

CHAPTER 7

Measuring and Encouraging Performance Information Use in Government

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SUMMARY

Public sector organizations can leverage government analytics to improve the quality of their services and internal functioning. But the existence of government analytics does not ensure its use. This chapter discusses how governments can measure the use of government analytics—or, in other words, conduct analytics on government analytics. The chapter assesses, in particular, one important component of government analytics: *performance management systems*. It does so by, first, contrasting different types of *performance information use*, including political and purposeful uses. The chapter next assesses different approaches to measure performance information use, including those based on surveys, administrative data, and qualitative inquiry. Finally, the chapter illustrates how the measurement of performance information use can be built over time and drawn upon to improve government analytics, using the example of the US Government Accountability Office (GAO). The chapter's findings underscore the importance of the robust measurement of government analytics use to enable governments to make the most of government analytics.

ANALYTICS IN PRACTICE

- The existence of government analytics systems does not automatically translate to the use of government analytics. Measurement does not equate to the use of measures for management action. As a result, policy makers should pay close attention not only to whether government analytics is used but also to exactly how it is used.
- The use of government analytics should be purposeful and strategic, but it can often fall prey to passive, political, and perverse uses. Ideally, performance information should be used by government agencies to purposefully plan for achieving their goals, either through internal restructuring or decision-making.

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However, when the design of *performance management systems* generates distortionary incentives, these same systems can lead public officials to perversely manipulate data or use performance information for political gain. This puts a premium on measuring *performance information use* to understand such (ab)use.

- Government analytics use can be measured using administrative data, surveys, qualitative data, and decision-based inferences. Administrative data can track how frequently performance information (for example, on a dashboard) is accessed; surveys of public servants can inquire about the extent of the use of performance information and about different types of use; qualitative data (for example, through focus groups) can provide rich detail on how (elite) decision-making is shaped by performance information; and decision-based inferences can showcase how informing public servants or managers about information alters their decision-making.
- The effective measurement of government analytics use benefits from longer time horizons that enable learning from previous experiences, as well as reforms to strengthen government analytics. In the United States, the stability of the core elements of a performance management system has meant that measurement can track progress in performance information use over time in order to help reformers understand what works and what needs fixing and gradually incorporate those lessons into practice.

INTRODUCTION

Government analytics enables governments to diagnose and improve public management across the public administration production function (see chapter 1). Yet the measurement of the internal machinery of government does not necessarily translate into the actual use of government analytics to improve public administration. This puts a premium on encouraging the use of government analytics, as a number of chapters in *The Government Analytics Handbook* discuss (see, for example, chapters 25 and 26). It also, however, underscores the importance of measuring whether—and how—government analytics is used by public sector organizations to improve their functioning. In other words, it underscores the importance of doing analytics on the use of government analytics.

This chapter discusses how this can be done, focusing on the case of *performance management systems*. Governments rely on performance management systems, sets of coordinated processes to measure, validate, disseminate, and make use of performance data within the government. Early government performance systems focused on performance measurement and have gradually transitioned, with varying degrees of success, to performance management (Moynihan and Beazley 2016). Performance management systems have often emphasized routines of data collection, including requirements to set strategic goals and short-term targets, and have measured some combination of outputs and outcomes. But the collection of performance information does not, by itself, ensure its use (Kroll 2015).

How can governments monitor progress in the use of performance measurements? This chapter provides guidance in this effort. First, it provides a conceptual grounding, discussing different types of *performance information use*, including political and purposeful uses. Subsequently, it moves to measurement: different ways of measuring performance information use, including engagement metrics based on administrative data, survey-based instruments, and qualitative inquiry. Finally, it illustrates, using the case of the US Government Accountability Office (GAO), how to construct effective governmentwide measures of performance information use and underscores their utility to improve performance management systems.

THE (AB)USES OF PERFORMANCE INFORMATION: A TYPOLOGY

Performance management systems often struggle to demonstrate their own effectiveness. As a result, there is remarkably thin evidence on the causal effects of performance management systems on government performance

itself (Gerrish 2016). One important intermediate outcome of performance management systems, however, can be measured, and this is performance information use. By *performance information use*, I refer to the extent to which data are considered by and inform the decisions and behavior of public officials (Kroll 2015).

