Building a Better System for Today and Tomorrow: Municipal Performance Management during the COVID-19 Pandemic

Obed Pasha and Willow S. Jacobson

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Local government managers know that management is never easy. In recent years, however, they have faced situations in which "never easy" has become "almost impossible." Job turnover and workforce transformation, social unrest, natural disasters, and a global pandemic have presented substantial new challenges. Proactive public managers need to prepare their organizations to handle unexpected crises that have the potential to get even worse.

This bulletin explores how building good management practices and systems allows jurisdictions to better respond to stressful circumstances. In specifically looking at performance management systems during the COVID-19 pandemic, we found that many organizations tended

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to fall back on their existing capacity, relying on procedures they were most comfortable with. Our results show that if public managers take the time to invest in and implement beneficial practices during periods of relative stability, they will be more prepared to handle any crisis that arises.

Context

In March 2020, the United States started to feel the effects of the pandemic that would challenge it for months to come. On March 11, the World Health Organization declared COVID-19 a pandemic and, on March 13, President Trump declared COVID-19 a National Emergency. Suddenly, organizations big and small had to modify their operations to respond to shifting demands and safety requirements—many businesses halted altogether. Federal, state, and local governments did not have the option to suspend their services, but the way they worked had to quickly, and in some cases radically, transform. Immediate decisions had to be made within an increasingly ambiguous context and timeline. Employees who had long enjoyed consistent and stable workplace environments found themselves navigating a world of uncertainty and change.

Local governments are often the first line of response in a crisis. While COVID-19 policies were being developed at a federal and state level, counties and municipalities were faced with crucial decisions of their own. They did not have the option of stopping the fundamental services they provided to their citizens—the trash still needed to be collected, the power had to stay on, and social services were more essential than ever. For many public organizations, the pandemic transformed the assumptions and structures they previously operated under—from bureaucratic norms and contingency planning to emergency preparedness and political oversight.[1] The pandemic also exposed the institutional weaknesses and capacity gaps that made it hard to deal with such a crisis, suggesting the obstacles organizations are likely to face in the future if they do not proactively reconsider their structures, procedures, and processes.[2]

A county child protective services official, for example, struggled to find new ways to collect data on child abuse now that schools were closed and children were having limited interactions with teachers, nurses, and other potential reporters of abuse. Similarly, some municipal-waste-management divisions had to consider altering their contracts with collection companies due to a sudden increase in residential waste caused by all the people staying at home.[3] Parks were forced to issue physical-distancing protocols,[4] and social service agencies were so besieged with

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1. Christopher Ansell et al., "The COVID-19 Pandemic as a Game Changer for Public Administration and Leadership? The Need for Robust Governance Responses to Turbulent Problems," *Public Management Review* 23, no. 7 (2020): 1–12; Jonida Carungu et al., "The Impact of a Humanitarian Disaster on the Working Approach of Accountants: A Study of Contingent Effects," *Accounting, Auditing & Accountability Journal* 34, no. 6 (March 2021).

2. Claire A. Dunlop et al., "Researching COVID-19: A Research Agenda for Public Policy and Administration Scholars," *Public Policy and Administration* 35, no. 4 (2020): 365–383.

3. Mahmood Yousefi et al., "Municipal Solid Waste Management during COVID-19 Pandemic: Effects and Repercussions." *Environmental Science and Pollution Research International* 28, no. 25 (2021): 32200–32209.

4. Abraham J. Miller-Rushing et al., "COVID-19 Pandemic Impacts on Conservation Research, Management, and Public Engagement in US National Parks," *Biological Conservation* 257 (May 2021): 109038.

welfare requests that they struggled to provide food and shelter to everyone who needed it.[5] Public employees frequently had to operate outside their prescribed roles and responsibilities to meet unforeseen challenges.[6]

Our research focuses on how performance management practices changed for municipal governments during the pandemic and addresses how public managers can make better decisions in uncertain situations.[7] We examine the following two questions in our cross-sectional analysis of 103 North Carolina local government line managers from a variety of functional areas: (1) What changes did municipalities make to their level of performance management use during the COVID-19 pandemic? (2) What factors impacted performance management changes during the pandemic?

