disclosed.

Chackerian and Mavima (2001) advocate an incremental approach to performance-related reform that allows for a substantive application of data—institutional history can support a phased-in approach that, of course, realizes less dramatic results. Others caution, however, that extended implementation can “diffuse the intellectual coherence of the initiative and thereby compromise leadership commitment” (Bradley and Flowers 2001, 401). An organizational culture with a sustained focus on performance measurement and program results is important for usefulness and institutionalization as well.

Nonetheless, research on local applications of performance measurement to budgeting is cautiously optimistic. Smith and Bratton (2001) assess the implementation of computerized statistics (Compstat) to reengineer police management and influence citizen safety in New York City. They are hopeful the system will continue to support a changed culture in the police force, opening lines of communication and accountability among officers and reorienting precincts as hubs for problem solving and performance management. Scheps (2000) illustrates a good case for sustained pressure and constant communication to successfully link performance measures to resource alloca-

tion in Dallas County, Texas. Steifel, Rubenstein, and Schwartz (1999) find support for ongoing flexibility and the enhancement of performance measures in making spending decisions. Their research indicates that adjusted performance measures can be used effectively to explain past resource-allocation decisions. Kluvers (2001) claims the use of performance indicators does not foster reallocations in local budgets, but it does provide useful information that allows direct and allocated costs to be sorted and fosters a changed attitude toward planning. He finds that the institution of planning, programming, and budgeting did not assist in eliminating duplicate activities or change objectives that were originally based on performance indicators. Yet, he concludes the subtle effects of measurement application can influence spending over time.

Poister and Streib (1999) review the inconsistent use of performance measurement among local governments and find that larger local governments and those with council-manager governments are more likely to use measurement. Not surprisingly—particularly at the local level—workload and output quantification is a measurement mainstay. They also find that local officials are pressed to use measures to track costs and to improve accountability to the manager or chief administrator. These authors find that in governments with centralized systems, performance measurement is used in a meaningful way for planning and considered very important for budgeting purposes. According to Poister and Streib (1999), most officials (80 percent) with centralized systems of performance measurement indicated that consideration of measures had at least moderately improved decisions in their jurisdictions. Of this group, “more than 60 percent report moderate or substantial changes in budget allocations as an impact of their performance measures” (331).

Berman and Wang (2000) concur that the existence and meaningful use of performance measurement are separate issues, and the overstatement of use often masks the inadequacies of the organization in supporting such reform. Their research corroborates Jordan and Hackbart (1999), who find that organizational capacity is vital to the usefulness of performance measurement for budgeting. Jordan and Hackbart suggest that governments can best support their performance initiatives by empowering the central budget office, which can influence budget deliberations later in the budget cycle. As the nexus between policy and budgeting, these offices provide an appropriate conduit on information to the chief executive about what agencies do and what they need. Depending on orientation (capacity as a control versus policy office), these offices house examiners who understand the usefulness of performance measurement to spending decisions, and who are in a strong position regarding when and where to use such information for success in terms

of gaining support for spending from the budget director, the chief executive, and eventually the legislative branch (Thurmaier and Willoughby 2001).

Research Focus and Methods

Considering the previously cited literature, this research addresses the following questions to further understanding of performance-measurement adoption and use by local governments for budgeting purposes and decisions:

1. How pervasive is performance-measurement use in local governments?
2. What types of measures are perceived as most useful in these governments?
3. Where in the budget cycle are performance measures documented?
4. How important are performance measures at various phases of the budget process?
5. Are budgeting and other effects of performance measurement evident in local governments?
6. What factors influence the effects of performance measurement?