Performance information can be construed as an intermediate measure of the effectiveness of performance management systems. Performance measures cannot generate improved performance by themselves. To have an effect, they have to alter the judgment and decision-making of a human being. In other words, data must be effectively used for management. If data are left unused, it is impossible for them to improve public sector outcomes through changes in the behavior of civil servants.

Types of Performance Information Use

Conceptually, it is useful to distinguish between four distinct types of performance information use (Kroll 2015; Moynihan 2009). Box 7.1 lays out four primary types of performance information use, along with the scholarly literature informing their definitions.

BOX 7.1 Types of Performance Information Use

Purposeful: The central hope of performance management reformers is that public employees use data to improve program performance. Such improvements can come via goal-based learning that gives rise to efficiency improvements, better targeting of resources, and more informed strategic decisions, or by tying indicators to rewards or sanctions in contract arrangements.

Passive: Performance management reforms may result in passive reactions, in which officials do the minimum required to comply with requirements to create and disseminate information but do not actually use this information (Radin 2006). This approach is also more likely in hierarchical relationships, where actors often lack strong incentives to use data but are not penalized for not using them. Cynicism based on failed performance management reforms in the past increases the likelihood of a passive response because the current reform will be perceived as temporary. A passive response is also more likely if elected officials, stakeholders, and agency leaders demonstrate little real interest in implementing performance management tools. Where results-based reforms have a permanent statutory basis, it becomes more difficult for public servants to assume they can wait them out.

Political: Performance management reforms are grounded in a demand for public agencies to present evidence that they are performing. As a result, public employees may see performance information as a means to define their efforts and success. Performance data thereby become a means of advocacy in a political environment (Moynihan 2008). In many cases, employees have some degree of influence in selecting and measuring the performance goals by which they are judged. They are likely to select, disseminate, and interpret information that portrays them in a favorable light.

Perverse: In some cases, the pressures to maximize measured performance may be so great that agents will improve these measures in ways that are in conflict with the underlying goals of a program. Agents may game program indicators through a variety of tactics, including making up data, selecting easy-to-serve clients while neglecting more difficult ones (*cream-skimming*), focusing on measured goals at the expense of important unmeasured goals or values (*goal displacement*), changing performance goals to limit comparison across time, or manipulating measures (Courty and Marschke 2004). Gaming becomes more likely when strong financial, career, or reputational incentives are attached to performance indicators, as well as when measures only partially capture the underlying goal.

Source: Adapted from Moynihan (2009).

The purposeful use of performance information anchors the use of performance indicators in goal orientation, improving resource allocation and strategic decisions. As such, the purposeful use of performance indicators can improve the efficiency of public administration. There is, therefore, strong interest in creating an environment that pushes public officials from passive to purposeful performance information use, as well as in monitoring for and minimizing perverse forms of use.

Public servants are, in general, the primary users of performance data. Members of the public might support the idea of a performance-driven government in the abstract but cannot be expected to be active users of public sector performance data. The only settings in which the public may be more interested in performance data are those where there is market-based choice in the provision of services or where services have high personal salience to the public. Some examples are the choice of schools or medical providers. Elected officials may express interest in performance data and seek them out in specific domains but are generally reluctant to let them alter their ideological preferences or other factors that shape their decisions (Christensen and Moynihan 2020; Moynihan 2008).

Beyond making data available and attractive, designers of performance management systems ultimately have little control over whether members of the public or policy makers use data, but they have much more control over the environment of public servants and thus greater opportunity to shape that environment to ensure performance data are used. Public servants also enjoy extensive program-level knowledge that makes them more likely to understand how to make sense of detailed performance information that would be difficult for nonspecialist actors to understand. Thus, I focus on public servants' use of performance data.

HOW IS PERFORMANCE INFORMATION USE MEASURED?

Performance information use is a cognitive behavior, a form of judgment and decision-making that is often difficult to observe. Methodological approaches to measuring the use of performance systems require design choices, each associated with trade-offs. I briefly consider these approaches and trade-offs before concluding that surveys are the most practical option for governments seeking to track the use of performance management systems, although administrative data and qualitative approaches can provide important complements.