Performance Management during Turbulence

Performance management is a system that allows public managers to analyze quantitative and qualitative information in order to make evidence-based decisions that will improve overall performance.[8] There are multiple reasons to measure performance, including to motivate, evaluate, budget, control, and learn.[9] Performance management systems are most effective when they are used and valued by multiple organizational stakeholders, including administrative executives (such as the city/county manager), strategic-policy decision makers (the board), and the operating core (those within the department). For performance measurement to move to performance management it needs to be engaged and accepted by a range of critical organizational stakeholders so that it becomes actively embedded in institutional decision-making.[10]

In its assessment of worldwide governmental responses to the pandemic, "A Guide to Benchmarking COVID-19 Performance Data."[11] suggests that comparative data analysis is a means of making well-informed decisions when dealing with a crisis like COVID-19. Along similar lines, Jeremy Hall[12] also emphasizes the critical need for data measurement in order to

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5. Gabriela Cohen et al., "Living with Dementia: Increased Level of Caregiver Stress in Times of COVID-19," *International Psychogeriatrics* 32, no. 11 (July 2020): 1377–1381.

6. Christian Schuster et al., "Responding to COVID-19 through Surveys of Public Servants," *Public Administration Review* 80, no. 5 (2020): 792–796.

7. Bert George et al., "A Guide to Benchmarking COVID-19 Performance Data," *Public Administration Review* 80, no. 4 (July/Aug. 2020): 696–700; Jeremy L. Hall, "Governance: Struggle and Strife—or Synergy and Success—in the Trans-COVID Era," *Public Administration Review* 81, no. 1 (Jan. 2021): 7–11; Falconer Mitchell et al., "Evaluating Performance Management of COVID-19 Reality in Three European Countries: A Pragmatic Constructivist Study," *Accounting, Auditing & Accountability Journal* 34, no. 6 (2021): 1345–1361.

8. Theodore H. Poister et al., *Managing and Measuring Performance in Public and Nonprofit Organizations: An Integrated Approach* (John Wiley & Sons, 2014).

9. Robert D. Behn, "Why Measure Performance? Different Purposes Require Different Measures," *Public Administration Review* 63, no. 5 (Sept./Oct. 2003): 586–606.

10. Kaifeng Yang and Sanjay K. Pandey, "How Do Perceived Political Environment and Administrative Reform Affect Employee Commitment?" *Journal of Public Administration Research and Theory* 19, no. 2 (April 2009): 335–360; Obed Pasha, "Can Performance Management Best Practices Help Reduce Crime?" *Public Administration Review* 78, no. 2 (March 2018): 217–227; David N. Ammons, *Performance Measurement for Managing Local Government: Getting It Right* (Melvin & Leigh, 2020).

11. George et al., *supra* note 7.

12. Hall, *supra* note 8.

gain a better understanding of turbulent situations and to make evidence-based decisions. But as Kaifeng Yang[13] points out, it is difficult to arrive at data-informed decisions when resources are depleted, competing values must be balanced, and time is constrained. He proposes that additional factors, such as "trained intuition" and "reasonableness," be employed alongside data when making decisions. Research in other disciplines such as accounting, nonprofits, and health care has also put a greater emphasis on performance management as a tool to mitigate the impact that COVID-19 had on services.[14]

There are competing views on implementing changes during a crisis. The first holds that because a crisis opens the field to power struggles among various stakeholders, it provides a window of opportunity to adopt transformational organizational changes.[15] The opposing view holds that a crisis restricts broad changes because it is often accompanied by (or causes) extreme pressure on existing resources. Any fundamental change to the organization is likely to cause stress, anxiety, and confusion to employees, intensifying their resistance and guaranteeing its failure.[16]

We explore how these contradictory views play out in the changes that North Carolina local governments made during the pandemic to their performance management systems and how they used them, and to what extent those changes were related to their existing use of performance management practices.

Methodology and Results

This research relies on an electronic survey of municipal department directors in North Carolina. We administered the survey on February 11, 2021, and followed up with reminders two and three weeks later on February 25 and March 4. A final request for participation was made on March 23, 2021, and the survey was closed on March 25, 2021.