This research is part of a performance-measurement examination effort funded by the Alfred P. Sloan Foundation. The present study involved sending an extensive mail survey to state and local government budgeters and central office and agency administrators during the summer of 2000. The survey coincided with a Governmental Accounting Standards Board (GASB) analysis of the success of government performance-measurement initiatives in selected governments. The work stems from the GASB's Service Efforts and Accomplishments project, which supports government experimentation with performance measurement and reporting. The research reported here draws from the local government respondents to the mailed survey. As is typical of such research, most questions were accommodated to Likert-scale items, in which responses fall along a continuum regarding the level of agreement, evaluation of effectiveness, or frequency of use. The scales used range in value from 1 (lowest) to 4 or 5 (highest).

The mailing list was constructed from a previous GASB survey of local administrators and budgeters, coupled with a list obtained from the International City/County Management Association (ICMA). Questionnaires were sent to 735 administrators and budgeters in city and county governments in the United States. The response rate of 37 percent includes 277 usable instruments. The response rate was 39 percent for city administrators and budgeters and 34 percent for those in counties. Responses were received from administrators and budgeters in 47 counties and 168 cities. In addition to the survey data, community-level statistics, including population and the form of government, were obtained from the ICMA *Municipal Yearbook 2002*

and the U.S. Census Bureau. These data were merged with the survey data and used in multiple-regression models.

Research Findings

Past research has shown that the application of performance measurement to management decisions is fairly widespread in governments that use such information. At the state level, for example, Willoughby and Melkers (2000) found that performance measurement remains most essential for managerial decisions and communication purposes, while its impact on appropriation outcomes is quite limited. How institutionalized is the use of performance measurement in local governments? Are performance measures revealed throughout the budget cycle? Are they considered useful for budgeting purposes by those working in local government? Are there lasting effects related to the presence and use of performance measurement in these governments? And, what factors most strongly influence the effects of performance-measurement application? Descriptive and inferential statistics are presented to assess these questions.

Use of Performance Measures

Examining the use of performance measures in cities and counties is interesting because the nature of these governments varies considerably from those at other levels in the United States. At the state level, for example, staff in executive and legislative budget offices are likely to have a broad perspective on performance-measurement use in their state, and they are among the most knowledgeable individuals to report on performance-measurement activities within their state. Within local governments, however, the smaller albeit more direct nature of government functioning means that a wider range of individuals may be able to comment knowledgeably on performance-measurement development and use within their department as well as governmentwide. That is, local department heads are more likely than state department and agency heads to attend meetings where budget and performance issues are addressed.²

Results of the present survey indicate a high level of performance-measurement use in local government departments. Almost half of the respondents (47.8 percent) noted that all departments within their city or county use performance measures, and another 20 percent noted that at least half of their departments do so. County respondents reported more extensive use of performance measures across departments than their municipal counterparts.

Variation also exists between cities and counties regarding who is involved in the development of performance measures. Generally, most respondents indicated their budget office staff are involved in developing measurements

and, to a lesser extent, in setting performance targets. Executive leadership plays a slightly larger role in counties than in cities in terms of deciding which performance measures are adopted. Alternatively, a higher proportion (about half) of city respondents than county respondents believed citizen involvement is important when selecting performance measures. Fifteen percent of city respondents (including those in Albuquerque and Phoenix)—compared to 5 percent of county respondents—pointed to the active involvement of citizens in the selection of performance measures in their governments.

Survey participants were also asked to report on the use of performance measures in their agencies by type, distinguished as input, activity/process, output, outcome, cost/efficiency, quality/customer satisfaction, and benchmarks. Respondents were provided with a definition of each term to support a consistent understanding of each type of measurement. For example, respondents were given the following definitions to assist them in distinguishing between outputs and outcomes:

Outputs—Measures of the quantity of services provided or the quantity of service that meets a certain quality requirement. (For example, the number of lane miles of road repaired or the number of serious crimes reported)

Outcomes—Measures of the results that occur, at least in part, because of services provided. This may include initial, intermediate, or long-term outcomes. (For example, the percentage of lane miles of road maintained in excellent, good, or fair condition or the clearance rate for serious crimes, or the percentage of residents rating their neighborhood as safe or very safe)

