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The shift from performance measurement to performance management in local government: do performance measurement systems support the drivers of performance data use?

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William C. Rivenbark
School of Government, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA, and
Vincenzo Vignieri
Department of Business and Law Studies, University of Siena, Siena, Italy

Abstract

Purpose – The authors explore how performance measurement systems have evolved over the past 20-plus years to support the drivers of measurement system maturity, outcome measures and benchmarking, which contribute to performance data use in local government.

Design/methodology/approach – The authors use a case study of three municipalities in the United States to determine how performance measurement systems have changed from their FY 1994–95 operating budgets to their FY 2021–22 operating budgets, focusing on the selected departments of fire services, solid waste and human resources. They also conducted interviews to explore organizational context.

Findings – The authors find mixed results regarding the ability of performance measurement systems to support the drivers of performance data use in local government. While the municipalities have made some progress in transitioning from output to outcome measures, they continue to rely upon ad hoc approaches regarding measurement system maturity and benchmarking.

Practical implications – The authors provide several recommendations based on their findings, including that the academic community has an opportunity to provide training to local officials to help them create more robust performance measurement systems.

Originality/value – The authors provide clear evidence that more research is needed on the drivers of measurement system maturity, outcome measures and benchmarking to better understand why some local governments embrace these drivers while others do not.

Keywords Local government, Performance management, Outcome measures, Benchmarking

Paper type Research paper

1. Introduction

The normative research on performance measurement from the 1970s to the 1990s supported the widespread adoption of this management tool in local government, which included the dimensions of a well-designed performance measurement system (Hatry, 1972, 1980; Palmer, 1993). The descriptive research produced during that period focused more on an inventory approach to performance measurement in local government, using survey data to catalogue the types of measures being collected and reported and finding that output measures were more common than outcome measures (Poister and Streib, 1989, 1994, 1999). After the paradigm shift from performance measurement to performance management in the early 2000s (Ammons, 2000; de Lancer Julnes and Holzer, 2001; Hatry, 2002), scholars began to focus on drivers of performance data use in local government (Moynihan and Pandey, 2010).

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Kroll (2015) identified several critical drivers of performance data use through a systematic review of 25 empirical studies, including measurement system maturity, stakeholder involvement, leadership support, innovation, and goal clarity. These drivers generally come in one of two flavors. The first represents intangible drivers of culture, which include leadership support and innovation. The second represents tangible drivers of performance measurement systems, which include measurement system maturity and goal clarity. Ammons (2022) recently provided guidance on the future of performance management research, which not surprisingly began with the tangible prerequisite of having a good set of measures. He described the benefits of local officials moving beyond the rudimentary measures of output toward the more sophisticated measures of outcome. To leverage the tangible drivers of performance data use for the benefits of performance management, we must understand how performance measurement systems have evolved in local government to support them.

Our research explores how the 20-year evolution of performance measurement systems has advanced the selected drivers of measurement system maturity, outcome measures, and benchmarking, which contribute to performance data use in local government. We begin with a literature review on performance measurement and performance management in local government before presenting our case study comparing performance measurement systems from three U.S. municipalities as contained in their FY 1994–95 and FY 2021–22 operating budgets. We find evidence that the municipalities continue to use an ad hoc approach to pursue measurement system maturity across the selected departments of fire services, solid waste, and human resources. We also find evidence that they have made some progress moving from output to outcome measures of service delivery before returning to an ad hoc approach to embracing the benefits of benchmarking. We then provide several recommendations based on these findings, including that the academic community has an opportunity to provide training to local officials to help them create robust performance measurement systems in support of these fundamental drivers of performance data use. We conclude with research limitations and future research possibilities.

2. Literature review

2.1 Overview

Research on the evolution of performance measurement indicates that the New York Bureau of Municipal Research was instrumental in promoting performance capacity in local governments at the turn of the twentieth century (Williams, 2003, 2004). The bureau's work influenced the efforts of other organizations focusing on performance measurement in local government (Ridley and Simon, 1937), including the International City/County Management Association (ICMA). A more recent push for performance measurement in local government began in the 1970s, and many of the normative recommendations made at that time remain relevant today (Rivenbark, 2005). We begin our discussion with the performance measurement literature before turning to the paradigm shift from performance measurement to performance management in local government. We then identify three tangible drivers of performance data use set out in the performance management literature, setting the stage for our case study.

