Defining and Using Performance Indicators and Targets in Government M&E Systems

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Developing effective national monitoring and evaluation (M&E) systems and/or performance budgeting initiatives requires well-defined formulation and implementation strategies for setting up performance indicators. These strategies vary depending on a country’s priority for measuring results and on the scope and pace of its performance management reform objectives. Some countries have followed an incremental method for developing indicators, that is, progressively, at strategically selected programs/sectors (for example, Canada, the United Kingdom, and Colombia), while others have taken a comprehensive, “big bang” approach by defining indicators for all existing programs and sectors at once (for example, Mexico and the Republic of Korea). In both cases, countries need to continuously work on their indicators to improve their quality and thus ensure that indicators can meaningfully inform government processes.

There is a large body of literature on performance management indicators. However, the literature contains relatively few references to practical elements of successful government implementation of performance indicator systems. This note encapsulates some of the main elements for senior officials to realistically and practically consider when introducing performance indicator and target systems into their countries and for ensuring systems’ sustainability. The first section highlights a number of technical elements regarding the formulation of indicators, the importance of institutional arrangements and procedures for consultation and political validation, and the role of indicators in linking funding to results. The second section briefly notes the information challenges associated with developing performance indicators. The third section focuses on country examples of performance indicator systems, with particular emphasis on the United Kingdom and Colombia. The fourth section identifies specific success factors for improving the relevance and utilization of indicators in government. The final section concludes by emphasizing the importance of quality data and processes and the necessity of tailoring performance indicator systems to match available resources and capacities.

Technical Aspects of Performance Indicators

Performance measurement is an essential part of a broader process often referred to as performance-based management or managing for results, the objective of which is to improve efficiency, effectiveness, and accountability in government. This process involves the use of performance indicators to assess the degree to which intended results are being achieved. But for indicators to be relevant, timely, and of sufficient quality to facilitate better government decisions, a number of technical elements need to be considered in their selection and for the processes through which they are defined and used. These elements are discussed in more detail in the following sections.
Goals, outcomes, and outputs
At the national level, the task of setting performance indicators must differentiate between high (macro) and low (micro) levels of results in the government’s implementation chain. The high level refers to the external influence of all programs and includes impacts, outcomes and outputs, which are primarily of interest to national planning and budget officers. The low level alludes to internal program management and involves outputs, activities and inputs, which are mostly of concern to the sector and agency budget and program officials. Both sides of the results chain are crucial for measuring performance, and outputs are the “bridge” between the high and low sides of the government’s implementation chain (figure 1).

At the agency level, establishing a sequenced results chain for all programs starts with the identification of goals or high-level outcomes, which are medium to long term (4–15 years)—as for example, reducing infant mortality. To identify what agencies expect to achieve with their budgets and to measure their performance with indicators, managers and their M&E officers must therefore have good knowledge of where the agencies are going and what their fundamental business lines are. Then they can identify outcomes and outputs that are linked with the agency goals. This will allow officers to know what successful spending looks like while providing clear and simple statements of what each program and agency aims to do.

Defining targets and setting performance indicators
From their goals, agencies can derive shorter-range targets (one to four years) that define the expected effects from budget allocations. In essence, targets are quantifiable orders of a given variable for a specific period of time. High-level targets help improve effectiveness, and low-level targets address efficiency. One technique for defining targets is translating outcomes and outputs into positive results-oriented statements that, starting from a baseline level, identify a path and destination (for example, increase coverage of nutritional support programs from 35 percent to 40 percent of poor people between 2008 and 2010). Targets must capture improvements for a single output or outcome, assuming a finite number of required inputs and activities (figure 1).

Defining relevant targets requires technical criteria for identifying credible baseline data, realistic consideration of the resources and capacities necessary, as well as extensive knowledge of the policies and programs. However, target definition cannot solely rely on planning or external experts. Defining targets, as with program goals and objectives, is much more than a technical exercise. To be meaningful, targets require ownership by internal stakeholders (for example, managers, central ministry staff, and/or budget officials), and therefore other key players, apart from technical officials, should also participate in their definition. Defining targets for all the variables involved in resource allocations can be complex and time consuming, but it is important. Targets hold governments accountable and exert external pressure over ministry and agency performance. Lastly, for targets to be relevant and credible, agencies must not be able to modify them at will, and once a target has been achieved, agencies must maintain that standard.

