Book

Implementing results-based budget management frameworks : an assessment of progress in selected countries

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IMPLEMENTING RESULTS-BASED BUDGET MANAGEMENT FRAMEWORKS

AN ASSESSMENT OF PROGRESS IN SELECTED COUNTRIES

ASIAN DEVELOPMENT BANK

50 YEARS

ADB

IMPLEMENTING RESULTS-BASED BUDGET MANAGEMENT FRAMEWORKS

AN ASSESSMENT OF PROGRESS IN SELECTED COUNTRIES

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ASIAN DEVELOPMENT BANK

6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines
Tel +63 2 632 4444; Fax +63 2 636 2444
www.adb.org

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Abbreviations

ADB	Asian Development Bank
ANAO	Australian National Audit Office
COFOG	classification of functions of government
DOF	Department of Finance
IMF	International Monetary Fund
IT	information technology
MTEF	medium-term expenditure framework
NPM	New Public Management
OBB	outcome-based budgeting
OECD	Organisation for Economic Co-operation and Development
PBB	performance-based budgeting
PBPB	performance-based program budgeting
PFM	public financial management
RBBM	results-based budget management
UK	United Kingdom
US	United States

Executive Summary

Results-based budget management (RBBM), or new public management (NPM), has been the flavor of the month for at least the last 2 decades with many Organisation for Economic Co-operation and Development (OECD) member countries and development partners. However, there seems to be a significant gap between the rhetoric surrounding the potential benefits of RBBM and the effort and rigor with which principles have been adopted and applied. Responsibility for a significant part of the failure to implement appropriate RBBM structures may be due to the assumption that RBBM is more or less similar to corporate planning, which is far from the truth.

RBBM is intended to hold managers to account for their role in organizing the supply of goods and services to the public, and to enforce a regular review of the purported effectiveness of government expenditure programs in delivering desired outcomes for the community. RBBM is intended to introduce evidence-based evaluation of government interventions through the association of financial expenditures with the delivery of physical outputs, which themselves are purported to deliver intended changes in society that can be measured through changes in outcome indicators. The changes in outcome indicators attributable to government interventions (i.e., the outputs of government) can be termed "impacts" of government interventions.

However, to measure the efficiency of output delivery and the effectiveness of government interventions (outputs) in effecting outcomes, as measured by outcome indicators, requires the specification of comprehensive sets of output performance indicators, which must then be linked to outcome indicators.

RBBM or NPM should exist within a highly structured data classification framework, designed to support the collation and correlation of relevant statistics. The two critical components of an RBBM system are outputs and outcomes and their associated statistical indicators, and yet no country seems to have developed a standardized nomenclature system for either outputs or outcomes, or implemented a system to classify outcomes or outputs and their statistics—which must span all government expenditures.

This is in contrast with classification systems previously developed as part of government financial statistics detailing aspects of financial expenditure such as economic types, functions of government, and line item accounts. The proponents of RBBM and NPM either did not appreciate the necessity of the statistical framework or were not sufficiently supported in their efforts to establish one. In any case, many of the consultants who proceeded to disseminate the good word of RBBM failed to appreciate the need to invest time, firstly, in defining the statistical framework and supporting information technology (IT) systems before proceeding to implementation across government agencies. Even the approach to identifying outputs and outcomes across agencies has, in almost all cases, proceeded in a haphazard and unstructured manner. Only in recent years have some countries realized the importance of developing a structured classification framework but, even then, the frameworks developed lacked rigor. The outcome classification frameworks that Canada and Singapore developed, as presented in this paper, do not properly span all government expenditures and are potentially unstable over time. An alternative outcomes classification framework in Appendix 3 is based on the classification of functions of government (COFOG) standard developed by the United Nations, OECD, and the International

Monetary Fund (IMF), among others. Shown in Appendix 6 is an indicative classification of outcome indicators that has used the COFOG structure as a general starting point for building an outcome indicators classification system.

This report discusses the implementation of RBBM frameworks in the context of national budgeting, but does not examine the extent to which countries have used their frameworks to make meaningful decisions. Unless implementation has been appropriate, fit, and proper, the RBBM framework cannot hope to deliver data that can be used to support and guide decision makers to the appropriate policy choice.

This report examines the extent to which the fundamental structural elements of frameworks put in place in selected countries conform with certain desirable traits, because this is a significant determinant of the probability that the framework can be put to good use in a practical sense. In this context then, this report is simply an assessment of the RBBM frameworks put in place to assist in the national budgeting decision-making processes, where the assessment is conducted against certain business principles upon which the introduction of RBBM and the NPM models are based.

The quality of the implementation of the framework elements also significantly determines the usefulness and appropriateness of the analysis and conclusions derived from using the implemented framework. Therefore, the quality of the framework structure and elements are the fundamental determinants of the successful use of the RBBM framework in a national budgeting context.

As recognized in the presentation by S. P. Lim to the National University of Singapore–World Bank Institute East Asia Urban and City Management Course in May 2000: "...the basic concepts and principles [of promoting operational efficiency, and accountability for good governance] are quite universal."[1]

While accrual accounting is, in the medium to longer term, a fundamental element of a fully functioning RBBM framework, this report does not assess accrual accounting as part of the implementation of the RBBM frameworks of the selected countries, primarily because the performance measurement of government interventions may be initially introduced at a meaningful level without the concurrent introduction of accrual accounting, and few countries have introduced full accrual accounting in government.

Nor does the report discuss performance-based remuneration of staff, except to note that both literature and practice indicate conflation of corporate planning and organizational management concepts with national RBBM concepts. While a cascading linkage of the national RBBM concepts to corporate planning and remuneration concepts is desirable, it is beyond the scope of this report to discuss how this should be done to ensure the practical use and application of the RBBM performance concepts.

For this report, the term "RBBM" refers to the general approach to budgeting that uses performance indicators to assist in defining the delivery of outputs produced by an agency, and outcome indicators to measure the progress toward achieving outcome goals, which encompasses performance-based budgeting or any other term devised to describe a form of budgeting that uses performance indicator concepts to measure the delivery of government outputs and the extent to which the objectives of government interventions are achieved.

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[1] S. P. Lim. 2000. Towards Good Governance: Promoting Operational Efficiency and Accountability. Presentation at National University of Singapore–World Bank Institute East Asia Urban and City Management Course. 1–14 May.

A swathe of papers has been written about the use of performance information in both the development and analysis of government budgets. The papers seek to enlighten their audiences on using performance information in a government budget context. However, misconceptions of the conceptual foundations underpinning RBBM and its practical implementation across government organizations remain widespread.

Terminology varies from one author to another and authors often fail to distinguish corporate planning and internal management concepts from national budgeting and planning, which should be treated as quite distinct, albeit complementary, subjects.

The conflation of internal management issues (in particular personnel performance measurement, and short-term corporate planning concepts, such as "key result areas" or "strategic result areas") with the longer-term concepts required for national budgeting and public reporting purposes has created confusion and consequent ambivalence toward performance budgeting among bureaucrats, for good reason. Corporate planning for internal management purposes has a very different audience, function, and analytical requirement from RBBM for government and should never be discussed as a single topic. Corporate planning must integrate with RBBM concepts, particularly for delivery of outputs in terms of service delivery standards of quantity, quality, timeliness, and cost. However, corporate planning and RBBM have their own complexities and are complementary, not unitary.

Currently, there are many poorly conceived interpretations of not only RBBM but even program budgeting and the concept of a medium-term expenditure framework (MTEF). Many discussion papers and guidelines published with the authoritative support of supranational institutions have lent credibility to those misconceptions.

This report finds that most if not all countries have often failed to realize the intended benefits of RBBM, primarily due to compromised implementation of the RBBM business model. Progressive implementation of RBBM has been impeded by factors, including

(i) inappropriate output descriptions, perceived to be largely caused by failure of some public servants to comprehend, or value, the outputs that they produce, instead focusing on concepts of tasks or projects to be completed within a fixed time frame;

(ii) inappropriate specification of service delivery standards, or output performance indicators, partly as a consequence of (i) above, but also because of inexperience in understanding the importance and consequences of defining appropriate performance indicators;

(iii) inappropriate and inadequate specification of outcome indicator descriptions and targets, again most likely because of inexperience and a lack of understanding of the importance and consequences of applying rigorous standards to descriptions and definitions;

(iv) a lack of appreciation at the executive management level of the importance to strategic management decisions of having a relatively highly structured performance indicator and outcome indicator linked framework and a supporting data management system; and

(v) partly as a consequence of (iv) above, a failure by central agencies to impose a strict data management and quality control protocol to the definition of outputs, outcomes, and their associated performance indicators and outcome indicators.

Most, if not all, countries that led the introduction of RBBM are still struggling to realize anticipated benefits, and some have fallen behind in both transparency and efficacy.

The introduction of output and/or outcome budgeting was supposed to address the inefficiencies that are found in government organizations due to the absence of an explicit equity owner. The lack of an equity owner may also be why a destructive element has permeated the intellectual foundations proposed as part of the original concept underpinning output budgeting. Instead, the leading developed countries' RBBM systems have mostly deteriorated, becoming second-rate governance structures.

As K. MacKay notes in his assessment of the Australian monitoring and evaluation system:

> "The system took considerable effort and time to build—as did [the Department of Finance's] budget estimates and policy advising expertise. But it took much less time to degrade these functions. Current efforts to renovate government evaluation can also be expected to require significant effort and to be time-consuming."[2]

A review of some of the OECD member countries that have pursued budget frameworks more heavily dependent on performance indicators suggests that few, if any, practiced a logically rigorous implementation of RBBM, including Australia, Canada, New Zealand, the United Kingdom (UK), and the United States (US).

Sequencing Reform Initiatives in Planning and Budgeting

Reform initiatives generally follow a process that includes the introduction of program budgeting, then either performance-based program budgeting (PBPB) followed by a forward estimates process, or vice-versa, then an MTEF and, lastly, output budgeting and outcome budgeting, referred to here as RBBM.

The introduction of forward estimates and MTEF processes do not require a significant cultural shift within civil service bureaucracies, although if processes are to be embedded in the annual budgeting cycle in a sustainable way, they require an investment in computerized systems and significant training of staff. If implemented as intended, forward estimates and MTEF provide significant gains in analysis and integrity of budget processes, and significant efficiency gains for the budget process.

Each of these reforms brings a different quality to the budgeting process. Program budgeting provides a useful budgeting system that facilitates activity-based costing and alignment of organizational responsibilities with accountability for delivery of budgeted programs. PBPB provides a useful bridge between program budgeting and RBBM.

The introduction of forward estimates assists in the budget planning process and streamlines budget preparation. The introduction of an MTEF provides an enhanced fiscal discipline element to the budget process, which also assists in planning with respect to allocation of available fiscal space across government's policy priority areas. Forward estimates and MTEF are not RBBM-focused reforms, nevertheless, they facilitate a superior planning environment and thereby assist to provide a foundation for effective RBBM implementation.

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[2] K. MacKay. 2011. The Australian Government's Performance Framework. *Evaluation Capacity Development Working Paper* No. 25. Washington, D.C.: World Bank. p. 29.

The Results-Based Budget Management Business Model

Output budgeting introduces a business model to budgeting intended to strengthen organizational accountability and improve efficiency. It is not intended to enhance performance-based remuneration of staff, although the service delivery standards associated with outputs must be integrated into the process for determining the strategies embedded in the annual corporate plan to improve organizational performance, and may provide data to support the performance-based remuneration of staff.

The achievement of government's socioeconomic goals, or outcome objectives, is the aim of all government interventions. Government interventions take the form of outputs, delivered by government ministries and agencies to the general public (although some outputs are considered to be delivered to the political or parliamentary arm of government, or the president, as the case may be, depending on the notional relationship between an agency and the political entity to which they provide services). The key attribute of a ministerial or agency output is that it is delivered to a client that is external to the ministry or agency.

Linking the delivery of outputs to the achievement of outcomes is analogous to the private sector's production of outputs with the goal of a maximum return on equity (profitability). A representation of the RBBM business model is in Figure 4 of the main text. In the case of government, the notion of maximizing private profit is replaced by the notion of maximizing public welfare, as represented by outcome indicator targets.

RBBM demands from bureaucrats and politicians at central agencies and line agencies a major lateral shift in attitudes and mindset. Data management systems and budget preparation and monitoring systems and procedures must be revised significantly, and the critical importance of centralized data management and quality control cannot be overemphasized. The importance of this aspect of RBBM is overlooked or underestimated in every jurisdiction. As noted by Dormer and Gill:

> "Whilst public sector organisations have developed increasingly sophisticated performance measurement systems, concern exists that the espoused theories of public management embodied in these systems do not reflect the systems actually used in organisations."[3]

Central Agency Staff and Experience

The private sector is perfectly capable of providing each good or service provided by public sector bureaucracies, including regulatory and policy advice related to market failures, externalities, and tax collection. The desire to establish a government bureaucracy is not brought about by the private sector's inability to provide these services, as some bureaucracies seem to believe, but by the need for government to receive "frank and fearless" advice that is, as far as possible, independent of vested commercial interests and impartial to political viewpoints.

The RBBM framework and the NPM were devised as a way of introducing the management disciplines of the private sector into the public sector environment, and treating government outputs in the same way as if they were produced by the private sector—an entirely reasonable proposition. Unfortunately, the lack of appropriate or relevant experience in operating in a business environment among key

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[3] R. Dormer and D. Gill. 2009. *Managing for Performance in New Zealand's Public Service—A Loosely Coupled Framework?* Wellington: Victoria University. p. 2.

bureaucratic and political actors as stakeholders has undermined implementation of the business model in many countries.

Many key central agency staff lack experience and appreciation of the business model and issues surrounding the collection of nonfinancial data and reporting of performance indicators.. Thus, central agencies lack appreciation and understanding of the day-to-day issues involved in output delivery, data collection, data classification, data storage, data retrieval, and database management protocols with respect to nonfinancial data. Central agency staff must change their attitudes for two important reasons:

- First, central agency staff are rarely involved in commercial transactions on behalf of government, whereas both procurement and supply of goods and services is more widespread in spending agencies and involves day-to-day interaction with suppliers and clients from the private sector. This necessitates the development of skills in negotiating performance clauses in supply contracts that deal with quantity, quality, timeliness, and cost performance indicators. The principles applied to commercial transactions are fundamental to understanding the basics of RBBM. Unless central agency staff can acquire a skill set similar to those in line agencies, they will be at a significant disadvantage when negotiating service delivery standards for the outputs they fund through the line agencies.
- Second, central agencies do not have significant experience in reporting socioeconomic indicators for their outputs, at least not in the same way as, for example, the health or education agencies, which have a long history of measuring their performance using socioeconomic statistics and operational data.

Therefore, central agency staff are less familiar with the practical issues that must be addressed when institutionalizing RBBM, which is based on statistical measurement of both financial and nonfinancial aspects of public policy.

In the case of Australia, for example, staff turnover in the Department of Finance (in the name of budget savings and efficiency gains) resulted in a significant loss of corporate knowledge in data management and relevant database management protocols. Contrast this with Canada, which appears to have understood the importance of information technology in the management of performance data and, at least at face value, invested significantly in developing data management standards and protocols related to performance data and indexing information to enhance accessibility.

Based on a review of budget documents from the various jurisdictions and discussions with practitioners, the most important change is attitudinal, even more so among central agency staff than sector agency staff.

Importance of Quality Assurance and Database Management

The major problems all countries face when introducing RBBM are traced to fundamental issues related to the introduction of systems heavily dependent on statistics and, therefore, requiring rigorous data classification, management, and storage standards, as well as a rigorous quality assurance function for data aggregation and accumulation.

The logic models and associated guidance issued by jurisdictions examined here are reasonably sound and well constructed, although inconsistencies and confused terminologies remain, in varying degrees. However, most, if not all, jurisdictions have failed to introduce sufficiently rigorous or appropriate

quality assurance processes during the implementation period of RBBM systems. The business model was not embedded in the resulting systems. Many jurisdictions failed to recognize the importance of building a centralized database within which data can be accessed according to stable coding and data classification standards consistent with the theoretical model.

The results are

(i) output and outcome descriptions or definitions can be inappropriate, resulting in poorly defined performance indicators at both the output and outcome levels and, therefore, poor reporting information that is verbose and obfuscatory; and

(ii) output and outcome definitions and their associated performance indicators can be unstable from one period to the next, preventing trend analysis and correlation analysis.

The failure to appreciate the critical importance to nonfinancial data of data classification and storage standards might be due to the central agency staff's lack of experience in dealing with nonfinancial statistics, particularly where those performance indicators should reflect a business-operating environment consistent with the RBBM business model in Figure 4 of the main text. The business model requires a significant mindshift away from the administrative-focused control of the traditional central agency bureaucrat toward the use of performance parameters to enhance transparency and create control boundaries in line agencies.

Leadership and the "Challenge" Function of Central Agencies

The other area where public service has failed the business model implied by output and outcome budgeting is the lack of rigorous and dynamic leadership from the center. It is anathema to common sense that line agencies, given the funding they receive, should be solely, or even mostly, responsible for defining the outputs they produce, along with the outcomes they pursue and the service delivery standards performance indicators by which outputs should be measured.

Only rarely in public financial management would line agencies be allowed to obtain funding for a particular program of expenditures without challenge from one or more of the central coordinating agencies as to the merits of the proposal and the results, or outcomes, it is expected to deliver. In our private lives, we would never allow a retailer to dictate to us the product they are selling to us for a given price, or the quantity, quality, or timeliness with which it is to be delivered.

Unfortunately, this "hands-off" approach to specifying critical elements of the RBBM business model is widespread among the countries examined. Central agencies allowed line agencies much freedom to define their outputs, outcomes, and associated performance indicators. An examination of the central agencies' own outcomes and outputs suggests that in some countries the central agencies themselves do not fully understand the RBBM business model (the alternative to which is that they deliberately obfuscated their own accountability).

This resulted in unstable output and outcome definitions and undermined the integrity of the RBBM business model. As noted by Dormer and Gill:

> "The 'new paradigm for the administration of public affairs' ...was developed largely by practitioners... from a theoretical framework drawn from new institutional economics including agency theory and transactional cost economics. It was also heavily influenced by private sector, practitioner based models generically referred to as 'managerialism.' This ... has resulted in an increased emphasis in the public sector

> on performance and results....However,...these private sector practices are premised on a set of clear and mutually compatible objectives that are first defined and then translated into a limited set of agreed performance targets. In a public sector context, in the absence of a singular performance metric such as profit...and clear and stable priorities and objectives...defining, monitoring, and managing such targets has proved problematic."[4]

Clearly, the central agencies have a critical role in implementing the RBBM business model and in determining

- how an output is described;
- the standards by which output service delivery would be measured; and
- agreeing on the extent to which the funding provided should achieve some change in one or more socioeconomic statistics (outcome indicators), based on the assumed cause–effect relationship between the output and the outcome(s) sought.

These questions are fundamental to the role of every central agency in both the planning and funding of government interventions. To suggest that the central agencies should not be closely involved in determining the descriptions, definitions, and performance indicators would be to abrogate the historical primary role of central financing agencies to challenge the integrity of all revenue and expenditure policy proposals.

Corporate Management versus Results-Based Budget Management

Within any service delivery organization, once the central financing ("procuring") agency has agreed to the targets for the outcomes and outputs with the supplying organization, there must be a system of management by performance measurement that cascades down to the process and input levels.

Unfortunately, there is confusion at the national RBBM level between organizational corporate planning concepts, which should focus on the lower level strategies; work unit process performance indicators and organizational outcomes; and the higher-level national planning concepts, which should encompass a stable set of organizational outputs and a stable set of associated national-level outcomes and outcome indicators.

Conclusions

Most countries that led RBBM reform have a long way to go before they have efficiently functioning RBBM systems. This conclusion is supported by the findings of the Supreme Audit Institutions (also known as the International Organization of Supreme Audit Institutions) in a number of countries, which expressed disappointment with current results. Canada may be an exception, but it too has some way to go before its RBBM system can be described as a comprehensive working framework.

While many shortfalls in implementing such a significant (some might even say radical) reform initiative as RBBM are likely in the short to medium term at least, the shortfalls could be expected to be overcome after 20 or more years of implementation with continuous improvement processes. That is not the case for the countries examined here. On the contrary, some countries' RBBM systems appear to have seriously regressed.

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[4] Footnote 3, p. xii.

The main point of this comparative analysis is that developing countries are not far behind the pioneers in their RBBM frameworks, primarily because the pioneers have not successfully implemented their RBBM and have regressed in many cases because they fail to realize the intended benefits of a properly implemented, rigorous performance management framework.

Some reforms that could minimize the risk of having a sound RBBM business model founder during or after implementation include the following:

- establishing an overarching outcomes classification framework that can be used to correlate outcome indicators across organizations and across multiple unique outcome descriptions;
- establishing an outputs classification system that facilitates benchmarking and comparative analysis across agencies;
- establishing standardized output service delivery performance indicator classes (quantity, quality, timeliness, and cost) for all outputs;
- establishing simple reporting structures that inform the public on performance trends in both output delivery and outcome achievement;
- establishing centralized quality control mechanisms to ensure consistent implementation of concepts across a diverse range of organizations and people;
- establishing supporting IT infrastructure along with data management protocols; and
- firm leadership within central agencies, not only from the top but also cascading to middle management.

Countries with an outputs and outcomes structure could consider a top-down review by a team of external consultants capable of objectively assessing the government agencies, and developing a clear set of output descriptions and appropriate service delivery performance indicators. The targets for revised performance indicators would be determined by agreement between the output-producing agency and the central financing agency based on a given level of funding.

Once a set of outputs and performance indicators are agreed between stakeholders, an appropriate outcomes structure can be developed for the entire government, which can facilitate analysis of cross-agency participation in achieving common outcome goals as reflected by changes in outcome indicators.

The sections that follow first discuss some of the key public financial management reform initiatives introduced in the last 60–70 years leading to the introduction of RBBM. This report then focuses on the implementation of RBBM and some of the issues when introducing a business model into the typical public service bureaucracy. The report defines some of the characteristics that a well-structured RBBM framework demands, which is then followed by a review of RBBM implementation in Australia, Canada, Indonesia, Malaysia, New Zealand, the Philippines, Singapore, and the UK, measured against those standards.

1 Background of Results-Based Budget Management

Introduction[1]

The most important sequencing of reform actions needed to introduce results-based budget management (RBBM) across government organizations is

(i) first, identify appropriate output descriptions for each organization, based on their existing programs of expenditure;[2]

(ii) second, identify appropriate service delivery performance indicator descriptions for each output description, covering quantity, quality, timeliness, and cost (which must be tailored to specific circumstances whether cash or accrual accounting is used);

(iii) third, identify a stable set of outcome descriptions, preferably aligned, to a greater or lesser extent, with the division and group levels of the classification of functions of government (COFOG);

(iv) fourth, identify a limited number of outcome indicators under a COFOG-aligned outcome classification to which each of the organizational outputs will be correlated;

(v) fifth, associate each organizational output with one or more of the outcome indicators; and

(vi) last, create the accounting associations from the base budget[3] to the organizational outputs (i.e., using cost accounting methods).

RBBM should not be confused with the so-called New Public Management (NPM), which focuses on the New Zealand form of RBBM.[4] The NPM incorporates aspects of public financial management (PFM) not necessary for all forms of RBBM.

For example, formal contracts or agreements, such as the Purchase Agreement Contract in New Zealand between a minister and the chief executive officer of their agency, is not a necessary part of any

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[1] The terms "ministry," "department," or "agency" are used throughout this document, which equally refer to, say, "the Department of Finance," "the Office of Budget and Management," or any other budget-dependent agency by whatever nomenclature they might be referenced. "Ministry," "department," or "agency" should be taken to mean a government agency, however named, that carries responsibility for delivering outputs funded by a government.

[2] This is not to say that a program budget is required. Even line-item budgeting has its informal "programs" of expenditures. Cost accounting experts, in consultation with stakeholders, are needed to identify what outputs are being funded through the line items.

[3] Be that a program budget, a line-item budget, an organizational unit budget, or any other arrangement based on a cash or accrual accounting system.

[4] The NPM implemented in New Zealand takes a step toward linking RBBM to performance-based remuneration of organizations by requiring the chief executive or head of agency to sign a performance contract with the government of the day, which sets out the performance indicator targets for delivery of organizational outputs. It does not, however, translate directly to a system for performance-based remuneration of staff, nor does it provide any starting point for quantifying a performance payment to the organization, which requires a far more complex arrangement and/or specification.

RBBM system. Likewise, accrual accounting is not an essential part of an RBBM system.[5] Further, the extent of devolution of authority, and deregulation of rules and procedures, is a matter of preference in each jurisdiction (and also capacity of both information technology systems and personnel).

Hence, some critics of the NPM overstate their case against the New Zealand model because they focus on only one aspect of a particular approach in claiming that the whole approach is flawed.[6] Furthermore, many critical analyses of the NPM fail to differentiate between failure of the model itself and poor implementation of the business model. This report's author contends that failure of RBBM to realize its full potential resulted from poor implementation of the model, and perhaps a lack of capacity within civil service bureaucracies to adapt to the business model, rather than failure of the model itself. One of the major problems with the introduction of RBBM in both developed and developing countries is the conflation of organizational corporate planning concepts with national RBBM. This resulted in unstable outcome and output definitions.

There are many misconceptions about what RBBM and performance-based budgeting (PBB) are capable of delivering, or what they should achieve and how they should be used. In general, RBBM is a statistics-based, logical specification of output deliverables supporting the achievement of outcome indicator targets, which should be developed and defined in a manner that facilitates medium- to long-term correlation analysis to support policy development and resource allocation decisions.

Many authors have extended PBB and RBBM to encompass performance-based remuneration. While data related to output delivery to end-customers is fundamental to payment of performance-based remuneration to organizations, achievement of output delivery service standards does not translate directly into performance-based remuneration for individual staff members.

Performance-based remuneration of staff should be treated quite distinctly, as a separate topic, which would require developing and implementing a logical interface between remuneration of an organization based on output delivery, and the allocation of performance-based remuneration to individual staff members based on responsibilities for performing specific tasks (which might be identified in corporate or business planning documentation and individual duty statements).

In the context of various governments' PFM budgeting agenda, reform encompasses a range of techniques that may be used to improve the efficiency and effectiveness of governance and allocation of public resources. Many aspects of today's initiatives in PFM budget reform have been under active consideration or use in various parts of the world for perhaps the last 100 years, although some were popularized only in the last 30 years or so, including

- program budgeting (Appendix 1);
- forward estimates of revenues and expenditures;
- medium-term expenditure frameworks (Appendix 2);[7] and

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[5] Although it will
- enhance PFM and improve comparability of financial indicators across organizations, both within the public sector and across alternative suppliers in the private sector; and
- increase the probability that capital assets will be managed soundly.

[6] See for example, A. Schick. 1998. Why Most Developing Countries Should Not Try New Zealand Reforms. *World Bank Research Observer.* 13 (1). pp. 123–31. The paper's main criticism (which may be valid) is that the use of performance contracts is time- and resource-consuming with little benefit, if any.

[7] Which in some jurisdictions has become divided into two documents, one being the medium-term expenditure framework focused on expenditure, and another being the medium-term fiscal framework, which sets out the macroeconomic assumptions that proscribe government tax and nontax revenue estimates, including debt financing, and determines the resource envelope to be used when determining budgets within which expenditure is constrained.

- PBB, which includes using either program budgeting, output budgeting, outcome budgeting, or any combination or permutation of the three.

Important budget reform is often driven by the vision and personalities of a small number of key people within the bureaucracies of central agencies, and some champions scattered among line agencies, with crucial support from a few key political actors. The particular form that RBBM takes in any jurisdiction will depend on the choices made by the reform managers in each jurisdiction.

The main challenge to implementing reform is to bring to life the vision of reform in a manner that is true to the underlying philosophy of that reform. Often, a beautiful vision turns into an ugly duckling because of one or more of the following

- deliberate sabotage by vested interests,
- a poorly designed and/or executed change management plan, and/or
- a lack of a consistent and shared understanding of the vision for reform among strategic players charged with implementing various aspects of the reform.

Central agencies have a critical role in addressing impediments to reform efforts. Some of the quintessential elements to building a foundation for successful implementation include

- ensuring understanding of the reform philosophy across the whole of government;
- ensuring the use of change-management techniques with respect to processes, procedures, and attitudes within the central agencies;
- strong leadership not only at the political level but even more so at the bureaucratic levels within the ministry of finance[8] and other agencies, at both the executive and middle management levels; and
- strategic use of information technology, which in today's environment is fundamental to creating rigorous structures that support implementation of new systems and maintaining the integrity of data subject to revised classification criteria and systems.

An unpublished survey of 13 countries undertaken by the author between November 2014 and February 2015, which aimed to investigate the extent to which PBB was introduced in each country, showed that within each responding country there were widely disparate views of the way their national budgeting systems operated in practice. Of even more concern was that this disparate understanding was not only between organizations but also within them, including the central budgeting and planning agencies of each jurisdiction.[9] This survey indicated that even if the business model on which the budgeting system is based is well understood and broadly disseminated, many important stakeholders may not fully understand or be aware of how it operates in practice.

The following sections identify some of the significant PFM budget reforms introduced in the last 50–60 years, and suggest some appropriate characteristics of program budgeting and RBBM.

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[8] The term "ministry" is used throughout this document for ease of reference, and equally refers to the "department of finance," or the "office of budget and management." "Ministry" should be taken to mean the central agency, however named, that carries primary responsibility for introducing PFM budget reforms.

[9] The Organization for Economic Co-operation and Development (OECD) also undertakes a survey with similar objectives, except that it does not appear to have surveyed either a cross-section of organizations within each jurisdiction or a cross-section of personnel within the responding institution(s). The "survey" approach would appear to be not so much a survey but a questionnaire provided to each central financing agency, which is completed in accordance with a formal protocol of consensus within the management structure of the responding agency. As a result, the OECD "survey" appears to show relatively well structured and uniform understanding of the budgeting system within each country. Hence, the OECD survey results are likely to present a far more certain or uniform understanding of the underlying budgeting principles in those countries than may be the case.

Goals of Public Financial Management Reform

Generally, PFM reforms have two basic goals, namely,

(i) increased transparency in the use of public resources, and

(ii) increased efficiency in the use of public resources.

The first goal has two aims—combating corruption, and improving public understanding (and perceptions) and, thereby, widespread acceptance of the purpose of government interventions.

To be achieved, these goals require the following, at a minimum

- clear and unambiguously described purposes and means of government interventions,
- full and clear presentation of financial data for expenditure on inputs related to the means of achieving government goals,
- presentation of both financial and nonfinancial performance data that demonstrate the standards to which government interventions were delivered to the community, and
- the use of consistent terminology and provision of consistent comparative analysis reports from one time period to the next.

The data descriptions should be presented in relation to each agency of government in annual budget documentation and in annual reports.

The second goal, increased efficiency in the use of public resources, achieves socioeconomic objectives, or targeted outcomes, as efficiently as possible by

(i) reducing opportunities for corruption,

(ii) improving the availability and quality of information used as the basis for resource allocation decisions,

(iii) increasing bureaucratic operational efficiency, and

(iv) increasing transparency in the use of public resources.

From the preceding, we can conclude that no matter what new processes or procedures one might wish to introduce as part of reform, these should contribute to, and not detract from

- transparency in the use of public resources, and
- the clarity of reports that intend to show the performance in using public resources by both the bureaucracy and the government.

Increased transparency in the use of public resources is critical to combatting corruption and ensuring the most efficient and effective application of government resources to achieve government goals.

Brief History of Budget Reforms

Historically, government budgeting had been cash-based and relied on incremental "line-item" budgeting, constructed under organizational units. Budgets were identified according to organizational units that had mandates to provide particular services, and the specification of the organizations' outputs was taken to be inherent in the mandate. Because organizational units were aligned with distinct functions, and therefore outputs, budgets were defined for each organization only by input components (such as "salaries and remuneration," "transport and communication," "consultants," "conference and membership fees," "periodicals and newspapers," and "vehicles and equipment"). Budgets were usually increased or decreased for each line item at the margin, according to the inflation rate, an assumed natural growth rate, or particular policy decisions that impacted on the organization's role and responsibilities.

During the mid-20th century, the use of program budgeting by governments became more widespread, particularly in the United States (US), mainly in response to a need for increased transparency about the purposes for which funds were provided as part of the US war effort (World War II) so that resource allocation decisions could be made with an increased level of information related to the physical resources required to produce particular outputs.[10] The functional classification system was also developing as a useful tool during this period and, consequently, program budgeting structures in many cases developed along the lines of a functional purpose approach.[11] Program budgeting was critical within the US Department of Defense during World War II, and was gradually adopted during the next 40 years by an increasing number of agencies and governments in the US and internationally.[12]

Program budgeting requires that an organization identify each distinct "purpose" or function for which it receives a budget and to then construct a list of all the discrete activities and projects that it undertakes to achieve, or realize, the stated purpose(s). The budget is effectively constructed for all the objects of expenditure (line items) under each of the activities and projects and then aggregated as the budget for the purpose, or program. In effect, each purpose identified results in the creation of a "program" budget. (A "purpose budget" does not sound nearly as businesslike as a "program budget," and so, presumably, the term "program budgeting" has stuck.)

Over the years that followed, program budgeting in the US was supplemented by different concepts, including the planning–programming–budgeting system, which focused on short- and long-range planning and the cost-effectiveness of different alternatives. That system was followed by a "management by objectives" approach, which tracked the achievement of objectives (common with outcome budgeting), but focused on productivity rather than results.[13] Zero-based budgeting was

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[10] There is also evidence that a form of program budgeting was in use before the 1940s in some large US corporations, see D. Novick. 1996. *Origin and History of Program Budgeting.* Santa Monica, California: Rand Corporation. p. 1; John Hagen says that an early form of program budgeting was introduced in New York City's Bureau of Municipal Research in 1907, see J. Hagen. 1968. *Program Budgeting CSE Report Number 7, 1968.* Los Angeles: Centre for the Study of Evaluation, UCLA Graduate School of Management. p. 2.

[11] It was also natural for program budgeting structures to closely align with organizational structures, although the purists did in many cases attempt to define programs across organizational structures, which creates its own management and accountability issues.

[12] For example, in Australia program budgeting was introduced in federal government agencies in the mid-1980s, replaced by a mix of output- and outcome-based budgeting from 1999, and reintroduced at around 2010 as a supporting framework for outcome-based budgeting.

[13] Office of Program Policy Analysis and Government Accountability. 1997. *A Report on Performance-Based Budgeting in Context: History and Comparison.* Tallahassee: Florida State Legislature. p. 4.

introduced in a number of jurisdictions in the 1970s as an annual budgeting exercise, focused on management and efficiency. Zero-based budgeting was gradually abandoned, primarily due to the perception that there was little reward from the effort required and little reallocation of resources from 1 year to the next.[14]

In 1997, the Florida State Legislature's Office of Program Policy Analysis and Government Accountability found that

> While these reform efforts have had some effect on the government budgeting process, all failed to be sustained for several reasons. First, the information requirements of these systems were extensive but were not supported by adequate historical record-keeping, sufficient staff expertise, or sufficient computer support for the type of analysis required. Typically, these systems collapsed under paperwork. Second, requiring all programs to justify their existence under a system like zero-based budgeting was a laborious exercise that was not feasible on a regular basis and did not appear to produce substantial resource reallocation. Third, by stressing "rational" analysis, these systems did not acknowledge the political choices inherent in budgeting and so tended to have little impact on funding decisions. Finally, prior reform efforts have often not had the strong and consistent backing from both the executive and legislative branches needed to succeed.[15]

More recently, program budgeting evolved into performance-based program budgeting (PBPB, or PB^2). PBPB required that the outputs of a program be explicitly defined in terms of physical goods or services and that "key result areas," or performance indicators, be defined for aspects such as the production process and/or the delivery of goods and services.

Later, outcome and output budgeting were developed and implemented firstly by New Zealand and then followed by other countries such as Australia, Canada, and the United Kingdom (UK). Outcome and output budgeting emphasize using performance indicators to measure the efficiency of delivery of outputs (through quantity, quality, timeliness, and cost indicators) and the effectiveness of outputs on the achievement of time-bound government objectives, as specified in outcomes desired from government expenditure (such as, "a 5% increase in life expectancy by 2020," "a 10% decrease in infant mortality by 2025," or "a 95% literacy rate by 2030").

Both output and outcome budgeting present little new in concepts relative to PBPB, except in presentational format and the (intended) rigorous application of the concept of an output, which may take account of input costs that program budgeting took for granted (such as depreciation of long-lived assets).

Outcomes were always the primary objective of a program and always a justification for expenditure when new proposals were put forward for funding, even though a formalized impact analysis methodology might not have to be developed when expenditure programs were postulated for funding.

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[14] That is not to say that zero-based budgeting is not a useful periodic exercise, and a periodic zero-based budgeting exercise applied to programs is a practice that some countries have introduced (e.g., Philippines). However, the cost–benefit ratio for zero-based budgeting as an annual process across all programs is, in all likelihood, much less than one (where the estimated benefits are the numerator).

[15] Office of Program Policy Analysis and Government Accountability. 1997. *A Report on Performance-Based Budgeting in Context: History and Comparison*. Tallahassee: Florida State Legislature. p. 5.

Similarly, outputs were always inherent in program budgeting, although performance indicators were not usually considered strictly as service delivery standards but were often a mixture of process, output, and outcome indicators. Furthermore, costing of program budgeting outputs was not considered as rigorously as is intended with output budgeting. As such, output descriptions under output budgeting can be very different from the type of outputs defined under program budgeting.

Many program budgeting outputs for which performance indicators were specified would be internal or intermediate outputs, which would/should not appear as an output of an agency under output budgeting. Only outputs delivered to clients external to the agency are intended to be defined under output budgeting, and this is then the focus of performance measurement, along with explicit linkages to outcome indicators upon which outputs are expected to impact.

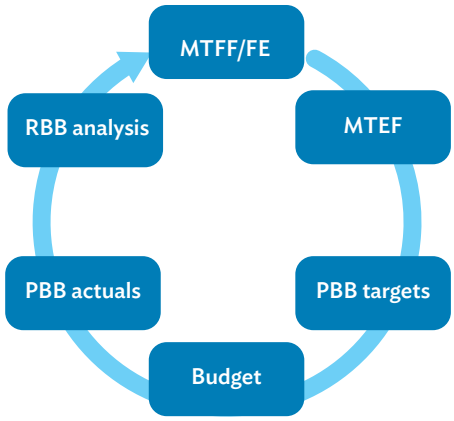
Chapter 3 discusses how the failure of output and outcome budgeting to deliver their expected benefits can be attributed to a lack of government officers' appreciation of the critical nature of a centralized database management system, the lack of a coherent data classification framework, and minimal or no centralized quality assurance activities. This failure is due to a lack of management expertise, or an inappropriate management structure within government, and a poor understanding of the basic business principles that underlie the RBBM framework of output and outcome budgeting.[16]

Sequencing Reforms

The implementation of program budgeting is usually a precursor to the implementation of PBPB, and the implementation of PBPB is a precursor to the implementation of output budgeting. Output budgeting is often implemented as an overlay to a program budget, with program expenditures and revenues distributed across one or more organizational level outputs to which their funded outputs contribute. The usual, but neither necessary nor necessarily desirable, long-term goal is to remove the program budget structure and to allocate resources according to the delivery of outputs or outcomes.[17]

The quality of budget documents and the performance reports produced by budget-dependent agencies is often compromised by the quality of their RBBM frameworks. In

Figure 1: Fitting Performance-Based Budgeting Reforms to the Annual Budget Cycle



MTEF = medium-term expenditure framework, MTFF/FE = medium-term fiscal framework/forward estimate, PBB = performance-based budgeting, RBB = results-based budget.