2.2 Performance measurement

Performance measurement became an object of rejuvenated interest within local governments during the 1970s (Kristiansen *et al.*, 2019), including its purpose of determining progress toward service delivery goals and identifying problem areas for improvement (Hatry, 1972). The inventory research also revealed that larger local

governments were collecting and using performance measures to some extent to support their annual budget processes (Fisk and Winnie, 1974). The Urban Institute found significant differences in performance measurement systems across forty-one local governments in 1973, with output measures being more common than outcome measures (Fisk and Winnie, 1974). Research also distinguished between general service delivery goals and quantifiable objectives (Altman, 1979).

Hatry (1980) continued to push for meaningful performance measurement systems in local government during the 1980s, emphasizing the need for appropriate measures, selection criteria, and benchmarks. He highlighted the necessity of investment in obtaining good information and adopting standard practices. A survey of municipalities with populations over 100,000 showed that output measures once again were more common than other types of measures being collected and reported (Usher and Cornia, 1981).

Research confirmed the prevalence of performance measurement systems during the 1990s (Poister and Streib, 1999) and highlighted discrepancies between existing and ideal systems (Bouckaert, 1993; Palmer, 1993). The significant milestone during this period concerned the introduction of the term "performance management." While researchers did not explicitly define the term as performance data use, they did begin to lay the foundation for the paradigm shift from performance measurement to performance management in local government (Osborne *et al.*, 1995).

2.3 Paradigm shift

The paradigm shift from performance measurement to performance management occurred in a relatively brief period during the early 2000s and led to Moynihan's (2008) landmark work on performance management. Ammons (2000) initiated this shift, describing the practice of benchmarking as a performance management tool in local government. While he did not explicitly define the term parallel to the research of Osborne *et al.* (1995), he did implicitly define it with three concrete examples of performance data use in local government. de Lancer Julnes and Holzer (2001) referred to the utilization of performance measurement systems to improve decision-making as a shift from performance adoption (system) to performance implementation (data use).

Hatry then defined performance management "as the use of performance information to affect programs, policies, or any other organization actions aimed at maximizing the benefits of public services" (2002, p. 352). This specific definition helped expand the performance paradigm beyond normative theory on performance measurement to include descriptive theory on performance management, prompting scholars to begin looking for the drivers of performance data use in local government (Moynihan and Pandey, 2010).

2.4 Performance management

A meaningful performance measurement system has long been recognized as a significant component of performance measurement and management in local government (Hatry, 1980), with measurement system maturity being one of several critical drivers of purposeful performance data use (Kroll, 2015). The maturation of performance measurement systems also has been associated with leadership support (Kroll, 2015; Moynihan and Lavertu, 2012), including the practice of using data for decision-making (Van de Walle and van Dooren, 2009). Resource scarcity in this context does not involve a paucity of information; instead, it refers to the inability to comprehensively process and use available information (Simon, 1973). Broadbent and Laughlin (2009) recognized this phenomenon in their conceptual model of performance management, concluding that a more mature performance measurement system allows decision makers to view program performance through more accurate parameters (Linna *et al.*, 2010).

The connection between measurement system maturity and performance data use in local government cannot be overstated. An abundance of research from multiple countries addresses this cause-and-effect relationship (Ammons and Roenigk, 2015a; Dimitrijevska-Markoski and French, 2019; Kroll and Proeller, 2013; Taylor, 2009). More mature performance measurement systems help local officials identify usable and relevant performance measures, which flow more readily from quantifiable objectives. Overlooking this flow may cause a "logical void in the causal chain" (Vignieri, 2022, p. 108), which links program ambition to program results. Pollanen (2005), based on survey research from Canadian municipalities with populations greater than 5,000, found that the ambiguity of objectives continues to be a major impediment to generating performance information.