Each target should be accompanied by a performance indicator—a quantitative or qualitative expression of a program or policy that offers a consistent way to measure progress toward the stated targets and goals. Performance indicators reflect changes in variables connected to an intervention, and they should facilitate a timely and cost-effective measuring and monitoring of results. They allow managers and program and budget officials to track progress all the way down the causal results chain, from impacts at the top to inputs at the bottom.

Performance indicators, in contrast, are not necessarily dependent on targets. They can facilitate measuring and monitoring government results in a timely, standardized, and cost-effective manner even in the absence of a benchmark, but to be relevant, indicators need to be of good quality. The results literature contains various acronyms to help officials set good indicators through a set of technical criteria (see box 1 for examples).

In practice, methodological considerations may apply differently to particular contexts. For instance, in the early stages of implementing an M&E system, it might be necessary to allow for a trade-off between the need for performance information and a slightly uneven quality and larger number of indicators. Such a trade-off may imply a process of “improving by measuring,” allowing suboptimal indicators while the process progressively improves. Deciding what level of trade-off
is acceptable requires good technical judgment. There are no perfect indicators. In many cases it is necessary to use indirect or proxy indicators—for example, when data are not available or cannot be collected at regular intervals, or when information gathering is too costly. Understanding the likely cost of gathering and analyzing data is crucial to sustain performance M&E efforts. Quite often agencies tend to select indicators without previously identifying the sources of information and confirming availability. But indicators are also frequently defined according to readily available information, regardless of how crucial and cost-effective it could be to collect new data for more appropriately measuring performance on a longer-term basis.

Finally, experience shows that developing performance targets can be more difficult than formulating indicators. In particular, the challenge of setting targets for the entire range of government performance can be quite significant. Targets, more than indicators, can create a complex series of undesirable and unintended side effects in government processes and “culture” (for example, in the morale and motivation of the civil service). Reducing the risk of perverse effects requires important knowledge of underlying incentives. Accordingly, the decision to move from indicators to target setting should be taken with care. The development of targets and indicators should also be thought of as two different stages in the evolution and institutionalization of M&E and performance management systems.

**Box 1. The Quality of Performance Indicators**

Performance indicators should be:

- **SMART**
  - Specific (precise and unambiguous)
  - Measurable (appropriate to the subject)
  - Achievable (of a reasonable cost)
  - Relevant (serve to assess performance)
  - Trackable (easy to validate or verify)

- **CREAM**
  - Clear
  - Relevant
  - Economic
  - Adequate
  - Monitorable

Sources: SMART was outlined first by Peter Drucker in (1954). CREAM was introduced by Schiavo-Campo & Tommasi (1999).
Linking funding to results with performance indicators

The robustness of performance management and M&E systems depends on the strength of the links between funding and results. One way of establishing those links is to standardize costs for outputs provided on a unit basis (for example, patients treated in health centers or students enrolled in secondary education). Another is to identify broader quantitatively connections between the level of outcome achieved and certain annual or multiannual budget allocations (for example, increases in coverage of water and sanitation). Both approaches seek to serve the same purpose, however, the former is more complex and not always feasible, because it is usually more of a normative proposition rather than a real possibility for the whole budget. The latter is more likely, but is more a way to better inform the budget, which is the dominant factor in funding decisions for only a few cases. In any case, establishing such links demands an enormous amount of technical judgment and significant operational work, because it must be done individually for each budget item and program category.

The differing characteristics of government outputs and outcomes can therefore make it complicated to link some allocations to performance, such as when the unit costs of a service vary considerably. A key technical step for linking funding to results using indicators is establishing a program classification to allow the budget to be read in terms of the results it expects to achieve. In practice, such a classification implies having some form of program budgeting in place. Program categories need to be a by-product of the whole process of defining budget outcomes, outputs, targets, and indicators for each agency—preferably by national budget and program officials working together.