Source: Author.

[16] The basic business model of RBBM/PBB is in Chapter 2.

[17] Although this is neither necessary nor desirable in many cases.

other words, if their budget structure, their output definitions, their output performance indicators, their outcome definitions, or their outcome indicators are not clear or relevant, then the performance reports will reflect this. Unfortunately, in too many examples, this is where we find ourselves today. Without clarity in the elements of the budget structure, the transparency of the budget is reduced, sometimes to the point of incomprehensibility.

We cannot say with certainty that there has not been deliberate obfuscation of the reform objective, but we can say with certainty that poorly executed reforms have in some cases resulted in RBBM frameworks that have diminished rather than enhanced transparency.

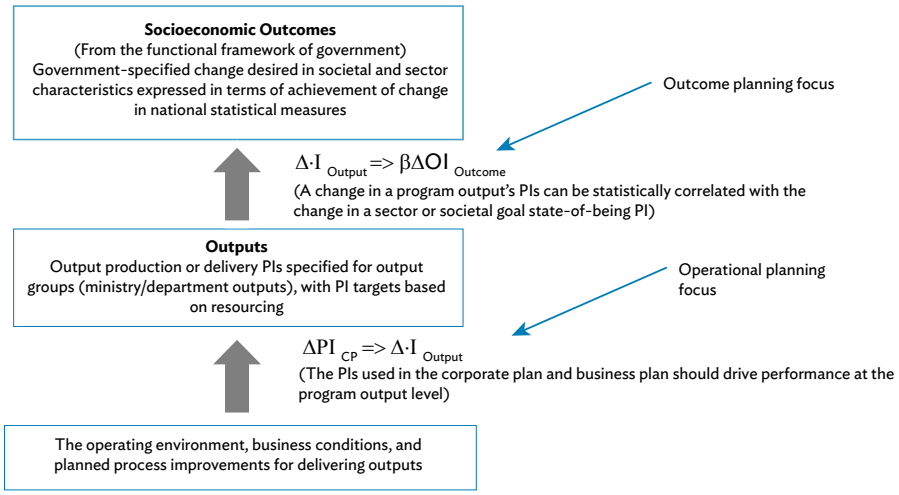
2 Results-Based Budget Management

Results-Based Budget Management Logic Model

The term results-based budget management (RBBM) has become synonymous with output budgeting and outcome budgeting. RBBM refers to budgeting systems where funding decisions (i.e., which outputs get how much of the available resources) are based on the results expected to be achieved toward the government's socioeconomic goals. Budget funds are allocated according to the outputs that government decides should be produced and in accordance with the quantity, quality, and timeliness targets it sets for the outputs.

The general relationship between the outputs produced by the bureaucracy (as measured by the service delivery statistics) and the socioeconomic outcome statistics that government seeks to achieve are in Figure 2.

Figure 2: The Ex Ante Output–Outcome Relationship



Where:			
Δ	A change in one or more of the PIs	$OI_{Outcome}$	The outcome indicator(s) related to a particular socioeconomic outcome or goal
β	The estimated correlation between the agency output and the outcome indicator (or social goal indicator) to which the output is directed; a measurement of the extent that the agency output impacts on the desired outcome	PI_{Output}	The agency output indicator(s) related to a particular output
=>	Implies impact: the relationship between the PIs at the related planning levels	PI_{CP}	PIs used in corporate plans or unit work plans to promote performance at the organizational level

OI = outcome indicator, PI = performance indicator.

Source: ADB. 2013. *Results-Based Management Framework in the Philippines: A Guidebook, 2013*. Manila.

The model assumes that if a logical relationship exists between an output and an outcome, then by funding the output at an appropriate level, the government can achieve the outcome(s) it seeks within the time frame it desires. Some commentators miss this point. For example, A. Schick (1998) says of the New Zealand output budgeting approach:

> The success, pervasiveness and demands of New Zealand's operations-oriented management regime leave inadequate opportunity for the government to use the budget to promote better allocation or to pursue its strategic visions.[18]

This misses the point that the New Zealand model requires that ministers determine the outputs they wish to procure to achieve strategic outcomes. Which strategic outcome and which output to produce, and in what quantities, are not questions that can be divorced from each other in the New Zealand model or any other model based on the logic inherent in Figure 2.[19]

In somewhat of a contradiction, Schick (1998) later goes on to say that "...reallocation is inherently difficult. Politicians fight reallocation, even when they profess to want to do the job. Reallocation means taking from in order to give to."[20]

The rigorous measurement of outputs is an integral part of outcome budgeting and cannot be ignored

Outcome budgeting differs from output budgeting in that the government is assumed not to seek to determine the output mix that it wishes to fund but instead allocates funding to the public service bureaucracy ("the bureaucracy") to achieve outcomes according to the government's priorities, which must be reflected in the setting of outcome indicator targets for the funding period. It is then the bureaucracy that determines the outputs it produces to achieve outcomes as cost-effectively as possible.

The justification for focusing budget papers on whether outcomes are being achieved at an acceptable rate, given the resources that have been spent in pursuit of the outcome goals, is fundamental to the definition of "outcome budgeting." Outcome budgeting, in reality, differs from output budgeting only in that the public reporting of performance is focused on the achievement of outcomes, and the publicity surrounding performance of the bureaucracy in delivering outputs is, consequently, opaque.

Analyzing Data

Being an evidence-based system of management, RBBM is highly dependent on statistics. For its full and proper implementation, output budgeting generally requires the public sector to implement full-cost accrual accounting for cost performance indicators to be comparable across organizations and between the public and private sector (in most jurisdictions this is a significant barrier to the full output

[18] A. Schick. 1998. Why Most Developing Countries Should Not Try New Zealand Reforms. *World Bank Research Observer*. 13:1. p. 5.

[19] Schick (1998, p 12).

[20] Footnote 17, p. 12.

budgeting model being implemented).[21] Output budgeting that is fully implemented according to basic principles should enable benchmarking both within a single jurisdiction, across multiple jurisdictions and between the public and private sectors.

Output budgeting focuses on determining the outputs to which funds should be allocated to most efficiently achieve given outcome indicator targets, and it will use both output service delivery targets and outcome indicator targets to reflect changes to funding allocations.

At the level of national government budgets, outcome descriptions and their associated outcome indicators should be classified in alignment with the classification of functions of government (COFOG) system and, thereby, remain stable over time. Changes in government priorities should be reflected in changes to outcome indicator targets, not by changes to the outcome classification descriptions.

Furthermore, the output descriptions of organizations should be stable over time, as should their associated service delivery performance indicator definitions/descriptions (performance indicators.). Changes in government priorities should be reflected by changes in outcome indicator targets and subsequently to resource allocations to outputs, with those outputs related to government's priority outcomes receiving additional funding while lower priorities may be required to give up funding. Changes in allocation of resources to outputs should be reflected by proportional changes in output performance indicator targets.

Under output budgeting, the allocation of budget funding to outputs is determined through the political process, with policy and operational advice provided by the bureaucracy. However, this is not the whole story, since to calculate ex post, the value for the correlation coefficient, β, one must solve a generalized system of equations similar to those in Figure 3.[22] Analysis of a model such as this is necessary to differentiate the impact of government-delivered outputs from each other on the various outcome indicators, and also to differentiate the impacts of nongovernment influences, such as exogenous (and endogenous) private sector investment.

For example, many government-run programs are designed to increase school attendance rates, or to lower the rate of poverty. Prima facie, one may argue that because school attendance rates increased, then the outputs that targeted increased school attendance were (highly) successful. However, further analysis might show that those outputs were largely ineffectual, and the primary reason that attendance rates increased was due to an increase in wages of the lowest paid in society, which was due to economic growth stimulated by a significant increase in foreign investment and, to a lesser extent, by government poverty reduction programs. Unless the type of analysis in Figure 3 is done, one may overestimate the effectiveness of the specialized school attendance program expenditures and, in doing so, perpetuate or even increase expenditure on a largely ineffectual program.

As outlined in Figure 2, the choice of outputs determines the outcomes that will be, or are intended to be, delivered and conversely, the choice of outcomes desired should determine the range of outputs that should be examined for funding.

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[21] It can be argued that the most significant and enduring contribution that both New Zealand and Australian bureaucracies made to their outputs–outcomes frameworks, and PFM reforms, was the introduction of accrual-based budgeting and accounting. In both jurisdictions, their descriptions and definitions of outputs, outcomes, and performance indicators have been, and remain, far from satisfactory.

[22] This is not a simple exercise, and requires the use of sophisticated econometric techniques, none of which appear to be in general use across any of the bureaucracies examined as part of this report.

The "vertical" (red) rectangle in Figure 3 highlights the impact that one output has on the range of outcome indicators used, while the "horizontal" (blue) rectangle will demonstrate the relative impact a "normalized" unit of each output has on one particular outcome indicator. The higher the b, the higher the impact per unit of output.

While we do not suggest that the calculations inherent in Figure 3 be undertaken in every jurisdiction or even in one jurisdiction, what the model seeks to demonstrate is the importance of and rigor with which data classifications must be defined and the importance of stable definitions across time, so that data and the statistics derived therefrom are comparable and useful in trend analysis.

Cost-effectiveness would be estimated by dividing the normalized outputs by their respective unit costs.

Allocation of funding to outputs is based on the government's priorities, aligned ex ante with the outcome indicators with which the outputs are expected to be correlated, or calculated to be correlated, ex post.

Figure 3: Estimating Ex Post the Beta Correlation Coefficient

Indicators 1 to "n" of Societal Goal 1

$$\Delta Y_{11,T} = \beta_{110001}\Delta X_{0001,Tij} + \beta_{110002}\Delta X_{0002,Tij} + \ldots + \beta_{11000n}\Delta_{X000n,Tij} + \Sigma\beta_{ii0001}\Delta Z_{iiTij}$$

$$\Delta Y_{12,T} = \beta_{120001}\Delta X_{0001,Tij} + \beta_{120002}\Delta X_{0002,Tij} + \ldots + \beta_{12000n}\Delta_{X000n,Tij} + \Sigma\beta_{ii0001}\Delta Z_{iiTij}$$

.

.

$$\Delta Y_{1n,T} = \beta_{130001}\Delta X_{0001,Tij} + \beta_{130002}\Delta X_{0002,Tij} + \ldots + \beta_{13000n}\Delta X_{000n,Tij} + \Sigma\beta_{ii0001}\Delta Z_{iiTij}$$

Indicators 1 to "n" of Societal Goal 2

$$\Delta Y_{21,T} = \beta_{210001}\Delta X_{0001,Tij} + \beta_{210002}\Delta X_{0002,Tij} + \ldots + \beta_{21000n}\Delta X_{000n,Tij} + \Sigma\beta_{ii0001}\Delta Z_{iiTij}$$

$$\Delta Y_{22,T} = \beta_{220001}\Delta X_{0001,Tij} + \beta_{220002}\Delta X_{0002,Tij} + \ldots + \beta_{22000n}\Delta X_{000n,Tij} + \Sigma\beta_{ii0001}\Delta Z_{iiTij}$$

.

.

$$\Delta Y_{2n,T} = \beta_{230001}\Delta X_{0001,Tij} + \beta_{230002}\Delta X_{0002,Tij} + \ldots + \beta_{23000n}\Delta X_{000n,Tij} + \Sigma\beta_{ii0001}\Delta Z_{iiTij}$$

.

.

Indicators 1 to "n" of the m[th] Societal Goal

$$\Delta Y_{m1,T} = \beta_{2n0001}\Delta X_{0001,Tij} + \beta_{2n0002}\Delta X_{0002,Ti} + \ldots + \beta_{2n000n}\Delta X_{000n,Tij} + \Sigma\beta_{ii0001}\Delta Z_{ii\,Tij}$$

$$\Delta Y_{m2,T} = \beta_{n10001}\Delta X_{0001,Tij} + \beta_{n10002}\Delta X_{0002,Ti} + \ldots + \beta_{n1000n}\Delta X_{000n,Tij} + \Sigma\beta_{ii0001}\Delta Z_{iiTij}$$

.

.

$$\Delta Y_{m,n,T} = \beta_{nn0001}\Delta X_{0001,Tij} + \beta_{nn0002}\Delta X_{0002,Ti} + \ldots + \beta_{nn000n}\Delta X_{000n,Tij} + \Sigma\beta_{ii0001}\Delta Z_{iiTij}$$

Where:

$Y_{m,n,T}$ is the n[th] outcome indicator (OI) related to the m[th] societal goal, or Outcome measured at time T.

X_{000i} is an index of physical delivery of Output X_{000i}

Z is an exogenous variable (e.g., growth in average income).

T_{ij} is the time lag between an output X's delivery at time i and its expected impact on an OI Y at time j.

Δ – means the change in the OI or the change in the performance indicator index for Output X between time periods.

$\beta_{mn,0001}$ is the correlation coefficient between Output X_{0001} and the OI, Y_{mn}, and measures the relative effectiveness of Output X_{0001} on delivering an impact on the OI Y_{mn}

OI = outcome indicator.

Source: Author.

Results-Based Budget Management Business Model

The private sector is perfectly capable of providing each good or service provided by public sector bureaucracies, including regulatory and policy advice related to market failures, externalities and tax collection. The desire to establish a government bureaucracy is not brought about by failure of the private sector to advise on, implement, or carry out government policy; it is brought about by the need for government to receive "frank and fearless" advice that is, as far as possible, independent of vested interests and impartial to political viewpoints. While this principle has been eroded over the last century in many democratic countries, the principal foundation for the maintenance of a significant public service remains the same—independence and neutrality in service of the political entity.

The RBBM framework and the NPM were devised as a way of introducing the management disciplines of the private sector into a public sector environment.

The RBBM business model is shown in Figure 4. The roles of the actors in the public service bureaucracy can be likened to the actors in any private sector business structure. The central financing and planning agencies are in a principal–agent position more generally with respect to the Parliament and the public. As noted by Jones and Kettl (2003):

> Over the past three decades, criticisms about government performance have surfaced across the world from all points of the political spectrum. Critics have alleged that governments are inefficient, ineffective, too large, too costly, overly bureaucratic, overburdened by unnecessary rules, unresponsive to public wants and needs, secretive, undemocratic, invasive into the private rights of citizens, self-serving, and failing in the provision of either the quantity or quality of services deserved by the taxpaying public…Application of market-driven solutions and business techniques to the public sector has undoubtedly been encouraged by the growing ranks of public sector managers and analysts educated in business schools and public management programs.[23]

In the absence of a profit motive and without vested "ownership" of the equity that is used within government agencies, the RBBM business model intends to provide a proxy governance structure and analytical framework with which to objectively measure efficiency and effectiveness of government resource usage. The RBBM business model is thus a relatively straightforward reflection of a market-oriented governance structure applied to the use and consumption of public resources.

Capital investment, shown in the left column of Figure 4, is intended to increase the capacity of line agencies to produce outputs within estimated future service delivery parameters, it is not an output consumed by end-customers. This is critical to understanding how the bureaucracy should be reporting and justifying expenditure on capital versus outputs. In this business model, the key players charged with safeguarding the public interest with respect to expenditure of public monies are the central agencies, while the spending agencies are charged with delivering outputs that will, it is hoped, deliver the socioeconomic outcomes that society seeks.

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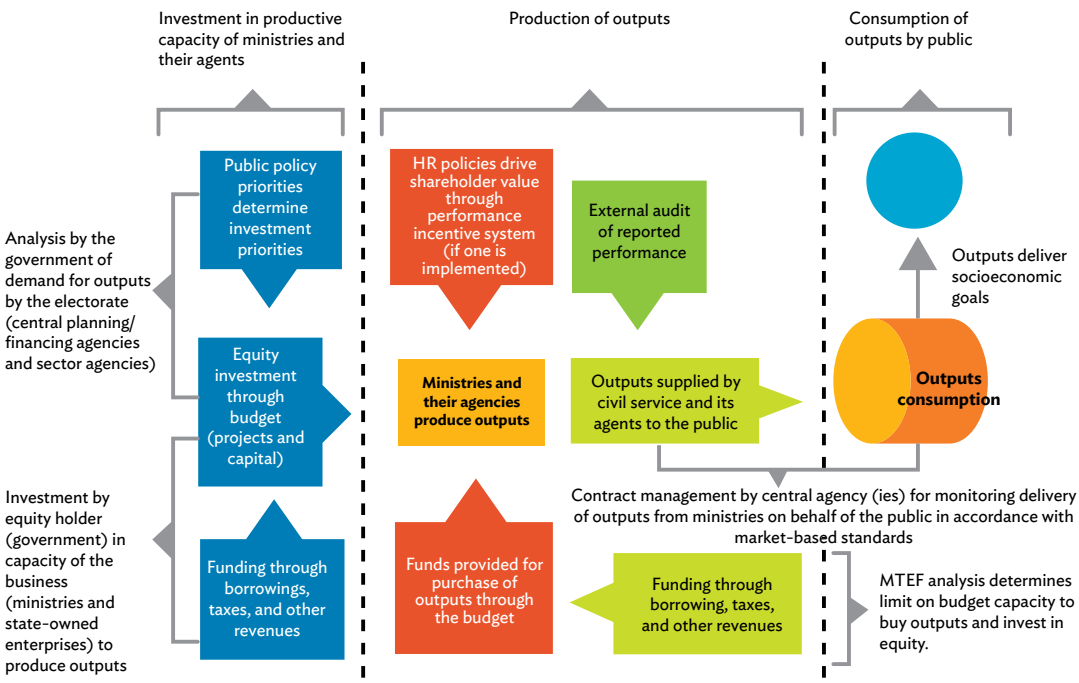
[23] L. Jones, L. and D. Kettl. 2003. Assessing Public Management Reform in an International Context. *International Public Management Review Journal*. International Public Management Network. p. 1.

Figure 4: Results-Based Budget Management Business Model



HR = human resources, MTEF = medium-term expenditure framework.

Source: Based on a version in ADB. 2013. *Results-Based Management Framework in the Philippines: A Guidebook*, 2013. Manila.

The key players in this business model are all faced with one or more potential conflicts of interest within the principal–agent context, and only through the rigorous application of the elements of the RBBM model can a relatively transparent governance structure be established.

Line agencies may be compared to any publicly listed company envisaged to act in the interest of its shareholders. However, the shareholders in line agencies do not have the opportunity to vote out senior management if it fails to perform. The best they can do is vote out the government, which is difficult because it requires that the majority of "firms" fail to perform for the "managing directors" of all companies to be tossed out at the same time. Unfortunately, this is not necessarily efficient nor desirable, and it may not be the "managing directors" who are failing to perform but the managers beneath them.

Output delivery standards should be established that reflect an efficient production function, which would be analogous to ensuring competitive pricing in the private sector. The central agencies should ensure that the right outputs are produced, relevant to public "demand," which would be analogous in the private sector to ensuring the goods or services provided are those that most closely meet consumers' needs and wants (i.e., demand and supply operating in a free/price flexible market). It is the politicians' prerogative to determine what outcomes society most values at any point in time which will, through a perceived cause–effect relationship, define the outputs that should be produced—if one can determine those outputs that have the most cost-effective impact on outcomes.

Output versus Outcome Budgeting

A number of Organization for Economic Co-operation and Development (OECD) countries[24] shifted the emphasis of their budgeting systems toward "outcome budgeting," that is, they moved, or attempted to move, the focus of their public reporting to outcomes rather than outputs. The argument goes that government interventions are, ultimately, directed at achieving outcomes, and the public is most interested in outcomes. In this scenario, determining outcome priorities is the prerogative of the politicians, not the bureaucrats. Outputs are a means to an end, but not an end in themselves. Bureaucrats, on the other hand, are best placed to determine what outputs are most cost-effective at achieving outcome objectives, and so they may reallocate funds to whatever means they believe will most efficiently achieve the end outcomes.

The achievement of outcomes is the central focus of budget documents and performance reports. The question of whether those outcomes given the highest priority and funding during the resource allocation (budgeting) process are the outcomes the community most values is clearly the politicians' prerogative. This is not a question of accountability for the budgeting process but, in a democratic system, will be resolved politically through the election process.

Given the predisposition of politicians to be "hands on" when determining the activities of the bureaucracy and the outputs to be delivered to the community, some people may find this unrealistic. The New Zealand model of RBBM recognizes this reality, as noted by Kibblewhite and Ussher (2002): *An explicit part of the reforms, which relates to the output/outcome distinction, was to outline the separate responsibilities of ministers and chief executives.*[25]

Scott, Bushnell, and Sallee (1990) state:

> The approach taken in the New Zealand financial management reforms is to require chief executives to be directly responsible for delivering the outputs produced by the departments in accordance with service delivery standards, while the ministers choose which outputs should be produced and should, therefore, have to answer directly themselves for the outcomes.[26]
>
> This vision has not been realised as completely as was originally envisaged. It illustrates, however, the central role that outcomes played in the financial management reforms and play in the public management system. Conceptually, the New Zealand system focuses on outcomes. There have, however, been difficulties integrating outcomes into public management, principally because it is hard to specify, measure, and manage for outcomes. Work continues to address these difficult issues.[27]

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[24] For example, Australia, Canada, New Zealand, and the UK.

[25] A. Kibblewhite and C. Ussher. 2002. New Zealand Treasury Outcome-Focused Management in New Zealand. *OECD Journal on Budgeting*. Paris: OECD. p. 86.

[26] G. Scott, P. Bushnell, and N. Sallee. 1990. *Reform of the Core Public Sector: New Zealand Experience, Governance*, 3, p. 157.

[27] Note that the criticisms by Allen Schick of the New Zealand system appear to relate only to the use of explicit contracts between the Minister and the Chief Executive Officer in the delivery of outputs. Many of the criticisms that Schick makes are valid in the questionability of the use of explicit contracts, but the view of the present author is that Schick overstates his case, and the New Zealand model, if implemented properly (but not necessarily with accrual accounting or with explicit contracts), is quite appropriate.

The reality is that political masters also take a close interest in which outputs are to be cut and which are to be allocated a funding increase. The political arm of government's close involvement in output determination is counter to the philosophical arguments used to support outcome budgeting.

Obviously, the idea that responsibility for the achievement of outcomes can somehow be divorced from responsibility for deciding on the outputs to be produced lacks consistency with the RBBM logic framework outlined in Figure 2. Whoever decides which outputs will be produced, and to what service delivery specifications, is effectively responsible for delivering the socioeconomic outcome(s) targets to which the output is directed.

The idea that responsibility for the achievement of outcomes can somehow be divorced from responsibility for deciding on the outputs to be produced lacks logical consistency

Output budgeting has been characterized in some jurisdictions by a formal "contracting" process between the ministers and their agency—for example, the output agreement in New Zealand (formerly known as the purchase agreement) and the public service agreement (PSA) in the UK (which was modified or abandoned following the election of the Cameron government in 2011). These agreements reflect the view that not only are outcomes determined at the political level, but so too are the kinds of outputs used to achieve desired outcomes. Under the UK's RBBM system up to 2010, and the New Zealand system since inception, the bureaucrats agree to deliver outputs at specified service delivery standards given a certain budget allocation. The bureaucrats have some freedom to determine how inputs are combined to deliver outputs at the lowest cost for the given service delivery standards, but they do not decide which outputs will be delivered.

The argument that outcome budgeting is somehow different from output budgeting overlooks a number of issues. First, public funds are expended on delivering outputs, not outcomes. Outcomes are the intended changes in socioeconomic characteristics of society as a result of expenditure on outputs. Those socioeconomic changes will, in theory, be manifested in outcome indicator statistics.

Unless the claim that an output is delivering an impact on one or more outcome indicator is publicly tested, transparency in the use of public funds is diminished. Kibblewhite and Ussher (2002) support this conclusion in their analysis of the New Zealand experience:

> In summary, a key benefit of retaining a focus on outputs within formal management systems is that this ensures a better understanding of what is done by the public service. This is a prerequisite for assessing value for money. There are other parts to that value for money puzzle, however, including robust outcome information about whether the outputs had the desired impact. In other words, good outcome information is an addition, not a replacement, for good output information.[28]

Second, the impact of outputs on outcomes may take many years to manifest in outcome indicator data, significant time lags may occur between the delivery of some outputs and their impact on socioeconomic variables. To focus on outcome indicators on an annual basis will generally provide little insight into public sector performance, and analysis of outcome achievement is, in many cases, likely be shallow, providing little or no transparency to government resource usage, even assuming that the outcome descriptions and their respective indicators are well defined (which, currently, is too often not the case). Again, this conclusion is supported by the analysis of Kibblewhite and Ussher (2002) in the case of New Zealand:

[28] Footnote 24, p. 90.

> One of the lessons that can be learnt from the New Zealand experience is that creating an environment that enables outcomes-focused management is unlikely to be enough. It is difficult to define, measure and manage for outcomes, and in some areas of government activity it is probably too difficult. Central agencies must balance the need to be responsive to the constraints that specific agencies face, with the need to provide impetus and leadership from the center. This makes it difficult to drive outcomes-based management from the top-down.[29]

For example, increased expenditure on prisoner rehabilitation schemes may not manifest in data as a decreased incidence of crime for a number of years, and focusing on the outcome indicator may mean that inefficient expenditures for some outputs can be hidden for longer within an envelope of more efficient expenditures, which leads to a weaker decision-making framework.

Third, many government outputs are, for many people, an end in themselves and so output service delivery is hidden behind opaque annual outcome reports (which tend to rely on verbose and shallow analyses), and diminishes rather than enhances transparency.

On a more practical note, Holmes and Evans conclude that "Experience suggests that budgets must be concerned to support outcomes but the format for appropriating funds in more developed systems is best targeted towards outputs."[30]

The specification of outcome descriptions and outcome indicators, and estimating the correlation of outcomes with outputs, is crucial to allocating fiscal space or reallocating resources among government priorities. Under output budgeting, the allocation of budget funding is, in theory, argued according to not only outputs but also according to output linkages with outcomes. Outcome prioritization is as much a part of output budgeting as it is fundamental to outcome budgeting. In both systems, the bureaucracy must examine which outputs are most cost-effective at delivering particular outcomes.

Technical Efficiency versus Allocative Efficiency

The question of "allocative efficiency" seeks to determine the relative effectiveness of outputs in delivering impacts on outcomes. It does not seek to answer the technical efficiency question as to whether the bureaucracy has produced the outputs at the lowest cost given the quantity, quality, and timeliness dimensions specified for their delivery.

Outputs with the highest impact on the outcome indicator(s) per monetary unit (cost-effectiveness) should be allocated more resources than those outputs with the lower impact per monetary unit[31] The β correlation coefficients shown in Figure 3: Estimating Ex Post the Beta Correlation Coefficient are, in effect, the relative impact indicators of the outputs X on the outcome indicator, Y—the higher the β, the higher the impact on Y of X. By dividing the β by the cost of producing the unit of output X,[32] one can determine relative cost-effectiveness, given service delivery standards.

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[29] Footnote 24, p. 105.

[30] M. Holmes and A. Evans. 2003. *A Review of Experience in Implementing Medium-Term Expenditure Frameworks in a PRSP Context: A Synthesis of Eight Country Studies.* London: Overseas Development Institute. p. 30.

[31] However, when converted to a monetary base, inefficient production of one output relative to another may adversely impact the assessed allocative efficiency of that output over the other, resulting in a worse allocation based on potential, although a practically better allocation given the current production functions in use.

[32] This explanation is an oversimplification in that the econometric calculation must determine some "index" of the various service delivery indicators of the output, such that changes in one or more of the quantity, quality, and timeliness indicators for a given change in cost of production can be comparable from one time period to the next.

Well-defined outcomes, outputs, and performance indicators are more an exception than the rule

The questions of whether sufficient outputs were procured to achieve the outcome in the time frame set, or whether sufficient funds were allocated for the procurement of the outputs at the service delivery standards specified, are technical engineering issues related to knowledge and understanding of the operating environment. Such questions must be resolved among the technical experts of the line agency and the central financing and/or planning agencies.

Given knowledge of the marginal impact that additional units of output are expected to have on an outcome indicator, it should be relatively straightforward for the budget analyst to determine whether the quantity of outputs funded will be sufficient to deliver the change in the outcome indicator(s) over the budget time frame, all other things being equal.

Questions of technical efficiency are addressed through performance indicators specified at the output level, which should be comparable between similar outputs produced by other ministries, the private sector, or by governments in other jurisdictions. The issue then becomes comparability of financial data. Given that most governments continue to use cash accounting while the private sector will generally price its outputs on an accrual costed basis, benchmarking can be problematic when comparing the government cost of delivery relative to a private sector provider.

Furthermore, the question as to whether the bureaucracy has produced the outputs at the lowest potential cost can only be assessed by examining the cost in conjunction with the quantity of outputs produced for given quality and timeliness standards. This should be a simpler exercise than determining allocative efficiency but, nevertheless, it is faced with significant issues in determining differences in quality and timeliness measures, and whether cost differences are appropriate for quantity, quality, and timeliness differences.

A properly implemented RBBM framework should be able to provide data that facilitates benchmarking of output production efficiency across agencies within a single jurisdiction, and across agencies in multiple jurisdictions. However, this requires output descriptions and their associated output performance indicators to be defined according to a clear set of principles and standards, which must relate to the aspects of output delivery relevant to the buyer or consumer (i.e., end-beneficiary). A review of some of the OECD countries that pursued budget frameworks more heavily dependent on performance indicators suggests that few, if any, have attained a logically rigorous implementation of RBBM. While outputs, outcomes, and performance indicators may be present, a structured approach to data with tightly defined elements underpinning the analytical function of the logical framework is almost always missing. Instead, well-defined outcomes, outputs, and performance indicators are more an exception than the rule. The results of an assessment of the implementation of RBBM concepts in a range of countries are in Chapter 4.

3 Transparent Reporting of Results

Introduction

Whether the performance of the bureaucracy, actual and intended, should be subject to public reporting in annual budget documents is moot but, in the interest of transparency, there is only one answer. In any case, as demonstrated in Figure 2 and Figure 3, outcome budgeting cannot provide a framework for budgeting without consideration of the impact that particular outputs have on the desired outcomes. As such, rigorous measurement of outputs is an integral part of outcome budgeting and the appropriate definition of outputs and their performance indicators for service delivery cannot be disregarded.

Changes in government policies and priorities should almost always be reflected in changes to outcome and output indicator targets, not changes to outcome and/or output descriptions and outcome and output indicators.

Transparency in output and outcome budgeting requires at least the following characteristics for budget documents:

(i) Operational Framework

- Outcome descriptions that are clearly expressed as socioeconomic characteristics targeted by government;
- A framework of outcomes that reflect annual changes in government priorities through changes in outcome indicator targets, not wholesale changes to outcome descriptions or outcome indicators;
- An outcome description classification system that may be aligned to a significant degree with the classification of functions of government (COFOG) on monetary expenditures (see the example in Appendix 3);
- Specification of outcome indicators that will be used to measure progress toward achievement of outcome descriptions, the definitions of which will remain inter-temporally stable;
- Output descriptions that clearly and simply describe the output being delivered to clients external to the agency and that will, for ongoing outputs, remain inter-temporally constant;
- A set of output type classifications associated with a standardization of output descriptions and output performance indicators, across government agencies, of like-for-like outputs (see examples in Appendix 4);
- A set of output performance indicators for each agency output that specifies the quantity, quality, and timeliness with which each output is to be delivered for a given budgeted amount, and that will remain inter-temporally stable;
- A relational database that replicates the relationships of the logic model in Figure 2;
- Budget documents that show resource allocations consistent with the relationships in Figure 2 ; and
- Periodic analysis of output effectiveness implied by the relationships in Figure 3.

(ii) Budget Documents

- Budget documents that include the latest measurements of outcome indicator statistics, along with specification of future targets across the budget and forward-estimates periods;
- Budget documents that show the assumed linkages between an output and one or more outcome indicators across the whole of government;
- Estimated expenditure (both historical and future) outputs for each common outcome indicator;
- Estimated output indicator targets for the budget year and forward estimates;
- Estimated and actual expenditures and output indicator targets for 2–3 years prior to the current financial year and for the current financial year; and
- Explanations of significant changes in output funding based on an analysis of relative effectiveness of the output or on changes in government priorities as reflected in changes to outcome indicator targets.

Budget Documents and Annual Reporting

At an experience-sharing workshop facilitated by the World Bank to discuss performance budgeting, the following quote was provided as part of the summary of the findings of the workshop: "There was a feeling among participants that too many reports are of poor quality, representing nominal or even "malicious" compliance at best."[33]

Budget documents must present trend series data showing historical performance along with targets consistent with the forecast resourcing years presented in the budget

For results-based budget management (RBBM) to deliver transparency to the readers of budget documents, multiyear comparable data must be provided that enables the reader to identify performance trends in the performance indicators for both outputs and outcomes. Obviously, this is not possible from the outset of a newly instituted RBBM framework, but as the database is gradually built, the budget documents can incorporate trend analysis and reporting. This means that, rather than simply reporting a target for the coming budget, the budget papers should report the previous 3 years', say, actual results for each performance indicator, which should include as a minimum an estimate for the last financial year's results along with the target that was included in the previous year's budget, and the targets for the upcoming budget year and any forward years based on forecast resourcing. Table 1 shows how an output performance indicator set can appear in the budget documents (including notional actuals and targets).

[33] B. Perrin. 2007. Moving from Outputs to Outcomes: Practical Advice from Governments Around the World. In Breul and Moravitz, eds. *Integrating Performance and Budgets: The Budget Office of Tomorrow*. IBM Centre for the Business of Government. Rowman and Littlefield Publishers Inc. p. 138.

Table 1: Reporting Performance Data in Budget Documents

Output Name	Performance Indicator Description	Budget Year-3	Budget Year-2	Budget Year -1 Target	Budget Year - 1 Est. Actual	Budget Target	Budget + 1	Budget + 2
Provision of technical advisory services – Agriculture	Number of technical advisories issued	120	110	120	130	>125	>125	>125
	% of technical advisories rated by clients as good or better	65.2	68.5	70	69	>72	>75	>75
	% of advisories issued within 10 days of request	35	41.82	45.83	38.46	>44	>50	>50
	Cost per advisory ($,000)	8,3	10.0	10.1	9.3	10.6	<10.0	<10.0

Est. = Estimated out-turn, since budget documents are prepared before final data is available.

Source: Author.

Table 2 illustrates a possible approach to demonstrating linkages between outputs and outcomes in a budget document, and Table 3 provides an example of an appropriations layout. The appropriation amounts related to an output may have been determined using cost accounting to methodically distribute budgets from a Program Budget structure to each of the outputs of the agency. The funds may actually be appropriated by Program.

Table 2: Presenting Outputs According to Outcomes

Outcome Description(s): Primary school students are well-prepared for secondary schooling								
Outcome Indicator Descriptions		Target 20yy-1	Estimated Actual 20yy-1	Targets 20yy	Estimated Actual 20yy	Targets 20yy+1	Targets 20yy+2	Targets 20yy+3
Output: Provision of Primary Education Services								
Performance Indicator Class	Performance Indicator Descriptions	Target 20yy-1	Actual 20yy-1	Targets 20yy	Estimated Actual 20yy	Targets 20yy+1	Targets 20yy+2	Targets 20yy+3
Quantity								
Quality								
Timeliness								
Financial								

yy = to be substituted by numbers denoting the year.

Source: Author.

Table 3: Possible Appropriations Layout

Output: Provision of Primary Education Services						
CURRENT OPERATING EXPENDITURE						
Acc.	**Item**	**Details of Expenditure**	**20yy Actual Expenditure**	**20yy+1 Approved Budget**	**20yy+2 Budget Estimates**	**20yy+3 Budget Estimates**
PERSONNEL SERVICES						
	1	Salaries/Wages				
	2	Other Compensation				
	3	Other Benefits				
	4	Fixed Personal Expenditure				
OTHER OPERATING EXPENSES						
	1	Travel				
	2	Communication				
	3	Repairs and Maintenance				
	4	Transport				
	5	Office Consumables				
	6	Rent				
	7	Interest				
	8	Utilities				
	9	Training				
	10	Miscellaneous				
	11	Taxes				
	12	Professional Services				
TOTAL CURRENT OPERATING EXPENDITURES						
CAPITAL						
	Land and Land Improvements					
	Buildings and Structure					
	Office Equipment					
	Transport Equipment					
TOTAL CAPITAL						
	PROJECTS		**20yy Actual Expenditure**	**20yy+1 Approved Budget**	**20yy+2 Budget Estimates**	**20yy+3 Budget Estimates**
Acc.	**Description**					
	Personnel Services					
	Other Operating Expenses					
	Capital Outlays					
TOTAL PROJECTS						
STAFFING RESOURCES (full-time equivalent funded positions)						
Class 1						
Class 2						
Class 3						
Class 4						
TOTAL STAFFING						

Acc. = Account code
yy = to be substituted by numbers denoting the year.

Source: Author.

Capital Expenditure

Capital expenditure that impacts output delivery should be presented with forecasts of how it will impact the capacity of the organization to deliver its outputs over the expected useful life of the asset, if not in the budget then at least as part of any budget proposal justifying the capital expenditure. This should be translated into the specific outputs for which the asset can be expected to provide service in marginal impacts on each output's quantity, quality, timeliness, and cost performance indicator.

Failure to provide this kind of analysis during budget preparation and budget reporting suggests a lack of capacity within government to use RBBM concepts. To be unable to provide this type of background information is entirely inconsistent with not only RBBM, but also basic cost–benefit analysis. This is the data that should form the basis of any financial analysis of an investment proposal, either in government or the private sector. Appendix 5 provides an outline of budget submission templates for capital expenditure.

Data Management

Introduction

RBBM is highly dependent on data, and data management should be of utmost interest and concern to central agencies whose role is to coordinate the efficient allocation of resources among competing bids from government spending agencies. Data management includes determining

- an appropriate data dictionary,
- appropriate structural metadata and descriptive metadata,
- appropriate technical standards,
- appropriate fields and their names,
- appropriate records associations,
- critical data elements, and
- the database management protocols or standard operating procedures.

Data management is not something the intellectual forces behind the implementation of an RBBM system should ignore. As pointed out by Claudio Weber Abramo (2002): "The main piece of software required to structure information resides in the human brain; information technology is only the means to structure data according to an intellectual conception."[34]

Centralizing Database Management

Decentralized data input should be differentiated from centralized management of the database structure. The question arises as to whether database management and data storage for a government-wide outputs–outcomes framework should be centralized or decentralized. The case for a decentralized database relies on arguments around rapid updating of information in the database, the wide variety of

[34] C. W. Abramo. 2002. Access to Information—A Long Way to Go. OECD/OAS *Public Sector Transparency and Accountability: Making it Happen*. Paris: OECD Publishing. http://dx.doi.org/10.1787/9789264176287-en. p. 148.

data that is required across the whole of government, and the overwhelming task required if this data is to be entered from a central location. Decentralization argues that each information "node" should be responsible for gathering, processing, and making available the data relevant to their organization, or "node." However, these arguments do not negate the storage of data in a central database, the integrity and structure of which is controlled by a single, centralized entity. The storage of data for outputs and outcomes across the whole of government may be centralized for the following reasons:

(i) Speed in updating the data is not an essential requirement of an RBBM information system;

(ii) A very significant percentage of outcome indicators across all government agencies are likely to have a common root;

(iii) To benchmark common outputs across government agencies, a common database structure must apply across all agencies for critical data sorting/classification codes; and

(iv) Data entry can be decentralized while the database is centrally managed.