Ammons (2022) recognized the need for an appropriate set of performance measures within the context of performance management, including the need for outcome measures to capture and report on policy consequences (Hatry, 1999). Performance measures are ranked based on each one's capacity to produce meaningful information (McDonald *et al.*, 2003). Input and output measures have value for accountability and transparency and for information on resource and workload dimensions of service delivery, but their greater value is in providing the data needed to produce the higher-order measures of efficiency and effectiveness (Fasiello *et al.*, 2022). While hierarchy exists among measures (McDonald *et al.*, 2003), studies have acknowledged the attribution problem between causes of outcomes and factors associated with them (Agostino and Arnaboldi, 2015; Bovaird, 2014). Research on performance management in local government, even with the attribution problem, has clearly shown that outcome measures represent a fundamental driver of performance data use (Ammons and Rivenbark, 2008; Ammons and Roenigk, 2015a; Melkers and Willoughby, 2005; Moynihan, 2015; Rivenbark *et al.*, 2019). This suggests that performance measurement systems that rely more heavily on outcomes rather than outputs are more likely to produce information for performance data use (Fasiello *et al.*, 2022). Rajala and Sinervo (2021) underscored the importance of effective performance information for decision-making in a study of a Finnish municipality, the findings of which parallel recent research on the need for high-quality financial data for decision-making (Domingos *et al.*, 2022; Faber and Budding, 2022; Sneller and Snels, 2022).

Another driver of performance data use in local government is benchmarking (Ammons, 2000). The push for comparing performance results against external data points is not a new phenomenon (Ammons, 2001; Clow, 1896; Hatry, 1977). Caution is warranted, however, in the use of benchmarking. Because of the complexities of collecting comparative data from local governments with different programs and processes of service delivery (Pollanen, 2005; Siverbo, 2014), the literature has focused more on the practice rather than the theory of benchmarking (Yasin, 2002). Ammons and Roenigk (2015b) responded to this phenomenon and suggested that coherent theory around the value of public-sector benchmarking does not exist and that interorganizational learning is a priority for local governments. For example, research in England, Germany, and Sweden (Kuhlmann and Bogumil, 2018) has shown that compulsory benchmarking may not lead to reflexivity and learning for local governments, suggesting that a goal-based benchmarking approach may be more appropriate for decision-making (McAdam and O'Neill, 2002).

There are two dimensions of benchmarking—internal and external (Kelly and Rivenbark, 2011). Our research focuses on external data points, where studies have found that this type of benchmarking drives performance data use in local government (Ammons, 1999, 2000; Ammons and Rivenbark, 2008; Dimitrijevska-Markoski and French, 2019; Folz, 2004). These studies demonstrated that local officials were more likely to respond to performance information when an internal data point, even with the inclusion of historical trend analysis, was given additional context from an external data point for a more robust interpretation.

External benchmarking also has been associated with increased transparency (Bovaird and Löffler, 2002), realized service-delivery improvement (Ammons, 2000), adoption of best practices (Northcott and Ma'amora Taulapapa, 2012), and advanced performance management (Davis, 1998). The thread that runs through these benchmarking studies is that data—like words—need context for interpretation (Rivenbark *et al.*, 2017).

3. Methodology

We used a case study to explore how performance measurement systems have evolved over the past 20-plus years to advance the drivers of measurement system maturity, outcome measures, and benchmarking, responding to the shift from performance measurement to performance management in local government. First, expanding on the research of Frank and D'Souza (2004), we used a convenience sample of three municipalities. These researchers recommended the case study approach to move beyond observing the adoption rates of selected measures to examining the details of system design and implementation. Second, we compared FYs 1994–95 and 2021–22 budget documents to understand how the three municipalities have evolved their performance measurement systems to incorporate these selected drivers of performance data use. We focused on budget documents, given that local governments in the United States commonly use them as performance data repositories. Third, we interviewed the budget directors from these municipalities to discuss the comparative findings and to explore how their organizations leverage these drivers of performance data use.

We used three criteria to select our convenience sample of three North Carolina municipalities. The first was a population of 25,000 or above for FYs 1994–95 and 2021–22. This criterion came from the descriptive research on performance measurement, which followed this population threshold for the inventory approach for the measures being collected and reported (Poister and Streib, 1994, 1999). The three municipalities chosen had a population range from 93,776 to 180,338 and operated under the council-manager form of government and had separate budget functions during both time periods. These municipalities also must follow Chapter 159 of the NC General Statues regarding local government budget preparation and adoption, which requires some degree of collecting and reporting on performance information during the annual budget process.

The second criterion was receiving the Distinguished Budget Presentation Award from the Government Finance Officers Association (GFOA) during FYs 1994–95 and 2021–22, which significantly reduced the number of eligible municipalities. While the qualifications for receiving the award have evolved, the requirement to include departmental goals, objectives, and measures in budget documents to earn the honor has not changed during the time periods studied.