The traditional financial classification, based primarily on global appropriations for inputs (for example, wages and salaries) or organizational units (for example, ministries or agencies), can say little about whether resources have achieved their targets or could produce higher benefits. A program classification helps establish a logical sequence between the program outcomes and outputs and the aggregated agency, sector, or policy results. With such a classification, the budget process can be seen more as a choice among different priorities than as a list of budgetary items. The technical challenge is to ensure that program categories capture the various allocative choices that governments face. When successfully implemented, this exercise can serve the purposes of both accountability (as ex post reporting information) and budget preparation (as ex ante information). But if it is to be effective, the whole budget process needs to be in a program format (for example, ministries’ requests, legal appropriations, or evaluation of allocations), at least as a complement to the traditional financial format. Again, some form of program budgeting is thus necessary to achieve sound linkages between program-based performance indicators and funding allocations.

Program costing, the other essential technique for linking funding to results using performance indicators, provides information that traditional financial and accounting systems cannot offer. However, costing can be difficult as well. On the one hand, government outcomes and outputs are not necessarily expressed in standard units. Outcomes, in particular, are often affected by external factors, such as crime, unemployment, or poverty. On the other hand, even outputs can be contingent on many services, such as the military or fire service. Sophisticated methods, such as activity-based costing (ABC), which segments organizational units and programs into discrete, quantifiable activities to estimate unitary costs and measurable productivity units (for example, number of hours work compared to units produced), reflect only some of these complexities. Consequently, it is often necessary to use complementary solutions to inform the budget—for example, performance evaluations.

Consultation on and validation of indicators

The single most important characteristic of a strong M&E system is use of the information produced. Low or inadequate use of performance information in management and particularly budgeting is often a problem for many indicator systems. Quite frequently this situation signals not only problems with performance data availability and quality, but also the existence of challenges with political consultation or a lack of buy-in of the performance indicators and the types of information produced.

Lack of consultation and validation are often signs of a weak institutional environment, which
tends to result in indicator “inflation”—too many indicators but a very low rate of utilization— which in turn deteriorates their quality. Officials in such environments tend to perceive that information is not a problem; for them, information may in fact be abundant, while for others (the producers), underutilization of the information they produce provides a very weak incentive to take data and indicators seriously. A vicious circle of overproduction, underutilization, lack of validation, and quality deterioration then takes place. It can therefore be useful to conduct surveys of data use (who is using/is willing to use what performance information, for what purposes, and how) before embarking on a large-scale effort to define performance indicators.

Further, if performance measures are to inform ministry budgets or to be used for public accountability of results, both line ministers and central budget officials need to be closely involved and agree on what will be measured and how. High-level officials need to agree on both goals and indicators, especially since the budget and public accountability are fundamentally political processes with complex and varied implications. For instance, on the one hand, budget decisions are made between competing uses that reflect not only policy but also governments’ political commitments. On the other hand, external accountability can eventually alter political perceptions about the government’s performance in the legislature or with the general public. Accordingly, when defining targets and indicators, program categories, and their links with measurable results, governments must also standardize and institutionalize procedures to ensure broad ownership and validation of their indicators and targets. Consultation procedures also help both central budget and line ministries by limiting discretion and reducing incentives for setting targets and indicators of low relevance, while making palpable the political risk associated with bad performance.

**Performance Information**

Measuring the results of government, including budget allocations, presents its own set of information challenges. First, collecting information on performance indicators is not easy. For example, output indicators are mainly based on administrative records (day-to-day data produced by programs on their own), which can be very weak in many developing countries. Outcome indicators, on the other hand, often rely more on statistical estimations (discrete observations obtained through survey approximations), which in many countries are not collected regularly enough to inform critical government decisions. In such weak institutional environments, national statistics offices should be considered a valuable resource.

Second, performance information needs analysis. Even if good information exists, it cannot be considered performance information until it is processed and organized in a structured, accessible, and timely manner. Utilization strongly relies on sound analysis rather than on the existence of large volumes of indicators. The challenge is, therefore, who should conduct such analysis and how, so that the information can be digestible and useful for decision makers. Because this analysis can be demanding and time consuming, it requires a technical unit made up of sufficient capable professionals who specialize in conducting regular assessments and reporting performance information within the government.

Third, performance information is different from financial information. Therefore, performance budgeting is possible only if the ministry of finance has competence in policy analysis and assessment of the information to be reported from line ministries and evaluation bodies. Again, program classifications of the budget can help identify links between performance and financial allocations.

Fourth, experience shows that it takes time and practice to develop quality and timely performance information, which in turn requires direct knowledge of the specific policies and programs to identify with precision what will be measured.