The case for centralization is, as described by Abramo (2002), that, "Decentralisation...comes with its own problems, chaos the first among them."[35] Unfortunately, in many jurisdictions, a decentralized approach has been adopted not only for data input but also for database specification and management, which has resulted in a lack of consistency in output descriptions, outcome frameworks, output performance indicators, and outcome indicators characterizing all of the RBBM frameworks examined. Furthermore, the descriptions have been unstable from one time period to the next, resulting in discontinuous time series and therefore an inability to undertake longitudinal studies and analysis of efficiency and effectiveness. A stable classification system is an essential ingredient to analysis, as noted below

> "Classification provides a method of distributing coded concepts in a sorted and meaningful manner. A good classification structure facilitates both immediate and longitudinal data management and retrieval across a number of different groups. Quality research requires the use of a reliable and suitable classification system."[36]

An obvious constraint to efficient implementation of RBBM is the lack of a centralized, well-designed and structured data classification and management framework, with rigorous quality controls embedded in the database management protocols. As Abramo (2002) points out

> "The key to an efficient information processing facility is dedicating time and effort to intelligently considering which information should be related to which other information; which aggregations are useful to which ends; and most importantly, how information is to be presented in order to be of the greatest value to [the] public...
>
> The overall objective—providing useful information to the public—must be constantly kept in mind (C.W Abramo (2002), p 147)."

The RBBM frameworks implemented in most jurisdictions appear to have dedicated insufficient time, reasoning, and resources to these questions.

As noted by MacKay (2011) in his analysis of the Australian RBBM system, the lack of attention to methodical data collection can impede the usefulness of the RBBM system, as he points out the following:

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[35] Footnote 32, p. 147.

[36] University of Sydney. Family Medicine Research Centre. http://sydney.edu.au/medicine/fmrc/classifications/

> "One limitation of the government's evaluation strategy was that it paid insufficient attention to the regular collection, reporting and use of performance information, via tools such as management information systems and performance indicators..."[37]

RBBM is a statistics-intensive system, with extensive nonfinancial indicators as important as financial accounts and indicators. For statistics to be useful in estimating relative importance and effectiveness of government interventions, an overarching and rigorous set of data standards and a data classification system are imperative.

Statistics are generally derived from base data, which must be collected and stored. A database structure must be designed with classification codes that enable end users to extract data and generate various reports in the various ways that may be needed by the analyst, specialist, politician, or general public. The design of the database coding structure should reflect the logic model of the RBBM framework, and is just as important to RBBM as the design of the chart of accounts is to the financial reports of government. The control and ongoing management of the database is equally important.

The design of an RBBM database structure depends on the type of analysis intended to be carried out on the data. The linkages between the data elements in the database need to be thought through at the design stage, including outcome descriptions, outcome indicator descriptions, outcome indicator targets, outcome indicator results, outputs, output indicator descriptions, output indicator targets, output indicator results, etc.—and their associated relationships. This should always transpire before the RBBM concept and framework is rolled out to line ministries.

The physical infrastructure, including software and hardware with its capacity designed to meet foreseeable data quantum, should be established for the storage and retrieval of data prior to rolling out the system across the whole of government. The testing of concepts in pilot agencies has, as its primary objective, the identification of future software and hardware requirements to avoid unnecessary costs when the time comes to procure and establish systems that meet the whole-of-government needs.

Stable Output, Outcome Descriptions, Performance Indicators, and Outcome Indicators

A centralized approach to data management is not enough. One of the fundamental problems with almost all RBBM posturing systems was the lack of stability and relevance in their output descriptions, outcome descriptions, output performance indicator definitions, and outcome indicators. Tyrone Carlin (2002) recognized this issue, when he concluded that

> "The empirical review of performance indicator disclosure in recent Victorian budget papers over three budget cycles reveals considerable turmoil in indicator disclosure...users are often, by reason of high turnover, unable to observe time series results....Given the low survival rates noted in our empirical analysis, this means that in many cases, no actual data is ever reported in respect of performance indicators. Instead, during the (often brief) period of their survival, the only reported data is in the form of targets. An inability to compare actual outcomes with targeted outcomes is a fundamental flaw in any system of accountability. Likewise, the inability

[37] K. MacKay. 2011. The Performance Framework of the Australian Government, 1987 to 2011. *OECD Journal on Budgeting.* (3). p. 8.

> to construct consistent performance time series represents a serious weakness in the current budget accountability regime in Victoria."[38]

While Carlin (2002) recognized the importance of stable performance and outcome indicators, he did not resolve why the instability was occurring, although he speculated that the high turnover in performance and outcome indicators could be due to report preparers' desire to obfuscate, but suggested that

> "Explanations of variation in the budget papers we examined tended to suggest that changes were based on a desire to improve the extant performance indicator inventory, to provide an enhanced view of the underlying operations, efficiency and effectiveness of Victorian government agencies (footnote 37)."

The unfortunate truth is that unless the organizations' outputs are defined in a rigorous manner so their description will be stable over time, then the performance indicators will not be stable and the performance indicator time-series will be regularly terminated. The problem in Victoria is still unresolved.

In the United Kingdom (UK), Her Majesty's Treasury provides guidance on developing a framework for performance information in *Choosing the Right Fabric: A Framework for Performance Information*. Its Foreword notes: "Given the sophisticated demands for information from a wide range of stakeholders, including Parliament, government must respond in kind with world-class performance measurement and reporting systems."[39]

The Foreword is signed by the five heads of the collaborating organizations.[40]

Chapter 4 then goes on to list the five components of the FABRIC acronym as the desirable characteristics of a performance information system.

The system should be

> **Focused** on the organization's aims and objectives;
>
> **Appropriate** to, and useful for, the stakeholders who are likely to use it;
>
> **Balanced**, giving a picture of what the organization is doing, covering all significant areas of work;
>
> **Robust** in order to withstand organizational changes or individuals leaving;
>
> **Integrated** into the organization, being part of the business planning and management processes; and
>
> **Cost-effective**, balancing the benefits of the information against the costs.[41]

The guidelines issued by central agencies to assist line agencies in the development of their RBBM frameworks are full of catchy acronyms, platitudes, and phrases like "FABRIC" or "SMART," but rely too much on the reader having fundamental knowledge on the use and application of not only statistics

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[38] T. Carlin. 2002. Performance and Transparency: Are Australia's "Leading Edge" Systems Really Working? In OECD/OAS *Public Sector Transparency and Accountability: Making it Happen*. Paris: OECD Publishing. p. 148.

[39] HM Treasury, Cabinet Office, National Audit Office, Audit Commission, and Office for National Statistics. 2008. *Choosing the Right Fabric: A Framework for Performance Information.* London: UK Government. p. 1.

[40] The five organizations are Her Majesty's Treasury, Cabinet Office, National Audit Office, Audit Commission, and Office for National Statistics.

[41] Footnote 37, p. 11.

but also management information systems. Unfortunately, this is rarely the case and a more centralized approach to quality assurance and database management is called for, without exception.

Issues with Public Service Management

Some civil servants clearly struggle to define their ongoing outputs within the context of a good or service provided to an external client. Too often, the defense is that the outputs of the civil service are different from those of the private sector. This is a fallacy. Any output by the public service is equally capable of being delivered by the private sector. The basis of provision of policy advisory services by a quasi-independent civil service is that, in theory, the civil service is not beholden to any vested interests and is therefore able to give independent and unbiased advice to government ministers.

Many public service managers tend to rise to management positions with little, if any, applied training or experience in organizational management concepts, although they may have accumulated some on-the-job experience in human resource management in a supervisory role at some point during their rise to the top. Bureaucrats tend to be promoted based on their technical expertise in a particular policy area, but have limited knowledge or use of performance indicators in organizational management.[42]

Consequently, while performance indicator specification, data collection, data storage, and data use become, in theory, a major part of the public servant's field of responsibility upon promotion to a position of manager, in practice, they may have little understanding or experience in any of these skills. Public service managers often have little or no experience in establishing internal management systems, because management systems within the civil service are usually inherited as part of the organization's history, or imposed from outside the organization by a specialist/central agency. Organizational management is very different from the simple human resource management function involved with staff supervision.

Internal management skills combined with fundamental technical knowledge are critical to improving organizational productivity and achievement of performance targets. However, due to the (persistent) absence of a rigorous accountability system across most public service agencies, combined with weak implementation of RBBM, public service managers are able to postpone indefinitely the rigorous application of performance indicators in their management processes and procedures.

RBBM, as a system, is well suited to a "hard" style of management, whereas public service is often characterized by a "soft" style. The soft style of management can be blamed for the failure of central agencies to dictate corrective actions when ministries submit poorly defined outputs, outcomes, or performance indicators. The failure of central agencies to impose discipline and quality assurance is explained away under the guise of wanting the line agency to "own" the output. However, the ministries do not "own" the output but, in essence and in fact, have been awarded a notional "contract" to supply the output. Government does not "owe" ministries a right to their existence, or public servants a right to their employment, and yet the "soft" style of management—allowing ministries to "own" the output—seems to take this as their starting point.

Such an approach is an abrogation of duty by the central agencies, particularly because the output is funded from the national budget and the performance indicators are supposed to specify the service delivery aspects of the output, commensurate with funding provided under the central agencies' oversight.

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[42] There are some exceptions to this, such as the health, education, and engineering-based areas of government, where performance indicators have long played an important part in their day-to-day efforts.

However, central agencies are not able to drive change without unflinching support from the political actors in the face of bureaucratic resentment, antipathy, and antagonism. During these periods of the reform process, political support for bureaucratic reformers is essential and critical. It is therefore imperative that, before undertaking change, a "plan of attack" is devised and clearly articulated to the political actors, to obtain their "buy-in" to a disciplined enforcement of reform without ambiguity or equivocation. The RBBM reform must address the weaknesses identified in Chapter 5 and must adopt measures dealing with the desired characteristics listed therein.

Institutionalizing Quality Assurance

Central agency personnel's lack of interest in, and lack of understanding of the RBBM business model has undermined the integrity of implementation of many RBBM frameworks. Whether this lack of interest or understanding was a consequence of the lack of an overarching database management framework to facilitate implementation of RBBM is moot. In any case, the absence of an integrated approach to data management and analysis allowed a multitude of interpretations of various aspects of RBBM frameworks to be manifested across agencies within countries. This has allowed bureaucracies to produce performance reports that lack rigor, avoid accountability, and, in many cases, deliberately obfuscate performance.

For a government-wide budgeting system, no matter how simple or complex, quality assurance can be institutionalized in only one way—by a centralized mechanism of control of classifications and review of both financial and nonfinancial database elements, or analytical elements, to ensure consistent application of principles, guidelines, and definitions.

While central agencies often issue a reasonable set of guidance describing what an output or outcome description should be, enforcing adherence to guidance has been problematic. It is unclear why in this time of large computer storage capacity and quick data transfer speeds that central agencies have permitted data storage and data standards to be devolved to line agencies such that central agencies no longer have access to reliable performance information. Furthermore, the descriptions of outputs and outcomes and their associated performance indicators change according to the whims of ministerial or departmental leaders, without the application of database management protocols designed to ensure comparability from one period to the next. The integrity of time-series data is thereby compromised, often irretrievably. This is the same as allowing departments to create their own chart of accounts or economic and functional classification systems separate from the rest of government.

A centralized database ensures control over the relationships within the database and, if managed by persons with appropriate understanding of data classification and database management, should ensure that the integrity of data time-series is defended across time periods. Unless a centralized database is established where performance information is stored systematically, and from which performance data can be confidently extracted for analysis as to comparability of data in a single time-series, the RBBM system will inevitably produce inconsistent data that might inadvertently produce policy options based on flawed evaluations. Any changes that budget-dependent agencies seek to make to data elements, descriptions, and relations should be channeled through a centralized control mechanism that would screen the proposed changes for adherence to data classification principles, and ensure the integrity of time-series data through "translation files."[43]

[43] Translation files are electronic files that interface between the analyst and raw data in the database. The translation files convert data in a time-series according to a new organizational or data classification structure. This ensures that the analyst uses comparable data from the "old" structure to the "new" structure.

Tried and trusted database management protocols have been relinquished of late, or in the case of many countries, never adopted, thereby diminishing the ability to analyze RBBM data and reducing transparency.

Developing an Inter-temporally Stable Outcome Prioritization Framework for Outputs

In the Napoleonic presidential systems, such as that of Indonesia, the Philippines and the United States (US), a set of "presidential priorities" is often prescribed in which the allocation of fiscal space is expected to be given precedence or preference. In parliamentary democracies, governments often produce papers that outline their priorities. Priorities change through the financial year as economic circumstances change and social topics gain prominence. If government priorities result in a new set of objectives or outcomes with each change in government or each change in circumstances, then inconsistencies and breaks in time-series data are inevitable. Thus, the database structure must accommodate the identification of new government priorities and changes in planning priorities, not only with every change of government but with every change of priority within a government's term. The data structure cannot be completely overwritten every time a priority changes.

New Zealand presents a case where the classification of government priorities regularly changes that makes time-series analysis problematic. As noted by Kibblewhite and Ussher (2002):

> "Since the mid-1990s, this requirement has been met by various sets of strategic priorities under a variety of names. There have been **Strategic Result Areas** and **Strategic Priorities** and **Overarching Goals**. Currently, there are **Key Government Goals to Guide Public Sector Policy and Performance**...In general, these strategic priorities have not been goals as much as statements of broad direction. They are not tightly specified, and no targets or quantifiable measures have been developed to monitor progress against them (footnote 23)."

Several jurisdictions maintain a planning function separate from the financing function. Such jurisdictions need the data structure to facilitate identification of planning priorities within the resource allocation framework. If the definitions of objectives in the planning system change from one planning period to the next, then inconsistencies and breaks in time-series data are inevitable, thereby undermining the usefulness of an RBBM framework. If, as in the Indonesian and Philippine situations, the planning framework does not use a framework common to and synchronized with the financing framework then, without an overarching classification system, inconsistencies are inevitable.

Even in jurisdictions where the planning and financing functions are integrated, such as Australia and New Zealand, they need to identify the various initiatives undertaken within separate organizations that may target common outcome objectives and common outcome indicators. Such "cross-organization programs," as they are sometimes called, can be accommodated in a number of ways, but the simplest and perhaps most economical and effective approach involves linking each organizational output with one or more common outcome indicators, classified under a common outcome description classification framework.

Outcome indicators must be, in general, inter-temporally stable and reflect the various socioeconomic sectors in which government has historically intervened. Changes in policy priorities can be reflected in outcome indicator targets rather than creating completely new outcome descriptions. The framework could be constructed within a relational

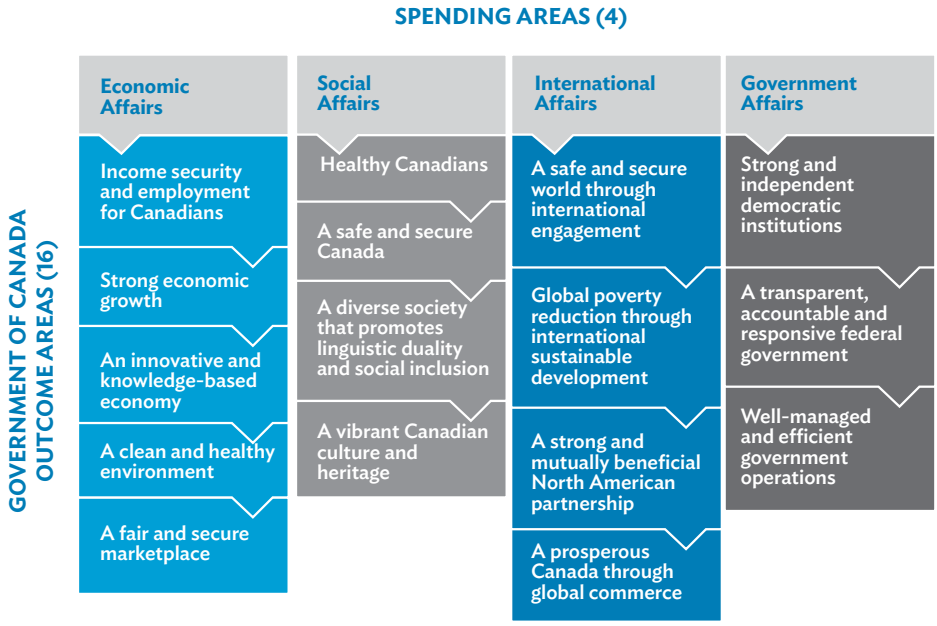
Changes in policy priorities can be reflected in outcome indicator targets rather than the creation of completely new outcome descriptions

database, thereby making analysis, reporting, and aggregation a relatively straightforward exercise. Perhaps a most practical and efficient approach to identifying common linkages to outcomes across government agencies is to use, as a guide, the preexisting and rigorously developed classification framework of COFOG as the basis for an outcome indicator classification system.

The COFOG framework was developed over many years with inputs from the Organization for Economic Co-operation and Development (OECD), the United Nations (UN), the International Monetary Fund (IMF), and others. The COFOG framework provides a comprehensive classification structure that spans all government activities, and is based on a study of the historical interventions by governments in the socioeconomic sphere, within which outcome descriptions may be grouped, and associated outcome indicators may be linked to outputs. The advantage of using COFOG to guide the development of an outcome indicator classification system is, firstly, it is comprehensive and encompasses the totality of government interventions and, secondly, most countries have already identified the COFOG classification codes by which their expenditures are coded and classified. Linking outcome statements and identifying appropriate outcome indicators under each COFOG Division and Group is relatively easy and inexpensive, which can use most, if not all, the existing budget coding to create an immediate reporting environment.

Canada recently defined a set of 16 "strategic outcome areas." The set is part of Canada's "whole-of-government framework" and Canada's programs[44] and "tailored" outcome descriptions of departments must be classified under the set. Canada has not yet created formal linkages of programs to outcome indicators in each of the 16 areas. The outline is shown in Figure 5.

Figure 5: Canadian Whole-of-Government Outcomes Framework



Source: Treasury Board of Canada Secretariat, Whole-of-Government Framework. http://www.tbs-sct.gc.ca/ppg-cpr/frame-cadre-eng.aspx

Prior to 2010, each agency had its own outcome descriptions, which could change from year to year and

[44] Canada does not define outputs for its programs.

made analysis of efficiency and effectiveness of programs problematic. With the 16 strategic outcomes, a stable reference point was created and under it, a stable set of outcome indicator definitions can also be created.

Why Canada did not emulate the COFOG framework more closely in developing its 16 outcome areas is not known. The reason may have been a desire to be different, or the structure developed may have more closely reflected the government's program structure and policies, or it might have simply been an oversight. Nevertheless, it is clear where much of the COFOG structure can be aligned within the 16 outcome areas with which Canada chose to link all its programs.

Singapore also established sets of "strategic outcomes" across six high-level policy areas, as described in Chapter 4. Other countries linked their programs or outputs to outcomes, but without an overarching analytical structure. As noted by Kibblewhite and Ussher about New Zealand, the overarching outcomes framework is not necessarily stable , as shown in the following:

> Parliament appropriates for outputs. The Public Finance Act, however, requires ministers to identify in the estimates (ministers' requests to Parliament for appropriations): **the link between the classes of outputs to be purchased by the Crown and the government's desired outcomes**.
>
> Current practice at making this link is variable. For the most part, it has been done in a cursory fashion merely by asserting that **output a** contributes to **outcome goal b**.[45]

The Philippines also followed a path that seeks to link all government outputs to a set of presidential priorities that change from one President to the next and from one year to the next.

Depending on the nature of government's priority statement(s), the linkage can become frivolous when the government's policy priority is stated in a pithy catchphrase such as, "Reducing poverty through inclusive growth and good governance." Under this policy statement, the bureaucracy might be required to link all expenditures, so that even military spending is part of the poverty reduction effort even though the priority statement does not mention national or personal security. In addition, with every change in presidential priorities, the outcome structure changes. With every change in president, the data becomes less connected across periods, unless the priorities can be framed within a stable, overarching outcome indicator classification structure.

A well-structured and stable set of outcome descriptions and outcome indicators that can capture government priorities, no matter who is in power, is the kind of outcomes structure that must frame all governments' output interventions. For this to be possible, the overarching outcomes classification system must map to all government expenditures and policies. However, not all government expenditures must map to government's stated priorities. If they did, the priority statements become trivial and all expenditure programs have a claim to equal priority, resulting in no prioritization.

An illustration of how an outcomes description classification framework might be aligned with COFOG is in Appendix 3.

[45] Footnote 23, p. 87.

Steps to Implementing Reform

From the preceding review, we can identify some obvious steps to prepare to undertake reform[46] and further steps to take during implementation. The more obvious are listed in Table 4.

Table 4: Implementing Reform—Some Practical Steps

Steps to Implementing Reform	Time Required
1. **Get your organizational structures sorted into an efficient configuration—FIRST**	**Months**
a. Set up a reform design Steering Committee (SC) (Team to come from leadership, with input from the Project Management Team (PMT)	T = 0
b. Set up the PMT (leadership to come from practitioners within the organization—outside expertise may inform both PMT and the SC)	T + 1
c. Identify the budget processes and procedures that are the subject(s) of reform (Terms of reference by SC, specific recommendations endorsed by SC on the advice of practitioners from PMT)	T + 1-4
d. Design the proposed changes to the processes and procedures and identify where they impact on organizational units and where they impact on data collection and data entry to data storage facilities (designed by PMT with input and guidance from external experts, under the guidance of SC)	T + 2-5
e. Identify data storage requirements relative to existing facilities and develop a future procurement and implementation plan (by PMT)	T + 3-6
f. Design the model accountability structure that optimizes operational efficiency (by PMT)	T + 3-6
g. Analyze current organizational structure against proposed budget accountability framework (PMT)	T + 4-8
h. Design optimal organization structures to match budget structure (PMT)	T + 4-8
i. Map phased transition actions necessary to move organizational structures and maintain financial management integrity (PMT)	T + 5-8
2. **Commence implementation of revised organization and budget structure—SECOND**	
a. Set up project steering committee (PSC) to oversee organizational restructuring	T + 4
b. Design staff communication strategy	T + 5-8
c. Disseminate objectives of reform and set out the phased development stages implementing organizational restructuring and revised budget processes and procedures	T + 5-9
d. Establish information technology (IT) steering committee to oversee procurement and training in new IT hardware and software	T + 5
e. Restructure the organization in line with the proposed budget accountability structure, in harmony with any changed financial management processes and procedures required to facilitate transition	T + 8 - 26

Source: Author.

[46] These steps do not attempt to identify internal or external approval and endorsement activities that need to be undertaken at frequent points along the way.

4 Case Studies on the Current Status of Results-Based Budget Management

Introduction

In assessing the current state of results-based budget management (RBBM) in the eight countries examined, the author was only able to examine materials readily available from sources on the internet, although some assessment of Indonesia and the Philippines was aided by the author's firsthand knowledge of working within their systems. The assessment did not involve in-depth discussions with current practitioners in any of the countries concerned.

The countries examined were Australia, Canada, Indonesia, Malaysia, New Zealand, the Philippines, Singapore, and the United Kingdom (UK). To make a quick assessment of the current state of RBBM in the eight countries, 10 RBBM aspects were assessed:

(i) the RBBM logical framework specified for the national budgeting system,
(ii) database management,
(iii) output definitions,
(iv) output classification framework,
(v) output performance indicator definitions,
(vi) outcome definitions,
(vii) outcome indicators,
(viii) outcome classification framework,
(ix) analytical reports, and
(x) quality assurance practices.

The criteria used to assess each of these aspects are in Appendix 7 and the documents reviewed for each country are listed in Appendix 8.

Given the limited time allocated to preparing this report, the review focused primarily on the budget documents and annual reports of the central agencies of selected line agencies for each jurisdiction, along with the documents of the central agencies generally believed to be responsible for driving the implementation of RBBM frameworks.

The general finding is that line agencies implement RBBM concepts to a higher standard than central financing agencies in each jurisdiction, but there is a wide disparity from agency to agency in the

quality of the budget documents and annual reports in all jurisdictions. This disparity is largely rooted in poor output specification, resulting in poor output performance indicator specification, poor outcome specification, and in many cases, a disconnect in the logic within documents. For example, the Australian Department of Finance budget document and annual reports focus on task reporting rather than outputs. These tasks or projects should normally be treated as a service delivery data point of an output description, not as the organizational output description. Sometimes, these projects may not even be the data point of an output but instead constitute a capital creation activity designed to improve the capability of the organization to deliver its outputs.

Outcomes were largely directed at the achievement of low-level tasks and not on the achievement of national socioeconomic targets.

The RBBM systems of Australia and the UK were in a state of flux for several years and appear to have lost most, if not all, of their integrity from a whole-of-government business model perspective (although there were still islands of excellence within some spending agencies).

New Zealand struggled to come to terms with the notion of outcomes, and even its output performance indicator and output descriptions appear to be deteriorating over time.

Canada is the best of the eight jurisdictions, even though it does not specify outputs for its programs or have a particularly well-structured set of program performance delivery indicators. Canada has well-described programs, and the program titles give a better description of the type of outputs to be expected than the output descriptions of other jurisdictions, including Australia, Indonesia, and the UK. Singapore and Canada are unique in that they created a high-level set of outcome descriptions that cut across spending agencies, and to which agencies must link their programs. This facilitates the tracking of programs with common goals and should facilitate analysis by central agencies.

Australia

Australia has undergone a series of budgetary reforms since it commenced introducing RBBM in the late 1980s and early 1990s. Until 1997, Australia's introduction of RBBM followed a relatively trouble-free path, which was considered to be well constructed and implemented. In the 1999–2000 budget, Australia introduced the concept of outcomes and outputs and appropriated funds according to outcomes. For the appropriation mechanism to be functional, the appropriation bill had to be read in conjunction with "portfolio budget statements" to clarify the purpose of an appropriation. The statements identified the outputs each agency was intending to produce and the funding allocated against those outputs, along with performance indicators for the outputs and outcomes.

From the 2009–2010 budget, the Australian federal budget transitioned from an outcome budget supplemented by an output allocation to an outcome budget supplemented by a program allocation. In 2015–2016, funds continue to be appropriated by outcomes, and the portfolio budget statements detail supporting information according to "programs" and "subprograms."

The *Outcomes and Outputs Framework Guidance Document* (the Guide) issued in November 2000 by the Department of Finance and Administration, showed a clear and logical framework for RBBM.[47] However,

[47] Department of Finance and Administration. 2000. *The Outcomes and Outputs Framework Guidance Document*. Canberra, Commonwealth of Australia.

the Guide did not clearly articulate that output performance indicators were in the nature of service delivery standards. (No requirement was set for a "timeliness" indicator for delivery of outputs to end customers or clients). Its treatment of outcomes was confused. Paragraph 1.2.5 of the Guide, which deals with cross-agency outcomes, demonstrates a lack of appreciation of how an outcomes classification system aligned with, say, classification of functions of government (COFOG), could have assisted in the analysis of output effectiveness. Furthermore, guidance on how to describe outcomes ignores the role of outcome indicators in defining the nature of an outcome. Instead, the Guide suggests incorporating a number of descriptive aspects into the outcome description that might be better left demonstrated by linkage of an output with a set of outcome indicators. Many of the outcome description examples are objective statements related to undertaking tasks, more in the nature of organizational outcomes rather than national outcomes resulting from the provision of outputs. For example, "The investigation and prevention of crime against the Commonwealth, and the protection of Commonwealth interests in Australia and overseas" (footnote 40) is an outcome adopted for the Australian Federal Police. This is more of an output statement than an outcome statement. Surely the outcomes that the Australian Federal Police seeks, inherent in this output, include (i) a society free of crime; and (ii) safe and secure Australian assets, both domestic and international.

Similarly, "Contribution to Australia's export trade performance by providing financial and other assistance to eligible organisations" is not an outcome but a statement of what is hoped as a relationship. The outcome should be worded as, "A healthy level of exports of Australian products consistent with Australia's economic potential." This would be the outcome to which Austrade hopes to contribute through the delivery of its outputs of "export finance facilitation" and "technical advisory services."

When it comes to providing clarity on defining performance indicators, the Guide becomes lost in detail and lacks direction in how a performance indicator should be described. For example, "Centrelink people have the skills to do their job and are committed to delivering services to our customers (measured by survey)" is not a performance indicator for an output but an objective statement. How does Centrelink propose to measure skills? How do they measure commitment to delivering services? When they can define the measures for these aspects, then they might be describing performance indicators (although not necessarily a measure of the output delivered, but rather an internal measure of their own skill set and readiness to deliver an output).

The "Guide to Preparing the 2015–16 Portfolio Budget Statements" issued by the Department of Finance (DOF) in 2015 shows a significant conflation of corporate planning-type elements with the national budgeting approach.

Also, the ring-fencing of "Administered Items" is misconceived. Given that 80% of the Commonwealth Budget is made up of "administered" items, this should be a significant issue. The ring-fencing of Administered Items suggests that either

- The bureaucracy was worried it would be held accountable for aspects of output production that it considered were beyond its control;
- The bureaucracy was not savvy enough to define its own output in terms of administering grants and payments systems; and/or
- It reflects the notion of "outcome budgeting," which requires that the bureaucracy determine the outputs to be produced given funding allocated by the Parliament for the achievement of outcomes, and that administered funds were grants and social welfare payments that were nondiscretionary as far as the civil service was concerned.[48]

[48] As noted in Chapter 2, this approach does not conform to reality and it is considered inappropriate to RBBM. The Australian system has moved away from outcome budgeting and is in the process of adopting and improving a program budget aligned with outcomes, similar to the approach used in Canada, albeit without the overarching outcomes classification framework.

MacKay (2011) notes of the Australian experience:

> "Australia's performance framework during this period (1997–2007) provides a strong example of how not to go about constructing a system of performance indicators. The framework encountered many conceptual and data difficulties. It also suffered from severe problems of implementation by departments and agencies, and from a lack of effective oversight by the DoF (Department of Finance)."[49]

Some of the reasons for the currently weak RBBM framework in Australia, as documented by MacKay (2011) (footnote 36), include poor oversight by central agencies, a lack of application of data classification standards, and unstable definitions from one year to the next. As seen in Figure 6, the assessed overall score for the Commonwealth's output definitions was 4 out of a possible 10 and for output performance indicator definitions, the score was only 3 out of a possible 10. Furthermore, the lack of a coherent outcomes classification structure scored the budgeting system a 0 out of 10, while the outcome indicators used scored only 5 out of 10. These are hardly auspicious scores for a system in development since before 1999.

In its 2007 report, 20 years after the Commonwealth of Australia began to introduce its RBBM, the Australian National Audit Office (ANAO) noted that

> "Approximately half of the surveyed agencies stated that their key priority in the ongoing application of the framework was to develop better performance indicators. The main reasons given were to overcome difficulties in measuring and reporting against current performance indicators, and to improve the quality and relevance of reporting to enable better use of performance information in management decision making."[50]

The ANAO report goes on to say

> "...In particular, approximately 60 per cent of surveyed agencies considered that not all of their outcome indicators were measurable, and targets and benchmarks were generally not identified...(footnote 50)"

This says nothing about the quality of the other 40% of surveyed agencies, whose outcome indicators are also likely to be suspect in one form or another. The ANAO adds: "The ANAO identified that almost two-thirds of the performance indicators were not sufficiently specific."[51]

One wonders how long it should take the bureaucracy to get their performance indicators right, when it is not a complex or difficult academic exercise. Is 20 years not enough? It is likely that many of the issues surrounding the poor performance indicator specification identified by the ANAO is rooted in poorly specified output descriptions; poorly specified outcome descriptions; the absence of a robust, overarching data classification framework; and lack of capacity in, and understanding of the importance of statistical methods, both within central agencies and line agencies.

The DOF required that agencies seek its approval for changes to their outcome statements, but did not require its approval for changes to their output descriptions or performance indicators.

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[49] Footnote 36. p. 43.

[50] Australian National Audit Office (ANAO). 2007. *Application of the Outcomes and Outputs Framework*. Canberra: Commonwealth of Australia. p. 59.

[51] Footnote 50, p. 54.

Australia's DOF issued a discussion paper, in an attempt to identify ways in which its RBBM framework could be improved. The discussion paper admits that

> "Since the 1980s, the Commonwealth has attempted a number of reforms to improve the reliability and scope of information on the performance of the Commonwealth public sector with mixed results....
>
> No reforms have yet succeeded in embedding a performance focus into the workings of the Commonwealth public sector as a whole."[52]

However, the questions raised in the paper suggest that the DOF has not recognized that its weak control from the center significantly contributed to the poor state of affairs, and the changes proposed in the review exercise are unlikely to address the fundamental weakness of the Australian system, which includes poorly defined outputs, a lack of data structure, and no centralized management information system to control quality and provide consistent structure across all agencies. The solution inherent in the DOF-issued paper is the creation of even more layers of potentially poor quality information.[53]

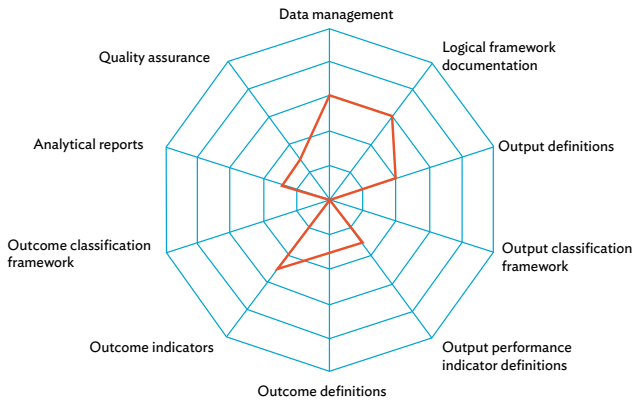
The DOF, in its 2016 Portfolio Budget Statements, lists three outcomes that are not written as outcomes, but as organizational objectives to provide support in three areas. Nothing is said about how the outcomes should look or manifest themselves in the community. One is reminded of the quote from Confucius in *ADB's Handbook of Style and Usage, 2011 Edition:*

> If language is not correct, then what is said is not what is meant;
> if what is said is not what is meant, then what ought to be done remains undone...
>
> —Confucius

Figure 6 shows how the wide variability across government agencies in the quality of performance indicator definitions and output and outcome definitions resulted in low scores for output definitions, output performance indicator definitions, outcome definitions outcome indicators, quality assurance, and analytical reports.

As found across almost all jurisdictions, the central agencies are among the worst performers in output definitions, outcome definitions, and specification of their respective performance indicators.

Figure 6: Characteristics of Australia's Results-Based Budget Management Implementation



Sources: Author. See Appendix 8 for a list of resources used as the basis for assessment.

[52] Commonwealth Department of Finance. 2014. *Enhanced Commonwealth Performance Framework: Discussion Paper*. Canberra: Commonwealth of Australia. p. 1.

[53] The paper proposes additional publications including a corporate plan, a performance plan, and an annual performance statement. These are mostly duplications of information that is, or could be, included in portfolio budget statements and annual reports. How this is expected to improve the quality of performance data and implementation of the (already adequate) guidelines is anybody's guess.

In the DOF Annual Report for 2013/2014, the department seeks to enlighten us as to its performance in Programme 1.1 with the following information:

Table 5: Department of Finance Annual Report 2013/2014, Extract from Table 1, p. 35

Key Performance Indicator	Result
Accurate and timely financial statements are prepared as part of the budget documentation.	Achieved
Appropriation bills accurately reflect the decisions of the Government of Australia, and are finalized for introduction into Parliament as agreed by the government.	Achieved

Source: *Department of Finance Annual Report 2013/2014*. p. 35.

None of the preceding are key performance indicators. Instead, these are statements of objectives. The reader must take for granted the DOF's assertion that it achieved these objectives. There is no inherent time-series of performance data that can be constructed from information contained in this table. Almost all key performance indicators set out in the DOF Annual Report for 2013/2014 are objective statements, not performance indicators. This characteristic is prevalent year after year, demonstrating the fundamental problem with instilling a performance culture when the agency responsible for overseeing its integrity constructs such flawed performance indicators.

Canada

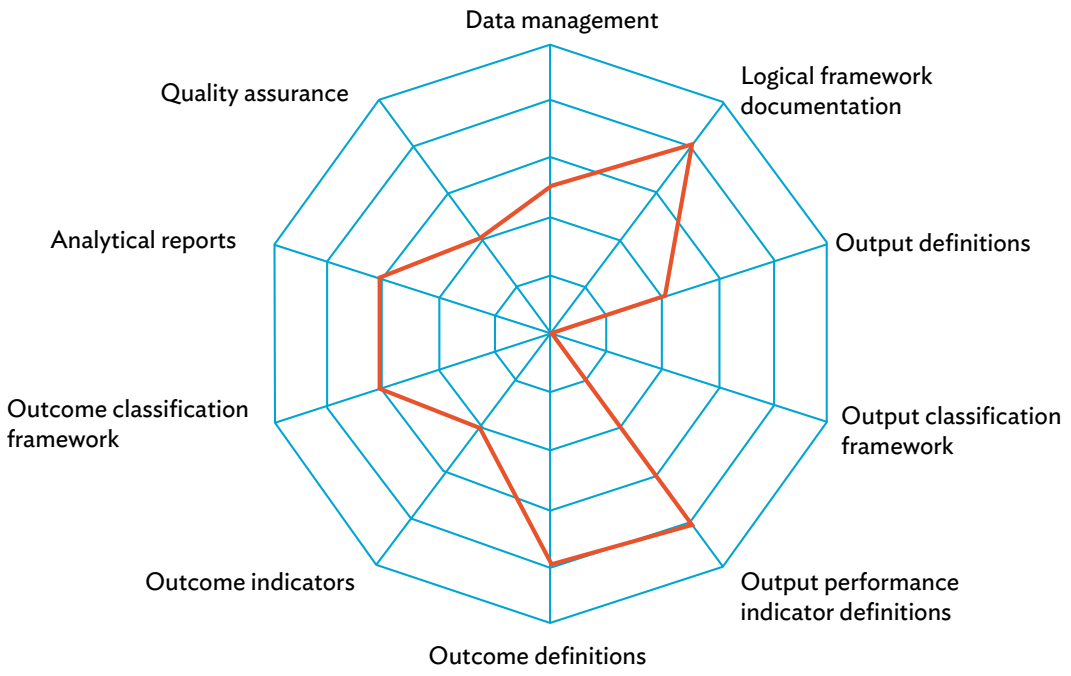
Canada has been at the forefront of RBBM implementation for a number of years. It has made marginal improvements to its framework without the radical changes of other jurisdictions such as Australia and the UK. This may be testament to the bureaucrats' ability to manage political transitions or it may reflect the effectiveness of the Treasury Board of Canada in managing the reform processes and developing guidance materials and standards.

Canada's ministries produce departmental performance reports that have a well-structured outcomes framework linked to a well-structured program budget, along with performance indicators for each program. This is a blend of performance-based program budgeting (PBPB) and RBBM. Prior to 2010, Canada's outcomes structure was as poorly conceived as that of other jurisdictions assessed within this report. However, from 2010, Canada introduced a constant set of 16 "strategic outcomes." All programs across government must be linked to at least one of the outcomes. This creates an analytical tool that enables policy analysts to identify all interventions targeting the same outcome area.

However, the outcomes structure lacks a set of outcome indicators correlated across programs, and the annual reporting documents do not show a series of performance indicator targets associated with actual performance, but only a report on the most recent budget year's actual achievements versus targets.

Canada scored an "8" for output definitions (Figure 7) even though it has not defined program outputs. Instead, it uses program or subprogram descriptions in place of output descriptions. The program and/or subprogram descriptions used in Canada are generally superior to many of the output descriptions

Figure 7: Characteristics of Canada's Results-Based Budget Management Implementation



Source: Author. See Appendix 8 for a list of resources used as the basis for assessment.