For the final criterion, we return to the essence of a convenience sample. The three NC Carolina municipalities that agreed to participate in our study had to provide us with access to their respective budget documents, which included hard copies and scanned copies for FY 1994–95. After setting the criteria and choosing the municipalities, we then selected three service units from each local unit to analyze from a comparative perspective the presence of the three drivers in FYs 1994–95 and 2021–22. They included fire services from public safety, solid waste from public works, and human resources from administration.

The first driver, measurement system maturity, was analyzed primarily from the standpoint of having quantifiable objectives, which measure success toward the unit's service delivery goals and state the desired level of performance (Ammons, 2020). Research has shown that these types of objectives are fundamental to performance measurement systems in local government (Ammons, 2022; Broadbent and Laughlin, 2009). The second driver is the reliance on outcome measures, which include the higher-order measures of

efficiency and effectiveness. We began our analysis with an examination of outcome measures before determining whether the indicators were reflective of quantifiable objectives and were professionally recognized in the literature (Hatry, 1999). The third driver is benchmarking, responding to the notion that external data are likely to inspire performance data use in local government (Ammons and Rivenbark, 2008).

4. Case study analysis

4.1 Municipality A

Appendix 1 contains an overview of the performance measurement systems from the operating budgets of Municipality A for FYs 1994–95 and 2021–22. While the three service units had missions and goals for both fiscal years, Municipality A moved from having non-quantifiable objectives, or statements more aligned with a respective service unit's work plan, in the FY 1994–95 operating budget to having no objectives at all in the FY 2021–22 operating budget. The result is a disconnect between Municipality A's service delivery goals and its desired level of performance, representing a major shortfall toward the driver of measurement system maturity. Thus, Municipality A's outcome measures were not connected to quantifiable objectives.

The most significant change during this time was a shift from output measures during FY 1994–95 to outcome measures during FY 2021–22. The outcome measures used by the municipality were professionally recognized and provided information to support decision-making and productivity improvement. Examples include *percent of emergency incidents with a travel time response of 5 min or less* (fire services), *percentage of recyclable material diverted from the landfill* (solid waste), and *employee turnover* (human resources). Municipality A used trend analysis for context, as shown in the FY 2021–22 operating budget, including graphs that displayed these measures for actual FY20, estimated FY 21, and projected FY 22. While this type of data visualization provides internal benchmarking for planning purposes regarding resource allocation, Municipality A did not leverage the power of external benchmarking to inspire performance data use.

4.2 Municipality B

Appendix 2 contains an overview of the performance measurement systems from the operating budgets of Municipality B for FYs 1994–95 and 2021–22. The evolution of the performance measurement system for this municipality was not as uniform as that observed with Municipality A. The units of both fire services and human resources in Municipality B listed missions, goals, and non-quantifiable objectives in the FY 1994–95 operating budget. In the FY 2021–22 operating budget, fire services had no objectives, while human resources again listed non-quantifiable objectives. The service unit of solid waste moved from having a mission, goals, and non-quantifiable objectives in FY 1994–95 to having a mission, goals, and quantifiable objectives in FY 2021–22, resulting in a higher level of measurement system maturity.

The shift in focus in solid waste services resulted in several professionally recognized outcome measures being identified from the quantifiable objectives, supporting the possibility of performance data use. Examples include *customer satisfaction*, *percentage of scheduled pick-ups*, and *cost per collection points*. The other two service units (fire services and human resources) continued to rely on output measures. Municipality B then used limited internal benchmarking as shown in the FY 2021–22 operating budget, including tables rather than graphs to display these measures for actual FYs 20 and 21. Like Municipality A, Municipality B failed to use external benchmarks to build additional context through comparisons with outside organizations.

4.3 Municipality C

Appendix 3 contains an overview of the performance measurement systems from the operating budgets of Municipality C for FYs 1994–95 and 2021–22. While the three service units had missions and goals for both fiscal years, Municipality C moved from having non-quantifiable objectives in the FY 1994–95 operating budget to having no objectives at all in the FY 2021–22 operating budget. Thus, Municipality C's outcome measures were not connected to quantifiable objectives, an issue also observed in Municipalities A and B. This resulted, as it did with Municipality A, in a disconnect between Municipality C's service delivery goals and its desired level of performance, representing a shortfall in measurement system maturity.