**Performance Indicators and Monitoring Systems**

To ensure efficient collection, management, and reporting of monitoring information on performance indicators, countries need to develop sound indicator monitoring systems. Most budget systems collect financial data, particularly for budgeting control purposes (for example, commitments and payments). However, results-based monitoring requires the integration of financial and performance information, therefore the interaction between different institutional spheres and the potential interoperation among national
statistical systems, program information systems, and national financial information systems are vital. Further, monitoring systems can be used not only to describe how a program is performing, but also to help explain why it performs one way or another. In addition, having such systems in place reduces the need for expensive and one-off information collection processes for individual program evaluation.

Choosing the type of monitoring system to implement depends strongly on the specific purposes for which the government intends to use the performance information. That purpose may be associated with the need to inform the budget process and improve efficiency in the provision of public services—for example, the United Kingdom’s Public Service Agreements System (PSAS). Alternatively, systems might also be directed toward monitoring the aggregate results of government to facilitate public accountability, such as Colombia’s Government Goals Monitoring Information System (Sistema de Gestión y Seguimiento a las Metas del Gobierno—SIGOB).

In these two systems, performance indicators serve “central” government purposes, and, to some extent, both governments have found it necessary to establish centralized requirements for producing performance information. Some of these central requirements relate to the methods and procedures for collection, validation, access, reporting, and use of performance indicators and targets, with a focus on ensuring the reliability and suitability of the information for the government’s own purposes.

Unfortunately, there is no formula for the development of monitoring systems. Further, there is little evidence regarding the extent to which financial information systems can serve the purposes of performance information management. This seems to be an area with a shortage of good practices from which to learn, particularly in relation to systems capable of consolidating aggregate information on public sector performance.

Two additional country examples of performance information systems are Finland and Chile. Finland developed the Netra Reporting System, which since 2004 functions as a publicly accessible Internet application that integrates financial and performance information. Netra seeks to inform decision making and accountability through predefined reports on service delivery and expenditures for different government levels and users. Chile uses a Web application to transmit performance information from ministries and agencies to the budget office of the Ministry of Finance; however, this application is not publicly accessible.

It should be noted that in all of these cases, countries have from the outset had to devote considerable time and technical effort to define the roles and responsibilities of different agencies, as well as establish standardized processes and requirements for the production, management, access, use, and quality controls of indicator information.

### Success Factors in Defining Performance Indicators

A wide range of issues need to be considered in the development of performance indicators to support government M&E systems, or performance management more broadly. There are a number of country lessons or success factors that can help improve the relevance and utilization of performance indicators in government; this section discusses six of the most important success factors.

**Success factor 1.** There is no perfect system of indicators. In developing performance measures, governments have benefited enormously from considering the fact that indicators have practical limits on the degree to which they can capture a precise picture of performance. Not only do good indicators rely on information that is often not available, but some dimensions of performance are very difficult to measure (for example, output quality). Further, contextual factors can importantly influence final results, and indicators cannot eliminate or adjust these factors. This is one of the reasons governments need to consider in favor of using evaluations as a complementary tool to enhance the information base for performance management.

**Success factor 2.** Clearly define from the outset what for and how government officials
intend to use performance indicators. For example, if indicators are to provide information for program managers at the micro dimension of the implementation chain, or for central budgeting purposes at the macro dimension, then the type of indicators and their requirements can be very different. For the first case, comparative or summary measures might not be so important for informing on the details of a program, while for the second case these measures can have huge benefits for enhancing the scope and perspective of performance.
Success factor 3. Avoid complex performance indicator systems. In several country cases, a critical factor of success has been the adoption of a simple yet very careful approach to the development of performance indicators and monitoring systems. A number of experiences have shown that spending enormous amounts of money to develop sophisticated technological systems does not necessarily guarantee that the indicator base meets technical standards of quality and ensures utilization of performance data. A customized and common sense approach can be far more important. This approach would consider the necessary institutional arrangements, respond to the specific performance measurement needs of key users, and ensure that information sources are available, reliable, and have adequate baseline measurement. The information management model behind the performance indicators base is the real backbone of a system.