The focus of many performance-based efforts—at whatever level of government—involves the evolution from basic activity-level measures to more meaningful outcome and impact measures. The emphasis on results differentiates useful performance measurement from that which merely tracks events or costs, and it implies an evolution of measurement from the consideration of quantity to the consideration of results. Another important goal of recent performance-measurement initiatives is to move from identifying measures and collecting data to using that information meaningfully in decision processes. A majority of the survey participants here indicated that outcome measures are used by at least half of their agencies; one quarter indicated that all departments within their government use outcome measures. Further, findings show that one quality measure, customer satisfaction, is important at this level of government, where citizen input tends to be more visible and valued. About one-fifth of city respondents and more than one-quarter of county respondents indicated that

more than half of the departments in their government use quality and customer satisfaction measures. Approximately one-fifth of respondents in both groups indicated this was true for all departments in their government.

Respondents, however, were split in terms of reporting the range and coordination of measures. For example, about half of those surveyed strongly agreed or agreed that departments in their government “had developed multiple levels of measures, from output, to outcome, to societal benchmarks.” Interestingly, county respondents indicated this more frequently than their municipal counterparts. County respondents pointed more frequently to the availability of reliable cost data for their programs, while city respondents indicated more frequently that performance measures are reviewed regularly.

Overall, these results attest to an evolution in the use of performance measures, from easy-to-measure output measures to more meaningful measures of impact. Respondents indicated that stakeholder input, including that of citizens, is important to the process, suggesting an advancing user or audience orientation to measurement development and data reporting. Given the street-level nature of local government services, it also suggests concern for the appropriateness and digestibility of measures to citizens.

As governments identify performance measures and targets, a question arises: What happens when those targets are not met or, conversely, when they are exceeded? Melkers and Willoughby (1998) found that a handful of states have formally defined rewards or sanctions related to goal attainment (or lack thereof) specified in their performance-based budgeting systems. The present study shows a similar trend in local governments. While only about 10 percent of respondents indicated their government had imposed sanctions on departments for poor performance, almost 20 percent indicated that rewards had been offered for the attainment of performance goals. As table 1 shows, rewards at the department level range from recognition (most frequently cited) to budgetary flexibility (least frequently cited). Those surveyed also reported the use of rewards to individuals as part of programmatic performance-goal attainment. Recognition (a low-cost reward) was the most frequently cited reward, although some pointed to pay-based rewards, including pay for performance and even additional pay or gain sharing.

Measurement Documentation and Its Importance to Budgeting

While performance-measurement initiatives are designed to provide data useful for a range of management and organizational decisions, their role in influencing budgeting decisions remains central and of great importance in this study. The existence of performance measurement throughout the budget cycle speaks to the consistency of

Table 1 Types of Rewards Used for Meeting Performance Targets (as Reported by City and County Respondents)

Type of reward	City respondents indicating rewards		County respondents indicating rewards	
	n	%	N	%
Rewards to the department				
Recognition	45	27	11	23
Discretionary use of surplus resources	22	13	6	13
Relaxation of budget rules	20	12	4	9
Additional/supplemental allocations	19	12	2	4
Access to special pools of funding	11	7	1	2
Lump sum budgets	8	5	1	2
Flexibility	7	4	3	6
Rewards to individuals				
Other special recognition (award ceremonies)	38	23	10	22
Individual pay for performance	29	17	11	23
Additional pay	23	14	8	17
Gain sharing	11	7	0	0

reporting such information and alludes to the institutionalization of a performance-measurement system for budgeting and management decisions. Survey participants were asked about the extent to which performance measures appear and are reported in various phases of the budget process and their perceptions about the importance of this information at any given phase.