The good news is that the municipality moved from tracking no performance measures in the FY 1994–95 operating budget to tracking outcome measures for each of the three service units in the FY 2021–22 operating budget. The outcome measures used by Municipality C were professionally recognized outcomes, providing information to support performance data use. Examples include *percentage of fire code violations cleared within 90 days* (fire services), *diversion rate* (solid waste), and *employee turnover rate* (human resources). Municipality C then used five-year trend analysis for internal benchmarking as shown in the FY 2021–22 operating budget, including graphs that displayed these measures. While the use of five-year trends is helpful and represents common practice in local government (Rivenbark, 2007), the failure to use external benchmarks diminished the chance of performance data use.

5. Findings and recommendations

5.1 Measurement system maturity

We began our analysis by examining the evolution of measurement system maturity from FY 1994–95 to FY 2021–22, focusing primarily on the presence of quantifiable objectives. Overall, the data show that the three municipalities in our sample moved from having non-quantifiable objectives or statements more aligned with annual work plans during FY 1994–95 to having no objectives at all during FY 2021–22, with one exception. Municipality B reported on a collection of quantifiable objectives for its solid waste service unit, which included *customer satisfaction rate of 99%*, *maintain a pick-up rate of 98%*, and *maintain annual cost per collection point for refuse of less than $70*. While these objectives were not connected to service delivery goals, they did result in outcome measures.

The lack of attention being placed on quantifiable objectives in these municipalities expands on the research conducted by Pollanen (2005), who found that the ambiguity of objectives continues to be an impediment to performance measurement systems in local government. There are two important challenges with this finding. The first is that quantifiable objectives are an important prerequisite to meaningful performance measurement systems (Ammons, 2022), giving local officials the ability to interpret program performance through performance parameters that flow from the program's service delivery goals (Linna *et al.*, 2010). The second is that research has shown that measurement system maturity is one of the fundamental drivers of performance data use in local government (Dimitrijevska-Markoski and French, 2019).

We turned to the municipal budget directors to explore this ad hoc approach to their performance measurement systems. Each referenced culture as the underlying barrier to identifying quantifiable objectives. When asked to operationalize the unit's culture, they provided feedback on lack of leadership, professional capacity, and hesitation with quantifiable accountability. This insight supports prior research on performance measurement transparency, which revealed the correlation between leadership support and measurement system maturity in local government (Melkers and Willoughby, 2005). We

must turn again to the studies on the conscious shift from a passive to a purposeful use of performance information (Cepiku, 2017; Cepiku *et al.*, 2017; Micheli and Pavlov, 2020), underscoring the recommendation of more research on the top-down and bottom-up leadership needed to achieve measurement system maturity in local government (Rivenbark *et al.*, 2016; Sanderson, 2001; Sanger, 2008).

5.2 Outcome measures

The data from the case study show that the three municipalities made some progress in transitioning from output measures to outcome measures from FY 1994–95 to FY 2021–22, increasing the likelihood of performance data use (Ammons and Rivenbark, 2008; Ammons and Roenigk, 2015a; Melkers and Willoughby, 2005; Moynihan, 2015; Rivenbark *et al.*, 2019). Municipalities A and C reported on outcome measures across all three service areas in their FY 2021–22 operating budgets. The budget directors from these two municipalities noted that budget staff members were involved in helping departments make this transition. While the outcomes are not reflective of quantifiable objectives, except for the solid waste service unit from Municipality B, the measures are professionally recognized (Hatry, 1999). An excellent example is the outcome measure of *turnover rate* for human resources.

Two findings represent challenges for achieving a positive shift from output to outcome measures in local government. First, Municipality B continued to depend more heavily on output measures as reported in its FY 2021–22 operating budget, which may signal that some local governments are still relying on rudimentary measures of service demand as shown by prior research (Ammons, 2013). The budget director from this municipality reported that department heads and division managers are more comfortable with output metrics given that they have more control over staff processes rather than service outcomes. This feedback is in alignment with prior research that has shown the challenge between responsible levels of performance management and external factors outside of management control (Heinrich, 2002). Pollanen (2005) recommended training in response to the performance complexity of planning, control, and evaluation.