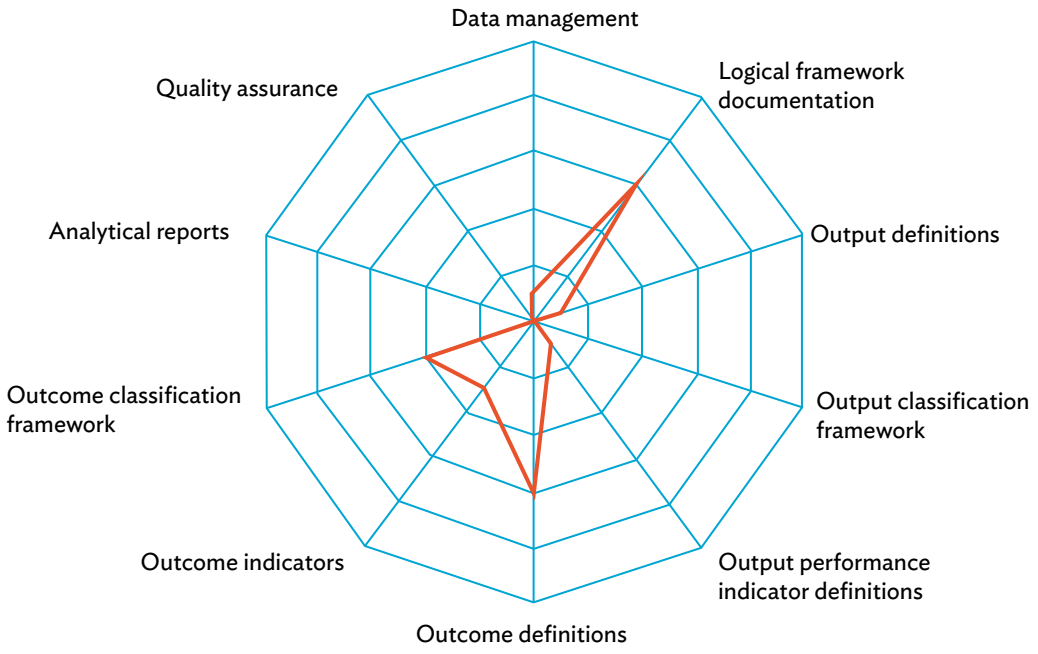
used in other jurisdictions such as Australia, Indonesia, and the UK, and are relatively clear in identifying the type of good or service the program and/or subprogram provides. However, Canada does not have a classification system that identifies an association between programs and/or subprograms that produce similar goods or services. Therefore, Canada received a score of "0" for an outputs classification framework.

Canada has undertaken a slow but consistent reform path, and has not suffered from disruptive changes to its reform direction. However, its program performance indicators are limited and do not adequately or consistently capture the complete set of nonfinancial service delivery aspects of program outputs including quantity, quality, and timeliness. Much can still be done to improve Canada's RBBM system.

Indonesia

Indonesia commenced implementing its RBBM in 2003 with the passage of Law 17/2003. This was further emphasized with the passage of Law 25/2004. However, progress has been hampered by the lack of alignment between planning and budgeting documents in the RBBM terminology and concepts. This lack of progress should be viewed in context and in comparison with other jurisdictions that have embarked on a similar course.

Figure 8: Characteristics of Indonesia's Results-Based Budget Management Implementation



Source: Author. See Appendix 8 for a list of resources used as the basis for assessment.

Figure 8 assists with examining the current state of play with the Indonesian RBBM, and assessing it against the criteria listed in Chapter 3 as considered necessary for an effective RBBM.

Indonesia has a reasonably well-defined logic framework and a satisfactory set of outcome objectives defined within each Kementerian/Lembaga (ministry/agency), but the rest of the characteristics are below the requirements for an effective RBBM. Outcome indicators are often irrelevant or lack clarity as to what is being measured.

The root of the problem is the program budget structure that is the foundation for output definitions. Most program descriptions are worded as objective statements, not as program descriptions, so it is difficult for the reader to know what each program is producing. The output descriptions developed as an overlay to program budgeting are also worded as objective statements, inputs, or multiple activities, not as output descriptions, so the reader does not know what goods or services the bureaucracy produces.

Furthermore, many of the performance indicator descriptions were developed without considering what is measured or whether the measurement is possible or logical. It is as if words were plugged into the blank spaces merely to fill out a template rather than any thought given to service delivery, accountability, logical consistency, and rigor.

To remedy the poor output descriptions and performance indicator descriptions, the Indonesian Ministry of Finance recently attempted to introduce Arsitektur Dan Indikator Kinerja—ADIK, the aggregation of outputs at a higher level than what currently exists within each organization. It is unclear if this initiative will be successful because minimal training was done and any confusion resulting from the first phase introducing performance-based budgeting (PBB) is not likely to be corrected. Furthermore, no attempt was made to institutionalize a centralized quality assurance function.

In addition, the relationship between the Ministry of Finance and the central planning agency (Bappenas) suffers a disconnect between the outputs and outcomes specified for the national plan, and the outputs and outcomes specified for the national budget. Given that much of the functional spending in Indonesia is now undertaken by regional and local governments, a unified analytical framework is needed, from the national government to the local governments. But no mechanism is currently in place for the Ministry of Finance and Bappenas to control or manage such a system.

Malaysia

Mucciarone and Nielson (2011) note that interest in performance measurement in Malaysian government circles had its roots in the Manpower, Planning, and Modernizing Unit (MAMPU) Circular 2 of 2005, that introduced the concept of key performance indicators into the public sector management system, and which in 2010 became part of a "Government Transformation Program."[54]

The IMF suggests that the output-based "modified budgeting system" was in place for 20 years prior to the introduction of outcome-based budgeting (OBB) in 2012, which included extensive use of output performance indicators and delegation of virement[55] authority to managers to assist them in achieving results.[56] However, the report also found that, over time, the modified budgeting system degenerated into a compliance exercise with minimal use of performance data, largely because outputs were not correlated with outcomes. OBB is seen as a method of building on the foundation laid by the modified budgeting system.

The World Bank reports that Malaysia adopted a set of national program objectives and outcomes resourced through PBB. The World Bank also suggests that, in the future, development and operating expenditures would be integrated into a single budget for each ministry and that new programs would be identified that align with the national priorities. The report further states that Malaysia has identified six key priority areas in its Government Transformation Program—reducing crime, fighting corruption, improving student outcomes, raising living standards of low-income households, improving rural basic infrastructure, and improving urban public transport, known as the "National Key Results Areas." Key challenges are identified within each area, which are further divided into short-term priorities and long-term issues.[57]

The IMF reports that by 2015, nine pilot ministries had redesigned their program structures to link to outcomes, with plans to roll out the framework to all ministries.[58] According to the IMF report, the

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[54] M. Mucciarone and J. Neilson. 2011. Performance Reporting in the Malaysian Government. *Asian Academy of Management Journal of Accounting and Finance*. 7 (2). p. 37.

[55] The administrative transfer of funds from one part of a budget to another.

[56] T. Curristine et al. 2015. *Malaysia Technical Assistance Report—Strengthening Outcome Based Budgeting: IMF Country Report No. 15/266*. Washington, D.C.: International Monetary Fund. pp. 13–14.

[57] Footnote 54, p. 41.

[58] Footnote 54, p. 7.

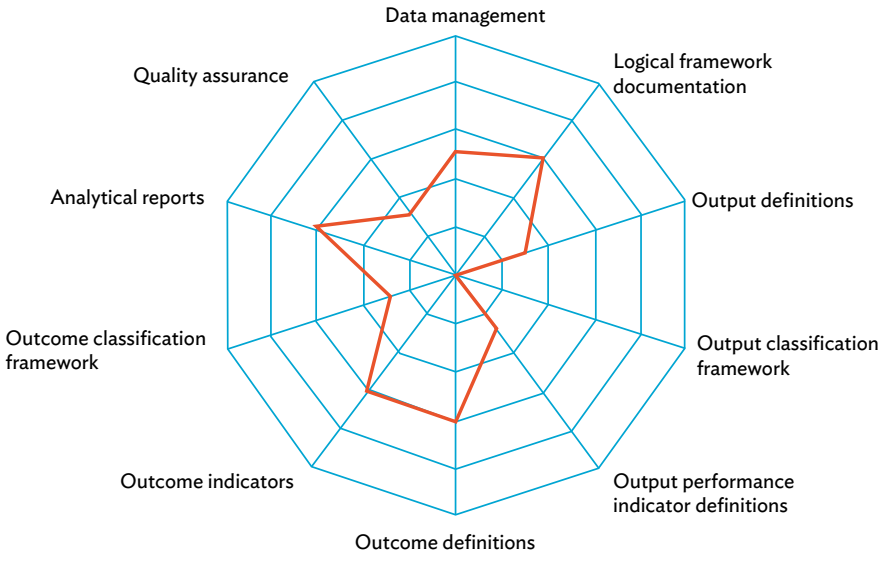
current outcomes structure has major issues with overlap, gaps, and prioritization. Outcomes have been "...designed for different purposes and at different times," which "...makes it difficult to arrive at a single, coherent set of outcome priorities for OBB."[59]

The lack of a stable outcomes structure is a fundamental flaw, particularly where the focus of the budgeting system is outcomes. The Malaysian system of outcomes can change from plan to plan, and year to year, creating an unstable data relationship between program outputs and outcomes.

Outputs and output performance indicators have been published since 2010 for programs. However, output definitions are often problematic, many being activities associated with delivery of an internal service or a partial output to the public rather than the output itself. This results in output performance indicators that often refer to activities and not a service delivery standard. Furthermore, the output performance indicators generally refer to a quantity of output with no measures incorporated for quality or timeliness of service delivery. This is understandable given that the output definitions themselves may be inappropriate, making identification of complementary service delivery standards problematic.

The budget estimates document is well structured for the presentation of performance data, with output performance indicators showing the latest available actual results for the year, 2 years prior to the budget year, and the last budget year's target. This enables the reader to make judgments about where performance is headed. However, the budget documents fail to include any outcome indicator, which is an important shortcoming because this is an OBB. The lack of outcome indicators dragged down the scoring for the "Analytical Reports" aspect in Figure 9, although it is still respectable. While the logical framework of the Malaysian system is well designed, many of the reports do not rigorously correlate programs with the outcomes to which they are linked.

Figure 9: Characteristics of Malaysia's Results-Based Budget Management Implementation



Source: Author. See Appendix 8 for a list of resources used as the basis for assessment.

[59] Footnote 57, p. 30.

Malaysia has two strengths to its current implementation path, as follows:

(i) the potential for "MyResults" as a central database for storage and controlling of performance data, and

(ii) a "...well-informed and highly motivated OBB team" to manage and guide implementation.[60]

Malaysia is investing significant resources in its information technology (IT) systems to support the presentation of performance information. Malaysia's dashboard system of reporting performance indicators is appealing, but at times there is a disconnect between the information presented in relation to high-level socioeconomic statistics and the output or program upon which a report is focused.

The inconsistent application of concepts detracts from Malaysia's RBBM framework and indicates a lack of quality assurance undertaken and control exercised by central agencies in ensuring well-defined outputs and well-structured performance indicators for output service delivery. The lack of well-defined outputs will ultimately detract from the analysis of allocative and operational efficiency.

New Zealand

In the case of New Zealand, output budgeting was introduced in 1989 and, in 2004, a pilot program was introduced to examine ways the budgeting process could increase its focus on outcomes beyond the focus on outputs.

The New Zealand Auditor-General in his 2008 report expresses disappointment with the New Zealand framework. The auditor-general laments that after 20 years

> "Overall, the poor quality of nonfinancial performance reporting by public entities is disappointing..."
>
> In my view, many entities' performance reports:
>
> - do not seem to set out coherent performance frameworks showing logical links from the medium-term outcomes information and organisational strategies to the annual output information...; and
> - do not have well-specified, relevant, understandable, reliable, and comparable performance measures and targets...
>
> Those preparing performance reports also need to better set out the elements of the reports by:
>
> - applying the definitions of the elements (in particular, of outcomes and outputs) – if the underlying elements are not properly identified and presented, the basis of the reporting is undermined; and
> - considering how to meaningfully aggregate elements (in particular, outputs and output classes) with enough detail to communicate a comprehensive yet succinct and coherent account of the outputs they deliver.[61]

[60] Footnote 57, p. 16.

[61] Auditor General of New Zealand. 2008. Discussion Paper—The Auditor General's Observations on the Quality of Performance Reporting. Wellington: Office of the Auditor General. p. 3.

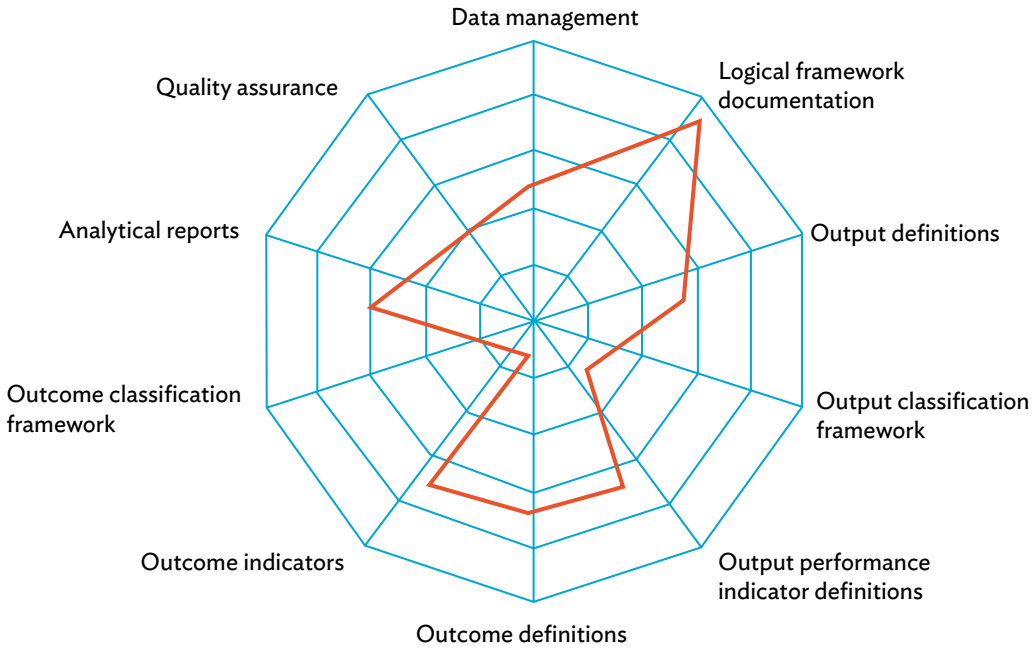
The auditor-general says that the outcome and output definitions are not rigorously defined, which undermines the basis of the performance report. He also suggests that the aggregation of outputs at the higher level is not done with proper care and diligence.

A review of selected agencies confirms the lack of structure provided to outcomes and deterioration in the output descriptions and their associated performance indicators.

One of the "outputs" the Ministry of Justice produced in 2011/12 is its "Sector Leadership and Support." Three of the performance indicators that the Ministry of Justice used to measure its output delivery performance are in Table 6.

While the format New Zealand uses for performance reporting is good, showing the previous year's actual performance against the targeted performance ("standard") and the actual achieved along with an explanation for any variance, the performance indicators themselves leave a lot to be desired (never mind the "output" description). The first performance indicator refers to the ministry's own policy criteria as the benchmark for performance, rather than an independent measure. We must also take at face value that the Ministry states it met 100% of its criteria 100% of the time. The second performance indicator is expressed as an objective statement, not as a performance indicator. Again, we must just accept that they achieved this vague goal. The third indicator potentially holds the minister to ransom. Again, it is not worded as an indicator.

Figure 10: Characteristics of New Zealand's Results-Based Budget Management Implementation



Sources: Author. See Appendix 8 for a list of resources used as the basis for assessment.

Table 6: Sector Leadership and Support

Actual 2010/11	Performance Measures	Standard 2011/12	Actual 2011/12	Variance Explanation
100%	Percentage of justice sector leadership advice and documentation that meets the ministry's policy criteria	100%	100%	
Achieved	Justice sector information assets, such as the Integrated Sector Intelligence System, are maintained and enhanced and two to three initiatives are delivered as per the annual work program	Achieved	Achieved	
Good	The minister will be requested to indicate his/her level of satisfaction with the quality of support and advice provided by the ministry in relation to its management of Crown entities and agencies.	Satisfactory or better	Very good	

Source: Statement of Service Performance 2011/12, Ministry of Justice. p. 5. Previously available through http://www.justice.govt.nz/publications global-publications.

In other cases, the output performance indicators, and the output descriptions are well written. It is this variability that results in a score of only "5" for both output descriptions and output performance indicator definitions in Figure 10. There is no outcomes classification framework, hence, a score of "0" in that measure in Figure 10. The output classification framework is limited to aggregation of similar outputs within an agency as an "output class," but there is no classification of output types across agencies, therefore, inhibiting benchmarking of output performance across agencies. Thus, a nominal score of "2" for the existence of an output classification framework in Figure 10.

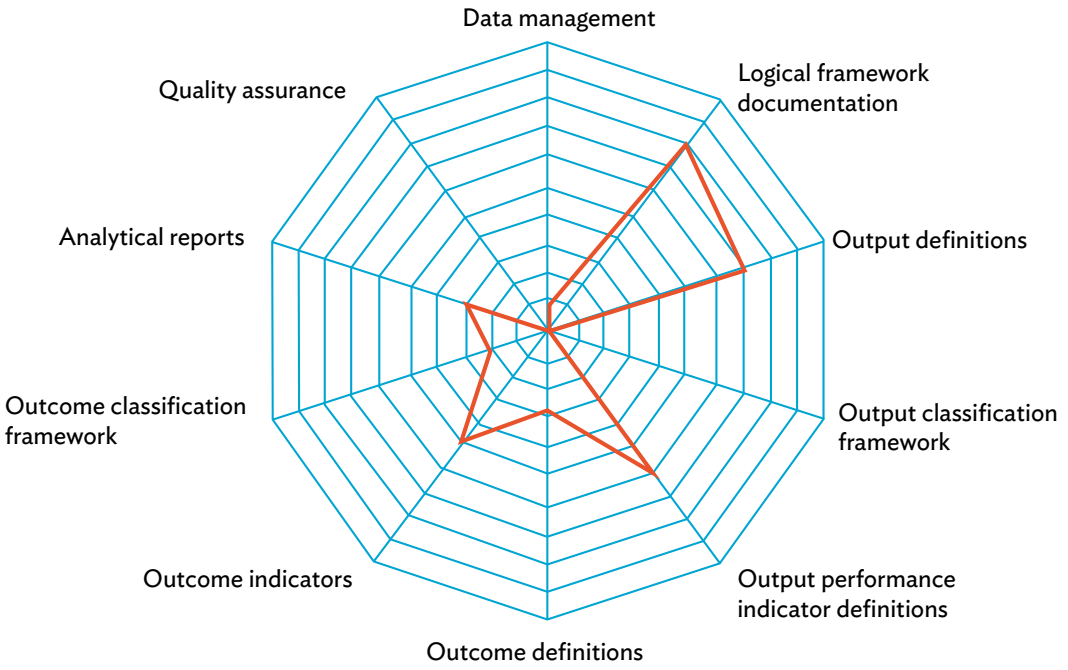
Similarly, while New Zealand's analytical reports are better than for most countries examined, it scores only 5 out of a possible 10 because of inconsistencies from one agency to the next in performance indicators, output definitions, and the overall quality of the presentation of performance data. It is disappointing that among the worst examples are those from central agencies, which drags down the overall score. As noted elsewhere, however, this trait among central agencies is common across jurisdictions.

Philippines

The Philippines has been developing its RBBM framework since the late 1990s. The effort suffers from gaps in its approach, and a lack of capacity within central agencies to provide quality assurance services. Figure 11 shows an assessment of the current state of the Philippines' RBBM framework.

In Figure 11, the Philippines' score for output definitions and output performance indicator specifications are relatively high at present due to a top-down review undertaken in 2013–2014, resulting in redefinitions of outputs and performance indicators across all government agencies, including government-owned enterprises. This facilitated uniformity and consistency in describing outputs across agencies, which facilitates benchmarking of outputs and provides a clear understanding of the nature of each output. The redefinition was provided by a specialist group of consultants under the umbrella of the Department of Budget and Management and the authority of the National Budget Circular 532

Figure 11: Characteristics of the Philippines' Results-Based Budget Management Implementation



Sources: Author. See Appendix 8 for a list of resources used as the basis for assessment.

(NBC 532).[62] This centralized approach created a uniform application of principles for both output descriptions and performance indicator definitions, and a consistent approach across all government agencies.[63]

Unfortunately, the wording of output descriptions and performance indicator definitions presented in the budget documents is deteriorating in some agencies, sometimes marginally, sometimes significantly. This deterioration is due to the following:

- ineffective quality assurance exercised by either the Department of Budget and Management or the line agencies for each annual budget update,
- no centralized database of outputs and performance indicators, and
- no database management protocol that facilitates the imposition of data classification and quality control standards on the budget documents and the accounting framework.

Consequently, the disparity in perceptions and levels of understanding within and across line agencies manifest across working units within each line agency and then into the budgeting and accounting documents.

[62] The author was the team leader for the group of national consultants who undertook this rewrite and is therefore familiar with the constraints and issues in the Philippines.

[63] Outcome descriptions and outcome indicators (of which there were none) were not reviewed.

Furthermore, outputs are ostensibly linked to organizational outcomes, which are supposed to be connected to sector outcomes. However, there is confusion among agencies as to what constitutes an organizational outcome and the nature of its potential connection to a sector outcome. In many cases, the organizational outcomes are more in the nature of national outcomes, and result in a repetition of outcome descriptions at both the organizational and sector levels.

In any case, no formal connections are made, and no outcome indicators are specified to measure the impact of outputs against outcomes.

In 2014, a revised budget appropriation format was tried that integrated nonfinancial performance data with the budget appropriation. This is a significant improvement. However, there is a lack of data of historical performance and future performance, with output performance indicator targets set for the budget year, but nothing else. In some cases, in the 2016 National Expenditure Program, some agencies did not understand what is meant by setting targets or how to go about such an exercise.

Singapore

Prior to 2006, Singapore agencies' program budget documents were accompanied by a statement of their "desired outcomes," but without outcome indicators. performance indicators were presented for program activities. The performance indicators were a mixed bag of workload indicators, efficiency indicators, quantity indicators, and timeliness indicators, but not integrated into a set of service delivery standards capable of describing an output to end-clients. The performance indicators were sometimes directed at internal processes and sometimes at delivery of a service to an external client. From 2006, some agencies began publishing key performance indicators associated with their stated "desired outcomes."

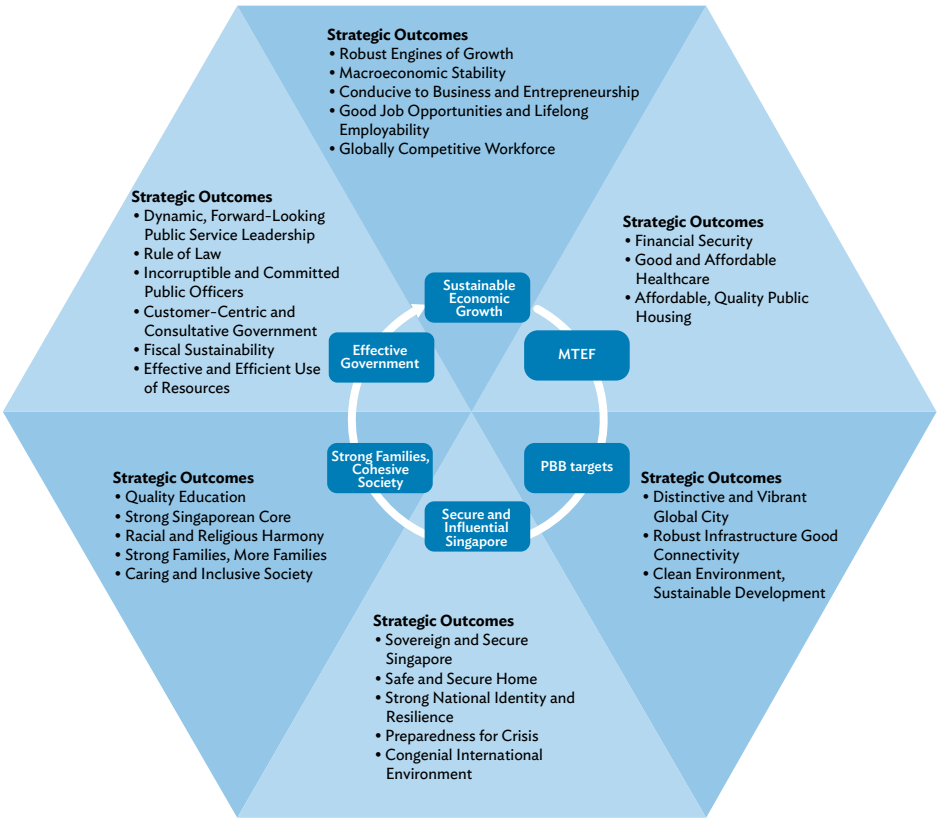
Post 2008, efficiency indicators were dropped and programs were associated with outcomes grouped under six themes, as depicted in Figure 12, which show a close correlation with the COFOG system of classification. Biennial reports of outcome achievement were published in the *Singapore Public Sector Outcomes Review*. After 2008, there is no public disclosure of program performance measures, only reports claiming credit for achieving outcomes.

The Singapore model shifted to a focus on outcomes but lacks sufficient supporting information to enable the reader to ascertain whether the performance trend in outcome indicators is due to government intervention or some other factor(s).

The budget documents limit reporting to financial data with a brief explanation of the functions of the agencies' programs. No performance data is included in budget documents, other than information on initiatives proposed to be undertaken in the forthcoming period.

Previous annual reports of agencies contained a mix of output, efficiency, and outcome measures. However, annual reports are not structured to facilitate evaluation of effectiveness or efficiency of their outputs to end-beneficiaries. The annual reports are more of marketing tools rather than tools for accountability, and the *Singapore Public Sector Outcomes Review* follows a doctrine of claiming favorable trends, explaining away unfavorable trends resulting from factors outside their control. True accountability is absent from the public documents.

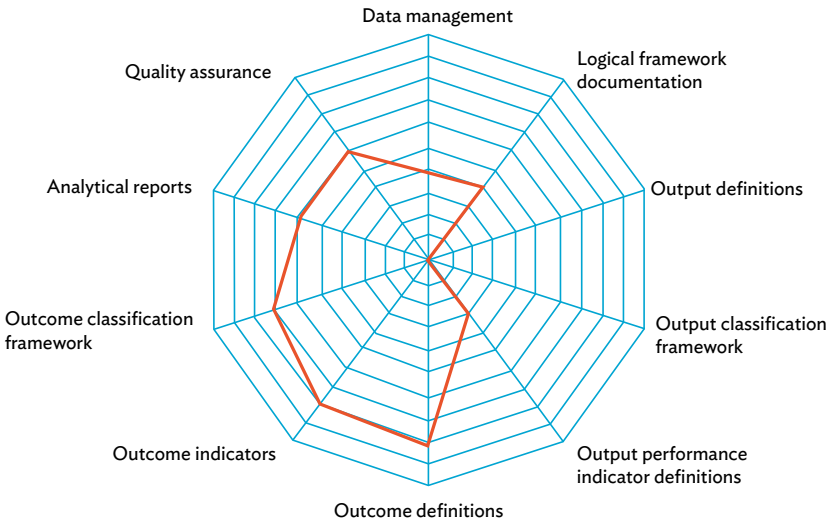
Figure 12: Singapore's Outcome Classification Structure



MTEF = medium-term expenditure framework, PBB = performance-based budgeting

Source: Government of Singapore. 2010. *The Singapore Public Sector Outcomes Review –Meeting Challenges of Tomorrow with a Whole-of-Government Approach*. Singapore. p. 2.

Figure 13: Characteristics of Singapore's Results-Based Budget Management Implementation



Source: See Appendix 8 for a list of resources used as the basis for assessment.

United Kingdom

Until 2010, the UK's RBBM framework required government ministries to report their activities that supported a series of public service agreements setting out the government's priority outcomes it sought to achieve across various sectors. The minister of each agency was directly accountable for achieving outcome targets.[64]

The auditor-general, in his 2009 report, found that

> ...performance measurement frameworks are widely used, and focus on strategic objectives, but rarely relate to a coherent business model or provide a comprehensive picture of performance...
>
> ...organisations need to devote more attention to data quality, and improve its presentation, to support decision-making...
>
> ...performance measurement frameworks did not link financial information and performance information satisfactorily, hindering informed strategic decision-making.[65]

The auditor-general found further in the second review of the UK's performance management framework that, while the framework was well considered, the business models adopted lacked clarity, as noted below:

> A good performance measurement framework is based around clear performance objectives; tailors performance measurement to key delivery drivers, and affords a full view of the organization's current performance and credible projections of future performance. Most of the organisations we reviewed had frameworks which covered objectives, inputs and outputs and/or outcomes—and therefore scored relatively well for the development of frameworks. But the strength of evidence supporting the framework or the articulation of the underlying business models was often weak. That affects the ability to link inputs and activities to outputs and outcomes, to interpret current performance and to project future performance. These weaknesses are part of the explanation for lower scores in the reporting and use part of the matrix.[66]

In 2010, the incoming conservative government abolished public service agreements and replaced them with a list of actions the government required each agency to complete to support one or more of the government's stated priorities. These actions are project milestones rather than a stable set of outputs that would be normal under a business model that defined the outputs produced by each agency.

The framework is similar to what previously existed, with poorly defined outcomes and outcome indicators. Figure 14 is based on a review of the current budget documentation and shows a cobweb quickly shrinking to oblivion. A 2013 review of evaluations in the UK by the National Audit Office found significant gaps in coverage, questionable quality, and a lack of use of evaluations and impact analysis in requests for funding.[67]

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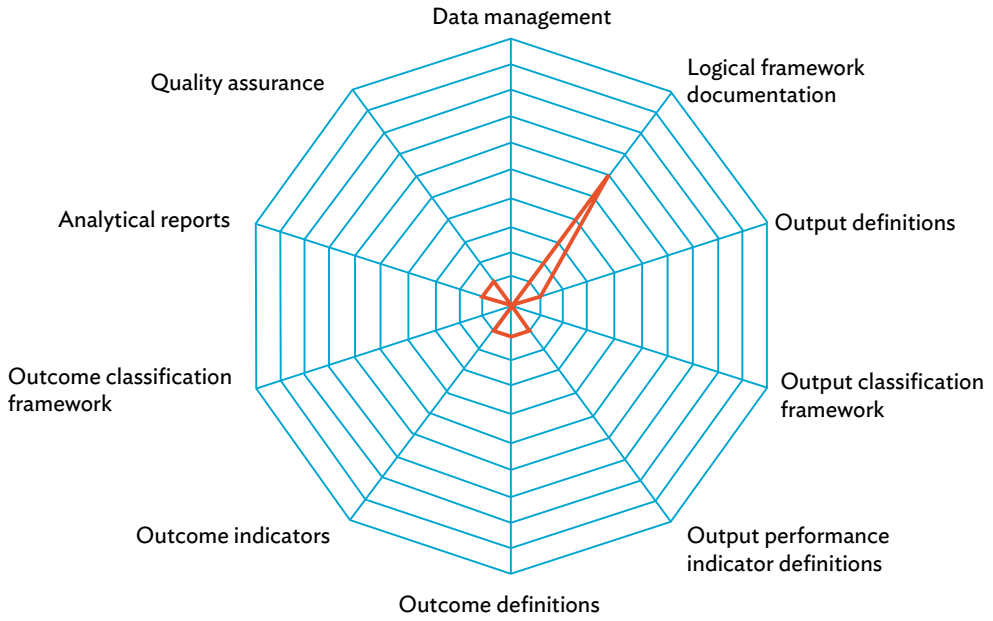
[64] See, for example, N. Panchamia and P. Thomas. 2010. *Civil Service Reform in the Real World—Patterns of Success in UK Civil Service Reform*. London: Institute for Government. p. 50.

[65] D. French et al. 2009. *Performance Frameworks and Board Reporting I: A Review by the Performance Measurement Practice*. London: National Audit Office. pp. 4–5.

[66] Footnote 65, p. 7.

[67] A. Athanasopoulou et al. 2013. *Evaluation in Government*. London: National Audit Office.

Figure 14: Characteristics of the United Kingdom's Results-Based Budget Management Implementation



Sources: Author. See Appendix 8 for a list of resources used as the basis for assessment.

Summary

The central agencies of Australia (Department of Finance) and New Zealand (Ministry of Finance) at some point lost momentum and enthusiasm for reform, or failed to follow through due to a lack of technical expertise, combined with inherent issues with public service management in general (including political expediency). Cobweb charts of these two RBBM leaders, and a cursory examination of their budgetary documentation, literature, and data indicate they have significant challenges ahead, even after 20 years or more of implementation. These "leading" countries have far from satisfactory implementation when their strengths and weaknesses are compared against the characteristic aspects of a well-implemented RBBM framework.

The UK junked the RBBM framework it implemented before 2010 and is in the process of rethinking its framework. Little remains of a performance management framework relating to operational and allocative efficiency.

Singapore has, since 2008, introduced an outcomes framework to which it links its expenditures, and while it produces biennial reports on the achievement of outcomes, it does not provide information that enables the observer to assess the performance of the bureaucracy in delivering outputs that impact on outcomes. Singapore also ceased publishing specific performance information on individual

government programs, and annual reports of agencies have assumed more of a marketing role than an accountability function.

The bright spot among the pioneers of RBBM is Canada, which has made slow but steady progress in advancing its RBBM framework.

Of the so-called "developing" countries, the Philippines has made significant strides in developing a meaningful RBBM framework. However, without a centralized database to control amendments to output definitions, performance indicator definitions, and their linkages to an overarching outcomes analytical framework, the disparate knowledge and skill base among line agencies and within the central agencies puts any advances to date at risk of being undermined.

Malaysia is in the process of rebuilding, while rebuilding needs to take place in Indonesia.

The main point of this comparative analysis is that the developing countries are not far behind the pioneers in their RBBM frameworks, primarily because the pioneers have not successfully implemented their RBBM and have even regressed because of the failure to realize the intended benefits of a properly implemented, rigorous performance management framework.

5 Government Bureaucracies: Their Nature and Impact on Results-Based Budget Management Reforms

Introduction

Results-based budget management (RBBM) should empower central agencies, among others, to look keenly into the operations of spending agencies. Some of the key characteristics of an effective and useful RBBM framework include the following:

(i) a well-developed logical framework;

(ii) a well-defined set of organizational outputs that remain constant over multiple time periods, at least for the foreseeable, planned future;

(iii) an output classification framework that facilitates data extraction for comparative analysis of similar outputs across the whole of government and which is suitable for benchmarking output performance;

(iv) a well-defined set of output performance indicators that specify output delivery standards (when combined with a "target") in quantity, quality, and timeliness (for a given "price"), that will remain relevant over multiple time periods for the expected life of the output;

(v) a well-defined, structured set of outcome descriptions (preferably aligned with the classification of functions of government [COFOG]) that may be used across multiple time periods and over the long-term planning period;

(vi) a well-defined set of outcome indicators that may be used across multiple time periods and over the long-term planning period[68] and to which government interventions and/or organizational outputs may be correlated;

(vii) a well-developed outcome classification system facilitating the formal correlation of outputs to outcome indicators over multiple time periods, for the foreseeable future;

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[68] The European Commission Agriculture Directorate-General. 2001. *A Framework for Indicators for the Economic and Social Dimensions of Sustainable Agriculture and Rural Development*. Brussels: European Commission. p. 10, set out the following criteria for indicators:
"The indicators should meet the following criteria:
- Policy relevance
- Conceptual soundness
- Definition at an appropriate level of aggregation
- Effectiveness
- Statistical validity
- Analytical soundness
- Technical feasibility
- Cost-efficiency

Furthermore, indicators should be limited in number, and simple and easy to interpret to make them useful for policy decisions."

(viii) a highly structured, centralized database management system with rigorously enforced database management protocols that facilitates analysis of efficiency and effectiveness of output service delivery in achieving outcome objectives;

(ix) a quality assurance protocol that maintains all database elements across all agencies in rigorous form using a consistent standard for both concepts and classification principles; and

(x) the ability to generate meaningful analytical reports using data extracted from the database that may be used to assess effectiveness of outputs in achieving outcomes and the relative efficiency of the output production in one organization compared to another.

The importance of an accurate output costing methodology, or an accrual accounting system, is not in this list. While these are both ideal, they are not fundamental to the initial establishment of a useful, functioning RBBM framework. Initially, it is important to have the base elements of the system well defined, leaving the accrual accounting and output pricing components of the framework for the last.

The failure of bureaucracies to efficiently implement an effective RBBM system has been characterized during the initial 10- to 25-year period of implementation by the following:

(i) an inability of the bureaucracy to define its outputs in a business context, resulting in a fragmented and disorganized performance framework and hollow and meaningless output performance indicators;

(ii) a lack of experience in using performance indicators for management purposes, particularly among central agencies;

(iii) a lack of experience in implementing and/or using rigorous human resource and organizational management practices;

(iv) the dispersion across government organizations of responsibility for implementing sound and rigorous human resource and organizational management practices, meaning that no single person can be held to account for poor practices within each individual organization;

(v) a lack of understanding of the importance of and/or commitment to, quality controls and application of data classification principles and standards on the elements of the performance management framework (particularly among central agency staff), thereby affecting the quality of output definitions, performance indicator definitions, outcome definitions, outcome indicators, analysis, and reporting;

(vi) a lack of appreciation among all stakeholders, particularly central agencies, of the importance of establishing and managing the control of a centralized database of performance statistics;

(vii) a lack of appreciation by key managers of the importance to effective and efficient implementation of RBBM of a well-designed, computer-based data management system;

(viii) a lack of appreciation (by central agencies in particular) of the importance of the imposition of rigorous database management protocols and data classification principles to the effective and efficient implementation of RBBM; and

(ix) incongruent understanding among stakeholders of both the meaning of terminology and how the performance management framework should work—in particular, a lack of common appreciation of the meaning and integration of terminology such as “service standards,” “impacts,” “outcomes,” and “responsibility.”

These problems constrain the efficient and effective implementation of RBBM.

Much of the disharmony observed or experienced by both the proponents and the detractors of RBBM can be attributed to chaotic implementation, which is the result of a civil service bureaucracy that has not been led with the same strength, determination, and single-mindedness as would a private sector entity with personal wealth at stake. The "principal–agent" problem (discussed below) is always present in government reform initiatives.

RBBM does not address the principal–agent problem inherent in government, although it clearly articulates the issue, assists to identify the existence of inefficiencies, and may be used as a foundation for an incentives-based system that might be used to address the principal–agent problem.

The Principal–Agent Problem

Conflicts of interest and moral hazard issues may arise when a principal hires an agent to perform specific duties that are in the principal's best interest but may be costly, or not in the agent's best interest. The principal–agent problem[69] (also known as agency dilemma or theory of agency) occurs when one person or entity (the "agent") is able to make decisions on behalf of, or that impact, another person or entity (the "principal"). The dilemma exists because sometimes the agent is motivated to act in his own best interests rather than those of the principal.[70]

Principals create incentives for the agent to act as the principal wants because the principal (may) face information asymmetry and risk on whether the agent has effectively completed a contract.