Success factor 4. Develop formal quality controls for indicators. Countries have different approaches to developing their performance indicators base. What is common to all countries, however, is the need to ensure that information sources and data flows emerging from indicators can be credible enough to ensure utilization by different users. To that end, countries should be aware that indicators need continuous revision and improvement, and that an indicator base is not a one-shot effort. Experience shows that it requires practice, and that it is necessary to devote time and various attempts to develop indicators that really capture the desired data. Accordingly, formal processes for technical formulation and review, incentives linking indicators to budgeting and planning processes, public access to the indicator base and information sources, and periodic external audits have all proved effective in controlling the quality of indicators and their information base.

Success factor 5. Avoid starting out with an unmanageable number of indicators. Governments do not need to measure everything, at least not all at once. To be useful, performance indicators need to be readily digestible to decision makers, who normally have great restrictions on their time. A couple of good indicators can be more useful than a comprehensive inventory of hundreds of indicators. Controlling inflation of the indicator base is necessary to ensure a manageable indicator system and control indicator quality. Countries should be aware, however, that reducing the size of the indicator base can be technically and politically complex because it implies not only the development of a robust strategic planning process, but a clear sense of the political priorities of the government.

Success factor 6. Differentiate between performance indicator systems and target-setting regimes. Both indicators and targets are key elements of an M&E system or of a performance management model. However, setting performance indicators should not be interpreted as having targets associated with each of them. To be meaningful, targets depend on an underlying measure, but performance indicators do not necessarily need to have associated targets to be useful. The process of defining targets, for which a government will be accountable and against which managerial controls will be exerted, requires a certain level of M&E institutionalization and good performance management practices.

Conclusion

Developing indicators and target systems is not simply a matter of compiling a comprehensive list of algorithms and benchmarks with a series of correspondent reference values. Rather, it implies an elaborated, systematic professional judgment that in turn requires robust strategic planning, important knowledge of the government’s priorities and program base, intensive technical and operational work, and a significant understanding of the wide range of incentives, explicit or implicit, that can influence good or bad performance in government.

It is also important to understand that the process of developing indicators is normally a gradual one, which may allow suboptimal versions in the early stages of a system, particularly if their quality and quantity is to improve progressively overtime (for example, by sectors or specific agencies). Therefore it will be paramount for a country not only to define the purpose and scope of a system right from the start, but also to establish the institutional setting that will guarantee sustainability, technical adaptability, and political backing for the process so that the effort remains functional and relevant over time.

In terms of indicator utility, experience shows that it might be more important to have good quality information on a fairly small number of simple
measures rather than a set of complex algorithms with limited information. It is important that the information feeding the indicators be of good quality, because the results information generated will be of the same quality. Strengthening the quality of information should be a continuous process within the government organization, and one for which protocols, technical standards, sound administrative procedures, and adequate technological tools will be required. Ensuring public access to information, making the benefits of having timely and quality information visible to public managers, and establishing meaningful incentives are also key requirements.

It is not a simple task to formulate, manage, and continuously monitor a country system of performance indicators, but, as detailed in this note, it is important and worth undertaking, particularly if a country really wants to improve the efficiency and effectiveness of its public service delivery. Over the last decade, there has been growing interest and greater political priority for goal setting, performance indicators, and targets in developing countries, particularly in the poorest ones. This interest and priority are increasingly being translated into the content of poverty reduction strategies and global development agendas. Governments should, however, consider many issues before deciding to embark on a large-scale formulation of performance indicators, and targets in developing countries, particularly in the poorest ones. How far to go with respect to the introduction of indicators will depend on the specific capacity challenges faced by each country. These challenges can be considerable, particularly in countries with limited managerial and policy analysis capabilities.

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Acknowledgments

For their comments, the author thanks Indu John-Abraham (Operations Officer, Poverty Reduction and Gender Group, Latin America and the Caribbean Region), and the following members of the Poverty Reduction and Equity Group: Philipp Krause (consultant), Gladys Lopez-Acevedo (Senior Economist), Keith Mackay (consultant), and Jaime Saavedra (Director). The views expressed in this note are those of the author. To access other notes in this series, visit www.worldbank.org/poverty/nutsandbolts.

Notes

1. The British Public Service Agreements System is an example, outcome targets are linked to the multiyear budgeting process (see Robinson [2007]).
2. This is especially the case when the exercise is first carried out, but the burden can significantly be reduced over time with practice, particularly if technology is efficiently used to make the process automatic.
3. See the Finnish State Internet Reporting (www.netra.fi).

References

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