Second, the municipalities focused on different outcomes for the service unit of solid waste, the only functional area in which all three municipalities reported these types of measures in their FY 2021–22 operating budgets. Municipality A reported on *cost per ton*, Municipality B reported on *cost per collection point*, and Municipality C reported on *refuse tons collected per FTE*. Within this functional area, the outcome measure *cost per collection point* represents an industry standard for understanding service efficiency, and *complaints per 1,000 collection points* represents an industry standard for understanding service effectiveness. Ammons (2022) suggested that not all data are equal for inspiring performance data use. Our research reveals a more nuanced finding: not all outcome data are equal for inspiring performance data use, responding to the missed opportunity of tracking these industry standard outcomes. This finding returns us to the need of training (de Lancer Julnes and Holzer, 2001; Pollanen, 2005; Yang and Hsieh, 2007), focusing on the ability of local officials to identify appropriate outcome measures. Fasiello *et al.* (2022) recommended that training represents an opportunity for researchers who specialize in performance measurement and performance management in local government.

5.3 Benchmarking

The data from the FY 1994–95 and 2021–22 operating budgets from the three municipalities revealed an ad hoc approach to placing measures within the context of benchmarking to increase the likelihood of performance data use and relied on internal trends rather than external data points. Municipality A used five-year trends for the performance measures – predominantly output measures – in its FY 1994–95 operating budget, then used three-year

graphical trends for the performance measures – predominately outcome measures – in its FY 2021–22 operating budget. However, we found no use of external benchmarks by Municipality A to inspire performance data use. The budget director from this municipality responded during the interview process that staff capacity is an issue, including that this driver is not part of the GFOA's Distinguished Budget Presentation Award.

Municipalities B and C went from presenting no trends in their FY 1994–95 operating budgets to having two-year and five-year trends, respectively, in their FY 2021–22 operating budgets. The performance measurement systems of the two municipalities also failed to leverage the additional context of data points external to the organization as shown in their budget documents. The budget directors from these two municipalities also referenced staff capacity and discussed moving away from the requirement of collecting external data points through systematic benchmarking to using external benchmarking on selected project-related activities. While this finding has the potential to support previous studies on how external benchmarking is a driver of performance data use in local government (Ammons and Rivenbark, 2008; Dimitrijevska-Markoski and French, 2019; Folz, 2004), these two municipalities used a different benchmarking approach.

Previous studies on benchmarking are typically based on benchmarking consortiums that fall into the category of compulsory benchmarking (Kuhlmann and Bogumil, 2018). These consortiums use the form of benchmarking known as comparison of performance statistics as benchmarks, which requires subsequent analysis. Our finding is based on municipalities that are following the goal-based approach to benchmarking for specific decision-making reasons (McAdam and O'Neill, 2002). Therefore, we return to the recommendation of Ammons and Roenigk (2015b) who maintained that benchmarking theory does not exist and that research on interorganizational learning is priority to leverage this driver of performance data use in local government.

6. Conclusion

The purpose of our research was to explore how performance measurement systems have evolved over the past 20-plus years in local government to advance the performance drivers of measurement system maturity, outcome measures, and benchmarking. Based on our comparative analysis of the performance measurement systems of three municipalities as presented in their FY 1994–95 and FY 2021–22 operating budgets, we find mixed results regarding the capacity of these systems to support the drivers of performance data use in local government. While all three municipalities moved from reporting on output to outcome measures since the paradigm shift to performance management—representing a driver of performance data use—they all used an ad hoc approach for developing and leveraging the drivers of measurement system maturity and benchmarking. We note several recommendations from our findings, including more research on leadership support of measurement system maturity and on a coherent theory of the value of benchmarking. We also note that the academic community has an opportunity to provide training to local officials to help them create stronger performance data systems to support the drivers of performance data use in local government.

Several research limitations must be considered when interpreting the results of our comparative case study analysis. First, our findings are based on data from three U.S. municipalities. This limited qualitive data set prevents generalizing from the results. Second, our cases were not randomly selected. Rather, they were based on a convenience sample that included the criteria of population size, receipt of the GFOA's Distinguished Budget Presentation Award, and accessibility of FYs 1994–95 and 2021–22 operating budgets. Third, our comparative case study analysis was used to make inferences about selected drivers rather than examples of performance data use.