A significant problem arises where the two parties have different interests and asymmetric information (the agent having more information), such that the principal cannot directly ensure that the agent is always acting in its (the principal's) best interest, particularly when activities preferable for the principal are costly to the agent, and where elements of what the agent does are costly for the principal to observe.[71]

A principal will (should) attempt to create an environment in which the agent's interest is aligned with that of the principal, usually through an incentive-based payments system. Any incentive-based payment must be of sufficient magnitude to counteract the opposite incentives and/or disincentives that the agent experiences, either as "costs" of following the principal's best interest or as benefits bestowed by alternative actions not in the best interest of the principal (and about which the principal may not become aware).

Principal–agency theory proposes that individuals can attach monetary values to nonmonetary costs or benefits as well as monetary costs and benefits. The magnitude of an incentive payment required to align the principal's interest with that of the agent will vary from case to case, with agents at one extreme requiring no incentive while at the other extreme, a large monetary incentive might be required (in which case, the agent would, we hope, be found to be too expensive to engage unless the agent reformed the value system!).

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[69] Sourced from http://www.investopedia.com/terms/p/principal-agent-problem.asp

[70] In the case of the RBBM, the "principal" is the general public (taxpayers, voters, and general members of society), whereas the agent encompasses both the public service bureaucracy and the political representatives.

[71] Based on the explanation in https://en.wikipedia.org/wiki/Principal%E2%80%93agent_problem

In the case of the government bureaucracy, the principal (the political wing of government) is itself an agent (of the people). Therefore, any incentives-based payments system that the political wing may provide to the bureaucracy is itself at risk of distortions and inefficiencies that permeate the principal–agent problem between the people and the politicians.

The public service bureaucrats are in a unique position relative to their private sector counterparts. The bureaucracy usually has security of tenure, an absence of responsibility to generate a surplus above salaries, and an equity holder (the general public) that suffers from not only asymmetric information but also a deprivation of the means of exercising direct influence over the bureaucracy.

This conflict between the agent's motivation and the principal's "instructions" is often associated with perverse or corrupt behavior in government. In extreme examples of the principal–agent problem, senators and people's representatives are seen to behave in the interest of financial benefactors and themselves rather than the majority of the people they represent, and police and judicial officers receive money from third parties in exchange for favorable treatment or judgments.

Introducing public financial management reforms across the public sector is almost always accompanied by some form of principal–agent problem

Principal–agent conflict is also present in the day-to-day operation of public service, where managers may make lifestyle choices ahead of their duty as managers. These seemingly less important conflicts of interest can have very major costs to the whole government in perpetuating inefficient polices, practices, and procedures.

Introducing public financial management (PFM) reforms across the public sector is always accompanied by some form of the principal–agent problem.[72] The "champion" of reform may suffer "costs" from two potential sources, including

- personal stress between the individual agent and counterparts in the bureaucracy, and
- potential impediments to future career prospects within the bureaucracy as a result of "damaged" relations associated with the introduction of PFM reforms.

Both these costs may lead the reform "champion" to choose a less optimal reform path than that the principal would wish. This is a particular problem when the agent is also the object of the reform, and even more so where reforms involve or require significant changes in processes, procedures, and responsibility or accountability.

Reforms that are primarily procedural usually involve a lower "cost" to relationships than those that result in heightened accountability or responsibility.

When introducing RBBM, some jurisdictions attempted to improve alignment of the interests of the agents with the goals of RBBM by suggesting that the RBBM will enable the payment of bonuses to the objects of reform (which include the agents). This tactic has worked to a greater or lesser extent in garnering support at the grassroots level of the bureaucracy, but is not a substitute for a well-planned execution accompanied by strong, centralized quality control.

[72] In terms of RBBM, the principal may be taken to be society, and the agent may be taken to be the individual managers within the public service bureaucracy.

Impacts of Dispersion of Responsibility for Organizational and Human Resources Development

Every reform initiative involves some change or modification to the organizational systems in place, either for a single organization or across the whole of government. In the case of RBBM, reform represents a dramatic shift toward the accountability practices of the private sector, away from the historical "soft" style management of the public service.

A "soft" style of management focuses on addressing poor performance in individuals (in whatever way "performance" may be measured) by applying organizational resources to "develop" that individual. Similarly, poor organizational performance is explained away by various "extraneous" factors and with ad hoc initiatives to further "develop staff" or "strengthen the organization," even though the root cause of the performance problem may not yet be identified.

The public service bureaucratic management style has historically been characterized as "soft"

Human resources management systems and practices entrenched in the public service since time immemorial are based on the "soft" style of public service management, where the employee is the center of importance and profits have no place in the organizational and human resource management structures. This lack of a profit motive has also meant that the clients, or intended end-beneficiaries, of civil service interventions have not been front-and-center in day-to-day or even strategic organizational thinking. The primary focus of individuals operating within government organizations has been power relations at the political and organizational levels, and socioeconomic interventions are the result of those relations rather than their focus. This is a classical principal–agent conflict of interest.

Today's public service managers inherited their organizational structures, processes, and procedures from a long line of public service managers and are understandably cautious about change.[73]

The public service, as a bureaucratic structure, treats individual ministries and agencies as part of a whole. In doing so, significant aspects of organizational and human resource development policy and practice are governed by specialist bodies established to develop standards and provide initiatives across the whole government, such as staff development, staff discipline, staff assessment, remuneration frameworks, auditing, procurement policies and practices, management information systems, budgeting, and accounting. This diminishes accountability within individual organizations and spreads accountability across multiple organizations.

On the positive side, these entrenched structures supported and enabled managers with technical skills to rise to management levels and survive with minimal prior, present, or future training in either human resources, organizational, or financial management skills. But it also meant that the existing silo structures of human resources and organizational management specialists had an inordinate influence over the manner the reform of existing processes and procedures was designed and implemented.

[73] Many of the existing practices, processes, and procedures of individual government organizations, and government as a whole, were developed over more than one generation of public servants and influenced, in many cases, by the processes and procedures designed, modified, perfected, and embedded over several generations of public servants.

As a result, implementation of reform suffered from a dichotomy of skills. On the one hand, the approach to reform must take account of and address human factors. But on the other hand, reform must take account of the importance of technical aspects of the processes and procedures that are the subject of reform. When addressing human aspects of reform, the technical requirements are often subjugated to paternal or maternal considerations for human resources and are hostage to the principal–agent problem described earlier.

The approaches and methods used by most (if not all) countries that tried to introduce RBBM focused on the "human" aspect of change management, emphasizing "ownership" by line agencies of the output descriptions, the outcome descriptions, the output performance indicators, and the outcome indicators they were required to specify, and their production the government funded.

Central agencies issue guidance in broad principles for specifying outcomes, outputs, and performance indicators, but failed to rigorously enforce appropriate statistical and data classification standards on the data frameworks of their RBBM. For example, the overarching outcomes framework should have been constructed across the whole government within a data classification system that should, by and large, follow a COFOG[74] approach. This has not been effectively done in any jurisdiction that introduced an RBBM framework using outputs and outcomes.[75]

Central agencies have failed to enforce appropriate statistical and data classification standards on the data frameworks of their RBBM

At the expense of a "feel good" approach toward colleagues and counterparts, RBBM has been compromised, lacking appropriate output descriptions and appropriate performance indicators that should reflect service delivery standards for outputs. This has undermined the integrity and robustness of many accounting frameworks, irrespective of whether they are based on sound business principles and measured with robust data. The resulting RBBM systems can be confusing and often less transparent than a simple program budget.

Without the rigorous application of output description standards and statistical structure required for an RBBM framework, reforms have largely failed to improve transparency, operational efficiency, or allocative effectiveness and, in some cases, have decreased transparency.

Disparate Interpretations and Understanding of the Logical Framework

Central agencies are usually the primary drivers behind the introduction of RBBM. However, many central agencies commenced introducing RBBM without sufficient capacity within their own organizations to see the reform through to full implementation.[76] Consequently, a common understanding of all parts of the RBBM framework concept is often missing within key areas of the

[74] Classification of Functions of Government (European Communities 2007; OECD 2009).

[75] Although as demonstrated in Figure 5, Canada has, since 2010, made a first step in this direction.

[76] In the case of Australia, a political idealism that resulted in a significant downsizing of the Department of Finance after 1996 is likely to have had a serious detrimental effect on the progress of PBB implementation due to the effect on capacity within the Department of Finance, because there was a significant loss of experienced staff who knew the importance of database management and structured classification systems. See also MacKay (footnote 2, p. 28).

central agencies, some parts of which may be important fulcrums to line ministries for dissemination and implementation of the RBBM concepts. This is likely to lead to inconsistent standards applied and implemented across ministries.

MacKay (2011) notes the disparate manner in which RBBM has been interpreted not only between organizations within the one jurisdiction but also between individuals within the same organization in the Australian experience as indicated below:

> Particular difficulties included definitional changes from year to year and different definitions adopted by different departments; these made it difficult to analyse departmental performance over time, or to make efficiency comparisons between departments... It can be argued that one advantage of a systemic and centralised approach to performance measurement is that it enables exactly such comparisons to be made. A devolved approach, in contrast, is inherently unlikely to achieve this.[77]

It is essential that a centralized database management and quality assurance function is institutionalized according to the agreed standards and guidelines, and that the database management protocol institutionalizes safety measures that protect the integrity of the database structure and the data stored within the database.

Central agencies often failed to provide quality assurance and control services to ensure that concepts are implemented consistently within each agency and from agency to agency. The abrogation of responsibility for this function, under the guise of enabling ministries to "own" the outputs and outcomes they define, is one of the great tragedies of RBBM implementation. This "hands-off" approach fails to understand the essentially technical and intensely statistical nature of RBBM and the importance of constructing and rigorously managing strictly defined classification and database management systems covering outputs, outcomes, and performance indicators (including outcome indicators) and creating the logical links within the database that reflect the logic model.

A coherent classification system can only be implemented consistently if a rigorous quality assurance system is used to oversee implementation and ongoing use of the RBBM concepts. Unfortunately, too few central agency staff members are familiar with the principles of data classification or database management, which should be considered a core fundamental of all PFM systems.

Unless the RBBM is institutionalized through a centralized, structured, and rigorously managed database, the logic model data relationships can be quickly compromised by personnel changes in key central agency policy areas

Unless tight control is maintained over the integrity of the RBBM system, changes will occur over time, as personnel and perceptions change. This leads to variability in standards and can undermine the philosophy on which the system is based. If different elements of the government organization as a whole begin to move away from a common standard, data become less comparable and time-series data become discontinuous and unsuitable for analytical purposes.

Most central agencies have long understood and continue to promote a unified classification system of financial transactions. However, less well understood or appreciated is that the same principles must be applied to nonfinancial data.

[77] MacKay (2011), footnote 2, p. 25.

"Nonfinancial data" generally refers to the specification of outcome descriptions, of output descriptions, of outcome indicators, of output indicators, of program structures, and the remaining elements of the chart of accounts. In most jurisdictions, the move toward RBBM was not accompanied by a standardization of principles for describing and defining outcomes, outputs, or performance indicators—or even program budgeting structures.

Government budget papers and public reporting in accordance with RBBM suffered greatly as a result of the poor state of output definitions, outcome definitions, and their associated indicators.

6 Summary and Recommendations

While many shortfalls in implementing such a significant (some might even say "radical") reform initiative as the results-based budget management (RBBM) are likely to be observed in the short to medium term at least, with continuous improvement processes, the shortfalls are expected to be overcome after 20 or more years of implementation. That is not the case for the countries examined here. On the contrary, some countries' RBBM systems have seriously regressed.

We argue that two technical aspects of reform implementation are critical to success and these are the:

- enforcement of quality controls over definitional aspects of the RBBM in line agencies' logic frameworks and PIs, and
- centralized and (highly) structured RBBM database of nonfinancial PIs in which the logic model should be embedded and clearly manifested.

Lee McCormack, executive director, Results-Based Management of the Treasury Board Secretariat, and Government of Canada noted the following:

- There is no end point—persistence over many years is required and you never get it "right."
- You need central leadership to build capacity—someone with authority must set the game plan, make and enforce policies and invest.
- A detailed understanding of the program base is essential—it is easy to lose and not easy to get back.
- Information systems are always a challenge.
- You need a common whole-of-government planning and reporting framework if you want to do real strategic planning and reporting.
- Evaluation needs backbone and support.
- [In Canada] Parliamentarians and the external auditor demand better public performance information; this is good.

There is no managing for results without sound management practices, period—you need clear expectations and annual assessment [78]

Responsibility for weak implementation of RBBM rests primarily on the central agencies, which firstly drive the reform initiatives and must then adequately oversee their implementation and embed the reforms systematically.

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[78] T. R. Robinson. 2007. Presentation at the Conference on Performance Based Budgeting, Warsaw, Poland, sponsored by the European Social Fund Operational Program—Human Capital. 7–9 November.

While many factors contribute to the failure, after 20 years or more, to embed the business model inherent in RBBM, two critical tools that could be used to largely overcome the problems are centralized institutionalization of

- a quality control function, which screens all proposed outcome, output, performance indicator definitions, and logical correlations; and
- a structured database that embeds the logical framework, prevents the introduction of elements that do not conform to guidelines, and facilitates time-series analysis of performance data.

The implementation of an RBBM framework must be planned very carefully, and implemented from a strong centralized position of control and quality assurance.

Three salient recommendations that follow from the assessment above are

(i) Countries should review the output descriptions and performance indicator definitions across the whole of government, as was done in the Philippines in 2013–2014.

(ii) An outcomes classification structure along the lines of COFOG should be developed to which outcome indicators may be related and to which organizational outputs may be linked in a relational database.

(iii) While the identification of organizational outputs should be straightforward, civil service bureaucrats often have difficulty in doing so, because they are unable to imagine themselves as a private sector provider of a service. Therefore, any technical assistance should be provided by specialists who are able to identify an output description to simply and clearly describe the good or service provided by the public sector organization, along with relevant service delivery parameters.

APPENDIX 1
Program Budgeting

A1.1 Introduction

A program budget structure seeks to identify all organizational revenues and/or expenditures associated with a unique policy subject or objective and to identify a program (and/or subprogram) that addresses the subject or supports the achievement of each objective.

Program budgeting is, essentially, the organization of the budget into a logical structure that reflects an engineered process required to produce a product in the form of either a good or service. The purpose of producing the good or service should generally be understood as a purpose or "program objective."

The good or service produced by an expenditure program may be used by one or more other programs as an input, but is usually final in nature and has as its ultimate objective some impact on the socioeconomic fabric of society. Where a program produces more than one end-output, then each end-output should be produced through a separate subprogram of the program.

The original idea of program budgeting was to create a "work breakdown structure" of what was essentially a production process. Program budgeting is a budget format designed around an "activity-based costing" method of determining resource requirements to achieve a particular purpose. It is to improve transparency and simplify the budgeting process by introducing orderliness and clarity using the engineered breakdown to understand how a change in activity outputs in one part of the process will impact input requirements in other parts of the production process.

Therefore, a program budget is a collection of funded activities designed to meet some end-objective or purpose, usually translated as the delivery to the community of an output in the form of a good or service. The output serves some purpose, much like an outcome under RBBM.

Each program or subprogram will align or correlate with at least one government objective

If it is useful or necessary to group a set of programs with similar goals into a single program structure, then the separate programs may be renamed as subprograms under an overarching program description. The program is then a collection of related outputs designed to meet some common end-objective. Each subprogram produces outputs with more specific sub-objectives related to the higher-level, broader, all-encompassing objective. The subprogram structure is based on some logical reasoning that distinguishes each subprogram from the other.

Program budgeting requires that an organization identify the "purpose(s)" or function(s) for which it will receive each budgeted block of funds, and to construct a list of all the discrete activities and projects that it undertakes to deliver or realize the stated purpose(s).

Projects tend to be capital-creating with a defined start date and end date, the time period of which is much shorter than the intended life of the program(s) to which the projects relate.

The budget is constructed for each program according to, first, the objects of transactions (line items) recorded under each of the activities that make up the program. Second, the objects of transactions are then aggregated as the budget for the "purpose," or program. Third, projects are added, which are also costed by line item (or "object," in the nomenclature of the chart of accounts). Each purpose or objective for which government allocates funding results in the creation of a program of expenditures.

Program budgeting also focuses on prioritizating expenditures relative to line-item budgeting, i.e., allocation of funds to the sectors and programs considered most important (at the political level at least). Program budgeting should facilitate

- policy analysis and managerial planning,
- results-oriented decision making,
- analysis of cost structures, and
- control over total expenditure.

It is important to understand that a program structure is intended to be stable over long periods of time. That is to say, each program, its description and activities, will continue to exist for the foreseeable future. Unlike a project, there is no date by when the program should cease operating (otherwise it would be termed a "project"). The specification of a program or subprogram envisages the ongoing delivery of a good or service to the community. It is not usually a one-off or short-term intervention, although government could decide to terminate the program shortly after it has commenced, or at any time thereafter.

Programs and activities, once specified, are intended to continue over the foreseeable time frame—but may be terminated by government at any time

A project, on the other hand, has a definite start date and end date, and is not considered a program. The project usually results in the creation or enhancement of one or more capital assets that may, once completed, be used as an input to one or many programs and/or subprograms.

Each program or subprogram is broken down into the identifiable process steps, or activities, required to produce the goods or services that target a particular policy objective.[79] A series of logically related activities is specified that, when undertaken step-by-step, aggregate into a "production process" for each program or subprogram. For example, the subprogram "Primary School Teaching" may be constructed from several activities, including

Activity 1: Procurement of teaching supplies, stationery, and office supplies;

Activity 2: General administration (payment of salaries, recruitment, logistics, discipline, etc.);

Activity 3: Structured teaching (classroom and/or formal teaching);

Activity 4: Extracurricular teaching (school trips, after-school sports, etc.); and

Activity 5: Curriculum development and teacher training.

An activity is ongoing over the life of the program and generally will be regularly undertaken throughout

[79] A project is also broken down into a logically related series of steps, but each step is terminating and is associated with a "milestone" date.

the annual production process. One-off activities will generally not be explicitly defined as an activity, but expenditure on one-off actions will be subsumed within one of the major activity descriptions. Program activities should not be so narrowly defined that they cannot accommodate the recording of expenditure on one-off or infrequent actions related to program delivery. The number of activities in a production process is, usually, no less than three, representing a beginning, middle, and an end to the production process.

A1.2 Designing the Program Structure

Top-down specification of strategic program budgeting structure, bottom-up allocation of resources to those strategic elements based on knowledge of on-the-ground operations

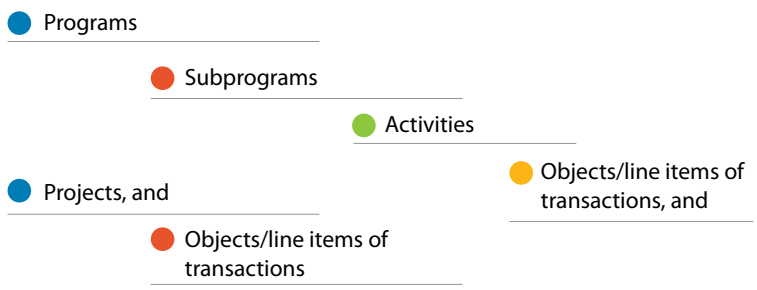
The design of a program structure should be guided by a top-down, bottom-up review of the organization's existing revenues and expenditures. This construct works in two directions, as mentioned—top-down and bottom-up. From the top, the organization's budget may be disaggregated into programs (broad objectives of government), which may be further disaggregated into subprograms (more focused objectives encompassed by the higher-level program objective), and then into activities. From the bottom, activities and projects are reviewed and amended as necessary, and financing requirements estimated based on objects of expenditure and revenue, or the natural accounts.

Whether a budget grouping is at the organizational, program, subprogram, activity, or object and/or item level, all members of a grouping must

- contribute and/or relate to the same objective(s),
- not overlap,
- capture all finances of the organization's appropriation, and
- reflect finances only once in the program structure (no double counting).

Most countries that use program budgeting suggest that an organizational budget can be efficiently divided into three levels of program hierarchy: program, subprogram, and activity (where the item, or object, level of classification is treated as the bottom rung of revenue and expenditure), with projects identified separately outside the program structure, as in Figure A1.1.

Figure A1.1: Program Budgeting Levels



Source: Author.

In cases where projects are considered as stand-alone, terminating budget allocations, and not part of a specific program (they often contribute to more than one program and/or subprogram), then by definition, the sum of all transactions incurred by activities under a program or subprogram must equal the total funding allocated to that program or subprogram.

The sum of all funding allocated to a sublevel classification must equal the total allocated to the next higher level of classification

Similarly, the sum of all funds allocated to subprograms must equal the total of all funding allocated to the program. And, the sum of all funding allocated to programs and projects for the organization (defined as all members of a group or program) must equal the total funding allocated to the organization.

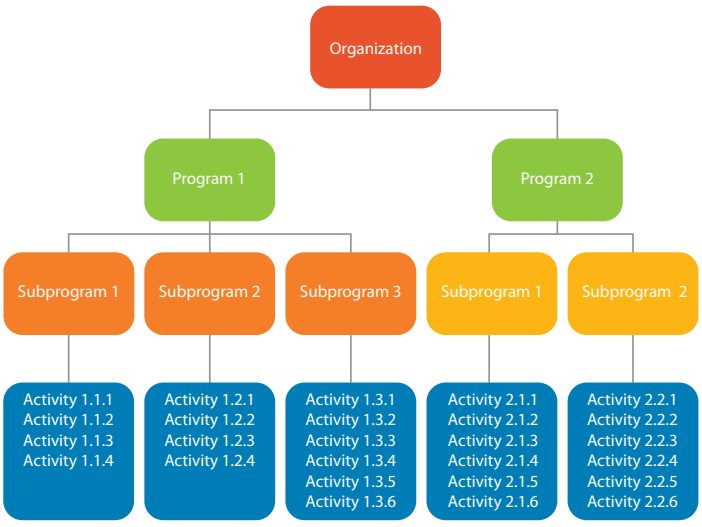
The objects of transactions in the Chart of Accounts will appear under each activity and project. Revenue and expenditure will only be recorded at the object level, although coded according to the various elements of the Chart of Accounts. From there, it can be summed by object across all activities of the subprogram or program and projects, as the case may be, to give a total budget for the subprogram or program or projects.

- All members of a group (vote or program) should contribute to the same objective.
- Members should not overlap.
- All costs and revenues should be reflected—but only once.

A program does not have to contain subprograms. However, subprograms are desirable, perhaps even necessary, when more than one sub-objective is funded within a program. This suggests the following rule: If subprograms are to be developed underneath a program, then there must be at least two subprograms. A single subprogram under a program would mean the subprogram is identical to the program. In the Chart of Accounts, where two digits are allocated for a subprogram code, this code would be, say, "00" if there are no subprograms under the program.

Figure A1.2 presents the three-layered program structure.

Figure A1.2: Three-Layered Program Structure



Source: Author.

A properly specified program structure must have more than one activity per program or subprogram and, where there are sub-activities, there must be more than one sub-activity per activity

Similarly, by definition, two or more activities must always be specified beneath the program or subprogram, whichever is the case. If the activities and sub-activities are to be logically structured, there must be more than one, otherwise the activity or sub-activity is simply a rewording of the level above it, rather than a breakdown of that level into its component parts.

If a program has subprograms, no activities can be specified for the program—activities will be specified only under the subprogram level. If there are no subprograms, the activities will be specified for the program.

Accordingly, a program (for example "Vocational Education and Training," as in Table A1.3) may be divided into subprograms (for example, "Trade School Operations," and "Nursing School Operations") and these would be further divided into activities (for example, "Classroom Training in Theory," and , "Workshop Practical Training"), and under each activity would be the objects against which revenues and expenditures would be recorded.

For a subprogram such as "Primary School Education," projects such as the construction of new classrooms are usually considered "one-off" capital expenditures and not part of ongoing operations, so it is convenient to separate them from the programs and list them separately as projects. Projects are not shown with an activity structure, but project expenditure will be recorded according to objects of expenditure, and delivery of the project is identified with milestones that align with the completion of certain activities that are part of an engineered "work breakdown structure."

The budget documents may include information regarding a project's start date, projected end date, and the current state of affairs, such as expenditure to-date, forward estimates, and milestones achieved. In contract documents, the project is broken down into completion stages. And the contractor will have developed a detailed work breakdown structure for costing and project management purposes.

A "School Feeding Program" may serve as an example of activity structure. The School Feeding Program would be made up of a number of distinct activities for the program to deliver its output, including

- procurement of food supplies;
- distribution of food inputs to schools;
- preparation and distribution of food to learners; and
- administration (such as payment of salaries and creditor invoices, logistical planning, etc.).

If the program is delivered under an all-inclusive contract with a supplier, then perhaps an alternative construct for the program activities might be as follows:

- supply of meals to learners (capturing the full contract with the supplier),
- inspection and verification of contract performance (an overhead), and
- contract administration and evaluation and/or impact analysis (an overhead).

In some localities, if the Ministry of Education directly provides the meals while a third party contract supplies others meals, create a combined list of activities, or identify two subprograms, one dealing with the supply of outputs by the third party and one with the supply of the output by the government agency. In this way, the finances of each stage of production of the subprogram can be identified.

A1.3. Program, Activity, and Objective Descriptions

The program's description or name should give a good idea of the purpose of the budgeted revenue and expenditure grouped under its heading. Each program is described by its name or title, and may refer to its overarching objective. If a program encompasses other key outputs, these should be captured in the subprogram descriptions.

As the program objective must encapsulate all of its subprograms' objectives, the subprograms are each part of a subset of objectives that contribute to the overall objective of the program. Programs and subprograms otherwise share the same characteristics. This hierarchy is illustrated in Table A1.1.

The program name (description) should

- be no more than 5–6 words, if possible;
- include at least one noun in its description; and
- give insight into the output of the program

Table A1.1: Hierarchy of Objectives

Program: Primary School Education	Objective: To provide a sound educational basis for children to succeed at secondary schooling.
Subprogram 1: Provision of teaching services	**Objective 1:** To provide children with comprehensive primary school level instruction.
Activities:	The objectives for activities will relate to the completion of processes, and not to the delivery of end outputs (even though their completion is instrumental in the delivery of the output). These objectives are suitable for work plans and performance management objectives used by managers and individuals.
Subprogram 2: Provision of textbooks to children	**Objective 1 (a):** To ensure all children have equal access to necessary learning materials.
Activities:	
Subprogram 3: Supply of student meals	**Objective 1 (b):** To ensure that the education of country's children is not impeded by hunger.
Activities:	
Subprogram 4: Hostel accommodation for students	**Objective 1 (c):** To ensure that students from remote areas have access to affordable accommodation when they must attend school away from home.
Activities:	
Projects: Construction of *x* classrooms at school *a* Construction of *y* classrooms at school *b* Construction of *z* classrooms at school *c*	The objectives of projects relate to the provision of facilities for use as inputs to programs or subprograms and do not speak directly to an output or outcome. They usually have as their objective an increase in the agency's productivity and ability to deliver outputs.

Source: Author.

Each program's objective should relate to all revenues and expenditures recorded under that program

Table A1.1 shows how the objectives of subprograms are covered by the overall program objective. The outputs of subprograms within a program should not overlap with each other, but should be differentiated by some criteria. In the preceding example, one subprogram was related to provision of teaching staff, one to provision of food, another to provision of textbooks while the last was the provision of accommodation. There was no overlap of outputs.

If there are multiple program objectives, there should be a separate statement for each variable

The program objective should be explicit and brief—ideally one sentence. There has to be a clear link between strategic and operational objectives of the organization. Examples of well-formulated program objectives include "To provide a sound educational basis for children to succeed at secondary schooling" (for the program "Primary School Education") or "To provide a sound educational basis for children to progress to higher education, gainful employment, and living fruitful lives" (for the program, "Secondary School Education"). Table A1.2 provides an example of how program objectives can be reformulated.

Table A1.2: Reformulating Program Objective Descriptions

Original Objective	Revised Objective	Implied Outcomes
Program: Preprimary and Early Childhood Development		
Preprimary education is widely recognized as having a significant impact on the subsequent performance of children in the basic education programs. It lays the foundation for acquiring basic literacy and numeracy skills, considerably reduces dropout and repetition rates and, well managed, it predisposes the child toward learning and attending school. Preprimary education would ensure a smooth transition between early childhood development and primary education and lay the foundation for lifelong learning.	To provide basic literacy skills to ensure a smooth transition from early childhood education to primary schooling. To provide basic numeracy skills to ensure a smooth transition from early childhood education to primary schooling.	Lower dropout rates. Lower repetition rates. Improved primary school attendance. Higher average achievement scores in primary school.
Program: Primary School Education		
Primary education is the crucial phase when the foundation is laid for secondary and ultimately tertiary education. It entails the provision of basic education facilities, hostels, sanitation, library services, recruitment and retention of qualified teachers and support staff, provision of textbooks and other teaching and learning support materials, and the provision of school feeding to all needy learners. In addition to the teaching and learning activities for grades 1–7 learners, which are the core focus areas for the primary phase; sub- activities for professional development and capacity building are also taken care of during the academic year by the regional directorates of education—training of trainers, teachers, heads of departments, school principals, school board members, education officers for advisory services, and inspectors of education—all benefit during such training activities.	To provide a sound educational basis for children to succeed at secondary schooling.	Improved average achievement scores in secondary school.

continued on next page

Table A1.2 *continued*

Original Objective	Revised Objective	Implied Outcomes
Program: Secondary School Education		
Secondary education forms the hub of a child's education. This is the stage where children become adolescents, where their vision for life and careers is clearly formulated. Therefore, the purpose of secondary education is to provide quality teaching and learning at the grades 8–12 levels and produce quality graduates who feed into the system to produce high-quality human capital. Secondary education develops skills and knowledge prerequisite for the country's socioeconomic development. The program structure makes secondary education a stand-alone program because secondary education is the critical time in the life of the child. This is the stage when children choose a career that determines their future. Secondary education is carried out through teaching activities from grades 8–12. In the past, this program formed part of general education.	To provide quality education that provides a basis for future employment, and vocational or higher education study.	Increased employment rate. Higher gross domestic product per person.
Program: Higher Education		
The purpose of this program is to provide mid- and high-level skills in key priority human resource areas as described in National Development Plan 4. The program focuses on the delivery of higher education in pursuit of a knowledge society. It aims to enhance the relevance and responsiveness of higher education to national development goals, accredit programs of higher education institutions, and audit higher education institutions. It also aims to provide funding to students from disadvantaged communities who aspire to pursue higher education qualifications.	To produce graduates with internationally recognized skill sets needed to meet <insert country's name> development goals.	Lower share of technical positions filled from foreign recruitment. Increased gross domestic product. Increased employment in knowledge-based industries.

Source: Based on the author's proposed rewrite of an African country's 2013 education objectives.

The program name should be short and informative (for example, "Adult Literacy"). Such a name makes clear to the political leadership, the Parliament, and the public what the program is about.
A program's targeted outcome(s), output(s), objective(s), or beneficiaries contained in the program's original establishment documents will also provide clarity for interested persons. For example, education ministries typically have separate programs for primary and secondary education. These programs can be linked to an overarching outcome for the ministry (say, "educated and socialized young people"), but target different beneficiaries and have different lower-level objectives, as in Table A1.2.

Furthermore, the activity should also be described so the reader can clearly understand the type of activities to which resources are directed.

A1.4. How Many Programs, Subprograms, and Activities?

Historical literature often refers to limiting the number of programs within a ministerial or departmental administrative structure. Limiting the number of programs to a "manageable" level ranges between 4 and 10, depending on the complexity of the agency.

However, such limitations were arbitrary, and usually developed in response to the circumstances of the sponsoring reform agency (usually the Ministry of Finance of the particular jurisdiction) at the time the available program budgeting guidance was written (primarily during the mid-1980s). Factors that led to the arbitrary upper limit on the number of programs in an organization's budget included

- size of the line agencies' budgets;
- a manual (rather than electronic) editing process using hard copies of draft budget documents, leading to a desire to limit the size and content of the budget documents;
- desire to limit printing costs;
- desire to keep documentation accessible and not overly cluttered with detail;
- a very limited (by today's standards) memory and processing capacity of computers at the time when program budgeting was becoming more widely fashionable; and
- limited computer literacy and end-user capacity of organization personnel, meaning that the analysis of numerous programs or subprograms was time-consuming and difficult to manage.

With the explosive growth in computer processing speeds, storage capacity, analytical capacity, and reduced cost of hardware and software, arbitrary limitations imposed on the number of programs and subprograms can be relaxed or ignored. Instead, the number of programs and subprograms can be determined by other considerations, such as the

(i) number of objectives and sub-objectives funded under each organizational appropriation with community-level significance,

(ii) number of funded objectives and sub-objectives with political-level significance,

(iii) relative importance (size) of funding for a particular objective or sub-objective vis-a-vis the total organizational appropriation,

(iv) relative importance to a particular sector of the outputs produced by the proposed program or subprogram (not only the inputs used), and

(v) ease that organizational administration costs may be allocated across programs.

The number of funded objectives considered very important to the community should be a determinant of the number of programs or subprograms identified for the organization

In general, the first two criteria are a matter of perception, judgment, and government direction. The last three criteria can be quantified using a "rule of thumb." Regarding criterion iii, for example, if funding for an objective constitutes 10% or more of the total budget for the organization, it should be identified as a distinct program or subprogram.

If a proposed subprogram constitutes less than 10% of the funding provided for a program then, unless criteria i or ii applies, it may be considered for merging with another subprogram with a similar output objective. The wording of the objective of the

merged subprogram may need to be revised so that its description adequately encompasses all funding for the subprogram. Similarly, the name of the merged subprogram may need to be refined.

On criterion iv, where the agency produces a significant proportion of the national or regional output of a particular good or service (including revenue collection), then the expenditure that delivers that output should be identified as a separate program or subprogram. A "significant" level might be 5% or more at either the national or regional level, but this is, again, a "rule of thumb."

The number of activities representing a production process should, usually, not be less than three, representing a beginning, middle, and an end to a production process

On criterion v, if administrative expenses can be appropriately allocated across an agency's programs and subprograms, there is no need to identify a separate program for "General Administration." However, if it is logistically difficult to reasonably identify the appropriate allocation of overheads to the different programs and/or subprograms, it may be simpler and/or proper to create a special purpose program for identifying all costs associated with coordination, management, and administration of the agency as a whole.

Ministerial portfolios that receive a significantly large proportion of the total budget and have significant importance at both the community and political levels, such as education or health, are likely to have numerous programs and subprograms that need to be separately and explicitly identified and evaluated.

A1.5. Aligning Program Budget Structure and Organizational Structure

The organizational structure needs to be aligned to a logically sound program budget structure, but not rigidly so.

The more diverse the agency, the more programs are likely to be required and the less appropriate it is to develop a program structure without subprograms. Therefore, the agency should

(i) identify the various agency initiatives and expenditures that can be collated into distinct expenditure programs directed toward a single objective;

(ii) identify and name the agency programs adequately, preferably with reference to the objectives that are widely accepted as being associated with the portfolio;

(iii) organize all identified initiatives into overarching programs and their subprograms—more complex ministries, such as education, could have up to 20–30 distinct subprograms across the programs; and

(iv) analyze each program and subprogram and work out the broad production phases as activities—organizations of significant size and diversity, such as the education or health sectors, could have between 60–90 components.

The agency should not limit itself to having organizational divisions at only one level of the program structure (i.e., one program may be served by several organizational divisions as subprograms, or one organizational division may constitute a single program).

Organizational protocols and niceties must not be allowed to drive program budgeting structures, and organizational structures should not be driven by the program budgeting structure, although human nature often makes following that advice difficult.

The key to success is that organizational divisions and the program budgeting structure are linked clearly at different points that may be specific to each program, and that all agency staff, decision makers, and the public understand the links. Furthermore, programs require a program manager to be accountable for operations, and the same program manager can be accountable for multiple programs, or for one, more or all subprograms.

Cost center or subprogram? Regarding the program structure, care should be taken to avoid classifying administrative units as a subprogram for no reason other than their discrete administrative nature. It may be more appropriate to reflect an administrative unit as a cost center under a subprogram of, say, "Policy Coordination" or "Planning and Support Services." For example, the "Office of the Minister"[80] and or "chief executive officer" are more of cost centers to be recorded under either, for example, "Policy Coordination" or "Planning and Support Services," or both.

However, the classification of the Office of the Minister as a cost center does not prevent the minister from also holding the role of program or subprogram manager for one or the other, or of both a policy coordination subprogram and planning and support services subprogram.

Activities versus subprograms. In some cases, not having a subprogram level between the program and activities levels of program budgeting can be problematic. If the level of "activity" is so broad that it is akin to a subprogram, the whole purpose of program budgeting is defeated. Program budgeting's original intent was to facilitate the transparent costing of activities undertaken to deliver some end-output. However, over-aggregation, where a single activity takes on the role of a subprogram, means that costing is not carried out at the activity level but at a highly aggregated level of line items at the subprogram level.

Where a policy decision has been made, for whatever reason, not to use the concept of subprograms, the alternative is to split the "activities" into new programs or create sub-activities under the activities.

Lines of accountability. When establishing a program classification, it is important to ensure that

- clear responsibility for managing each program or subprogram, and accountability for its results, is allocated to a specific unit and/or program manager within the ministry or department concerned; and
- the program classification provides a cost-effective and useful basis for data collection, reporting, monitoring, and analysis.

Activities may contribute to more than one program, although they should be aligned with only one program manager.

As for administrative classifications, there is no specific international norm for codifying programs. Program classification depends on the needs in each country, and on both the implementing agencies and the central agencies such as finance, planning, and human resources.

[80] In some government systems, the term "secretary" is equivalent to the term "minister" as used here.

When establishing clear lines of accountability for each program, the implication is that the organizational framework will closely align, at some level, with the program framework, which includes activities. However, in some cases, an organizational unit must be involved in the delivery of a number of programs that cut across the organizational structure. For example, under the program structure in Table A1.3, an ongoing activity is shown for "Computer Supply and Maintenance," another for "School Feeding," and another for "Textbook Supply" under each of the programs for different education levels. However, an alternative and organizationally aligned structure is shown in Table A1.4, which splits the three activities into separate programs with activities that align with the different educational levels.

One program manager should be responsible for each program or subprogram, who will be responsible for program results and budgetary discipline

Management decides which of the two options presented in Tables A1.3 and A1.4 to adopt. The chosen option is likely to be the approach that provides management the least path of resistance at the time any of these three initiatives is operationalized. One approach could be adopted for one initiative while the other option may be adopted for another initiative. There is no strict rule. The primary considerations are simplicity, ease of implementation, and the path of least resistance for management accountability.

Table A1.3: Option 1—Crosscutting Program Allocated Across Programs

Programs	Pre-Primary	Primary School	Secondary School	Vocational Training	Adult Education	Higher Education
Activities	**School feeding**	**Computer supply and maintenance**	**Computer supply and maintenance**	**Computer supply and maintenance**	**Computer supply and maintenance**	**Computer supply and maintenance**
	Textbook supply	**School feeding**	**School feeding**	Bbb	Bbb	Bbb
	Ccc	**Textbook supply**	**Textbook supply**	Ccc	Ccc	Ccc
	Ddd	Ddd	Ddd	Ddd	Ddd	Ddd

Source: Author.

Table A1.4: Option 2—Crosscutting Programs Retain Their Individual Identities

Programs	Primary School	Secondary School	VET	Adult	Higher	Computer Supply	School Feeding	Textbook Supply
Subprograms/ Activities	Aaa	Aaa	Aaa	Aaa	Aaa	**Primary**	**Preprimary**	**Preprimary**
	Bbb	Bbb	Bbb	Bbb	Bbb	**Secondary**	**Primary**	**Primary**
	Ccc	Ccc	Ccc	Ccc	Ccc	**VET**	**Secondary**	**Secondary**
	Ddd	Ddd	Ddd	Ddd	Ddd	**Adult**	Ddd	Ddd
	Eee	Eee	Eee	Eee	Eee	**Higher**	Eee	Eee

VET = vocational education training

Source: Author.