Table 2 reports, in descending order, the mean responses for participants’ consideration of the importance of certain measures at various stages during the budget cycle. Given that every budget stage realized a median response of “somewhat important” regarding output or outcome performance measures, the generation of mean responses allows discernment of the subtle differences by budget stage and type of government regarding measurement usefulness. Generally, these results square with past work that recognizes a limited consideration of performance measures for budgeting decisions when compared to management purposes. In fact, between two-thirds and three-quarters of all respondents rated these particular measures as “not important” or “somewhat important” anywhere in the budget cycle. Nonetheless, the examination of means confirms that the strongest application or usefulness of measures within a budget cycle is during budget development, with a tapering of importance as the budget process proceeds. Not surprisingly, measures seem least important during budget execution. Finally, while county-level respondents pointed to more importance of measures during the budget-development stage, city respondents reported greater importance of measures later in the budget process, as well as greater consistency of importance, in general, across all budget phases. These differences, however, are not statistically significant.

Table 2 Mean Responses

How important have output or outcome performance measures been in the following steps in the budget process? (Scale: 1 = not important to 4 = very important)

Stage of budget process	All respondents (n=277)	City (n=214)	County (n=63)
Department			
Department budget development	2.39	2.37	2.47
Department budget appropriations	2.23	2.25	2.17
Department audit/assessment of results	2.23	2.28	2.08
Department budget execution	2.18	2.22	2.05
City/county wide			
City/countywide budget development	2.39	2.38	2.44
Executive deliberations	2.33	2.33	2.30
City/countywide budget appropriations	2.21	2.24	2.08
City/countywide audit/assessment of results	2.17	2.19	2.11
Council/commission deliberations	2.16	2.19	2.05
City/countywide budget execution	2.14	2.17	2.07

Table 3 presents respondents' considerations of the extent of use of certain measures in their government for a variety of activities. The median response—that such measures are actively used in a few select departments—is the same for all activities listed except strategic planning, where the median response is that use of such measures occurs in less than half of government departments. Again, the consideration of mean responses allows for better differentiation of measurement use across the listed activities. In general, respondents reported these types of measures are used most frequently for reporting, whether to elected officials or administrative staff, and less so for personnel decisions,

benchmarking, or specific improvement initiatives such as training or operations improvements. City respondents reported slightly more extensive use across departments than did their county counterparts, although the differences are not significant. These results suggest that local governments are making an effort to integrate performance measures into a range of decision areas, including budgeting. Measures are most actively engaged for reporting, assessment, and future planning. On the other hand, findings confirm that performance-measurement applicability can only be considered as advancing incrementally.

While it is helpful to know the types of decisions for which performance measures are actively used, it is equally important to address measurement *effectiveness* related to these decisions. Survey participants were asked to indicate how effective the development and use of measures had been for a range of decisions and activities, from resource allocation to programmatic and other organizational issues such as communication patterns among key players (table 4).

Many respondents were willing to describe performance measurement as “somewhat effective” for budgeting, and particularly for communication and lasting effects; “somewhat effective” was the median response for every effect listed. However, few were more enthusiastic. Across the

Table 3 Mean Responses

To what extent are output or outcome performance measures actively used by departments in your city/county for the following types of activities or decisions? (Scale: 1 = no departments to 5 = all departments)

To what extent are these measures used in:	All respondents (n=277)
Reporting or accountability to elected officials	3.29
Reporting results to management and staff	3.25
Assessment of program results	3.13
Budgeting, including resource allocation or discussion about resource changes	3.06
Program planning, annual business planning, or oversight activities, including programmatic changes	3.00
Strategic planning (more than one-year time horizon)	2.92
Reporting or accountability to citizens, citizen groups, or media	2.89
Managing operations (e.g., managing services or contractors) or daily decisions (e.g., scheduling activities)	2.76
Establishing or changing of policies	2.70
Evaluation to determine underlying reasons for results	2.63
Personnel decisions including staffing levels and evaluations	2.62
Establishing contracts for services	2.56
Benchmarking, or comparison of program results with other entities	2.52
Specific performance improvement initiatives (e.g., investments, technical assistance, training, operations improvements)	2.52
Holding local jurisdictions accountable for state-funded or state-regulated programs	2.37
Determining which programs, local jurisdictions, or contractors to target for audits, special studies, technical assistance, or other initiatives	2.09