Survey Measures

The survey was divided into sections including performance data analysis, performance measurement use, and changes in service demand during the pandemic. The survey captures the use of performance information for decision-making by department heads in 2019 (before the pandemic), measured on a seven-point Likert scale, as well as how much that practice changed

13. Kaifeng Yang, "What Can COVID-19 Tell Us about Evidence-Based Management?" *The American Review of Public Administration* 50, nos. 6–7 (2020): 706–712.

14. *See, e.g.*, Ralph Kober and Paul J. Thambar, "Coping with COVID-19: The Role of Accounting in Shaping Charities' Financial Resilience," *Accounting, Auditing & Accountability Journal* 34, no. 6 (2021): 1416–1429; Christian Huber et al., "Organizing Care during the COVID-19 Pandemic: The Role of Accounting in German Hospitals," *Accounting, Auditing & Accountability Journal* 34, no. 6 (2021): 1445–1456.

15. B. Guy Peters et al., "Global Financial Crisis, Public Administration and Governance: Do New Problems Require New Solutions?" *Public Organization Review* 11, no. 1 (2011): 13–27.

16. Wayne H. Bovey and Andrew Hede, "Resistance to Organisational Change: The Role of Defence Mechanisms," *Journal of Managerial Psychology* 16, no. 7 (2001): 534–538; Prashant Bordia et al., "Management Are Aliens! Rumors and Stress during Organizational Change," *Group & Organization Management* 31, no. 5 (Oct. 2006): 601–621.

Table 1. Survey Respondents

Department	Number
Budgeting	21
Human Resources	19
Inspections	13
Parks	14
Planning	21
Public Works	15
Total	**103**

(whether it increased or decreased) during the pandemic, measured on an eleven-point slider scale (see Appendix A for the survey items). This approach helps us explore the changes with respect to the previous year's behavior.

Sample

We collected survey data from six municipal departments (budgeting, human resources, inspections, parks, planning, and public works) in North Carolina cities and towns with populations greater than 10,000 (ninety municipalities qualified for inclusion). The specific departments represent fundamental core services across municipalities. They also offer a mix of internal- and external-facing functions. The population size of the municipalities increased the probability that their workforces would be large enough to have dedicated staff within these departments.

Email addresses for department directors were assembled from municipal websites, and the survey was administered to 472 individuals. Some municipalities, especially the smaller ones, didn't have the specific departments we were asking about. Any municipality that contracted its services to the county or had consolidated departments was excluded. If we couldn't find contact information for a departmental director on the official website, we excluded that person. We received 103 responses (a 21.82 percent response rate). Table 1 shows the distribution of respondents by department.
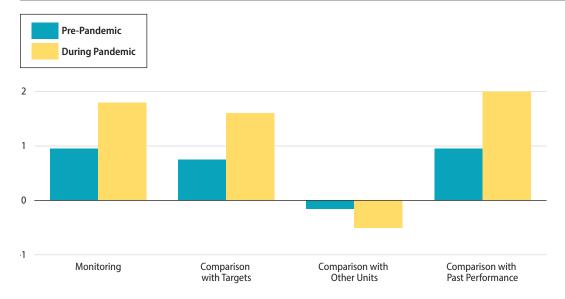
Figure 1. Change in Performance Information Analysis during the Pandemic

Analysis and Results

To understand the changes municipalities made to their level of performance management use during the COVID-19 pandemic, we used descriptive statistics to compare performance management analysis and use in 2019 (pre-pandemic) and 2020 (during the pandemic). Next, we examined the changes by department type to determine whether there was a relevant variation. An Ordinary Least Squares (OLS) regression analysis was used to determine the changes in performance management practices during the pandemic (see Appendix D).

The following results emerged from our analysis:

Performance Information Analysis

- Respondents indicated an increase in their analysis of performance information during the pandemic (2020) compared to 2019 for all measured areas except when conducting comparisons with other units (benchmarking), which showed a decrease (see Figure 1).
- Service department directors reported that their engagement in benchmarking their services with peers declined in 2020.
- Municipal departments reported an increased use of performance information during the pandemic (2020) to monitor their progress and compare it with internal targets and past performance.
- All of the departments increased their levels of performance information analysis when monitoring performance information and comparing it with targets and past performance except for budgeting departments, which showed a negligible increase (see Figure 2).
- Human Resources was the only department that increased the use of benchmarking in this time period.