The research on performance data use continues to expand our awareness about what drivers increase the likelihood local officials will use performance data for decision-making (Allegrini *et al.*, 2022). This research has shown that measurement system maturity, outcome measures, and benchmarking are drivers of performance data use in local government (Kroll, 2015). Therefore, more research on these core drivers is needed to enhance our understanding of why some local governments embrace them while others do not. Fasiello *et al.* (2022) recently found, for example, that local governments were more likely to report on outcome measures when quantifiable objectives were involved and when local officials had access to training opportunities. The authors concluded that more research is needed on a comprehensive body of knowledge that supports meaningful and well-designed performance measurement systems in local government.

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Appendix 1

Table A1. Performance measurement systems from Municipality A: excerpts from operating budgets FY 1994–95 and FY 2021–22

Fire services	FY 1994–95	FY 2021–22
Mission	To provide fire and rescue services	To provide exceptional service to our citizens and visitors
Goals	• Maintain and expand infrastructure • Maintain an efficient organization • Maintain an environment which is conducive to quality growth • Provide good services to citizens	• Deliver exemplary service • Reinvent professional development program • Run a full training academy • Enhance existing partnerships
Objectives	• Develop a comprehensive long-range plan • Inspect all buildings required to be checked under state code • Reduce fire loss and response time	Not available
Performance Measures (outcomes in italics)	• Number of emergency calls • Number of inspections • Number of permits issued • Annual fire loss (in millions $) • *Average Response Time*	• *Percentage of emergency incidents with a travel time response of 5 min or less* • *Percentage of building and contents saved from fire loss* • *Percentage of town population contacted for fire and life safety*

Solid waste	FY 1994–95	FY 2021–22
Mission	To collect garbage, yard waste, and curbside trash	To provide household garbage-collection services
Goals	• Provide comprehensive solid waste–management services • Provide cost-effective services	Develop solid waste–route maps Work on recycling initiatives Create more space to collect food waste
Objectives	• Collect curbside waste • Expand routes • Keep customers informed • Respond to service misses within 24 h • Meet or exceed 40% waste diversion goal	Not available

(*continued*)

Solid waste	FY 1994–95	FY 2021–22
Performance Measures (outcomes in italic)	• Number of customers • Number of collections • Landfill tonnage	• *Solid waste operating cost per ton* • *Recycling operating cost per ton* • *Recyclable material diverted from landfill*
Human resources	**FY 1994–95**	**FY 2021–22**
Mission	To promote our commitment to effective utilization of human resources	• To support our core value of "people first"
Goals	• Recruit and select high-quality employees • Select and promote based on merit • Maintain competitive compensation program • Communicate personnel policies	• Promote a comprehensive DEI strategy • Attract and retain a high-performance workforce • Partner with employees to evolve our workplace culture
Objectives	Not available	Not available
Performance Measures (outcomes in italics)	• Positions recruited • Applications processed • Formal grievances • *Turnover rate*	• *Turnover rate* • *Employee growth opportunities*

Source(s): Authors' own creation

Table A1.

Appendix 2

Fire services	FY 1994–95	FY 2021–22
Mission	To deliver fire protection and rescue services to minimize loss of life and property	To serve the citizens by protecting lives and property
Goals	• Maintain a preparedness level to respond to complex incidents • Maintain current ISO grade status	• ISO reaccreditation • Recruit classes and new hires • Make community a safer place
Objectives	• Attend 8 h of recertification training • Attend 27 h of EMS training • Meet ISO requirements for training	Not available
Performance Measures (outcomes in italic)	• Recertification classes • Monthly EMS classes • Drills for ISO training	• Fire incidents • Hazmat incidents • Medical incidents • Confined to room(s)
Solid waste	**FY 1994–95**	**FY 2021–22**
Mission	To provide weekly household waste and yard waste pick-ups	To provide customers with quality weekly household and yard waste collection

(*continued*)

Table A2. Performance measurement systems from Municipality B: excerpts from operating budgets FY 1994–95 and FY 2021–22

Solid waste	FY 1994–95	FY 2021–22
Goals	• Provide curbside collection of refuse • Provide curbside collection of yard waste • Provide curbside collection of bulky items	• Provide a safe work environment • Provide weekly solid waste collection and bi-weekly recycling
Objectives	• Collect household waste once a week • Collect yard waste once a week • Collect bulky items • Comply with the Americans with Disabilities Act • Educate citizens on recycling	• Maintain loss-time accident rate of less than 20 days • Provide 60 h of training • Customer satisfaction rate of 99% • Maintain a pick-up rate of 98% • Maintain annual cost-per-collection-point data (recycling< $28, refuse< $70)
Performance Measures (outcomes in italics)	• Collection points • Tons of household waste collected • Tons of yard waste collected • Number of bulky items collected • Number of collection points	• Collection points • *Customer satisfaction* • *Loss time* • *Percentage of scheduled pick-ups* • *Cost per collection point*