Table 4 Mean Responses

How effective has the development and use of performance measures been in the departments in your city/county regarding the following? (Scale: 1 = not effective to 4 = very effective)

	Total (n=277)
Budget effects	
Affecting cost savings?	1.97
Changing appropriation levels?	1.79
Reducing/eliminating ineffective services/programs?	1.78
Reducing duplicative services?	1.77
Communication effects	
Improving communication with the executive budget office?	2.30
Improving communication with the council/commission and council/commission staff?	2.22
Communicating with the public about performance?	2.17
Improving communication between departments and programs?	2.12
Changing the questions elected officials or their staff ask of government managers or executives?	2.02
Changing the substance or tone of discussion among commissioners/elected officials in budgeting or oversight?	1.95
Lasting effects	
Increasing awareness of, and focus on, results?	2.50
Increasing awareness of factors that affect performance results?	2.40
Improving programs/service quality?	2.31
Improving responsiveness to customers?	2.30
Improving effectiveness of department programs?	2.26
Changing strategies to achieve desired results?	2.23
Improving cross agency cooperation/coordination?	1.88
Improving external government cooperation/coordination?	1.71

board, only 10 percent to 15 percent of respondents described the development and use of performance measures as “very effective” for a particular effect. Finally, while most of the communication and lasting effects garnered at least one-quarter to a third of respondents indicating that performance measures had been “effective” or “very effective” in terms of positive influence, none of the budgeting effects realized such positive endorsement. Most markedly, and substantiating past research about state governments, few claimed performance measurement as effective in determining appropriation levels. This is not surprising, considering the intent behind most performance-related initiatives has been much broader than simply cutting costs. Finally, a comparison of city and county responses indicates that county respondents are slightly more enthusiastic than their municipal counterparts about the effectiveness of performance measurement across items, although this difference is not significant.

While the results so far coincide with our expectations given past study of performance-related applications, these responses are a bit surprising regarding the overall experience with performance measures. That is, respondents acknowledged fairly widespread use and reporting of measures, they were cautious about the effectiveness of application, and they indicated problems with measurement identification and applicability for specific decisions. Yet, when asked how they would rate their overall experience using performance measures, county respondents were more enthusiastic than city respondents—62 percent described their experience as “good” or “very good” compared with 48 percent of city respondents.

Finally, survey participants were asked whether they agreed with the statement, “Performance measures are a vital decision aid regarding budget issues in this city/county.” Responses were split: Half of the city respondents and 56 percent of the county respondents disagreed with this statement. Just under half (49 percent) of city respondents and 44 percent of county respondents agreed with this statement. We consider these findings somewhat surprising and encouraging. That is, a healthy proportion of respondents from both types of local government believe that measures contribute to budgeting decisions in their government in an important way. This suggests that performance measurement can add value to budgeting decisions, although such information does not supplant traditional (political) factors that contribute to resource-allocation decisions. Although these local administrators and budgeters had mixed experiences and were reticent about the effectiveness of performance measures in budgetary activities and decisions, they still admitted some benefits that measurement can foster.

Correlations and Modeling Relationships

Considering these findings, are there distinguishing characteristics about the performance-measurement systems in these governments that allow for greater integration of performance measurement into budgeting processes and decisions? Does the nature of local government contribute in any way to the applicability of performance measurement? To investigate such relationships, constructs of transparency and density were created from survey items and compared with other variables that distinguish local governments. *Transparency* measures the extent to which performance measures exist and are revealed in budget documentation across organizational units in a government; this may include departmental budget requests, the executive budget itself, operating budget documents, and quarterly and annual reports (coefficient of consistency among items, Cronbach’s $\alpha = 0.88$). Transparency increases with every report or document that necessitates measurement inclusion.