Engagement-Based Inferences on Performance Information Use, Using Administrative Data

The first—and most obvious—approach to measuring the extent of performance information use is to observe directly whether public officials engage with existing performance management systems. These engagement metrics can include, for instance, whether officials download performance data or use them in public discussions or reports.

This approach has the advantage of not relying on subjective reports and can be used in a nonintrusive way. At the same time, governments must be willing to invest in tracking real-time data on engagement by public officials with performance information. This often requires having a centralized website where information is made available. For example, Andersen and Moynihan (2016) observe that school principals are more likely to download available performance data under certain experimental conditions, including when they have been delegated more authority in hiring decisions and offered comparative information that they find more useful.

Such an approach may be especially useful to observe how public servants engage with the performance management system. There is a set of indicators available for doing so: how many times performance information has been downloaded, how much time public officials spend engaging with the data in, for example, a dashboard, and how many times performance information has been shared on social media, such as Twitter or organizational forums.

Engagement-based inference requires data quality checks and may become less reliable if employees know their behavior is being observed. Additionally, engagement measures can be biased toward frequent

but unimpactful use. After all, such measures provide information on the frequency of use but not on how performance information is used, for instance, in decision-making. A single instance of performance information use by a senior authority in an organization may result in a *low-frequency* measure in a dashboard tracking time spent on a performance dashboard. Yet this instance may be more impactful in terms of triggering organizationwide management changes than dozens of employees' consulting the dashboard.

Survey-Based Inferences on Performance Information Use

A second popular approach to evaluate the use of performance data is through public servant surveys. To discuss survey-based inferences in practice, I highlight the example of the United States. In the US federal government, the GAO is responsible for measuring performance information use. A central part of the GAO's strategy is a series of periodic surveys of public employees about performance management. These have taken place in 1997, 2000, 2003, 2007, 2013, 2017, and 2020 (US GAO 1997, 2001, 2004, 2008, 2013, 2017, 2021). The result has been a series of insightful reports that track how well the performance management system is being implemented and offer suggestions for improvement (for example, US GAO 2005, 2008, 2013, 2014).

Over time, the GAO has used a consistent set of indicators to track different types of performance information use. This has allowed the GAO to assess variation in performance information use across agencies. The results of the surveys show variation consistent with logical sources (discussed below). Survey-based inferences are discussed below in the context of the US performance management system. Box 7.2 presents a few examples of the precise wording of the GAO survey question on the use of the performance management system, as well as potential indicators as they correspond to box 7.1 on the types of performance information use.

BOX 7.2 US Government Accountability Office Survey Measures of Performance Information Use

For those program(s)/operation(s)/project(s) that you are involved with, to what extent, if at all, do you use the information obtained from performance measurement when participating in the following activities? Responses range from "to no extent" (0) to "to a very great extent" (4).

Passive performance information use

- Refining program performance measures
- Setting new or revising existing performance goals

Purposeful performance information use

- Developing program strategy
- Setting program priorities
- Allocating resources
- Identifying program problems to be addressed
- Taking corrective action to solve program problems
- Adopting new program approaches or changing work processes
- Coordinating program efforts with other internal or external organizations
- Identifying and sharing effective program approaches with others
- Developing and managing contracts
- Setting individual job expectations for the government employees the respondent manages or supervises
- Rewarding government employees that the respondent manages or supervises

Source: Adapted from US GAO (2021).

Qualitative Inferences on Performance Information Use

Beyond quantitative measures of performance information use, qualitative assessments can provide contextual knowledge on how performance information is being used in government. Qualitative assessments include focus groups and structured interviews in which public servants are invited to share their experiences with performance information use. During these qualitative assessments, interviewers enable public servants and managers to share their own stories regarding performance information use.

Qualitative assessments thus provide a complementary perspective to measures of how public servants use performance information. Qualitative assessments provide a holistic assessment of how performance information use is embedded within organizational routines, public servants' perceptions, and their performance of everyday tasks. While information on organizational functioning may be collected through public servant surveys as well, interviews and focus groups provide an insider's perspective and insights into elite decision-making based on performance information within organizations, and they embed them within a narrative.