Figure 2. Change in Performance Information Analysis during the Pandemic by Department
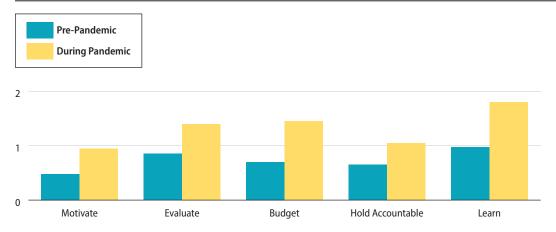
Figure 3. Change in Performance Information Use during the Pandemic

Performance Information Use

Performance information use refers to the practice of making decisions and taking action based on the information generated by a performance measurement system.[17]
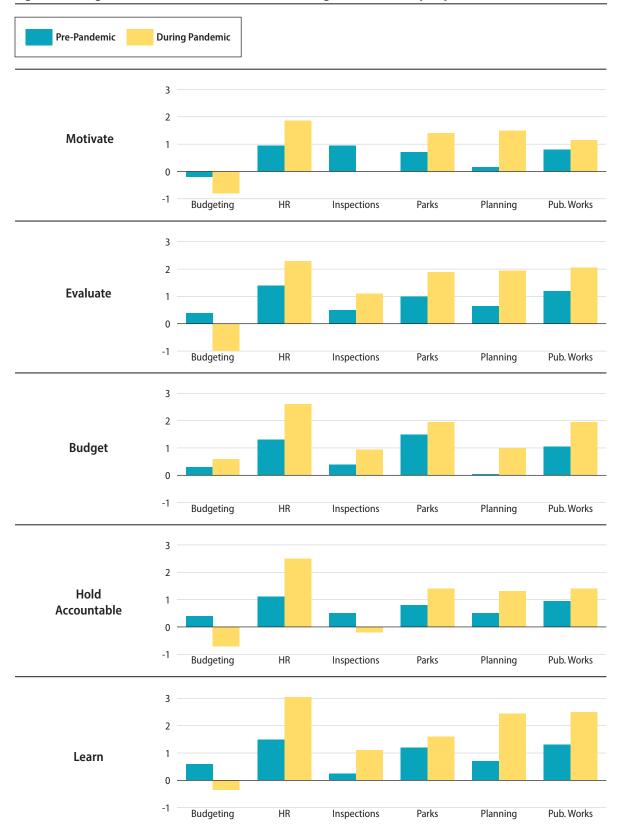
- Overall, the surveyed municipalities reported an increased use of performance information focused on motivation, evaluation, budgeting, accountability (control), and learning during the pandemic (2020) (see Figure 3).
- Not surprisingly, the use of performance information for the purposes of motivation, evaluation, and accountability increased less than for budgeting and learning.
- The biggest increase was seen in the use of performance information for learning.
- Across departments, the pattern of enhanced use remained consistent except for budgeting departments (see Figure 4), which reported a lower-than-average use of performance information for motivation both before and during the pandemic.

What Might Be Causing These Changes?

Consistently, municipal departments reported increased levels of performance information analysis and use during the pandemic (2020) as compared to the previous year (see Figures 1 through 4). What factors could explain these changes? The relationship between reliance on performance management practices before and during the pandemic was examined for both data use and analysis measures to provide a more complete view of changes to performance management practices.

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17. Poister et al., *supra* note 9; Donald P. Moynihan, *The Dynamics of Performance Management: Constructing Information and Reform* (Georgetown University Press, 2008).

Figure 4. Change in Performance Information Use during the Pandemic by Department

The results indicate that the departments that engaged in the following performance management activities prior to the pandemic (2019) increased their use of them during the pandemic (2020) (see Appendix E for the OLS results):

- performance monitoring,
- motivating employees,
- evaluating,
- budgeting,
- holding employees accountable (controlling), and
- learning.