Density measures the extent to which respondents claim to use performance measures at various stages of the budget process, from budget development through audit, both internally in departments and governmentwide (Cronbach’s $\alpha = 0.96$). Measurement density increases as respondents indicate that more departments use measures across more stages of the typical budget cycle.

Other variables that distinguish the local governments in this study are community characteristics, organizational culture, and performance-measurement characteristics.

Community characteristics include variables such as the government’s location within a major metropolitan area, its population in 2000, and the form of government (professional manager or elected). This information was collected from the ICMA *Municipal Yearbook 2002* and from data provided online by the U.S. Census Bureau. We define organizational culture using three variables, each resulting in a continuous dependent variable: Leadership support is a summative index (Cronbach’s $\alpha = 0.89$) created from survey items in which respondents indicated problems with leadership support for performance management. Another survey question provides a second organizational culture variable; this item asked respondents whether their government employs an explicit managing-for-results policy. The final organizational culture variables are made up of survey items (indexed, Cronbach’s $\alpha = 0.69$) that measure (1) organizational inclusion of other individuals in the government’s performance-measurement development and verification process, and (2) the inclusion of citizens in that same process (indexed, Cronbach’s $\alpha = 0.71$).

The performance-measurement variable quantifies evidence of what we define as a mature or evolved perfor-

mance system. It is created by indexing survey items in which respondents indicated the extent to which their government uses performance measurement for a range of public management practices, including strategic planning, budgeting, contract management, and personnel decisions, and extending to benchmarking with other governments, which collectively indicate a reasonably well-developed measurement system (Cronbach's alpha = 0.95).

Table 5 Spearman Correlation Coefficients: Performance-Measurement Transparency and Density with Community, Organizational, and Maturity Characteristics

	Transparency	n	Density	n
Community characteristics				
Location in major metropolitan area	.236**	261	.236**	261
Population	.363**	257	.195**	256
Local government management	-.072	259	-.065	259
Government entity type (city or county)	-.029	263	-.046	263
Organizational culture				
Managing-for-results process	.497**	243	.516**	243
Organizational inclusion	.433**	252	.525**	252
Lack of leadership support	-.357**	250	-.582**	249
Performance measurement characteristics				
Measurement maturity	.493**	260	.523**	256

**Significant at the .01 level (two-tailed).

To test for significant relationships between transparency and density with the community, organizational, and measurement characteristics, simple correlations were generated (using Spearman correlations to accommodate ordinal-level data). As table 5 shows, transparency is positively influenced by both location in a metropolitan area and population. Interestingly—and counter to the findings of prior research (Poister and Streib 1999)—the form of government is not significantly related to performance-measurement transparency as it is defined here.

The variables associated with organizational culture and performance-measurement maturity are much more strongly correlated with transparency and density than the community characteristics. A well-developed measurement system in which benchmarking with other entities is possible (suggesting relative maturity of measures), an explicit managing-for-results policy, greater inclusion in the development of the performance-measurement system, and strong leadership support are all significant and positively related to performance-measurement transparency and density. As it is defined here, a culture that promotes performance-measurement understanding and use through advanced exposure of measurement in budget documentation and

throughout the budget cycle, as well as the extension of measurement use (maturity), is beneficial to performance-measurement applicability in these governments.