Human resources	FY 1994–95	FY 2021–22
Mission	To provide human resources support that motivates employees and improves morale	To promote a culture of fair treatment, open communication, and mutual respect
Goal	• Create a quality culture • Assess personnel policies • Be fiscally responsible • Maintain a 95% staffing level • Provide equal employment opportunities	• Monitor departmental programs and data points • Track trends
Objectives	• Offer training programs • Reward individual employees • Comply with federal and state regulations • Review personnel budget requests • Attract and hire qualified applicants	• Report on compliance markers • Allocate resources • Track overall trend data
Performance Measures (outcomes in italics)	Number of employees in training Number of individual work plans created Number of exit interviews conducted *Percent change in salaries and overtime*	• Number of labor charges filed • Number of grievances filed • Number of minority employees promoted • Number of personnel actions filed

Table A2.

Source(s): Authors' own creation

Appendix 3

Fire services	FY 1994–95	FY 2021–22
Mission	To protect lives, health, and property	To mitigate loss and suffering due to fires, medical emergencies, and disasters
Goals	Education, prevention, mitigation, and control	• Establish a recruitment and hiring culture that reflects the community • Develop an equitable and competitive promotional process • Improve emergency processes • Focus on employee wellness
Objectives	• Participate in improvement processes • Identify areas of service improvement • Improve ability to address emergencies • Place smoke detectors in all residences	Not available
Performance Measures (outcomes in italics)	Not available	• *Percentage of fire code violations cleared within 90 days* • *Percentage of full response within 8 min travel time* • *Inspections completed per inspector FTE*

Solid waste	FY 1994–95	FY 2021–22
Mission	To collect and dispose of refuse, yard waste, discarded furniture, and appliances	To promote a healthy, safe, and sustainable community
Goals	• Perform collection and disposal of items in an efficient and effective manner • Maintain a neat and clean city	• Deliver excellent customer service • Enhance the community and environment • Create effective waste-management plan
Objectives	• Provide collection service in a dependable and timely fashion • Perform sanitation-code enforcement • Divert as much material from landfill as possible	Not available
Performance Measures (outcomes in italics)	Not available	• *Refuse tons collected per FTE* • *Diversion rate* • *Yard waste tons collected per FTE*

Human resources	FY 1994–95	FY 2021–22
Mission	To provide for the personal and professional development of employees	To build a highly engaged, empowered, diverse workforce that is reflective of city residents

(*continued*)

Table A3. Performance measurement systems from Municipality C: excerpts from operating budgets FY 1994–95 and FY 2021–22

Human resources	FY 1994–95	FY 2021–22
Goals	Advocate for a competitive, representative, and fair work force	• Focus on maximizing innovation • Focus on productivity • Focus on organizational performance
Objectives	• Complete implementation of continuous quality-improvement process • Continue to implement and monitor the affirmative action plan • Increase compliance with the Americans with Disabilities Act • Coordinate summer training programs • Coordinate city-wide reduction in force	Not available
Performance Measures (outcomes in italics)	Not available	• *Employee turnover rate* • *Ratio of human resource staff to 100 municipal employees*

Source(s): Authors' own creation

Table A3.

About the authors

William C. Rivenbark is a professor of public administration in the School of Government at the University of North Carolina at Chapel Hill (USA), teaching and conducting research on performance and financial management in local government. He has published numerous academic articles and has coauthored two books. He also served as a Fulbright Scholar at the University of Salento (Italy). William C. Rivenbark is the corresponding author and can be contacted at: rivenbark@sog.unc.edu

Vincenzo Vignieri is an assistant professor in the Department of Law and Business Studies at the University of Siena (Italy). He holds a Ph.D. in Public Management and Governance from the University of Palermo (Italy) and has published numerous academic articles and a book on performance management. He also served as a visiting scholar at the University of Baltimore (USA) and the University of North Carolina at Chapel Hill (USA).