A1.6. Performance-Based Program Budgeting

Performance-based program budgeting (PBPB) may be loosely interpreted to be any program budgeting structure that uses performance indicators, both financial and nonfinancial, to inform the reader of the delivery of outputs under the program and the achievement of objectives.

PBPB may be implemented in a variety of ways. At one end of the spectrum, the PBPB framework may be implemented using a highly structured approach with tightly defined definitions of performance indicators focused on a particular aspect of the program. At the other end of the spectrum, the PBPB framework may have minimum structure and/or rigor with a variety of performance indicators overlaying the program budgeting structure, some being process and input indicators while others may measure outputs and/or outcomes. Using this second approach, the analyst is left with much freedom as to how to interpret performance and results.

APPENDIX 2
Medium-Term Expenditure Frameworks

A2.1. Introduction

There are many misconceptions surrounding the role and function of medium-term expenditure frameworks (MTEFs). Some people think that the MTEF is an integral part of performance-based program budgeting and RBBM. It is not. The MTEF is a stand-alone process intended to assist in two critical areas by

(i) setting a resource envelope within which budget preparation should be undertaken, and

(ii) assisting managers to plan programmatic expenditures over multiple budgeting periods.

The level of detail and number of pages in a typical MTEF document has increased exponentially in recent times. The original concept of an MTEF was simple and straightforward. First, estimate the government's resource constraint over the forward estimates period, which should have been calculated with certainty for the budget year but with less certainty the further out the estimates are. Second, allocate the resource constraint across departments, with due regard to their existing commitments and allowing for government's policy statements and commitments to incur new expenditure.

In recent times, many MTEFs changed to setting limits on programmatic expenditures, not only departmental ceilings.

While a well-constructed MTEF combined with its disciplined use is exceptionally useful for budget management and planning, it is only a supplementary tool to the RBBM framework. Furthermore, while many countries claim to have implemented an MTEF and forward estimates, they are of limited use if the preparation is treated merely as a formal compliance exercise with little or no consequences for inaccuracy of estimates and little or no influence on future budget allocations.

A2.2. Background

The concept of an MTEF originated in the evolution of Australia's forward estimates system, which was first established when Australia had a line-item budgeting system. The forward estimates were subsequently supplemented by the calculation of "global limits," which were imposed on departmental budgets at the outset of the budget preparation process, based on someone's estimate of the resource constraint, which was itself based on a fiscal deficit and/or surplus target.

Australia introduced the notion of forward estimates into its budgeting software system before 1984. However, the forward estimates, while updated semiannually, were not used for any strategic purpose until much later, and in 1984 and even 1985, their accuracy could best be described as "tenuous."

Nevertheless, an electronic system was established, which was centrally managed in a highly efficient manner that drove the momentum in later years and, in the meantime, the central managers asked the budget divisions of the Department of Finance to gradually introduce more rigor and accuracy into the forward estimates.

With the shift toward program budgeting in 1985 and the introduction of the concept of global limits, improving the accuracy of the forward estimates became important. Subsequently, the Department of Finance's Financial Management and Accounting Policy Division issued a circular to all budget divisions to work through the forward estimates and ensure compliance with a set of policies and guidelines for ensuring the current and future accuracy of the forward estimates in the system.

Through this gradual process of enhancing the management and use of the forward estimates, and especially through tight control and oversight exercised over the database by the Financial Management and Accounting Policy Division, a set of credible forward estimates was gradually generated. This supported the calculation of forward commitments and estimated revenues, allowing for a more accurate calculation of available fiscal space. The forward revenue estimates generated were used as the basis for

(i) calculating the resource envelope,

(ii) developing fiscal policy, and

(iii) targeting deficit or surplus numbers, as the case may be.

The introduction of global limits resulted in, either by accident or design, two important changes in the outcomes delivered by Australia's federal budgeting processes and procedures. First, it brought under control the growth in government expenditures (by design), which at the time was considered unsustainable. To achieve this result required collaboration between the central agencies and the government's Cabinet of Ministers. The commitment of the Cabinet to a firm budget ceiling allocated across departments was critical to the success of "global limits." This was the first rudimentary form of what became known as the "medium-term fiscal framework." The assumptions underpinning the estimation of the resource envelope and debt sustainability calculations were not made public at the time, but formed the basis of briefings to Cabinet that intended to obtain government endorsement and commitment to the macroeconomic fiscal strategy. This required discipline within the Cabinet during budget preparation period, so that "pet (political) projects" were not approved out of expediency, and control was exercised diligently over total government expenditures.

A series of rules were introduced that allowed agencies to increase expenditures in areas they considered of higher priority, but only if accompanied by offsetting savings in other areas that were of lower priority. These proposals were debated in Cabinet with input from central agencies. Thus, strategic allocation across sectors was determined during Cabinet discussions, while prioritization of programmatic expenditures was allowed to be led by the agencies, albeit with oversight from central agencies and with the opportunity for challenge, with the Cabinet as the final arbiter.

The introduction of global limits was the Government of Australia's first effort at disciplined application of a "hard" resource constraint, aimed at achieving a maximum deficit target. True to the adage that reform is born out of necessity, Australia had, at the time, an unsustainable level of public debt and an excessive current account deficit fuelled by expansive government spending. Allocating global limits across departments was the first step toward allowing line agencies more freedom to manage their resources, with reduced interference from and accountability to central agencies.

Secondly, perhaps less by design, global limits freed up the time of central agency staff by reducing the time they spent fighting rear-guard actions to prevent overambitious agencies from obtaining Cabinet approval for tenuous projects. This meant that central agency staff had more time for strategic analysis and reviews, and the budget preparation process became less confrontational. While central agencies still had to review proposals for additional spending within departmental ceilings and proposals to shift resources between programs, the workload was substantially reduced and the quality of analysis improved.

Thus, the MTEF, which started as a basic control on global spending to limit growth in public and private debt, has evolved into a full-fledged budget document in many countries.

The successful introduction in Australia of what is now the MTEF was founded on

(i) long-term planning and foresight (by accident or design),

(ii) automation of data storage and forecasting processes and procedures,

(iii) strong centralized control and quality assurance over the database (of forward estimates),

(iv) a clear end-objective accepted and embraced by political leadership, and

(v) a sensible implementation strategy that appealed to all stakeholders.

In the beginning, the "MTEF" was not a document that was produced, but merely a process of budget management that was followed. No budget document published was identified as "The MTEF" and, therefore, the existing workload was not added to but, instead, was offset by savings elsewhere. However, the current emphasis on "transparency" has meant that the production of the MTEF document is more an additional workload that, in many cases, has not resulted in any offsetting reduction in workload.

Also important to the success of Australia's MTEF was the transition from line-item budgeting to program budgeting, which allowed expenditure to be viewed in a more strategic light and perhaps assisted the political arm of government when considering the merits of expenditure proposals and sector policies.

APPENDIX 3
Aligning the Classification of Government Functions Outcome Classification Structure

Appendix 3 shows how expenditure that is classified according to the COFOG framework can be subsumed under an outcomes framework, using a translation file.

To interpret the table, consider that expenditure under each COFOG categorization will be grouped beneath an overarching outcome description. Further sub-categorizations of outcomes (sub-outcomes) can be constructed under the overarching outcome descriptions, under which the COFOG structure can be more finely aligned according to purpose. The number of sub-outcome levels would be determined according to the complexity of the national budget but, generally, no more than three should be necessary.

Outputs would then be linked to the lowest level outcome categorization, and the actual expenditure recorded according to outputs could then be reported according to the level of aggregation required for a particular report. Thus, the COFOG structure provides a useful starting point to identifying a generalized, long-lived outcomes structure that is appropriate irrespective of changes in government.

Table A3: Translating Functions of Government into an Outcomes Structure

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
01	General public services	0100	High quality governance		
01.1	Executive and legislative organs, financial and fiscal affairs, external affairs	0103		Parliamentary system is corruption-free and held in high regard.	
01.1.1	Executive and legislative organs (CS)				
01.1.2	Financial and fiscal affairs (CS)				
01.1.3	External affairs (CS)				
01.2	Foreign economic aid	0102		Foreign aid is dispensed fairly and according to purpose.	
01.2.1	Economic aid to developing countries and countries in transition (CS)				
01.2.2	Economic aid routed through international organizations (CS)				
01.3	General services	0101		Public service is corruption-free and efficient.	
01.3.1	General personnel services (CS)				
01.3.2	Overall planning and statistical services (CS)				
01.3.3	Other general services (CS)				
01.4	Basic research	0101		Public service is corruption-free and efficient.	
01.4.0	Basic research (CS)				
01.5	R&D general public services	0101		Public service is corruption-free and efficient.	
01.5.0	R&D general public services (CS)				
01.6	General public services n.e.c.	0101		Public service is corruption-free and efficient.	
01.6.0	General public services n.e.c. (CS)				
01.7	Public debt transactions	0101		Public service is corruption-free and efficient.	
01.7.0	Public debt transactions (CS)				

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
01.8	Transfers of a general character between different levels of government	0101		Public service is corruption-free and efficient.	
01.8.0	Transfers of a general character between different levels of government (CS)	0101		Public service is corruption-free and efficient.	
02	Defense	0200	The rule of law is upheld and respected.		
02.1	Military defense	0201		Defense forces act according to the constitution and defend the nation.	
02.1.0	Military defense (CS)				
02.2	Civil defense	0201		Defense forces act according to the constitution and defend the nation.	
02.2.0	Civil defense (CS)				
02.3	Foreign military aid	0201		Defense forces act according to the constitution and defend the nation.	
02.3.0	Foreign military aid (CS)				
02.4	R&D defense	0201		Defense forces act according to the constitution and defend the nation.	
02.4.0	R&D defense (CS)				
02.5	Defense n.e.c.	0201		Defense forces act according to the constitution and defend the nation.	
02.5.0	Defense n.e.c. (CS)				
03	Public order and safety	0200	The rule of law is upheld and respected		
03.1	Police services	0202		Police and security services are corruption-free and apply the law appropriately to the public and themselves.	
03.1.0	Police services (CS)				

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
03.2	Fire-protection services	0204		The public is protected from fire and natural disasters.	
03.2.0	Fire-protection services (CS)				
03.3	Law courts	0203		Judicial system is corruption-free and applies the law appropriately.	
03.3.0	Law courts (CS)				
03.4	Prisons	0203		Judicial system is corruption-free and applies the law appropriately.	
03.4.0	Prisons (CS)				
03.5	R&D public order and safety	0202		Police and security services are corruption-free and apply the law appropriately to the public and themselves.	
03.5.0	R&D public order and safety (CS)				
03.6	Public order and safety n.e.c.	0202		Police and security services are corruption-free and apply the law appropriately to the public and themselves.	
03.6.0	Public order and safety n.e.c. (CS)				
04	Economic affairs	0300	Sustainable economic development		
04.1	General economic, commercial, and labor affairs	0301		The private sector is the primary driver of economic development and growth.	
		0313		The labor market is competitive.	
04.1.1	General economic and commercial affairs (CS)				
04.1.2	General labor affairs (CS)				
04.2	Agriculture, forestry, fishing, and hunting				

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
04.2.1	Agriculture (CS)	0302		Private sector development in agriculture is sustainable without government subsidy.	
04.2.2	Forestry (CS)	0303		Private sector development in forestry is sustainable without government subsidy.	
04.2.3	Fishing and hunting (CS)	0304		Private sector development in fishing is sustainable without government subsidy.	
		0305		Private sector development in hunting is sustainable without government subsidy.	
04.3	Fuel and energy	0306		Private sector development in fuel and energy is sustainable without government subsidy.	
04.3.1	Coal and other solid mineral fuels (CS)				
04.3.2	Petroleum and natural gas (CS)				
04.3.3	Nuclear fuel (CS)				
04.3.4	Other fuels (CS)				
04.3.5	Electricity (CS)				
04.3.6	Non-electric energy (CS)				
04.4	Mining, manufacturing, and construction	0307		Private sector development in mining is sustainable without government subsidy.	
04.4.1	Mining of mineral resources other than mineral fuels (CS)				
04.4.2	Manufacturing (CS)	0308		Private sector development in manufacturing is sustainable without government subsidy.	
04.4.3	Construction (CS)	0309		Private sector development in construction is sustainable without government subsidy.	

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
04.5	Transport	0310		Private sector development in transport is sustainable without government subsidy.	
04.5.1	Road transport (CS)				
04.5.2	Water transport (CS)				
04.5.3	Railway transport (CS)				
04.5.4	Air transport (CS)				
04.5.5	Pipeline and other transport (CS)				
04.6	Communication	0311		Private sector development in telecommunications is sustainable without government subsidy.	
04.6.0	Communication (CS)				
04.7	Other industries				
04.7.1	Distributive trades, storage and warehousing (CS)				
04.7.2	Hotels and restaurants (CS)				
04.7.3	Tourism (CS)	0312		Private sector development in the tourism industry is sustainable without government subsidy.	
04.7.4	Multipurpose development projects (CS)	0301		The private sector is the primary driver of economic development and growth.	
04.8	R&D economic affairs	0301		The private sector is the primary driver of economic development and growth.	
04.8.1	R&D general economic, commercial and labor affairs (CS)				
04.8.2	R&D agriculture, forestry, fishing, and hunting (CS)				
04.8.3	R&D fuel and energy (CS)				

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
04.8.4	R&D mining, manufacturing, and construction (CS)				
04.8.5	R&D transport (CS)				
04.8.6	R&D communication (CS)				
04.8.7	R&D other industries (CS)				
04.9	Economic affairs n.e.c.	0301		The private sector is the primary driver of economic development and growth.	
04.9.0	Economic affairs n.e.c. (CS)				
05	Environmental protection	0400	Sustainable environmental use and development		
05.1	Waste management	0401		Waste products do not pollute the land.	
05.1.0	Waste management (CS)				
05.2	Wastewater management	0402		Waste products do not pollute the waters.	
05.2.0	Wastewater management (CS)				
05.3	Pollution abatement				
05.3.0	Pollution abatement (CS)				
05.4	Protection of biodiversity and landscape	0403		The landscape and urbanscape remain pleasing to view.	
		0404		The botanical and animal species diversity remains intact.	
05.4.0	Protection of biodiversity and landscape (CS)				
05.5	R&D environmental protection	0400	Sustainable environmental use and development		
05.5.0	R&D environmental protection (CS)				

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
05.6	Environmental protection n.e.c.				
05.6.0	Environmental protection n.e.c. (CS)				
06	Housing and community amenities	0500	Housing for citizens		
06.1	Housing development	0502		Housing is affordable, built to quality standards, and with modern public amenities.	
		0503		Aged, frail, and disabled persons unable to care for themselves have a public housing option.	
06.1.0	Housing development (CS)				
06.2	Community development	0502		Housing is affordable, built to quality standards, and with modern public amenities.	
06.2.0	Community development (CS)				
06.3	Water supply	0501		The water supply is reliable and safe to drink.	
06.3.0	Water supply (CS)				
06.4	Street lighting	0502		Housing is affordable, built to quality standards, and with modern public amenities.	
06.4.0	Street lighting (CS)				
06.5	R&D housing and community amenities	0502		Housing is affordable, built to quality standards, and with modern public amenities.	
		0503		Aged, frail, and disabled persons unable to care for themselves have a public housing option.	
06.5.0	R&D housing and community amenities (CS)				

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
06.6	Housing and community amenities n.e.c.	0502		Housing is affordable, built to quality standards, and with modern public amenities.	
		0503		Aged, frail, and disabled persons unable to care for themselves have a public housing option.	
06.6.0	Housing and community amenities n.e.c. (CS)				
07	Health	0600	Healthy citizens		
07.1	Medical products, appliances, and equipment	0603		The medical system is world-class.	
07.1.1	Pharmaceutical products (IS)				
07.1.2	Other medical products (IS)				
07.1.3	Therapeutic appliances and equipment (IS)				
07.2	Outpatient services	0603		The medical system is world-class.	
07.2.1	General medical services (IS)				
07.2.2	Specialized medical services (IS)				
07.2.3	Dental services (IS)				
07.2.4	Paramedical services (IS)				
07.3	Hospital services	0603		The medical system is world-class.	
07.3.1	General hospital services (IS)				
07.3.2	Specialized hospital services (IS)				
07.3.3	Medical and maternity center services (IS)				

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
07.3.4	Nursing and convalescent home services (IS)				
07.4	Public health services	0601		Children are healthy.	
		0602		The adult population is healthy.	
07.4.0	Public health services (IS)				
07.5	R&D health	0601		Children are healthy.	
		0602		The adult population is healthy.	
07.5.0	R&D health (CS)				
07.6	Health n.e.c.	0601		The children are healthy.	
		0602		The adult population is healthy.	
07.6.0	Health n.e.c. (CS)				
08	Recreation, culture, and religion	0700	Freedom of culture and religion		
08.1	Recreational and sporting services	0601		The children are healthy.	
		0602		The adult population is healthy.	
08.1.0	Recreational and sporting services (IS)				
08.2	Cultural services	0701		The nation supports cultural diversity.	
08.2.0	Cultural services (IS)				
08.3	Broadcasting and publishing services	0701		The nation supports cultural diversity.	
08.3.0	Broadcasting and publishing services (CS)				
08.4	Religious and other community services	0702		The nation supports religious diversity	

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
08.4.0	Religious and other community services (CS)				
08.5	R&D recreation, culture, and religion	0701		The nation supports cultural diversity.	
		0702		The nation supports religious diversity.	
		0601		The children are healthy.	
		0602		The adult population is healthy.	
08.5.0	R&D recreation, culture, and religion (CS)				
08.6	Recreation, culture, and religion n.e.c.	0701		The nation supports cultural diversity.	
		0702		The nation supports religious diversity.	
		0601		The children are healthy.	
		0602		The adult population is healthy.	
08.6.0	Recreation, culture, and religion n.e.c. (CS)				
09	Education	0800	Educated citizens		
09.1	Preprimary and primary education				
09.1.1	Preprimary education (IS)	0801		Children have access to good quality pre-primary education.	
09.1.2	Primary education (IS)	0802		Children have access to good quality primary education.	
09.2	Secondary education	0803		Children and adults have access to good quality secondary education.	

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
09.2.1	Lower-secondary education (IS)				
09.2.2	Upper-secondary education (IS)				
09.3	Postsecondary nontertiary education	0805		Children and adults have access to good quality vocational education.	
09.3.0	Postsecondary nontertiary education (IS)				
09.4	Tertiary education	0804		The population has access to good quality tertiary education.	
09.4.1	First stage of tertiary education (IS)				
09.4.2	Second stage of tertiary education (IS)				
09.5	Education not definable by level	0800	Educated citizens		
09.5.0	Education not definable by level (IS)				
09.6	Subsidiary services to education	0800	Educated citizens		
09.6.0	Subsidiary services to education (IS)				
09.7	R&D education	0800	Educated citizens		
09.7.0	R&D education (CS)				
09.8	Education n.e.c.	0800	Educated citizens		
09.8.0	Education n.e.c. (CS)				
10	Social protection	0900	Social protection for disadvantaged citizens		
10.1	Sickness and disability	0902		Children are protected from sickness and homelessness.	
		0903		Aged and disabled people are protected from sickness and homelessness.	

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Table A3 *continued*

COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
10.1.1	Sickness (IS)				
10.1.2	Disability (IS)				
10.2	Old age	0903		Aged and disabled people are protected from sickness and homelessness.	
10.2.0	Old age (IS)				
10.3	Survivors	0901		The nation is highly regarded for its equitable treatment of all people in society.	
10.3.0	Survivors (IS)				
10.4	Family and children	0901		The nation is highly regarded for its equitable treatment of women and men at work, and in society more generally.	
10.4.0	Family and children (IS)				
10.5	Unemployment	0901		The nation is highly regarded for its equitable treatment of women and men at work, and in society more generally.	
10.5.0	Unemployment (IS)				
10.6	Housing	0903		Aged and disabled people are protected from sickness and homelessness.	
		0902		Children are protected from sickness and homelessness.	
10.6.0	Housing (IS)				
10.7	Social exclusion n.e.c.	0901		The nation is highly regarded for its equitable treatment of women and men at work, and in society more generally	
10.7.0	Social exclusion n.e.c. (IS)				

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COFOG Code	United Nations Statistics Division COFOG Descriptions	Example Outcome Code	Level 1 Outcome Classification Structure	Level 2 Sub-Outcome	Level 3 Sub-Outcome
10.8	R&D social protection	0901		The nation is highly regarded for its equitable treatment of women and men at work, and in society more generally	
10.8.0	R&D social protection (CS)				
10.9	Social protection n.e.c.	0901		The nation is highly regarded for its equitable treatment of women and men at work, and in society more generally	
10.9.0	Social protection n.e.c. (CS)				

COFOG = classification of functions of government, CS = collective services, IS = individual services, n.e.c. = not elsewhere classified, R&D = research and development.

Source: Author.

APPENDIX 4
Common Outputs and their Performance Indicators

Table A4.1: Output Type Classifications (Example)

Output Type Code	Common Output Types	Internal Output or External Output at Organizational Level	Comments
0	Not classifiable		
1	Adjudicatory Services	EO	
2	Asset Management Services	IO/EO	Public works sometimes provides this service to other agencies.
3	Collection of Taxes, Fees, and Charges	EO	
4	Construction Services	EO	
5	Disaster Management Services	EO	
6	Dispute Resolution Services	EO	
7	Education and Training Services	IO/EO	This service can be provided across programs or to external clients.
8	Financial Management Services	IO/EO	This service can be provided across programs or to external clients.
9	Financial Asset and Liability Management Services	EO	Usually provided by a unit on behalf of government.
10	Hospital Services	EO	
11	Human Resource Management Services	IO	
12	Indigenous Development	EO	
13	Information Management Services	IO/EO	Can be provided across programs or for the whole of government.
14	Internal Auditing Services	IO	
15	Land Management Services	EO	
16	Legal Advisory Services	IO/EO	Can be provided across programs or for the whole of government.
17	Maintenance of Registry(ies)	IO/EO	Can be provided across programs or for external clients.
18	Network Management	IO/EO	Can be provided across programs or for the whole of government, or to other external clients.
19	Office Equipment Support Services	IO	

continued on next page

Table A4.1 *continued*

Output Type Code	Common Output Types	Internal Output or External Output at Organizational Level	Comments
20	Organizational Management Services	IO	
21	Organizational Development Services	IO	
22	Passenger Services	EO	
23	Planning and Budgeting Services	IO	
24	Primary Education Services	EO	
25	Property Management	IO/EO	Public works sometimes provides this service to other agencies and is also often an internal output across programs.
26	Public Awareness Promotions	EO	
27	Public Relations and Publicity Services	IO	
28	Public Reporting	EO	
29	Regulatory Services	EO	
30	Repair and Maintenance Services	IO/EO	Public works sometimes provides this service to other agencies and is also often an internal output.
31	Research and Development	EO	
32	Secondary Education Services	EO	
33	Secretariat Services	IO	
34	Supply of Energy	EO	
35	Supply of Goods	EO	
36	Supply of Manufactured Products	EO	
37	Supply of Water	EO	
38	Surveillance and Policing Services	EO	
39	Technical Research and Advisory Services	EO	
40	Tertiary Education Services	EO	
41	Vocational Training	EO	
42–99	Reserved for future output type code allocations	IO/EO	On a case-by-case basis, new outputs may be IO or EO.

EO = external output, IO = internal output.

Source: Author.

Table A4.2: Determining the Performance Indicator Description of a Common Output (Example)

Output Description	Performance Indicator Class	Performance Indicator Description—Questions to Ask Oneself	Target
Network Management Services: (Road, Information Technology, Irrigation, etc.)	Quantity	What is the quantity to be measured?	>X
	Quantity	Is there a valid second way to measure quantity?	>Y
	Quality	How would we measure quality of service delivery – direct or proxy measures?	>X
	Quality	Is there a valid second way to measure quality of service delivery?	<Y
	Timeliness	How would we measure "timeliness" of service delivery?	>X
	Timeliness	Is there a valid second way to measure "timeliness" of service delivery?	<Y
	Cost/ Financial	Actual expenditure/Budgeted expenditure (accrual or cash?)	<X
	Cost/ Financial	Is there a valid second way to measure cost/ financial indicators (accrual or cash)?	>Y

X = an arbitrary numerical target (maximum or minimum), Y = another arbitrary numerical target (maximum or minimum).

Source: Author.

Table A4.3: Provision of Technical Advisory Services Standard Description and Performance Indicators

Output Description	Performance Indicator Class	Performance Indicator Description	Target
Technical Advisory Services	Quantity	Number of technical assistance/ advisories provided	>100
	Quantity	Number of persons trained	>500
	Quantity	Number of training days delivered	>200
	Quality	% of entities assisted who rate the technical service as good or better	>65
	Timeliness	% of entities' requests for assistance responded to within 1 week	>70
	Cost	Actual expenditure/Budget expenditure	<1.01

Source: Author.

Table A4.4: Provision of Legal Advisory Services Standard Description and Performance Indicators

Output Description	Performance Indicator Class	Performance Indicator Description	Target
Provision of legal advisory services	Quantity	Number of legal advisories provided	>100
	Quality	% of advisories rated by clients as good or better	>65
	Timeliness	% of advisories provided within 10 days of receipt of request	>70
	Cost	Actual expenditure/Budget expenditure	<1.01

Source: Author.

Table A4.5: Provision of Management and Administrative Support Services Standard Description and Performance Indicators

Output Description	Performance Indicator Class	Performance Indicator Description	Target
Provision of management and administrative support services	Quantity	Number of organization coordination meetings facilitated	>12
	Quality	% of participants who rate the quality of the coordination meetings as good or better	>75
	Quality	Average % of agenda items deferred to a following meeting	<10
	Timeliness	% of meetings that are completed within 10 minutes of their scheduled finishing time	>80
	Cost	Actual expenditure/Budget expenditure	<1.01

Source: Author.

Table A4.6: Provision of Internal Audit Services Standard Description and Performance Indicators

Output Description	Performance Indicator Class	Performance Indicator Description	Target
Provision of internal audit services	Quantity	Number of internal audits undertaken	>25
	Quantity	Number of internal audit reports produced	>35
	Quality	% of clients who rate the internal audit service recommendations as good or better	>70
	Timeliness	% of internal audits completed within 10 business days of commencement	>70
	Timeliness	% of internal audit reports submitted within 10 days of completion of audit	>80
	Cost	Actual expenditure/Budget expenditure	<1.01

Source: Author.

APPENDIX 5
Templates for Capital Budget Proposals

Form 1—Budget Motivation for an Expansion of Service

Proposal for the Expansion of Output Funding

(Note: complete one form for each proposal. All sections should be completed.)

Name of Agency: _____
Contact Officer for Verification of Technical Detail: _____
Telephone: _____
E-mail: _____

Part I: Proposal Summary

Program(s)/Subprogram: _____
Activity: _____
Output(s): _____

Increase in purchase cost of outputs from the private sector:

☐ Tick if appropriate

Cost of proposed increase in purchase of outputs from the private sector:

	Budget (Next)	MTEF Year 1	MTEF Year 2	MTEF Year 3
Base Cost				
Additional Cost	Inflation adjustment: Real increase:	Inflation adjustment: Real increase:	Inflation adjustment: Real increase:	Inflation adjustment: Real increase:
Total Cost				

MTEF = medium-term expenditure framework.

Increase in production of outputs by the civil service:

☐ Tick if appropriate

Cost of proposed increase in cost of outputs by the civil service:

	Budget (next)	MTEF Year 1	MTEF Year 2	MTEF Year 3
Operating				
Capital				
Maintenance				

MTEF = medium-term expenditure framework.

Part II: Scope and Objective(s) of the Proposal

1. Can/is production of the output outsourced to the private sector? [If not, why not? If yes, why should the government continue to manage the production process? What are the financial and other contractual implications of outsourcing or increasing purchases?]

Yes / No [Please circle one]

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

2. Financial relationship between Inputs, Outputs, and Activities of the Proposal

Baseline Output Cost: _____

Additional Request: _____

Baseline Output Performance Indicators	Impact on Performance Targets of Additional Funding			
	Budget (Next)	MTEF Year 1	MTEF Year 2	MTEF Year 3
Quantity	Old: New:			
Quality	Old: New:			
Timeliness	Old: New:			
Cost	Old: New:			

MTEF = medium-term expenditure framework.

3. Clearly outline the link between this proposal and the agency's outputs

(In terms of one of the four types of performance measures: quantity, quality, timeliness, and cost).

_____
_____
_____
_____
_____

4. How is the increase in output funding expected to impact on the government's outcome target(s)?

_____
_____
_____
_____
_____

Targeted Goal	Sector Goal Indicators	Budget (Next)	MTEF Year 1	MTEF Year 2	MTEF Year 3
		Old: New:	Old: New:	Old: New:	Old: New:
		Old: New:	Old: New:	Old: New:	Old: New:
		Old: New:	Old: New:	Old: New:	Old: New:

MTEF = medium-term expenditure framework.

5. Location and duration

(Where are the outputs to be produced and where will they be delivered? How long will it take to increase/improve outputs to the intended levels and over what time frame will the expansion/improvement in outputs continue?)

_____
_____
_____
_____
_____

6. Clearly identify the impact this proposed expenditure will have on men and women and/or list other agencies likely to be involved/participating in this issue

(Include other programs and activities within your own agency that are currently involved in addressing aspects of this issue.)

_____
_____
_____
_____
_____

Part III: Funding the Proposal

7. What are the proposed sources for funding these outputs?

(The total operating and capital costs of the project.)

	Budget (Next)	MTEF Year 1	MTEF Year 2	MTEF Year 3
1. Appropriation Act				
2. Others				
3. Donor Funds				
4. Community/Self-Help				
5. User Charges				
TOTAL FUNDING REQUIRED				

MTEF = medium-term expenditure framework.

8. Sources of funding

(Describe how sources might change over time, particularly with respect to user charges.)

_____
_____
_____
_____
_____

Part IV: Financial Analysis of the Proposal

9. Assumptions/risks of this proposal

(List key assumptions and describe some possible risks that may hinder the continuance of this proposal/ project. This could include human, technical, climatic risks, etc.)

_____
_____
_____
_____
_____

Description of funding needs

(Provide a brief summary of what the increase in funding entails and the status of the proposal/project, i.e., what work has been done and what is yet to be completed.)

Capital inputs:

_____
_____
_____
_____
_____

Implications for future maintenance expenditures:

_____
_____
_____
_____
_____

Operating expenses:

_____
_____
_____
_____
_____

10. Maintenance schedule

(Outline here the implications for maintenance expenditures of any capital purchases.)

	Budget (Next)	MTEF Year 1	MTEF Year 2	MTEF Year 3
Describe types of maintenance required. Xx Yy Zz				
Estimated cost of maintenance Xx Yy Zz				
Contracted maintenance or in-house? Xx Yy Zz				

MTEF = medium-term expenditure framework.

Describe any large maintenance expenditures not covered in the table:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

11. What are the major cost components of this proposal?

(Itemize costs associated with the proposal/project and the projections over the duration of this proposal/project. Include the level of recurrent costs.)

($,000)	Current Approved Budget	Additional Request	Proposed Budget	MTEF Year 1 Projection	MTEF Year 2 Projection	MTEF Year 3 Projection
COSTS: **Account Description** _____ _____ _____ **Total Operating Costs**	 _____ _____ _____	 _____ _____ _____	 _____ _____ _____	 _____ _____ _____	 _____ _____ _____	 _____ _____ _____
Account Description _____ _____ _____ ***Total Capital Costs***	 _____ _____ _____ _____	 _____ _____ _____ _____	 _____ _____ _____ _____	 _____ _____ _____ _____	 _____ _____ _____ _____	 _____ _____ _____ _____
Total of Capital and Operating Costs	_____	_____	_____	_____	_____	_____
VAT	_____	_____	_____	_____	_____	_____
TOTAL COSTS (VAT inclusive)	_____	_____	_____	_____	_____	_____

MTEF = medium-term expenditure framework.

12. What is the estimated net social benefit of this proposal?

(Outline the calculations undertaken to justify this proposal in terms of the government guidelines for the calculation of net social benefit.)

_____
_____
_____
_____
_____

Part V: Coordination with Other Agencies

13. Comments

(Include comments from other line agencies that are likely to be involved/participating in the issue listed under section 6.)

Other agencies' comments:

_____
_____
_____
_____
_____

Source: Author.

Form 2—Budget Proposals for a New Service and/or Output

Proposal for the Production of New Output

(Note: complete one form for each proposal. All sections should be completed.)

Name of Agency: _____

Contact Officer for Verification of Technical Detail: _____

Telephone: _____

E-mail: _____

Part I: Proposal Summary

Output description _____

Quantity of outputs per year _____

Purchase of outputs from the private sector: ☐ Tick if appropriate

	Budget (Next)	MTEF Year 1	MTEF Year 2	MTEF Year 3
Output Purchase Cost				
Additional Contract Management Costs to Civil Service				
Total Cost				

MTEF = medium-term expenditure framework.

Production of outputs by the civil service: ☐ Tick if appropriate

Cost of production of outputs by the civil service:

	Budget (Next)	MTEF Year 1	MTEF Year 2	MTEF Year 3
Operating				
Capital				
Maintenance				
TOTAL				

MTEF = medium-term expenditure framework.

Part II: Scope and Objective(s) of the Proposal

1. Description

(Briefly specify the purpose/type of activities involved in this proposal.)

_____

_____

_____

_____

_____

2. Can production of the output be outsourced to the private sector?
(If not, why not? If yes, why should government manage/intervene in the production process? What are the financial and other contractual implications of outsourcing to the private sector?)

Yes / No (*Please circle one*)

_____
_____
_____
_____
_____

Is the output intended to address an existing outcome targeted by the government?

Yes / No (*Please circle one*)

If Yes, proceed to the following section. If No, is there a Cabinet Decision notifying of a new outcome and targets? Provide details below, including Cabinet Decision number/reference:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

3. How is output funding expected to impact the government's existing outcome target(s)?
_____
_____
_____
_____
_____

Targeted Outcome	Key Result Indicator	Targets Budget (next)	Targets MTEF Year 1	Targets MTEF Year 2	Targets MTEF Year 3
		Old: New:	Old: New:	Old: New:	Old: New:
		Old: New:	Old: New:	Old: New:	Old: New:
		Old: New:	Old: New:	Old: New:	Old: New:

MTEF = medium-term expenditure framework.

4. Location and duration of production

(Indicate where the output will be produced, where it will be delivered, and the lag between approval to spend funds and delivery of outputs.)

_____
_____
_____
_____
_____

5. Clearly identify the impact this proposed expenditure will have on men and women and/or list other agencies likely to be involved/participating in this issue

(Include other programs and activities within your own agency that are currently involved in addressing aspects of this issue.)

_____
_____
_____
_____
_____

Part III: Sources of Funding

6. Indicate the intended source of funding, whether government (central or state), aid, or other.

(Please provide details of the donor/contributor; amount; and expected date of receipt.)

	Budget (Next)	MTEF Year 1	MTEF Year 2	MTEF Year 3
Appropriation Act				
Others				
Donor Funds				
Community/Self-Help				
User Charges				
TOTAL FUNDING REQUIRED				

MTEF = medium-term expenditure framework.

7. Source of funding

(Describe how sources might change over time, particularly for user charges.)

_____
_____
_____
_____
_____

Part IV: Financial and Economic Analysis of the Proposal

8. Assumptions/risks of this proposal

(List key assumptions and describe some possible risks that may hinder the implementation of this proposal. This could include human, technical, climatic factors, etc.)

_____
_____
_____
_____
_____

9. Financial relationship between Inputs, Outputs, and Activities of the Proposal

Cost	Output	Time Frame for Achieving Outcome Impact

Output	Performance Indicator	Targets Budget (Next)	Targets MTEF Year 1	Targets MTEF Year 2	Targets MTEF Year 3

MTEF = medium-term expenditure framework.

Targeted Goal	Sector Goal Indicator Description	Targets Budget (Next)	Targets MTEF Year 1	Targets MTEF Year 2	Targets MTEF Year 3

MTEF = medium-term expenditure framework.

10. What are the major cost components of this proposal

(Itemize costs associated with the proposal/project and the projections over the duration of this proposal/project. The level of recurrent costs should also be included.)

($'000)	Budget (Next)	MTEF Year 1	MTEF Year 2	MTEF Year 3
COSTS: **Account Description** _____ _____ _____ **Total Operating Costs**	 $_____ $_____ $_____	 $_____ $_____ $_____	 $_____ $_____ $_____	 $_____ $_____ $_____
Account Description _____ _____ _____ ***Total Capital Costs***	 $_____ $_____ $_____ $_____	 $_____ $_____ $_____ $_____	 $_____ $_____ $_____ $_____	 $_____ $_____ $_____ $_____
Total of Capital and Operating Costs	$_____	$_____	$_____	$_____
VAT	$_____	$_____	$_____	$_____
TOTAL COSTS (VAT inclusive)[a] [A]	$_____	$_____	$_____	$_____

MTEF = medium-term expenditure framework.

[a] Value Added Tax

11. Justify the need for the new expenditure in relation to outputs:

_____
_____
_____
_____
_____

12. Description of funding needs

[Provide a brief summary of what the increase in funding entails and the status of the proposal/project, i.e., what work has been done and what is yet to be completed.]

Capital inputs:

_____
_____
_____
_____
_____

Implications for future maintenance expenditures:

_____
_____
_____
_____
_____

Operating expenses:

_____
_____
_____
_____
_____

13. Maintenance schedule

(Outline the implications for maintenance expenditures of any capital purchases.)

	FY 20yy/yy	FY 20yy/yy	FY 20yy/yy
Describe types of maintenance required Xx Yy Zz			
Estimated cost of maintenance Xx Yy Zz			
Contracted maintenance or in-house? Xx Yy Zz			

Describe any known large maintenance expenditures not covered in the table:

_____
_____
_____
_____

14. What is the estimated net social benefit of this proposal?

(Outline the calculations undertaken to justify this proposal in terms of the government guidelines[81] for the calculation of net social benefit.)

_____
_____
_____
_____

[81] Government may or may not have issued guidelines on how net social benefits of any project should be estimated, depending on government policy and practice.

Part V: Coordination Comments

15. Comments

(Include comments from other line agencies likely to be involved/participating in the issue listed under section 6.)

Other agencies' comments:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Source: Author.