To further examine the relationships among the previously mentioned characteristics with the effects of using performance measurement, a series of regression models were developed. Each model uses as independent variables those defined previously and presented in table 5. The dependent variable of each of the three models is a continuous variable created as a summative index of items by category of effect (table 4). In the first model, the dependent variable is a *budget effects index* (Cronbach's alpha = 0.82); in the second, the dependent variable is the *communication effects index* (Cronbach's alpha = 0.88); and in the third, the dependent variable is the *lasting effects index* (Cronbach's alpha = 0.92). Each model is represented accordingly:

$$\text{Dependent Variable (Budget Effects, Communication Effects or Lasting Effects Index)} = B_0 + B_1 \text{Community Characteristics} + B_2 \text{Respondent Characteristics} + B_3 \text{Organizational Culture} + B_4 \text{Performance Measurement Characteristics} + \text{error.}$$

The results of our regression analysis are provided in table 6. Of the three models, those addressing the budget and communication effects are the strongest, each accounting

Table 6 Multiple-Regression Models of the Factors Influencing the Budget, Communication, and Lasting Effects of Performance Measurement in Local Governments

Dependent variable	Standardized coefficients B		
	Budget effects	Communication effects	Lasting effects
Independent variables			
Community characteristics			
Community type (city or county)	-.084	-.152*	-.101
Population	.060	-.015	.036
Location in major metropolitan area	-.145*	-.156*	-.113
Form of government	.063	-.033	-.005
Respondent characteristics			
Years employed in respondent's government	-.017	-.132*	-.007
Reported number of years working with Performance measures	.107	.017	.013
Organizational culture			
Lack of leadership support	-.091	-.145*	.223**
Managing-for-results process	-.097	.013	.080
Organizational inclusion	.076	.129	.100*
Citizen inclusion	.078	.087	.116
Performance-measurement characteristics			
Performance-measurement transparency	-.147*	.103	-.019
Performance-measurement density	.341***	.286**	-.003
Measurement maturity	.333***	.144	.266**
	Adjusted R ² = .47	Adjusted R ² = .44	Adjusted R ² = .33
	Significance = .000	Significance = .000	Significance = .000
	n=194	n=193	n=197

*** = Significant at the .001 level
 ** = Significant at the 0.01 level
 * = Significant at the 0.05 level

for almost half of the variation. The model addressing the lasting effects of using performance measurement in local governments has an adjusted R^2 of 0.33.

Which factors are most important in determining the budget, communication, and lasting effects of using performance measures?³ First, regarding community characteristics, city respondents were somewhat less likely to realize communication effects, as were respondents from major metropolitan areas (who were also somewhat less likely to experience budget effects). Neither the form of government nor population is significant in predicting any of the effects from using performance measurement. However, individual respondent experience does matter: Our results show that, although the reported length of experience in working with performance measures is not significant, the time that respondents have been employed in their government has a moderate, negative effect on the communication effects of performance measurement. This may suggest that seasoned practitioners are more reticent about the possible effects of new budget reforms.

Regarding organizational culture influences, leadership support is important in realizing the benefits of performance measurement. These results suggest a recognition of the problems with leadership support for performance-measurement application in these governments: Respondents expect to realize less of the communication and lasting effects given lackluster support for a performance-measurement initiative. While an explicit managing-for-results policy does not seem to influence any of the effects of performance-measurement use, the nature of the application of performance measurement does significantly influence lasting effects. Specifically, greater inclusiveness in measurement development and determination is positively related to lasting effects of performance measurement. This supports the view that participatory processes yield more productive and longer-lasting reforms. Inclusion does not seem to incorporate the general public, however. That is, the inclusion of citizens in the process does not show a significant effect in any of the models.

Finally, some aspects of the measures themselves matter. Both transparency (the presence of performance measures in budget documentation) and density (comprehensive use of performance measures across departments and in various stages of the budgeting process) are significantly related to the budget effects of performance measurement. While the transparency of measures is significantly correlated with budget effects, its negative direction ($b = -0.147$) is somewhat perplexing. These results seem to confirm that the mere presence of performance measures in budget documentation does not necessarily lead to their effective use in decisions. These results also may signal measurement overload: Measures that are included in documentation simply to support reporting protocols may not prove useful or

effective for decision making. The stronger relationships of density and measurement maturity to budgeting effects bear this out.