This narrative—for example, “managers do not use performance information”—may be explored using other sources of data. A narrative may also validate whether performance information is having its intended effect (purposeful use) or is being used perversely or politically within the government. For this reason—much in the spirit of Bridges and Woolcock in chapter 4 of this *Handbook*—qualitative inquiry can complement survey and administrative data to enable analysts to gain a more holistic understanding of the use of government analytics.

Decision-Based Inferences on Performance Information Use

A final approach to measuring performance information use is to evaluate whether providing decision-makers with performance information changes observed behavior. For example, a decision-maker might be asked to make a judgment about a program or organization or a decision about budgets, management, or a contract. Researchers then observe how much this decision varies depending upon the presence or absence of performance data, variation in the content of the performance data, changes in the environment in which the data have been presented, and individual traits.

As might be apparent, the controlled nature of such studies tends to rely on hypothetical scenarios, even if researchers sometimes try to increase their generalizability by using actual policy makers or public managers as respondents and actual government analytics data. This artificiality is one constraint of this mode of study and one reason it is often not practical in trying to assess general patterns of performance information use among civil servants (though survey experiments could certainly be inserted into such surveys).

Despite these potential limitations, policy experiments introducing decision-makers to informational treatments on performance have generated a significant body of work. For example, Holm (2018) measures how performance indicators affect management decisions by analyzing how public school principals define school priorities after being informed of performance results. Indeed, he finds that school principals prioritize goals with lower performance and devote their efforts to improvement in these lagging areas.

It becomes more difficult to evaluate whether performance information affects decision-making at a governmentwide level. One reason is that the bountiful array of performance data that exists makes it difficult to isolate the influence of one piece of information. Some researchers have looked at budget recommendations by government officials and budget decisions by legislators to see how these are correlated with whether summative performance data were positive or negative.

For example, there is clear evidence that program-level performance scores issued by the George W. Bush administration in the United States affected the budget recommendations it made to Congress, with less clear evidence that Congress followed those recommendations (Moynihan 2013). In parliamentary systems, where the executive and legislature work together, there is a greater likelihood that performance-informed executive judgments match legislative decisions, according to some studies (Sohn, Han, and Bae 2022). Decision-based inference is an important tool for understanding whether performance information changes

behavior. However, it should be a complement to rather than a substitute for administrative data and survey-based or qualitative inquiries, which provide a relatively more holistic understanding of performance information use.

Potential Biases from Performance Information Use

It is important to note that, beyond the typology of deliberate uses of performance information by decision-makers (for example, purposeful or perverse use), decision-makers may be subject to biases when consulting performance information (James et al. 2020). For example, there is ample evidence for the power of negativity bias: policy makers and members of the public pay more attention to negative rather than positive performance data (Nielsen and Moynihan 2017; Olsen 2015).

As a result, providing decision-makers with performance information and measuring their deliberate use is not enough: biases, ideological or political, may affect how decision-makers use this information (Baekgaard and Serritzlew 2016; Christensen et al. 2018; James and Van Ryzin 2017; Nielsen and Moynihan 2017). There is ample evidence that decision-makers select performance information that fits with their ideological beliefs and discount data that do not (James and Van Ryzin 2017). Policy makers are more resistant to efforts to reduce such biases than the general public, reflecting their status as more skilled and dedicated motivated reasoners (Christensen and Moynihan 2020).

CASE APPLICATION: THE GAO'S ROLE IN THE MODERNIZATION ACT

The US federal government currently uses a performance management system designed under the Government Performance and Results Act Modernization Act (GPRAMA), enacted in 2010. The Office of Management and Budget (OMB), part of the Executive Office of the President, is charged with leading the implementation of the system, while the GAO, part of the legislative branch, is charged with monitoring it. Several lessons about how to systematically measure performance information use can be drawn from this experience—which is, arguably, the world's most sustained effort to measure performance information use over time across government.

Lesson One: An independent agency evaluating progress through a consistent set of measurement tools enhances credibility and knowledge accumulation.

The GAO has issued reports evaluating progress in performance management and the use of performance information to Congress and made them publicly available. Some have been qualitative case analyses of performance reforms in particular agencies or focus groups of senior managers across agencies, but the primary source of information is the survey data collected from employees across the federal government over time.¹ The credibility of the GAO has helped ensure a high response rate and thus enhanced the credibility of the resulting information on performance information use in the US federal government.