APPENDIX 6
An Outcome Classification System with Outcome Indicators

Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00017	% change in exports	17.11	1	%						10
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00003	% Change in GDP		1	%						
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00005	% of people earning $ at or below the assessed poverty rate		2	%						
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00007	% of people living on less than $1.25 a day adjusted for inflation (base year 2015)	1.1	2	%						10
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00012	% of people suffering malnutrition in any year	2.2	2	%						10
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00006	% of the population practicing contraception		1	%						
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00016	Average % change in economic productivity (How do you propose to measure this across all sectors?)	8.2	1	%						1

continued on next page

Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00052	Average % change in the proportion of children of all ages living in poverty in all its dimensions according to national definitions (How would you like to calculate the average?	1.2	2	%						-50
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00008	Average % change in the proportion of men living in poverty in all its dimensions according to national definitions	1.2	2	%						-50
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00009	Average % change in the proportion of women of all ages living in poverty in all its dimensions according to national definitions	1.2	2	%						-50
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00018	Average % variance in annual FX exchange rates	17.13	2	%						10
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00020	Average variance in consumer price indices	17.13	2	%						3
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00014	Estimated average % of economic growth derived from efficiency gains	8.4	1	%						50
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00015	Estimated average % of economic growth driven by population growth	8.4	2	%						-1

continued on next page

Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	01159	Estimated average per capita kiloujoule consumption/ Estimated average per capita kilojoule requirement	8.4	2	ratio		1	1	1	1	1
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00004	GDP per capita		1	$						
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00021	GINI ratio for <insert country name>		2	index						
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	01158	Number of regulatory instruments that incorporate discriminatory provisions with respect to one person's characteristics over another		2	Number of instruments						0
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00002	Participation rate		1	%						
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00019	Three year average annual budget deficit as a % of GDP	17.13	2	%						3
000000	General Cross Cutting	000100	General cross cutting	000100	General economic and social indicators	00001	Unemployment rate		2	%						
010000	High Quality Governance	010100	High quality national government	010100	General	00033	% change in official development assistance and remittances	10.b	1	%						1
010000	High Quality Governance	010100	High quality national government	010100	General	00037	% of appeals against denial of access to data that is investigated by the freedom of information omudsman	16.6	1	%						99.9

continued on next page

Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
010000	High Quality Governance	010100	High quality national government	010100	General	00028	% of central agencies with a score of 7.5 or better in the Integrity of Public Services Assessment (out of a maximum of 10)		1	%						
010000	High Quality Governance	010100	High quality national government	010100	General	00030	% of central agencies with one or more accusations of corruption within the last 3 years		2	%						
010000	High Quality Governance	010100	High quality national government	010100	General	01163	% of central agencies with unqualified audits		1	%						
010000	High Quality Governance	010100	High quality national government	010100	General	00036	% of freedom of information requests that are denied by government bureaucracies	16.6	2	%						1
010000	High Quality Governance	010100	High quality national government	010100	General	00038	% of investigations by the anti-corruption authority that are impeded by court room actions	16.6	2	%						1
010000	High Quality Governance	010100	High quality national government	010100	General	01171	% change in the number of public servants (elected politicians and persons whose salary is paid from government taxes or the result of business operations established by virtue of government regulation) that have accusations of corruption outstanding or proved		2	%						.000001

continued on next page

Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
010000	High Quality Governance	010100	High quality national government	010100	General	01178	Absence of corruption score of the World Justice Project report		1	index		0.37	0.374	0.38	0.38	0.00
010000	High Quality Governance	010100	High quality national government	010100	General	00032	Average % of citizens who consider their national governance and bureaucratic framework is equal to or better than any alternative	10.7	1	%						99.9
010000	High Quality Governance	010100	High quality national government	010100	General	00031	Average % of eligible voters who choose to vote in elections		1	%						
010000	High Quality Governance	010100	High quality national government	010100	General	00035	Average % of people who consider that the national policies for the protection of patents on genetic resources provides fair and equitable sharing of the benefits arising from the utilization of genetic resources	15.6	1	%						51
010000	High Quality Governance	010100	High quality national government	010100	General	00040	Average % of SDG outcome indicator statistics against which statistics are reported	17.19	1	%						75
010000	High Quality Governance	010100	High quality national government	010100	General	00050	Closing a business ranking on the Worldwide Governance Indicator of the World Bank		2	index						

continued on next page

Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
010000	High Quality Governance	010100	High quality national government	010100	General	01174	Constraints on Government Powers score in the World Justice Project report		1	index		0.64	0.646	0.65	0.66	0.00
010000	High Quality Governance	010100	High quality national government	010100	General	00046	Corruption ranking on the Worldwide Governance Indicator of the World Bank		2	index						
010000	High Quality Governance	010100	High quality national government	010100	General	00206	Exports as a % of GDP (nominal)		1	%						
010000	High Quality Governance	010100	High quality national government	010100	General	00207	Exports as a % of GDP (real)		1	%						
010000	High Quality Governance	010100	High quality national government	010100	General	00048	Fundamental Rights Score in the World Justice Project Rule of Law Index		1	index		0.52	0.525	0.53	0.54	0.00
010000	High Quality Governance	010100	High quality national government	010100	General	00040	Investment as a % of GDP (nominal)		1	%						
010000	High Quality Governance	010100	High quality national government	010100	General	01172	Investment as a % of GDP (real)		1	%						
010000	High Quality Governance	010100	High quality national government	010100	General	01168	Number of regulatory instruments or institutional or bureaucratic blockage or limitations on foreign direct investment	10.b	2	%						.0001
010000	High Quality Governance	010100	High quality national government	010100	General	00047	Open Government Score in the World Justice Project report		1	index		0.58	0.586	0.59	0.60	0.00
010000	High Quality Governance	010100	High quality national government	010100	General	00007	Overall score in the World Justice Project report		1	index		0.52	0.55	0.58	0.6	0.62

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
010000	High Quality Governance	010100	High quality national government	010100	General	00041	Political stability ranking on the Worldwide Governance Indicator of the World Bank		2	index						
010000	High Quality Governance	010100	High quality national government	010100	General	00011	Private investment expenditure as a % of GDP		1	%						
010000	High Quality Governance	010100	High quality national government	010100	General	00045	Ranking of <insert country name> in the Global Competitiveness Index of the World Economic Forum (WEF)		2	index						
010000	High Quality Governance	010100	High quality national government	010100	General	00044	Regulatory Enforcement score in the World Justice Project report		1	index		0.51	0.515	0.52	0.53	0.00
010000	High Quality Governance	010100	High quality national government	010100	General	01177	Rule of law ranking on the Worldwide Governace Indicator of the World Bank		2	index						
010000	High Quality Governance	010100	High quality national government	010100	General	00049	Starting a business ranking on the Worldwide Governance Indicator of the World Bank		2	index						
010000	High Quality Governance	010100	High quality national government	010100	General	01173	Voice and accountability ranking on the Worldwide Governance Indicator of the World Bank		2	index						
010000	High Quality Governance	010100	High quality national government	010100	General	01193	Number of Government Agencies/Number of COFOG Divisions		2	ratio						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
010000	High Quality Governance	010100	High quality national government	010100	General	01194	% of output service delivery targets achieved within +/-5%		1	%						
010000	High Quality Governance	010200	High quality local government	010200	General	01180	% of local government agencies with a score of 7.0 or better in the Integrity of Public Services Assessment (out of maximum of 10)		1	%						
010000	High Quality Governance	010200	High quality local government	010200	General	01181	% of local government agencies with one or more accusations of corruption within the last 3 years		2	%						
010000	High Quality Governance	010200	High quality local government	010200	General	01182	% of local government agencies with unqualified audits		1	%						
010000	High Quality Governance	010200	High quality local government	010200	General	01178	Absence of corruption score of the World Justice Project report		1	index		0.37	0.374	0.38	0.38	0.00
010000	High Quality Governance	010200	High quality local government	010200	General	01170	Average variance in provincial GDP ($)		2	$						
010000	High Quality Governance	010200	High quality local government	010200	General	00046	Corruption ranking on the Worldwide Governance Indicator of the World Bank		2	index						
010000	High Quality Governance	010200	High quality local government	010200	General	00047	Open Government Score in the World Justice Project report		1	index		0.52	0.525	0.53	0.54	0.00
010000	High Quality Governance	010200	High quality local government	010200	General	01160	Provincial investment as a % of Provincial GDP (nominal)		1	%						

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
010000	High Quality Governance	010200	High quality local government	010200	General	00044	Regulatory Enforcement score in the World Justice Project Rule of Law Index		1	index		0.52	0.525	0.53	0.54	0.00
010000	High Quality Governance	010200	High quality local government	010200	General	00039	Second variance of Provincial GDP ($)		1	$						
010000	High Quality Governance	010200	High quality local government	010200	General	01195	% of <insert country name>'s who consider that the their local government has high integrity		1	%						
010000	High Quality Governance	010300	Respected judiciary	010300	General	01021	% of <insert country name>'s who consider that their judicial system is fair and equitable		1	%						
010000	High Quality Governance	010300	Respected judiciary	010300	General	00812	% of lower court judgements overturned on appeal		2	%						
010000	High Quality Governance	010300	Respected judiciary	010300	General	01178	Absence of corruption score of the World Justice Project report		1	index		0.37	0.374	0.38	0.38	0.00
010000	High Quality Governance	010300	Respected judiciary	010300	General	00122	Access to Civil Justice Score in the World Justice Project report		1	index		0.52	0.525	0.53	0.54	0.00
010000	High Quality Governance	010300	Respected judiciary	010300	General	00083	Civil Justice score of the World Justice Project report		1	index		0.52	0.525	0.53	0.54	0.00
010000	High Quality Governance	010300	Respected judiciary	010300	General	00046	Corruption ranking on the Worldwide Governance Indicator of the World Bank		2	index						

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
010000	High Quality Governance	010300	Respected judiciary	010300	General	00084	Criminal justice score of the World Justice Project report		1	Index		0.52	0.525	0.53	0.54	0.00
010000	High Quality Governance	010300	Respected judiciary	010300	General	00085	Due Process of Law and Rights of the Accused score in the World Justice Project report	4.3	1	Index		0.35				
010000	High Quality Governance	010300	Respected judiciary	010300	General	00044	Regulatory Enforcement score in the World Justice Project report		1	index		0.52	0.525	0.53	0.54	0.00
010000	High Quality Governance	010300	Respected judiciary	010300	General	01177	Rule of law ranking on the Worldwide Governace Indicator of the World Bank		2	index						
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	00611	% Change in the numer of recorded crime incidents									
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	01184	% of incidents of illegal poaching and cross border trafficking in flora and fauna that are successfully prosecuted	15.7	1	%						
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	01185	Average % change in the number of violence related deaths	16.1	2	%						-10
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	01185	Average % change in the number of violence related incidents	16.1	2	%						-10

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	00815	Average % of green and public open spaces with a higher incidence of crime than the national average	11.7	2	%						.0001
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	00084	Criminal Justice score of the World Justice Project report					0.52	0.525	0.53	0.54	0.00
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	00085	Due Process of Law and Rights of the Accused score in the World Justice Project report	4.3	1	Index		0.35				
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	00010	Order and Security Score in the World Justice Project report		1	index		0.52	0.525	0.53	0.54	0.00
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	00010	Order and Security Score in the World Justice Project Rule of Law Index					0.52	0.525	0.53	0.54	0.00
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	01177	Rule of law ranking on the Worldwide Governace Indicator of the World Bank									
020000	The rule of law, order and public safety is upheld and respected	020100	Domestic criminal activity is eliminated	020100	General	01209	Number of recorded incidents of violations of <insert country name>'s border integrity		2	Number of incidents						
020000	The rule of law, order and public safety is upheld and respected	020200	International criminal activity is eliminated	020200	General	00013	% of incidents of illegal poaching and cross border trafficking in flora and fauna that are successfully prosecuted	15.7	1	%						

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
020000	The rule of law, order and public safety is upheld and respected	020200	International criminal activity is eliminated	020200	General	00084	Criminal Justice score of the World Justice Project report					0.52	0.525	0.53	0.54	0.00
020000	The rule of law, order and public safety is upheld and respected	020200	International criminal activity is eliminated	020200	General	00085	Due Process of Law and Rights of the Accused score in the World Justice Project report	4.3	1	Index		0.35				
020000	The rule of law, order and public safety is upheld and respected	020200	International criminal activity is eliminated	020200	General	00010	Order and Security Score in the World Justice Project Rule of Law Index					0.52	0.525	0.53	0.54	0.00
020000	The rule of law, order and public safety is upheld and respected	020200	International criminal activity is eliminated	020200	General	01177	Rule of law ranking on the Worldwide Governace Indicator of the World Bank									
020000	The rule of law, order and public safety is upheld and respected	020300	Domestic civil and administrative codes are enforced	020300	General	01178	Absence of corruption score of the World Justice Project report		1	index		0.37	0.374	0.38	0.38	0.00
020000	The rule of law, order and public safety is upheld and respected	020300	Domestic civil and administrative codes are enforced	020300	General	00083	Civil Justice score of the World Justice Project					0.52	0.525	0.53	0.54	0.00
020000	The rule of law, order and public safety is upheld and respected	020300	Domestic civil and administrative codes are enforced	020300	General	00010	Order and Security Score in the World Justice Project Rule of Law Index					0.52	0.525	0.53	0.54	0.00
020000	The rule of law, order and public safety is upheld and respected	020300	Domestic civil and administrative codes are enforced	020300	General	00044	Regulatory Enforcement score in the World Justice Project Rule of Law Index					0.52	0.525	0.53	0.54	0.00
020000	The rule of law, order and public safety is upheld and respected	020300	Domestic civil and administrative codes are enforced	020300	General	01177	Rule of law ranking on the Worldwide Governace Indicator of the World Bank									

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
020000	The rule of law, order and public safety is upheld and respected	020400	International civil and administrative agreements are enforced	020400	General	01178	Absence of corruption score of the World Justice Project report		1	index		0.37	0.374	0.38	0.38	0.00
020000	The rule of law, order and public safety is upheld and respected	020400	International civil and administrative agreements are enforced	020400	General	00083	Civil Justice score of the World Justice Project report					0.52	0.525	0.53	0.54	0.00
020000	The rule of law, order and public safety is upheld and respected	020400	International civil and administrative agreements are enforced	020400	General	01161	Number of border disputes on foot/Number of border disputes registered with the International Court at the Hague		1	Ratio						
020000	The rule of law, order and public safety is upheld and respected	020400	International civil and administrative agreements are enforced	020400	General	00044	Regulatory Enforcement score in the World Justice Project Rule of Law Index					0.52	0.525	0.53	0.54	0.00
020000	The rule of law, order and public safety is upheld and respected	020400	International civil and administrative agreements are enforced	020400	General	01177	Rule of law ranking on the Worldwide Governace Indicator of the World Bank									
030000	Sustainable economic development	030100	General	030100		00027	% change in gross private research and development spending	9.5	1	%						1
030000	Sustainable economic development	030100	General	030100		00026	% change in gross public research and development spending	9.5	1	%						1
030000	Sustainable economic development	030100	General	030100		00025	% change in the number of research and development workers per 1 million people	9.5	1	%						1
030000	Sustainable economic development	030100	General	030100		01164	% change income of the bottom 40 per cent of the population/% change national income	10.1	1	ratio of change in income of bottom 40% to growth in national income						1

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030100	General	030100		01166	% of countries with which <insert country name> has one or more international cooperation agreements to sharing access to science, technology and innovation ideas	17.6	1	%						99.9
030000	Sustainable economic development	030100	General	030100		00022	% of districts assessed as underdeveloped		2	%						
030000	Sustainable economic development	030100	General	030100		00021	% of GDP produced outside of Java									
030000	Sustainable economic development	030100	General	030100		01167	% of the Doha Development Agenda agreements that have been implemented in <insert country name>'s legal framework governing trade	17.1	1	%						99.9
030000	Sustainable economic development	030100	General	030100		00023	Average % change in industry's share of employment	9.2	1	%						10
030000	Sustainable economic development	030100	General	030100		00024	Average % change in industry's share of GDP	9.2	1	%						10
030000	Sustainable economic development	030100	General	030100		01162	Average % change in proportion of population with mobile or fixed line internet connections	9.c	1	%						10
030000	Sustainable economic development	030100	General	030100		00029	Average cost per Megabyte of data transfer	9.c	2	USD						.01

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030100	General	030100		01169	Average variance in provincial GDP									
030000	Sustainable economic development	030100	General	030100		00050	Closing a business ranking on the Worldwide Governance Indicator of the World Bank									
030000	Sustainable economic development	030100	General	030100		00046	Efficiency Enhancers ranking in the World Economic Forum report		2	index		46				
030000	Sustainable economic development	030100	General	030100		00046	Efficiency Enhancers score in the World Economic Forum report		1	index		4.38				
030000	Sustainable economic development	030100	General	030100		00021	GINI Coefficient for <insert country name>									
030000	Sustainable economic development	030100	General	030100		00043	Global Competitiveness Indicator (GCI) ranking in the World Economic Forum report		2	index		34				
030000	Sustainable economic development	030100	General	030100		00043	Global Competitiveness Indicator (GCI) score in the World Economic Forum report		1	index		4.57				
030000	Sustainable economic development	030100	General	030100		00042	Growth in industrial output (%)									
030000	Sustainable economic development	030100	General	030100		01176	Innovation and Sophistication Factors ranking in the World Economic Forum report		2	index		30				

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030100	General	030100		01176	Innovation and Sophistication Factors score in the World Economic Forum report		1	index		4.2				
030000	Sustainable economic development	030100	General	030100		00040	Investment as a % of GDP (nominal)									
030000	Sustainable economic development	030100	General	030100		01172	Investment as a % of GDP (real)									
030000	Sustainable economic development	030100	General	030100		01165	Number of regulatory instruments or institutional blockages that prevent or limit foreign investment in a commercial enterprise in any sector of the economy		2	%						
030000	Sustainable economic development	030100	General	030100		00034	Number of regulatory instruments or institutional practices with one or more policies or practices that discriminates against or in favour of one or more potential trading or investing entities (other than in respect of internationally endorsed sanctions) relative to the whole	17.1	2	Number of instruments						.001
030000	Sustainable economic development	030100	General	030100		00039	Second variance of Provincial GDP ($)									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030100	General	030100		00049	Starting a business ranking on the Worldwide Governance Indicator of the World Bank									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00098	'000 metric tonnes of domestic livestock produced									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00055	% change in agricultural incomes of small-scale family farmers	2.3	1	%						200
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00056	% change in agricultural incomes of small-scale fishers	2.3	1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00054	% change in agricultural incomes of small-scale indigenous food producers,	2.3	1	%						200
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00053	% change in agricultural incomes of small-scale women food producers,	2.3	1	%						200
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00051	% change in agricultural productivity	2.3	1	%						200
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00057	% change in incomes of small-scale indigenous food producers	2.3	1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00067	% change in international cooperation through provision of donor support to agricultural sector		1	%						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00064	% change in investment in agricultural extension services	2.a	1	%						1

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00063	% change in investment in agricultural research	2.a	1	%						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00065	% change in investment in agricultural technology development	2.a	1	%						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00066	% change in investment in plant and livestock gene banks	2.a	1	%						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00062	% change in investment in rural infrastructure	2.a	1	%						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00058	% change in the number of genetically different seeds	2.5	1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00059	% change in the number of genetically diverse cultivated plants	2.5	1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00060	% change in the number of genetically diverse farmed and domesticated animals	2.5	1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00061	% change in the number of genetically diverse wild species	2.5	1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00075	% of agricultural commodities with an information exchange facility to provide consumers and traders with timely access to market information (including on food reserves)									99.9

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00073	% of agricultural commodities with government market intervention practices designed to influence food commodity markets or their derivative markets (such as futures and options)		2	%						.0001
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00074	% of agricultural commodities with government price control mechanisms that interfere with commodity markets and their derivative markets		2	%						.0001
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00072	% of agricultural commodities with one or more trade restrictions or subsidies in contravention of the mandate of the Doha Development Round		2	%						.0001
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00079	Agriculture production lost due to weather systems ($)									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00069	Average % change in rural sector capital investment (real)		1	%						10
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00078	Average income per agriculture worker/median <insert country name>n income									

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00077	Average inflation rate in basic food commodities (insert definition of "basic food commodities")									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00080	Gross value added by agriculture sector ($)									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00081	Gross value added by cropping ($)									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00082	Gross value added by livestock husbandry ($)									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00076	Growth in agriculture output (real, $)									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00085	Metric tonnes of banana per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00096	Metric tonnes of cabbage per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00091	Metric tonnes of cacao per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00097	Metric tonnes of cauliflower hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00086	Metric tonnes of coconut and copra per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00090	Metric tonnes of coffee per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00094	Metric tonnes of eggplant per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00088	Metric tonnes of mango per hectare									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00087	Metric tonnes of pineapple per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00092	Metric tonnes of rubber per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00089	Metric tonnes of sugarcane per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00095	Metric tonnes of tomato per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00093	Metric tonnes of vegetables per hectare									
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00071	Number of agricultural commodities with export enhancement measures that effectively subsidize their export		2	Number of commodities						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00070	Number of agricultural commodities with export subsidies in place		2	Number of commodities						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00068	Number of regulations or other formalized obstacles preventing or limiting international investment in <insert country name>'s agricultural sector.		2	Number of regulations						.00001
030000	Sustainable economic development	030200	Agriculture is sustainable	030200	General	00084	Value of agricultural exports (USD)		1	USD						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030201	Irrigation Services are sustainable and efficient	00119	% of hectares where estimated 5 year average (value added per megalitre delivered/cost per megalitre) is less than 1		2	%		1	1	1	1	1
030000	Sustainable economic development	030200	Agriculture is sustainable	030201	Irrigation Services are sustainable and efficient	00118	Estimated 5 year average of the ratio- (value added per megalitre of irrigation water delivered/cost per megalitre of irrigation water delivered)		1	Ratio		1	1	1	1	1
030000	Sustainable economic development	030200	Agriculture is sustainable	030201	Irrigation Services are sustainable and efficient	00120	Megalitres delivered per industry worker		1	Megalitres per person						
030000	Sustainable economic development	030200	Agriculture is sustainable	030201	Irrigation Services are sustainable and efficient	00117	Total irrigable land/Total land under irrigation		2	Ratio		1	1	1	1	1
030000	Sustainable economic development	030200	Agriculture is sustainable	030202	Rice production is sustainable and efficient	00132	% of production lost post harvest (rice)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030202	Rice production is sustainable and efficient	00129	Domestic consumption rice/Domestic production rice		1	Ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030202	Rice production is sustainable and efficient	00131	Estimated 5 year average of the ratio - (revenue per tonne of rice harvested/ cost per tonne of rice produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030202	Rice production is sustainable and efficient	00130	Metric tonnes of padi per hectare		1	tonnes/ hectare						
030000	Sustainable economic development	030200	Agriculture is sustainable	030202	Rice production is sustainable and efficient	00133	Tonnes produced per industry worker		1							

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030202	Rice production is sustainable and efficient	00128	Total rice production (million tonnes)		1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030203	Soy production is sustainable and efficient	00139	% of production lost post harvest (soya)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030203	Soy production is sustainable and efficient	00137	Domestic consumption soy/domestic production soy		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030203	Soy production is sustainable and efficient	00138	Estimated 5 year average of the ratio - (revenue per tonne of soya harvested/ cost per tonne of soya produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030203	Soy production is sustainable and efficient	00140	Tonnes produced per industry worker - Soya		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030203	Soy production is sustainable and efficient	00136	Total soy production (million tonnes)		1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030204	Corn production is sustainable and efficient	00148	% of production lost post harvest (corn)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030204	Corn production is sustainable and efficient	00144	Domestic consumption corn/domestic production corn		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030204	Corn production is sustainable and efficient	00147	Estimated 5 year average of the ratio - (revenue per tonne of corn harvested/ cost per tonne of corn produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030204	Corn production is sustainable and efficient	00145	Metric tonnes of white corn per hectare			tonnes/ hectare						
030000	Sustainable economic development	030200	Agriculture is sustainable	030204	Corn production is sustainable and efficient	00146	Metric tonnes of yellow corn per hectare			tonnes/ hectare						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030204	Corn production is sustainable and efficient	00149	Tonnes produced per industry worker - Corn		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030204	Corn production is sustainable and efficient	00143	Total corn production (million tonnes)		1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030205	Sugar production is sustainable and efficient	00161	% of production lost post harvest (sugar)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030205	Sugar production is sustainable and efficient	00159	domestic consumption sugar/domestic production sugar		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030205	Sugar production is sustainable and efficient	00160	Estimated 5 year average of the ratio - (revenue per tonne of sugar harvested/ cost per tonne of sugar produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030205	Sugar production is sustainable and efficient	00162	Tonnes produced per industry worker - Sugar		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030205	Sugar production is sustainable and efficient	00158	Total sugar production (million tonnes)		1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030206	Chicken production is sustainable and efficient	00171	% of production lost post harvest (chicken)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030206	Chicken production is sustainable and efficient	00168	domestic consumption chicken/domestic production chicken		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030206	Chicken production is sustainable and efficient	00170	Estimated 5 year average of the ratio - (revenue per tonne of chicken harvested/ cost per tonne of chicken produced)		1	ratio						1

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030206	Chicken production is sustainable and efficient	00169	Gross value added by poulterers ($)		1	$ (nominal)						
030000	Sustainable economic development	030200	Agriculture is sustainable	030206	Chicken production is sustainable and efficient	00172	Tonnes produced per industry worker - Chicken		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030206	Chicken production is sustainable and efficient	00167	Total chicken production (million tonnes)		1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030207	Beef production is sustainable and efficient	00178	% of production lost post harvest (beef)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030207	Beef production is sustainable and efficient	00176	domestic consumption beef/domestic production beef		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030207	Beef production is sustainable and efficient	00177	Estimated 5 year average of the ratio - (revenue per tonne of beef harvested/ cost per tonne of beef produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030207	Beef production is sustainable and efficient	00179	Tonnes produced per industry worker - Beef		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030207	Beef production is sustainable and efficient	00175	Total beef production (million tonnes)		1	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030208	Banana production is sustainable and efficient	00188	% of production lost post harvest (banana)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030208	Banana production is sustainable and efficient	00186	Estimated 5 year average of the ratio - (revenue per tonne of banana harvested/ cost per tonne of banana produced)		1	ratio						1

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030208	Banana production is sustainable and efficient	00189	Tonnes produced per industry worker - Banana		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030208	Banana production is sustainable and efficient	00187	Total banana production (metric tonnes)		1	tonnes						
030000	Sustainable economic development	030200	Agriculture is sustainable	030209	Coconut production is sustainable and efficient	00198	% of production lost post harvest (coconut)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030209	Coconut production is sustainable and efficient	00196	Estimated 5 year average of the ratio - (revenue per tonne of coconut harvested/cost per tonne of coconut produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030209	Coconut production is sustainable and efficient	00199	Tonnes produced per industry worker - Coconut		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030209	Coconut production is sustainable and efficient	00197	Total coconut production (metric tonnes)		1	tonnes						
030000	Sustainable economic development	030200	Agriculture is sustainable	030210	Pineapple production is sustainable and efficient	00203	% of production lost post harvest (pineapple)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030210	Pineapple production is sustainable and efficient	00201	Estimated 5 year average of the ratio - (revenue per tonne of pineapple harvested/cost per tonne of pinapple produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030210	Pineapple production is sustainable and efficient	00204	Tonnes produced per industry worker - Pineapples		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030210	Pineapple production is sustainable and efficient	00202	Total pineapple production (metric tonnes)		1	tonnes						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030211	Mango production is sustainable and efficient	00210	% of production lost post harvest (mango)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030211	Mango production is sustainable and efficient	00208	Estimated 5 year average of the ratio - (revenue per tonne of mango harvested/ cost per tonne of mango produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030211	Mango production is sustainable and efficient	00211	Tonnes produced per industry worke r- Mango		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030211	Mango production is sustainable and efficient	00209	Total mango production (metric tonnes)		1	tonnes						
030000	Sustainable economic development	030200	Agriculture is sustainable	030212	Coffee production is sustainable and efficient	00217	% of production lost post harvest (coffee)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030212	Coffee production is sustainable and efficient	00215	Estimated 5 year average of the ratio - (revenue per tonne of coffee harvested/ cost per tonne of coffee produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030212	Coffee production is sustainable and efficient	00218	Tonnes produced per industry worker - Coffee		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030212	Coffee production is sustainable and efficient	00216	Total coffee production (metric tonnes)		1	tonnes						
030000	Sustainable economic development	030200	Agriculture is sustainable	030213	Cacao production is sustainable and efficient	00225	% of production lost post harvest (cacao)		2	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030213	Cacao production is sustainable and efficient	00223	Estimated 5 year average of the ratio - (revenue per tonne of cacao harvested/ cost per tonne of cacao produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030213	Cacao production is sustainable and efficient	00226	Tonnes produced per industry worker - Cacao		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030213	Cacao production is sustainable and efficient	00224	Total cacao production (metric tonnes)		1	tonnes						
030000	Sustainable economic development	030200	Agriculture is sustainable	030214	Rubber production is sustainable and efficient	00233	% of production lost post harvest (rubber)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030214	Rubber production is sustainable and efficient	00231	Estimated 5 year average of the ratio - (revenue per tonne of rubber harvested/ cost per tonne of rubber produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030214	Rubber production is sustainable and efficient	00234	Tonnes produced per industry worker - rubber		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030214	Rubber production is sustainable and efficient	00232	Total rubber production (metric tonnes)		1	tonnes						
030000	Sustainable economic development	030200	Agriculture is sustainable	030215	Vegetable production is sustainable and efficient	00241	% of production lost post harvest (vegetable)		2	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030215	Vegetable production is sustainable and efficient	00239	Estimated 5 year average of the ratio - (revenue per tonne of vegetables harvested/ cost per tonne of vegetables produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030215	Vegetable production is sustainable and efficient	00242	Tonnes produced per industry worker - vegetables		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030215	Vegetable production is sustainable and efficient	00240	Total vegetable production (metric tonnes)		1	tonnes						
030000	Sustainable economic development	030200	Agriculture is sustainable	030216	Tomato production is sustainable and efficient	00249	% of production lost post harvest (tomato)		2	%						
030000	Sustainable economic development	030200	Agriculture is sustainable	030216	Tomato production is sustainable and efficient	00247	Estimated 5 year average of the ratio - (revenue per tonne of tomatoes harvested/cost per tonne of tomatoes produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030216	Tomato production is sustainable and efficient	00250	Tonnes produced per industry worker - tomatoes		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030216	Tomato production is sustainable and efficient	00248	Total tomato production (metric tonnes)		1	tonnes						
030000	Sustainable economic development	030200	Agriculture is sustainable	030217	Onion production is sustainable and efficient	00255	% of production lost post harvest (onion)		2	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030200	Agriculture is sustainable	030217	Onion production is sustainable and efficient	00253	Estimated 5 year average of the ratio - (revenue per tonne of onions harvested/ cost per tonne of onions produced)		1	ratio						1
030000	Sustainable economic development	030200	Agriculture is sustainable	030217	Onion production is sustainable and efficient	00256	Tonnes produced per industry worker - onions		1							
030000	Sustainable economic development	030200	Agriculture is sustainable	030217	Onion production is sustainable and efficient	00254	Total onion production (metric tonnes)		1	tonnes						
030000	Sustainable economic development	030200	Agriculture is sustainable	030218	Agricultural land use practice is sustainable	00272	% of agraicultural land that practices crop rotation									
030000	Sustainable economic development	030200	Agriculture is sustainable	030218	Agricultural land use practice is sustainable	00270	Average percentage change in output per hectare		1	%						
030000	Sustainable economic development	030300	Forestry industry is sustainable	030301	<insert country name>'s native forest timber industry is efficient and sustainable	00301	% of public that is aware of one or more public awareness programs to promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	15.2	1	%						
030000	Sustainable economic development	030300	Forestry industry is sustainable	030301	<insert country name>'s native forest timber industry is efficient and sustainable	00308	Area of land subject to degradation/Area of land subject to rehabilitation	15.3	2	%						1

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030300	Forestry industry is sustainable	030301	<insert country name>'s native forest timber industry is efficient and sustainable	00307	Average % change in national degraded land and soil areas (including land affected by desertification, drought and floods) that is rehabilitated	15.3	1	%						1
030000	Sustainable economic development	030300	Forestry industry is sustainable	030301	<insert country name>'s native forest timber industry is efficient and sustainable	00306	Average % change in national land areas suffering desertification	15.3	2	%						0
030000	Sustainable economic development	030300	Forestry industry is sustainable	030301	<insert country name>'s native forest timber industry is efficient and sustainable	00303	% change in the area of land subject to deforestation	15.2	2	%						
030000	Sustainable economic development	030300	Forestry industry is sustainable	030301	<insert country name>'s native forest timber industry is efficient and sustainable	00302	% change in the area of native forests (km2)	15.2	1	%						
030000	Sustainable economic development	030300	Forestry industry is sustainable	030301	<insert country name>'s native forest timber industry is efficient and sustainable	00304	Average % change in the national area of land subject to afforestation and reforestation	15.2	1	%						
030000	Sustainable economic development	030400	Fishing industry is sustainable	030400	General	00322	'000 metric tonnes of domestic fish products									
030000	Sustainable economic development	030400	Fishing industry is sustainable	030400	General	00325	'000 metric tonnes of fish by aquaculture									
030000	Sustainable economic development	030400	Fishing industry is sustainable	030400	General	00323	'000 metric tonnes produced by domestic commercial fisheries									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030400	Fishing industry is sustainable	030400	General	00326	% change in official finance sector loans to fishermen									
030000	Sustainable economic development	030400	Fishing industry is sustainable	030400	General	00318	Average income per worker (fishing industry)/Median <insert country name>n income		1	Ratio						
030000	Sustainable economic development	030400	Fishing industry is sustainable	030400	General	00319	Fisheries production ($) lost due to weather systems									
030000	Sustainable economic development	030400	Fishing industry is sustainable	030400	General	00320	Gross value added by fisheries sector ($)									
030000	Sustainable economic development	030400	Fishing industry is sustainable	030400	General	00321	Gross value added by fishing ($)									
030000	Sustainable economic development	030400	Fishing industry is sustainable	030401	<insert country name>'s deep sea fishing industry is efficient and sustainable	00336	Estimated 5 year average (revenue per tonne of ocean fish harvested/cost per tonne of ocean fish produced)		1	ratio						1
030000	Sustainable economic development	030400	Fishing industry is sustainable	030401	<insert country name>'s deep sea fishing industry is efficient and sustainable	00335	Tonnes of fish harvested (million) - Ocean		1	%						
030000	Sustainable economic development	030400	Fishing industry is sustainable	030401	<insert country name>'s deep sea fishing industry is efficient and sustainable	01363	% of total catch through IUU devices		1	%						
030000	Sustainable economic development	030400	Fishing industry is sustainable	030402	<insert country name>'s aquaculture industry if efficient and sustainable	00341	Estimated 5 year average (revenue per tonne of fish harvested by aquaculture/ cost per tonne of fish harvested by aquaculture)		1	ratio						1

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030400	Fishing industry is sustainable	030402	<insert country name>'s aquaculture industry if efficient and sustainable	00325	'000 metric tonnes of fish by aquaculture		1	%						
030000	Sustainable economic development	030400	Fishing industry is sustainable	030402	<insert country name>'s aquaculture industry if efficient and sustainable	01366	% change in fish produced by aquaculture per aquaculture worker		1	%						
030000	Sustainable economic development	030400	Fishing industry is sustainable	030403	<insert country name>'s river fishing industry is efficient and sustainable	00346	Estimated 5 year average of the ratio- (revenue per tonne of river fish harvested/cost per tonne of river fish produced)		1	ratio						1
030000	Sustainable economic development	030400	Fishing industry is sustainable	030403	<insert country name>'s river fishing industry is efficient and sustainable	00345	Tonnes of fish harvested (million) - rivers		1	%						
030000	Sustainable economic development	030400	Fishing industry is sustainable	030404	Seaweed industry is efficient and sustainable	00353	Estimated 5 year average of the ratio - (revenue per tonne of seaweed produced/cost per tonne of seaweed produced)		1	ratio						1
030000	Sustainable economic development	030400	Fishing industry is sustainable	030404	Seaweed industry is efficient and sustainable	00352	Tonnes of seaweed harvested		1	%						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00368	% change in number of technical assistance projects in the energy sector delivered to developing countries	7.b	1	%						1

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00359	% change in the average national energy efficiency (How to measure "efficiency"?	7.3	1	%						99.9
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00365	% of households whose energy supply suffers an average of 0.5 or more interruptions per month to at least one urban center with a population over 10,000 persons	7.1	2	%						10
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00360	% of households with universal access to "modern" energy services (How to define "modern"?)	7.1	1	%						99.9
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00362	% of households with universal access to affordable energy services (How to define "affordable"?)	7.1	1	%						99.9
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00363	% of households with universal access to energy services, where average consumption costs less than 20% of the average wage	7.1	1	%						99.9
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00361	% of households with universal access to networked energy services	7.1	1	%						99.9

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00364	% of households with universal access to reliable energy services (How to define "reliable"?)	7.1	1	%						99.9
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00374	% of national consumption of fossil-fuel subsidized by government	12.c	2	%						.00001
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00366	Average % change in gross public expenditure toward United Nations COFOG 04.3, Engergy	7.a	1	%						1
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00369	Average % change in the annual kilowatts per head of population of energy generated	7.b	1	%						1
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00367	Average % change in the proportion of global energy demand sourced from renewable energy generation facilities.	7.a	1	%						1
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00358	Average % share of renewable energy in national energy consumption	7.2	1	%						10
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	00370	Number of kilowatts consumed per head of population per year		1	Kilowatts per person						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030500	General	01378	% change in oil and gas exploration in <insert country name>'s territory									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030501	Efficient oil production and consumption	00381	% of annual consumption that is subsidized		2	%						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030501	Efficient oil production and consumption	00382	% of annual production that is protected by tarrifs		2	%						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030501	Efficient oil production and consumption	00380	Annual domestic gross oil production as a % of gross domestic oil demand		1	%						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030501	Efficient oil production and consumption	00379	Annual oil production (billions of barrels)		1	number billioin barrels of oil						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030502	Efficient gas production and consumption	00381	% of annual consumption that is subsidized		2	%						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030502	Efficient gas production and consumption	00382	% of annual production that is protected by tarrifs		2	%						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030502	Efficient gas production and consumption	00386	Annual domestic gas production as a % of domestic gas demand		1	%						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030502	Efficient gas production and consumption	00385	Annual gas production (terajoule)		1	Number terajoule of gas						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030502	Efficient gas production and consumption	01387	% of households connected to gas pipeline		1	%						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030502	Efficient gas production and consumption	01388	% of gas consumers who suffer on or more interruption to their supply of gas		2	%						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030503	Efficient coal production and consumption	00381	% of annual consumption that is subsidized		2	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030503	Efficient coal production and consumption	00382	% of annual production that is protected by tarrifs		2	%						
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030503	Efficient coal production and consumption	00394	Annual gross domestic production of coal as a % of gross domestic coal demand									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030503	Efficient coal production and consumption	00393	Annual production of thermal coal									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030504	Sustainable renewable energy industry	00398	% of total energy supplied by geothermal sources									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030504	Sustainable renewable energy industry	00401	% of total energy supplied through hydro electric energy									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030504	Sustainable renewable energy industry	00399	% of total energy supplied through solar energy									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030504	Sustainable renewable energy industry	00400	% of total energy supplied through wind energy									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030505	Sustainable and efficient electricity industry	01392	% of households connected to the national electricity grid									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030505	Sustainable and efficient electricity industry	01393	% of households connected to a provincial electricity grid									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030505	Sustainable and efficient electricity industry	01394	Average % of households within a local grid connected to the local electricity grid									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030505	Sustainable and efficient electricity industry	01395	Average cost per kilowatt of electricity delivered by national grid									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030505	Sustainable and efficient electricity industry	01396	Average cost per kilowatt of electricty delivered by provincial grids									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030505	Sustainable and efficient electricity industry	01397	Average cost per kilowatt of electriicty delivered by local grids									
030000	Sustainable economic development	030500	Sustainable and efficient energy sector	030505	Sustainable and efficient electricity industry	01429	% of national network customers who suffer one or more outages of one hour									
030000	Sustainable economic development	030600	Sustainable and efficient mining industry	030601	Sustainable and efficient gold production	00409	Area of land rehabilitated as a % of area of disused gold mining sites									
030000	Sustainable economic development	030600	Sustainable and efficient mining industry	030601	Sustainable and efficient gold production	00408	Tonnes of gold produced									
030000	Sustainable economic development	030700	Sustainable and efficient manufacturing sector	030700	General	00424	Value of merchandise exports ($)		1	$						
030000	Sustainable economic development	030700	Sustainable and efficient manufacturing sector	030700	General	01412	Imports/Total Consumption		2	ratio						
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030800	General	00436	% change in employment in services sector		1	%						
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030800	General	00435	Gross value added in services sector (%)		1	%						
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030800	General	00433	Growth in services output (%)		1	%						
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030800	General	00434	Value of services exports (USD)		1	$						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00442	% change in total assets of banking sector									
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00443	% change in total assets of nonbanking financial institutions									
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00449	% of derivative instrument trades that are settled through an automated market settlement system									
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00440	% of remittance corridors with costs higher than 5 per cent	10.c	2	%						.0001
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00445	Average number of bank offices per city									
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00446	Average number of bank offices per province									
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00439	Average transaction costs for remittances as a % of amount transferred	10.c	2	%						3
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00448	Face value of derivative instruments traded annually									
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00441	Getting credit ranking on the Worldwide Governace Indicator of the World Bank									
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00447	Number of deposit accounts per 100,000 residents									
030000	Sustainable economic development	030800	Sustainable and efficient services sector	030801	Financial markets	00019	Ratio of gross national saving to GDP as a %									