Lessons Learned

Overall, municipal departments reported an increased use of internally focused performance information during the pandemic (2020). While this exploratory study does not evaluate the effectiveness of using that increased information, previous scholarship would indicate that such practices could prove to enhance the decisions being made. Performance management systems, it has been argued, enable managers to use performance information to improve their results, including service quality and efficiency.[18] As such, the hope is that the increased use of performance information during the pandemic assisted in critical decision-making.

These are the main lessons learned from this study:

- Organizations that have consistently used performance information tools for managerial purposes—collection and use of performance data—are more likely to continue to deploy these measures and use them in times of intensified decision-making caused by events like the pandemic.
- This finding supports the assertion that changes, however transactional or transformational they might seem, emerge only out of the limited options that an organization's past decisions and existing structure allow.[19]
- A crisis is not the time to learn how to request, apply, and interpret information that is not part of the established decision-making models.

Our findings show that public managers should be encouraged to invest in beneficial management practices and embed them into their organizational routines so that they can be leveraged during a crisis. And though this study focuses on performance management, the results are applicable to other management practices, such as communication systems, workforce planning, and budgeting best practices.

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18. David N. Ammons and Dale J. Roenigk, "Benchmarking and Interorganizational Learning in Local Government," *Journal of Public Administration Research and Theory* 25, no. 1 (2015): 309–335.

19. Paul Pierson, "Increasing Returns, Path Dependence, and the Study of Politics," *American Political Science Review* 94, no. 2 (2000): 251–267; Geoffrey M. Hodgson, "What Are Institutions?" *Journal of Economic Issues* 40, no. 1 (2006): 1–25; Douglass C. North, "The New Institutional Economics," *Journal of Institutional and Theoretical Economics* 142, no. 1 (1986): 230–237.

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Appendix A. Survey Items

Focus Area	Item
Analysis	Please indicate your level of agreement on a scale of 1–7 with the following statements as they apply to **2019 (pre-COVID).** • I regularly monitor our performance data. • I regularly compare our performance measures against our department targets. • I regularly compare our performance measures against other similar departments in other jurisdictions. • I regularly compare our performance measures against our own past performance. Please indicate how, if at all, engagement in these practices changed **during COVID (2020)** by moving the slider scales (1–10) below. • I regularly monitor our performance data. • I regularly compare our performance measures against our department targets. • I regularly compare our performance measures against other similar departments in other jurisdictions. • I regularly compare our performance measures against our own past performance.
Use	Please indicate your level of agreement with the following statements as they apply to **2019 (pre-COVID)**. • I regularly used performance data to motivate my subordinates. • I regularly used performance data to evaluate my department's performance. • I regularly used performance data to budget programs and projects. • I regularly used performance data to hold my subordinates accountable. • I regularly used performance data to learn what is working and what we need to do differently to improve. Please indicate how, if at all, engagement in these practices changed **during COVID (2020)** by moving the slider scales below. • I regularly used performance data to motivate my subordinates. • I regularly used performance data to evaluate my department's performance. • I regularly used performance data to budget programs and projects. • I regularly used performance data to hold my subordinates accountable. • I regularly used performance data to learn what is working and what we need to do differently to improve.
Stakeholder Interest	Please indicate your level of agreement with the following statements as they apply to **2019 (pre-COVID)**. • My staff frequently uses performance measures in proposals and requests they make to me. • Our city manager/management team regularly monitors our performance measures. • Our board shows great interest in our performance information. Please indicate how, if at all, engagement in these practices changed **during COVID (2020)** by moving the slider scales below. • My staff frequently uses performance measures in proposals and requests they make to me. • Our city manager/management team regularly monitors our performance measures. • Our board shows great interest in our performance information.
Demand	Compared to **2019 (pre-COVID)**, the **demand** for our department's services in **2020 (during COVID)** was: • Much Lower to Much Higher (7-point scale)
Formal Strategy	Please indicate where you would place your department in terms of strategy development on the continuum below (by moving the slider scale with 0 representing informal and 10 representing formal strategy development). • 2019 • 2020

Appendix B. T-Test of Responder versus Non-Responder

Responder Status	Obs.	Mean of Population	
No	271	58982.37	t = -0.5623
Yes	207	65294.31	