Lesson Two: Evaluations of progress over time in performance information use benefit from stability in performance information.

The stability of the performance management system has allowed for comparisons across time. The surveys of federal government employees and managers have asked the same core questions over time. The GAO has also added questions that reflect changes in the performance management system while keeping the basic performance information use measures intact. This has allowed for analysis of the relationship between

aspects of the performance management system that change with a standard set of items over time. The data thus show, for instance, that while early evaluations of the system were relatively critical, they have become more positive over time, reflecting a process of gradual learning (Moynihan and Kroll 2016).

Lesson Three: Data-sharing agreements with external researchers can provide additional insights into measures of performance information use.

GAO reports have provided valuable insights into the progress of the performance management system. But they have also been able to generate substantial additional research and insight by soliciting suggestions from outside researchers about what questions to ask and by sharing the data when they were collected. These data have enabled researchers to generate a series of analyses. Such analyses are not constrained by the format of government reports and can ask different types of questions, combine survey with nonsurvey data, and use more advanced statistical methods. Federal government officials from both the OMB and the GAO have been responsive to this research, incorporating insights into budget and planning documents.

The GPRAMA also has lessons for encouraging performance information use more generally, complementing other chapters in the *Handbook* on this topic (for example, chapter 26). Because performance information was repeatedly measured in the US case, there is a stronger (survey) evidence base on the factors that encourage performance information use. This reinforces lesson three about sharing performance information use data with researchers. For instance, Moynihan and Kroll (2016; see also Kroll and Moynihan 2021) find that exposure to high-quality organizational routines—such as agency leaders’ identifying high-priority, agency-specific or cross-agency goals or the leadership team’s reviewing progress toward key goals every quarter, based on well-run, data-driven reviews—matters to performance information use.

Moynihan and Lavertu (2012) find that leaders who engage seriously with performance management systems encourage followers to do the same and that employees who have more discretion to make decisions are more likely to use performance data. Kroll and Moynihan (2015) also find that exposure to performance management training is associated with higher use, while Kroll and Moynihan (2018) find that managers who use program evaluations are more likely to use performance data. This has become particularly salient since the Obama administration, which built bridges between program evaluation research and performance managers in government, partly by institutionalizing performance staff, such as performance improvement officers, who view their job more broadly than reporting performance data.

As these examples underscore, analytics of repeated measurement of performance information use can help governments understand this use, the factors driving it, and how to improve performance management systems over time to further increase their use. The analytics of performance information use data can thus ensure governments make the most of their performance management systems.

CONCLUSION

The existence of government analytics does not ensure its effective use. This chapter shows that government analytics data can be used in a range of ways. Data can be used purposefully for management improvements, as intended by the designers of government analytics systems. Data can also be misused politically, however, or perverted, distorting organizational incentives.

Government analytics should thus not only measure whether and how frequently data are being used but also for what purpose. Much like for government analytics generally, a range of data sources are available for such analytics, including administrative data (for example, tracking users on a dashboard), survey data (for example, surveys of public employees and managers), and qualitative inquiry, among others.

The case of the United States—arguably the world’s most sustained effort to measure performance information use over time across government—underscores that such analytics is particularly helpful with

certain design features. For instance, the US system benefits from a stable set of performance information use measures and the regular collection of data assessing progress but also from a community of practice interested in using this longer-run data on government analytics to understand which parts of performance information (or government analytics) are working and what needs fixing. This community of career officials within the executive branch, who oversee performance issues, GAO officials in Congress, who complete their analyses, and external researchers, who share their findings, has then seen the gradual incorporation of lessons into practice.

The analytics of government analytics use can help improve and institutionalize how the government uses performance data to generate better outcomes. Ultimately, government analytics can only change the way governments operate if public officials meaningfully engage with, analyze, and operationalize analytical insights from data. This chapter thus underscores the importance of robust measurement of the use of government analytics to enable governments to make the most of the tools at their disposal.

NOTE

1. Rather than trying to survey all employees, the GAO engaged in random sampling of mid- and senior-level federal managers. In 1997 and 2000, it used mail surveys, but in 2003, it transitioned to email-based surveys linked to a web questionnaire (with follow-up phone efforts for nonrespondents).

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