In fact, measurement use at various stages in the budget process (density) shows a much stronger, positive, and significant influence on budget and communication effects. Finally, the extent to which output and outcome measures are used in a range of management decisions and activities (measurement maturity) is positively and significantly related to budget and lasting—but not communication—effects. For lasting effects, leadership support emerges as almost as important as measurement maturity in determining the long-term benefits of performance measurement use.

Conclusion: Implications for Application

This research confirms that the implementation of performance measurement supports improved communication within and across branches of government, advances learned discussion about the results of government activities and services, and adds value to budgeting decisions by providing relevant information about results, as well as costs and activities. We find that performance-measurement use across departments in local governments is fairly pervasive. Local administrators and budgeters are surprisingly positive about their experience with developing performance-measurement systems and employing measures for a variety of activities and decisions. Not surprisingly, the same respondents are much less enthusiastic about the effectiveness of using performance measures to influence budgeting processes and outcomes in particular. The most influential factors that support budgeting effects include the comprehensive use of measures across government departments and for a wide variety of activities and decisions, including benchmarking with external entities. We acknowledge that this last point poses difficulties for local governments in particular—the development and use of reasonably comparative measures for services that support a government's specific citizenry is difficult.

This research is important because it provides a national assessment of the perspectives of local government administrators and budgeters regarding performance-measurement use and effectiveness. Across the board, the vast majority of respondents expected that performance-measurement use in their governments will continue to evolve, adding value to budgeting and management decisions. Study results confirm some findings of past research that has been conducted on both the state and local levels (Melkers and Willoughby 2000; Poister and Streib 1999). While respondents were split as to whether performance measurement is a “vital decision aid regarding budget issues” in their government, they are optimistic about the

benefits and impact of performance-measurement adoption and use. Seventy-one percent of respondents agreed that using performance measures has enhanced program management in their city or county. And, 68 percent agree and another 15 percent strongly agree that their government is “better off” since they began using performance measures.

Regarding performance-measurement applicability to budgeting in particular, this study confirms the findings of Jordan and Hackbart (1999). Performance measurement’s greatest applicability (to date) seems to be in the budget-development phase, for county governments especially. According to city respondents, performance measures seem to be used more consistently across all stages of the budget process in their governments. Importantly, the inclusion of measures in budget documents—and the sheer existence of such information—does not automatically lead to effective use. Instead, active integration of measures consistently throughout the budget process is important in determining real budget and communication effects.

Finally, responses to this survey indicate that performance-measurement development and use at the local level provides some entree to the integration of citizens’ views of government operation. Current performance-measurement efforts at all levels of government often point to the role of the citizen or “customer” for input related to the quality of program outputs. The useful feedback of information about performance, not only generated with the help of citizens, but relayed back to citizens would support a knowledgeable citizenry. While only a handful of officials from this study expressed very strong views about the value and extent of citizen involvement in the measurement process, they represent an important indication of concern for real client satisfaction. Yet, as evidenced by the lack of significance of citizen inclusion in our regression models, this involvement may have a limited impact on performance-measurement development and use. Future research using these data will explore this characteristic of select performance-measurement systems in local governments and will examine the effectiveness of systems that integrate citizen views in such a complete way.

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Notes

1. See, for example, the Governmental Accounting Standards Board (GASB) case analyses of state and local government performance measurement applications at <http://www.seagov.org/index.html>, or the wealth of information for local managers at the International City/County Management Association Web site related to performance measurement (www.icma.org).
2. This research recognizes the difficulty of comparing the operations and performance of local governments. Rather, the present work addresses local officials’ consideration of the use and effectiveness of measurement for local government budget and management processes and activities, and it in no way attempts to measure or grade the participants’ government performance. See Halachmi (2002) for a brief note on the problematic nature of measuring and comparing productivity of services among local governments.
3. While a number of variables in each of the regression models here were not significant, the overall adjusted R^2 did not change markedly when the model was run with only the significant variables.

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