Appendix C. Responder versus Non-Responder by Department

Responder Status	Budgeting	Human Resources	Inspections	Parks	Planning	Public Works	Total
No	42	36	49	47	50	47	271
Yes	39	39	30	35	33	31	207
Total	**81**	**75**	**79**	**82**	**83**	**78**	**478**

Appendix D. The Estimation Model for the OLS Regression Analysis

An Ordinary Least Squares (OLS) regression analysis was used to determine the changes in performance management practices during the pandemic. This helped address the second research question of this study, which examines whether pre-pandemic performance management use affected use levels during the pandemic. This equation represents the estimation model:

$$\Upsilon_i = \beta_0 + \beta_1 \Psi_i + \beta_2 \nabla_i + X_i \Gamma + \varepsilon_i$$

Υ_i represents the change in performance management during the pandemic for department *i*. The dependent variable is thus the response to the survey that asked participants to indicate on a sliding scale of 1 to 7 the extent to which performance management use had changed between 2020 and 2019 (see Appendix A). β_0 is the constant and β_1 is the coefficient representing the relationship between the pre-pandemic status of performance management (Ψ_i) and Υ_i. ∇_i is the dichotomous variable for whether a department is budgeting and finance or not, and β_2 represents the coefficient for the difference in changes made by budgeting and finance departments compared to all other departments.

X_i represents the matrix of two control variables: the extent to which the department adheres to formal decision-making and changes in service demand during the pandemic. Given the small size of our sample, we were limited on the number of control variables. We ran models that included organizational size and tenure of respondents, but they were not statistically significant. We were unable to determine political stability. ε_i represents the unobserved random error, clustered by city.

Appendix E. OLS Regressions Estimating the Relationship between Performance Management Practices prior to and during the COVID-19 Pandemic

		Pre-Pandemic Status		Formal Strategy		Service Demand		Budget Dummy		Constant		Obs.	R-Squared
Monitor	(1)	0.320*	(0.168)	-0.174	(0.206)	-0.187	(0.190)	-1.130***	(0.328)	1.021***	(0.358)	69	0.147
Compare w/Target	(2)	0.361**	(0.142)	-0.061	(0.207)	-0.089	(0.173)	-0.879**	(0.376)	0.865**	(0.375)	58	0.185
Compare w/Others	(3)	0.753***	(0.170)	-0.484	(0.291)	-0.081	(0.202)	-0.849	(0.714)	0.049	(0.415)	56	0.256
Compare w/Past	(4)	0.181	(0.196)	-0.169	(0.266)	-0.121	(0.233)	-0.968	(0.577)	1.227**	(0.497)	53	0.072
Motivate	(5)	0.647**	(0.248)	0.073	(0.236)	0.156	(0.225)	-0.321	(0.585)	-0.182	(0.544)	53	0.282
Evaluate	(6)	0.624**	(0.247)	0.195	(0.237)	0.166	(0.211)	-1.181**	(0.545)	-0.160	(0.528)	50	0.385
Budget	(7)	0.462**	(0.214)	0.313	(0.286)	0.471*	(0.255)	0.488	(0.639)	-0.464	(0.579)	52	0.237
Hold Accountable	(8)	0.548**	(0.239)	0.254	(0.261)	0.221	(0.216)	-0.505	(0.538)	-0.236	(0.511)	49	0.302
Learn	(9)	0.524**	(0.210)	0.361	(0.262)	0.309	(0.276)	-0.409	(0.623)	-0.053	(0.605)	48	0.300
Staff Use	(10)	0.716***	(0.177)	0.408	(0.295)	-0.073	(0.230)	0.216	(0.482)	0.094	(0.529)	49	0.373
City Manager Use	(11)	0.789***	(0.191)	0.284	(0.217)	0.130	(0.231)	-0.066	(0.517)	-0.216	(0.544)	50	0.411
Board Use	(12)	0.922***	(0.189)	0.323	(0.303)	-0.139	(0.254)	-0.018	(0.702)	-0.072	(0.599)	37	0.529

Note: Unstandardized coefficients; robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.