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	030900	Sustainable and efficient construction sector	030900	General	01436										
030000	Sustainable economic development	030900	Sustainable and efficient construction sector	030901	Residential construction	01440										
030000	Sustainable economic development	030900	Sustainable and efficient construction sector	030902	Commercial building and construction	01447										
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031000	General	00477	Average % change in the number of injuries from road traffic accidents	3.6	2	%						
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031000	General	00478	Average % change in the number of traffic incidents	11.2	2	%						-99.9
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031000	General	00476	Average % change the number of deaths from road traffic accidents	3.6	2	%						
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031001	Public passenger transport	00485	% change in the number of passenger kilometres delivered by public transport	11.2	1	%						1
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031001	Public passenger transport	00491	Annual number of passengers carried - public transport									
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031001	Public passenger transport	00484	Average % change in cost per passenger kilometre on public transport/ Average weekly wage	11.2	2	%						1
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031001	Public passenger transport	00483	Average % change in the cost (real) per passenger kilometre on public transport	11.2	2	%						-1

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031001	Public passenger transport	00487	Average % of public transport systems that incorporate facilities for persons with disabilities or infirmities	11.2	1	%						99.9
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031001	Public passenger transport	00488	Average seat occupancy of airconditioned metro Jakarta buses									
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031001	Public passenger transport	00489	Average seat occupancy of non-airconditioned metro Jakarta buses									
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031001	Public passenger transport	00486	Estimated change in the % of total commuter journeys that are provided by public transport	11.2	1	%						1
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031001	Public passenger transport	00490	Number of vehicular accidents per day in metro Jakarta									
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031002	Bulk transfer of goods	01457	% change in the tonnage of agriculture produce transported by road		1	%						
030000	Sustainable economic development	031000	Sustainable and efficient road transport sector	031002	Bulk transfer of goods	01458	% change in the average time taken to transport agricultural products to market		2	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031101	<insert country name>n seafarers are highly regarded	00506	% change in the total number of <insert country name>n seafarers employed domestically and internationally		1	%						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00514	% change in the tonnes of cargo transshipping through <insert country name>n sea ports		1	%						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00513	% of ports with sea container unloading rates of 25 containers per hour or better.		1	%						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00520	Average berth times per ship		2	days						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00521	Average berth times per ship tonnage		2	days/tonne						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00518	Average container dwell times at <insert country name>'s container ports		2	days						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00517	Average number of vessel waiting days at <insert country name>n sea ports		2	days						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00522	Average port ship servicing time		2	days						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00524	Average time lost waiting for berth (waiting laytime)		2	days						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00515	Metric tons (million) transiting <insert country name>'s ports		1	tons (million)						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00516	Number of passengers (millions) transiting <insert country name>'s sea ports		1	people (millions)						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00519	Variance in port dwell times		2	days						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00523	Variance in port ship servicing times		2	days						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031102	<insert country name>n sea ports are cost efficient and sustainable	00525	Variance in port waiting laytimes		2	days						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031103	<insert country name> sea lanes are highly regarded for their safety and efficiency	00528	% change in the number of ships using <insert country name>'s sea lanes		1	%						
030000	Sustainable economic development	031100	Sustainable and efficient maritime transport sector	031103	<insert country name> sea lanes are highly regarded for their safety and efficiency	00529	Average container ship travelling speed in <insert country name>'s sea lanes									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031200	General	00536	% of flights arriving and departing within 10 minutes of scheduled arrival and departure times		1	%						
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031201	Domestic airports	00544	Average waiting time - landings domestic airports									
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031201	Domestic airports	00545	Average waiting time - takeoffs domestic airports									
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031201	Domestic airports	00543	Number of takeoffs and landings - Domestic									
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031202	International airports	00550	Average waiting time - landings international airports									
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031202	International airports	00551	Average waiting time - takeoffs international airports									
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031202	International airports	00549	Number of takeoffs and landings - international									
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031203	International cargo transport	00554	Total cargo (thousand tonnes) shipped through international airports									
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031204	Domestic cargo transport	00558	Total cargo (thousand tonnes) shipped through domestic airports									
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031205	Domestic passenger transport	00562	Number of passengers transiting domestic airports									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	031200	Sustainable and efficient aviation transport sector	031206	International passenger transport	00568	Number of passengers transiting international airports									
030000	Sustainable economic development	031300	Sustainable and efficient railway transport sector	031301	Economic and environmentally efficient intercity passenger services	01537										
030000	Sustainable economic development	031300	Sustainable and efficient railway transport sector	031302	Economic and environmentally efficient metropolitan passenger services	01538										
030000	Sustainable economic development	031300	Sustainable and efficient railway transport sector	031303	Economic and environmentally efficient bulk freight transport services	01539										
030000	Sustainable economic development	031300	Sustainable and efficient railway transport sector	031303	Economic and environmentally efficient bulk freight transport services	01540										
030000	Sustainable economic development	031400	Efficient and sustainable telecommunications sector	031401	Efficient and sustainable internet connectivity	00576	Average continuous download speed (mb/second)									
030000	Sustainable economic development	031400	Efficient and sustainable telecommunications sector	031401	Efficient and sustainable internet connectivity	00575	Average continuous upload speed (mb/second)									
030000	Sustainable economic development	031400	Efficient and sustainable telecommunications sector	031401	Efficient and sustainable internet connectivity	00577	Number of broadband subscriptions per 100 residents									
030000	Sustainable economic development	031400	Efficient and sustainable telecommunications sector	031401	Efficient and sustainable internet connectivity	00578	Number of fixed broadband subscriptions									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	031400	Efficient and sustainable telecommunications sector	031401	Efficient and sustainable internet connectivity	00579	Number of mobile broadband subscriptions									
030000	Sustainable economic development	031400	Efficient and sustainable telecommunications sector	031402	Efficient and sustainable voice telephony services	00591	% of municipalities with at least 95% of their land area accessible by mobile telephone									
030000	Sustainable economic development	031400	Efficient and sustainable telecommunications sector	031402	Efficient and sustainable voice telephony services	00592	% of municipalities with at least 99% of their land area accessible by mobile telephone									
030000	Sustainable economic development	031500	Sustainable tourism sector	031500	General	00599	% change in the $ equivalent of donor provided techncial assistance in tourism		1	%						
030000	Sustainable economic development	031500	Sustainable tourism sector	031500	General	01525										
030000	Sustainable economic development	031500	Sustainable tourism sector	031500	General	01526										
030000	Sustainable economic development	031500	Sustainable tourism sector	031500	General	01527										
030000	Sustainable economic development	031500	Sustainable tourism sector	031500	General	01528										
030000	Sustainable economic development	031500	Sustainable tourism sector	031500	General	01529										
030000	Sustainable economic development	031500	Sustainable tourism sector	031501	Domestic Tourism	00606	% of domestic tourists undertaking eco-tours		1	%						
030000	Sustainable economic development	031500	Sustainable tourism sector	031501	Domestic Tourism	00605	% of domestic tourists who would recommend <insert country name> as a first tourist destination to their friends		1	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
030000	Sustainable economic development	031500	Sustainable tourism sector	031502	International Inbound Tourism	00611	% Change in the number of tourist arrivals		1	%						
030000	Sustainable economic development	031500	Sustainable tourism sector	031502	International Inbound Tourism	00613	% of international tourists undertaking eco-tours		1	%						
030000	Sustainable economic development	031500	Sustainable tourism sector	031502	International Inbound Tourism	00612	% of international tourists who would recommend <insert country name> as a tourist destination to their friends		1	%						
030000	Sustainable economic development	031500	Sustainable tourism sector	031502	International Inbound Tourism	00615	Estimated value of visitor spending ($)		1	$						
030000	Sustainable economic development	031500	Sustainable tourism sector	031502	International Inbound Tourism	00614	Number of annual visitor arrivals to <insert country name>		1	People						
030000	Sustainable economic development	031600	Competitive labor market	031600	General	00618	% of nations with whom <insert country name> has executed a strategy to address youth unemployment		1	%						
030000	Sustainable economic development	031600	Competitive labor market	031600	General	00621	GDP growth rate (real)/Population growth rate		1	Ratio						1
030000	Sustainable economic development	031600	Competitive labor market	031600	General	00620	Per capita GDP ($)									
030000	Sustainable economic development	031600	Competitive labor market	031600	General	00011	Private investment expenditure as a % of GDP		1	%						
030000	Sustainable economic development	031600	Competitive labor market	031600	General	00045	Ranking of <insert country name> in the Global Competitiveness Index of the World Economic Forum (WEF)									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040000	General	040100		00636	% change in the number of international cooperation and capacity-building support projects in desalination	6.a	1	%						1
040000	Sustainable environmental use and development	040000	General	040100		00639	% change in the number of international cooperation and capacity-building support projects in recycling and reuse technologies	6.a	1	%						1
040000	Sustainable environmental use and development	040000	General	040100		00634	% change in the number of international cooperation and capacity-building support projects in sanitation	6.a	1	%						1
040000	Sustainable environmental use and development	040000	General	040100		00633	% change in the number of international cooperation and capacity-building support projects in the water sector	6.a	1	%						1
040000	Sustainable environmental use and development	040000	General	040100		00638	% change in the number of international cooperation and capacity-building support projects in wastewater treatment	6.a	1	%						1
040000	Sustainable environmental use and development	040000	General	040100		00637	% change in the number of international cooperation and capacity-building support projects in water efficiency	6.a	1	%						1

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040000	General	040100		00635	% change in the number of international cooperation and capacity-building support projects in water harvesting	6.a	1	%						1
040000	Sustainable environmental use and development	040000	General	040100		00647	% of human developments in distinctly identified natural habitats that provides for symbiotic relationships between threatened species and their human neighbours	15.c	1	%						
040000	Sustainable environmental use and development	040000	General	040100		00640	% of local communities with equity stakes in water and sanitation management services in their local area	6.b	1	%						99.9
040000	Sustainable environmental use and development	040000	General	040100		00644	% of people surveyed that are aware of one or more of the issues for sustainable development and lifestyles in harmony with nature (there must be a standard list used across all countries)	12.8	1	%						
040000	Sustainable environmental use and development	040000	General	040100		00645	% of people surveyed that are aware of one or more public information and awareness programs for sustainable development and lifestyles in harmony with nature	12.8	1	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040000	General	040100		00631	% of provinces that have enacted legislation and funded enforcement to protect and restore all identified water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	6.6	1	%						
040000	Sustainable environmental use and development	040000	General	040100		00630	% of provinces with shared water resources that have transboundary cooperation agreements in place and a funded semi autonomous body that oversights enforcement of the agreement's provisions	6.5	1	%						99.9
040000	Sustainable environmental use and development	040000	General	040100		00629	% of provinces with a legislated national integrated water resources management policy and funded semi-autonomous authority to enforce legislated provisions	6.5	1	%						99.9
040000	Sustainable environmental use and development	040000	General	040100		00646	Average % change in funds (real) allocated to the environmental function (COFOG Division 5)	15.a	1	%						10

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040000	General	040100		00643	Average % change in the estimated per capita global food losses in the production and supply chains, including postharvest losses	12.3	2	%						-1
040000	Sustainable environmental use and development	040000	General	040100		00642	Average % change in the estimated per capita global food waste at the consumer level	12.3	2	%						-50
040000	Sustainable environmental use and development	040000	General	040100		00641	Average % change in the estimated per capita global food waste at the retail level	12.3	2	%						-50
040000	Sustainable environmental use and development	040000	General	040100		00648	Number of lives lost as a result of environmental pollution or degradation									
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00658	% change in tonnes of chemical waste released to air	12.4	2	%						
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00657	Average % change in <air quality - suspended particles> (using what measure(s) of air quality) for cities of 500,000 people or more	11.6	2	%						-10
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00660	Average % change in number of days for cities of 500,000 or more with suspended particle reading days exceeding <what benchmark?>	12.4	2	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00662	Average number of days in cities of 1 million people or more where average suspended particulate level exceeds 90ug/ncm									
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00659	Environmental quality index		1	%						
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00652	Estimated % Change in Greenhouse Gas emissions		2	%						
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00655	Estimated % change in the number of deaths from air pollution and contamination	3.9	2	%						-10
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00653	Estimated % change in the number of deaths from hazardous chemicals	3.9	2	%						-10
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00656	Estimated % change in the number of illnesses from air pollution and contamination	3.9	2	%						-10
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00654	Estimated % change in the number of illnesses from hazardous chemicals	3.9	2	%						-10
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	00661	Number of days in Jakarta where average suspended particulate level exceeds 90ug/ncm									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040100	Healthy air	040100	General	01546	% of <insert country name>'s forest areas subject to conservation and preservation		1	%						
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00690	% change in the proportion of wastewater that is released without treatment	6.3	2	%						-50
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00696	% change in tonnes of chemical waste released to water	12.4	2	%						
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00674	Annual supply capacity of potable water		1	Number in megalitres						
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00687	Average % change in coastal sea water pollution (How to measure?)	6.3	2	%						-10
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00685	Average % change in groundwater pollution (How to measure?)	6.3	2	%						
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00698	Average % change in linear kilometres of coastline with water contaminats exceeding <what benchmark?>	12.4	2	%						
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00686	Average % change in river water pollution (How to measure?)	6.3	2	%						-10
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00679	Average % of population with access to drinking water costing less than 10% of average daily earnings for 8 litres	6.1	1	%						99.9

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00677	Average % of population with access to safe drinking water	6.1	1	%						99.9
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00678	Average % of population with equitable access to safe drinking water	6.1	1	%						99.9
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00683	Average % of the population using open defecation	6.2	2	%						0.001
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00682	Average % of the population with access to adequate and equitable sanitation and hygiene (how do you propose to measure “adequate” and “equitable”? Must reword OI)	6.2	1	%						99.9
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00691	Average estimated % change in the tonnage of material subject to recycling	6.3	2	%						-10
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00692	Average estimated % change in water-use efficiency across all sectors (How do you propose to measure “efficiency” across all sectors?)	6.4	1	%						3
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00694	Average ground water system withdrawals/ supply of freshwater	6.4	2	Ratio						1

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00695	Average number of people suffering from at least one water scarcity event per year (how to define a "water scarcity event"?)	6.4	2	Number of people						
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00693	Average River system withdrawals/ supply of freshwater	6.4	2	Ratio						1
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00689	Estimated % change in the cubic metres of hazardous chemicals and materials released into the environment	6.3	2	%						-10
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00675	Estimated % change in the number of deaths from water pollution and contamination	3.9	2	%						-10
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00676	Estimated % change in the number of illnesses from water pollution and contamination	3.9	2	%						-10
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	00688	Number of reported incidents of recorded dumping of waste products	6.3	2	Number of incidents						0
040000	Sustainable environmental use and development	040200	Healthy water	040201	Sustainable and efficient production of potable water	01557	% of <insert country name>'s water catchment areas subject to conservation and preservation orders		1	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040200	Healthy water	040202	Sustainable and efficient use of ocean environment	00706	% change in the number of cases of illegal, unregulated or destructive fishing practices recorded	14.4	2	%						
040000	Sustainable environmental use and development	040200	Healthy water	040202	Sustainable and efficient use of ocean environment	00707	% change in the square kilometres of coastal territory and marine areas declared as conservation areas	14.5	1	%						
040000	Sustainable environmental use and development	040200	Healthy water	040202	Sustainable and efficient use of ocean environment	00708	% of fishing industry inputs with subsidies applied in relation to fish, fisheries or fishing	14.6	2	%						
040000	Sustainable environmental use and development	040200	Healthy water	040202	Sustainable and efficient use of ocean environment	00704	% of prosecutions for marine environment pollution incidents that result in a successful conviction	14.2	1	%						
040000	Sustainable environmental use and development	040200	Healthy water	040202	Sustainable and efficient use of ocean environment	00705	Average % change in linear kilometres of coastline with solid waste contaminats exceeding <what benchmark?>	12.4	2	%						
040000	Sustainable environmental use and development	040200	Healthy water	040202	Sustainable and efficient use of ocean environment	00698	Average % change in linear kilometres of coastline with water contaminats exceeding <what benchmark?>	12.4	2	%						
040000	Sustainable environmental use and development	040200	Healthy water	040202	Sustainable and efficient use of ocean environment	00703	Estimated average % change in marine debris and nutrient pollution	14.1	2	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040200	Healthy water	040202	Sustainable and efficient use of ocean environment	00702	Estimated tonnes of pollution entering marine environments from land debris and nutrient run-off	14.1	2	Tonnes						
040000	Sustainable environmental use and development	040200	Healthy water	040203	Sustainable and efficient production of water for irrigation	00711	Annual supply capacity of water storage facilities for irrigation with 99% probability of delivery (Gigalitres)		1	Gigalitres of water						
040000	Sustainable environmental use and development	040200	Healthy water	040203	Sustainable and efficient production of water for irrigation	00712	Number of hectares of land under irrigation		1	Number of hectares						
040000	Sustainable environmental use and development	040200	Healthy water	040203	Sustainable and efficient production of water for irrigation	01557	% of <insert country name>'s water catchment areas subject to conservation and preservation orders		1	%						
040000	Sustainable environmental use and development	040200	Healthy water	040204	Sustainable and efficient production of industrial water	00719	% of businesses that experience one or more supply interruptions of 4 hours or more		2	%						
040000	Sustainable environmental use and development	040200	Healthy water	040204	Sustainable and efficient production of industrial water	00718	Annual supply capacity of industrial water with 99% probability of delivery (Gigalitres)		1	Gigalitres of water						
040000	Sustainable environmental use and development	040200	Healthy water	040205	Sustainable lakes and river systems	00736	% of days where the Citarum river measured a biochemical oxygen demand of 2 parts or less per 100,000 (using the bod5 method)									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040200	Healthy water	040205	Sustainable lakes and river systems	00737	% of days where the Jatiluhur dam measured a biochemical oxygen demand of 2 parts or less per 100,000 (using the bod5 method)									
040000	Sustainable environmental use and development	040200	Healthy water	040205	Sustainable lakes and river systems	00735	% of priority bodies of water with a biochemical oxygen demand of 2 parts or less per 100,000 (using the bod5 method)									
040000	Sustainable environmental use and development	040200	Healthy water	040205	Sustainable lakes and river systems	00733	% of priority water bodies with a combined pollution level exceeding 7mg/ litre of class c pollutants and/or 7mg/litre of class d pollutants (using the bod5 method)									
040000	Sustainable environmental use and development	040200	Healthy water	040205	Sustainable lakes and river systems	00726	% of river systems (cubic km) that are graded as [insert grading] or better		1	%						
040000	Sustainable environmental use and development	040200	Healthy water	040205	Sustainable lakes and river systems	00727	Estimated % change in the number of deaths from water pollution and contamination	3.9	2	%						-10
040000	Sustainable environmental use and development	040200	Healthy water	040205	Sustainable lakes and river systems	00728	Estimated % change in the number of illnesses from water pollution and contamination	3.9	2	%						-10
040000	Sustainable environmental use and development	040200	Healthy water	040205	Sustainable lakes and river systems	00734	Estimated % of water pollution emanating from domestic waste									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040200	Healthy water	040205	Sustainable lakes and river systems	00725	Number of cubic kilometres of river systems rehabilitated to [insert grading] or better		1	Cubic kilometres						
040000	Sustainable environmental use and development	040200	Healthy water	040205	Sustainable lakes and river systems	01557	% of <insert country name>'s water catchment areas subject to conservation and preservation orders		1	%						
040000	Sustainable environmental use and development	040200	Healthy water	040206	Healthy Soil Systems	00750	% change in the area of land with soil contaminants exceeding <what benchmark?>	12.4	2	%						
040000	Sustainable environmental use and development	040200	Healthy water	040206	Healthy Soil Systems	00749	% change in tonnes of chemical waste released to soil	12.4	2	%						
040000	Sustainable environmental use and development	040200	Healthy water	040206	Healthy Soil Systems	00308	Area of land subject to degradation/Area of land subject to rehabilitation	15.3	2	%						1
040000	Sustainable environmental use and development	040200	Healthy water	040206	Healthy Soil Systems	00307	Average % change in national degraded land and soil areas (including land affected by desertification, drought and floods) that is rehabilitated	15.3	1	%						1
040000	Sustainable environmental use and development	040200	Healthy water	040206	Healthy Soil Systems	00306	Average % change in national land areas suffering desertification	15.3	2	%						-1
040000	Sustainable environmental use and development	040200	Healthy water	040206	Healthy Soil Systems	00747	Estimated % change in the number of deaths from soil pollution and contamination	3.9	2	%						-10

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040200	Healthy water	040206	Healthy Soil Systems	00748	Estimated % change in the number of illnesses from soil pollution and contamination	3.9	2	%						-10
040000	Sustainable environmental use and development	040300	Healthy and diverse natural flora and fauna	040300	General	00760	% of development proposals that threaten biodiversity that have environmental safeguards imposed on their development conditions	15.5	1	%						
040000	Sustainable environmental use and development	040300	Healthy and diverse natural flora and fauna	040300	General	00761	% of developments that breach one or more environmental conditions that result in the successful prosecution of the responsible entity	15.5	1	%						
040000	Sustainable environmental use and development	040300	Healthy and diverse natural flora and fauna	040300	General	00758	% of distinctly identified natural habitats of <insert country name> that have suffered degradation to 10% or more of their natural area	15.5	2	%						
040000	Sustainable environmental use and development	040300	Healthy and diverse natural flora and fauna	040300	General	00013	% of incidents of illegal poaching and cross border trafficking in flora and fauna that are successfully prosecuted	15.7	1	%						
040000	Sustainable environmental use and development	040300	Healthy and diverse natural flora and fauna	040300	General	00759	% of unlawful acts of environmental degradation that result in one or more persons being successfully prosecuted	15.5	1	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040300	Healthy and diverse natural flora and fauna	040300	General	00763	Number of incidents of cross border traffiking detected	15.7	2	Incident number						1
040000	Sustainable environmental use and development	040300	Healthy and diverse natural flora and fauna	040300	General	00764	Number of incidents of illegal poaching detected	15.7	2	Incident number						1
040000	Sustainable environmental use and development	040300	Healthy and diverse natural flora and fauna	040300	General	00762	Number of species threatened with extinction (What standard do we use to determine when a species is threatened with extinction?)	15.5	2	number of species						
040000	Sustainable environmental use and development	040400	Safe storage and recycling of waste products and materials	040400	General	00775	% of companies listed on the ISX that have adopted recycling practices in one or more of their production processes	12.6	1	%						
040000	Sustainable environmental use and development	040400	Safe storage and recycling of waste products and materials	040400	General	00776	% of listed companies operating in <insert country name> that integrate sustainability information into their annual report	12.6	1	%						
040000	Sustainable environmental use and development	040400	Safe storage and recycling of waste products and materials	040400	General	00773	Average % change in national waste generated per capita	12.5	2	%						-10
040000	Sustainable environmental use and development	040400	Safe storage and recycling of waste products and materials	040400	General	00774	Average % change in waste generated that is subject to recycling and reuse (what is the baseline as at 2015?)	12.5	1	%						10

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
040000	Sustainable environmental use and development	040400	Safe storage and recycling of waste products and materials	040400	General	00772	Change in per capita tonnage of recycled liquid waste as a % of total tonnage solid waste for cities of 500,000 or more	11.6	1	%						10
040000	Sustainable environmental use and development	040400	Safe storage and recycling of waste products and materials	040400	General	00771	Change in per capita tonnage of recycled solid waste as a % of total tonnage solid waste for cities of 500,000 or more	11.6	1	%						10
050000	Affordable Housing for all <insert country name>ns	050000	General	050000		00783	(Average Rent/ Average Annual Income)	11.1	2	%						50
050000	Affordable Housing for all <insert country name>ns	050000	General	050000		00788	% of buildings inspected that are found to be fully compliant with fire code									
050000	Affordable Housing for all <insert country name>ns	050000	General	050000		00786	% of municipalities with urban plans and rural land management plans that are developed incorporating extensive community consultations	11.3	1	%						99.9
050000	Affordable Housing for all <insert country name>ns	050000	General	050000		00787	% of provinces with independent planning authorities responsible for undetaking community planning consultations and providing recommendations to decision-makers	11.3	1	%						99.9

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
050000	Affordable Housing for all <insert country name>ns	050000	General	050000		00784	Average (Average annual income/ Average cost per house (metre square))	11.1	2							700
050000	Affordable Housing for all <insert country name>ns	050000	General	050000		00785	Average % of population living in slums or homeless	11.1	2	%						10
050000	Affordable Housing for all <insert country name>ns	050100	Housing developments are ecologically sustainable	050101	Housing developments have electrification installed	00803	% of rural houses with networked electrification		1	%						
050000	Affordable Housing for all <insert country name>ns	050100	Housing developments are ecologically sustainable	050101	Housing developments have electrification installed	00802	% of urban houses with networked electrification		1	%						
050000	Affordable Housing for all <insert country name>ns	050200	Community developments are sociologically aesthetic	050200	General	00814	% of cities of 500,000 people or more with green and public spaces constituting 30% or more of total urban area	11.7	1	%						99.9
050000	Affordable Housing for all <insert country name>ns	050200	Community developments are sociologically aesthetic	050200	General	00812	% of <insert country name>ns living in squatter settlements		2	%						
050000	Affordable Housing for all <insert country name>ns	050200	Community developments are sociologically aesthetic	050200	General	00811	% of local government areas with squatter settlements		2	%						
050000	Affordable Housing for all <insert country name>ns	050200	Community developments are sociologically aesthetic	050200	General	00813	% of urban development plans requiring a minimum ratio of green space to commercial development, with universal access	11.7	1	%						99.9

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
050000	Affordable Housing for all <insert country name>ns	050200	Community developments are sociologically aesthetic	050200	General	00815	Average % of green and public open spaces with a higher incidence of crime than the national average	11.7	2	%						1
050000	Affordable Housing for all <insert country name>ns	050300	<Insert country name>n housing has piped water and sewage services	050301	Urban housing has piped potable water	00823	% of residents in urban areas within 5 minute walk to piped potable water		1	%						
050000	Affordable Housing for all <insert country name>ns	050300	<Insert country name>n housing has piped water and sewage services	050301	Urban housing has piped potable water	00822	% of urban households with piped potable water		1	%						
050000	Affordable Housing for all <insert country name>ns	050300	<Insert country name>n housing has piped water and sewage services	050302	Urban housing has sewage services installed	00827	% of urban households with sewage services installed		1	%						
050000	Affordable Housing for all <insert country name>ns	050300	<Insert country name>n housing has piped water and sewage services	050303	Rural housing has ready access to potable water	00831	% of rural households with piped potable water		1	%						
050000	Affordable Housing for all <insert country name>ns	050300	<Insert country name>n housing has piped water and sewage services	050303	Rural housing has ready access to potable water	00832	% of rural residents within 5 minute walk to piped potable water		1	%						
050000	Affordable Housing for all <insert country name>ns	050300	<Insert country name>n housing has piped water and sewage services	050304	Rural housing has installed sewage services	00836	% of rural households with sewage services installed		1	%						
050000	Affordable Housing for all <insert country name>ns	050400	Urban streets have ecologically sustainable lighting	050400	General	01647										
060000	Healthy <insert country name>ns	060000	General	060000		00847	Maternal mortality rate per 1,000 live births									
060000	Healthy <insert country name>ns	060000	General	060000		00848	Infant mortality rate per 1,000 live births									
060000	Healthy <insert country name>ns	060000	General	060000		00849	Malaria morbidity rate per 100,000									

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
060000	Healthy <insert country name>ns	060000	General	060000		00850	Rate of malaria mortality per 100,000									
060000	Healthy <insert country name>ns	060000	General	060000		00851	Rate of tuberculosis incidence per 100,000									
060000	Healthy <insert country name>ns	060000	General	060000		00852	Rate of tuberculosis mortality per 100,000									
060000	Healthy <insert country name>ns	060100	Highly regarded hospital facilities	060100	General	01655	% of <insert country name>ns who rate the quality of hospital services as good or better		1	%						
060000	Healthy <insert country name>ns	060100	Highly regarded hospital facilities	060100	General	01656	% of <insert country name>ns who rate the quality of hospital facilities as good or better		1	%						
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00876	% of children 2 years and under that are assessed with stunting		2	%						
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00895	% of <insert country name>ns that practice family planning	3.7	1	%						99.9
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00896	% of <insert country name>ns with access to universal sexual and reproductive health information and education schemes	3.7	1	%						99.9

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00904	% of medicines and vaccines that are subject to one or more regulatory interventions that limit their importation, in contravention to the Doha Declaration on the TRIPS Agreement and Public Health		2	%						.01
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00012	% of people suffering malnutrition in any year	2.2	2	%						10
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00897	% of population covered by health insurance	3.8	1	%						99.9
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00898	% of population covered under universal health financial risk protection (health insurance)	3.8	1	%						99.9
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00901	% of population with access to essential medicines and vaccines	3.8	1	%						99.9
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00899	% of population with access to quality essential health-care services [need to define “quality”]	3.8	1	%						99.9
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00879	% of pregnant women suffering from one or more nutritional deficiencies		2	%						
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00905	Average % change in health financing	3.c	1	%						10

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00906	Average % change in health workforce numbers	3.c	1	%						10
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00903	Average % change in public expenditure (real) on United Nations COFOG code 07.05 (Health Research and Development)	3.b	1	%						0.1
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00886	Average % change in the incidence of HIV/AIDS	3.3	2	%						-10
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00892	Average % change in the incidence of communicable diseases	3.3	2	%						-10
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00890	Average % change in the incidence of hepatitis	3.3	2	%						-10
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00888	Average % change in the incidence of malaria	3.3	2	%						-10
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00889	Average % change in the incidence of neglected tropical diseases (What diseases? This must be defined.)	3.3	2	%						-10
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00891	Average % change in the incidence of water-borne diseases	3.3	2	%						-10
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00880	Average % of children less than 5 years old suffering from stunted growth	2.2	2	%						
060000	Healthy <insert country name>ns	060200	Highly regarded public health services	060200	General	00881	Average % of children less than 5 years old suffering from wasting	2.2	2	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
060000	Healthy <insert country name>	060200	Highly regarded public health services	060200	General	00902	Average % of people who receive vaccinations where one or more of the vaccinations fails to vaccinate	3.8	2	%						0.1
060000	Healthy <insert country name>	060200	Highly regarded public health services	060200	General	00900	Average estimated % of people who rate the available essential health-care services as good quality or better	3.8	1	%						99.9
060000	Healthy <insert country name>	060200	Highly regarded public health services	060200	General	00887	Averge % change in the incidence of tuberculosis	3.3	2	%						-10
060000	Healthy <insert country name>	060200	Highly regarded public health services	060200	General	00893	Change in premature mortality from noncommunicable diseases	3.4.1	2	%						-33
060000	Healthy <insert country name>	060200	Highly regarded public health services	060200	General	00882	Estimated average % of adolescent girls suffering from one or more nutritional deficiency	2.2	2	%						
060000	Healthy <insert country name>	060200	Highly regarded public health services	060200	General	00883	Estimated average % of lactating women suffering from one or more nutritional deficiency	2.2	2	%						
060000	Healthy <insert country name>	060200	Highly regarded public health services	060200	General	00884	Estimated average % of older persons suffering from one or more nutritional deficiency (How do you define "older person" from one society to another?)	2.2	2	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
060000	Healthy <insert country name>	060200	Highly regarded public health services	060200	General	00894	Estimated average % of population without ready access to sexual and reproductive health-care services	3.7	2	%						1
070000	Freedom of culture and religion	070000	General	070000		01690										
070000	Freedom of culture and religion	070100	All <insert country name>ns have access to public recreational facilities	070100	General	00935	Equal Treatment and Absence of Discrimination score in the World Justice Project report	4.1	1	index		0.49				
070000	Freedom of culture and religion	070200	<Insert country name>'s indigenous culture is preserved and recognized around the world	070200	General	00935	Equal Treatment and Absence of Discrimination score in the World Justice Project report	4.1	1	index		0.49				
070000	Freedom of culture and religion	070300	<Insert country name>'s population has access to a wide range of multi cultural experiences	070300	General	01714										
070000	Freedom of culture and religion	070400	<Insert country name> is recognized for its religious tolerance and harmony	070400	General	00951	Freedom of Belief and Religion score in the World Justice Project Report		1	index		0.74	0.747	0.755	0.762	0
080000	Well-Educated <insert country name>	080000	General	080000		00959	% change in the number of qualified teachers	4.c	1	%						20
080000	Well-Educated <insert country name>	080000	General	080000		00959	% change in the number of qualified teachers	4.c	1	%						20
080000	Well-Educated <insert country name>	080000	General	080000		00976	% change in the number of scholarships available from developed countries	4.b	1	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
080000	Well-Educated <insert country name>	080000	General	080000		00960	% change in the number of teachers trained by international donor cooperation	4.c	1	%						20
080000	Well-Educated <insert country name>	080000	General	080000		00960	% change in the number of teachers trained by international donor cooperation	4.c	1	%						20
080000	Well-Educated <insert country name>	080000	General	080000		00967	% of adults assessed as functionally literate or better		1	%						
080000	Well-Educated <insert country name>	080000	General	080000		00970	Average % female adult literacy (as measured using what test?)	4.6	1	%						60
080000	Well-Educated <insert country name>	080000	General	080000		00971	Average % change in male adult literacy (as measured using what test?)	4.6	1	%						60
080000	Well-Educated <insert country name>	080000	General	080000		00974	Average % female adult numeracy (as measured using what test?)	4.6	1	%						60
080000	Well-Educated <insert country name>	080000	General	080000		00968	Average % female youth literacy rates (as measured using what test?)	4.6	1	%						100
080000	Well-Educated <insert country name>	080000	General	080000		00972	Average % female youth numeracy (as measured using what test?)	4.6	1	%						99.9
080000	Well-Educated <insert country name>	080000	General	080000		00975	Average % male adult numeracy (as measured using what test?)	4.6	1	%						60
080000	Well-Educated <insert country name>	080000	General	080000		00969	Average % male youth literacy rates (as measured using what test?)	4.6	1	%						100

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
080000	Well-Educated <insert country name>	080000	General	080000		00973	Average % male youth numeracy (as measured using what test?)	4.6	1	%						99.9
080000	Well-Educated <insert country name>	080000	General	080000		01722	Average PISA score rural schools/Average PISA score for municipal schools		1	ratio						
080000	Well-Educated <insert country name>	080000	General	080000		01723	Average number of years of schooling completed by <insert country name>'s citizens		1	years						
080000	Well-Educated <insert country name>	080000	General	080000		01731										
080000	Well-Educated <insert country name>	080100	Adults have access to further education	080100	General	01732										
080000	Well-Educated <insert country name>	080200	All <insert country name>n children have access to high quality pre-primary education	080200	General	00991	% of all boys with access to early childhood development, care and pre-primary education	4.2	1	%						99.9
080000	Well-Educated <insert country name>	080200	All <insert country name>n children have access to high quality pre-primary education	080200	General	00990	% of all girls with access to early childhood development, care and pre-primary education	4.2	1	%						99.9
080000	Well-Educated <insert country name>	080200	All <insert country name>n children have access to high quality pre-primary education	080200	General	00989	% of children between the ages of 3 years and 6 years who attend pre-primary schooling									
080000	Well-Educated <insert country name>	080200	All <insert country name>n children have access to high quality pre-primary education	080200	General	00993	Average % of all boys assessed as being "ready" for primary education (How do you propose to measure "readiness"?)	4.2	1	%						99.9

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
080000	Well-Educated <insert country name>ns	080200	All <insert country name>n children have access to high quality pre-primary education	080200	General	00992	Average % of all girls assessed as being "ready" for primary education (How do you propose to measure "readiness"?)	4.2	1	%						99.9
080000	Well-Educated <insert country name>ns	080300	All <insert country name> children have access to high quality primary education	080300	General	01009	% of <insert country name>ns who complete primary education		1	%						
080000	Well-Educated <insert country name>ns	080300	All <insert country name> children have access to high quality primary education	080300	General	01008	% of learners who are subject to compulsory classes imparting knowledge on cultural diversity and of culture's contribution to sustainable development	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080300	All <insert country name> children have access to high quality primary education	080300	General	01005	% of learners who are subject to compulsory classes imparting knowledge on gender equality	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080300	All <insert country name> children have access to high quality primary education	080300	General	01007	% of learners who are subject to compulsory classes imparting knowledge on global citizenship	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080300	All <insert country name> children have access to high quality primary education	080300	General	01004	% of learners who are subject to compulsory classes imparting knowledge on human rights	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080300	All <insert country name> children have access to high quality primary education	080300	General	01006	% of learners who are subject to compulsory classes imparting knowledge on promotion of a culture of peace and nonviolence	4.7	1	%						99.9

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
080000	Well-Educated <insert country name>ns	080300	All <insert country name> children have access to high quality primary education	080300	General	01003	% of primary school learners who by the end of year 7 have been subject to compulsory classes that impart knowledge on sustainable development	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080300	All <insert country name> children have access to high quality primary education	080300	General	01002	% of students that have access to free primary education	4.1	1	%						99.9
080000	Well-Educated <insert country name>ns	080300	All <insert country name> children have access to high quality primary education	080300	General	01001	Average % of boys that complete primary education	4.1	1	%						99.9
080000	Well-Educated <insert country name>ns	080300	All <insert country name> children have access to high quality primary education	080300	General	01000	Average % of girls that complete primary education	4.1	1	%						99.9
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01024	% of children assessed as functionally illiterate		1	%						
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01023	% of children completing 10 years of schooling or more		1	%						
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01019	% of <insert country name>ns who complete elementary education		1	%						
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01020	% of <insert country name>ns who complete senior secondary education		1	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01008	% of learners who are subject to compulsory classes imparting knowledge on cultural diversity and of culture's contribution to sustainable development	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01005	% of learners who are subject to compulsory classes imparting knowledge on gender equality	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01007	% of learners who are subject to compulsory classes imparting knowledge on global citizenship	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01004	% of learners who are subject to compulsory classes imparting knowledge on human rights	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01006	% of learners who are subject to compulsory classes imparting knowledge on promotion of a culture of peace and nonviolence	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01022	% of <insert country name>ns that receive free secondary education	4.1	1	%						

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01013	% of secondary school learners who by the end of Year 10 have been subject to compulsory classes that impart knowledge on sustainable development	4.7	1	%						99.9
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01179	Average % of boys that complete secondary education	4.1	1	%						
080000	Well-Educated <insert country name>ns	080400	All <insert country name> children have access to high quality secondary school education	080400	General	01012	Average % of girls that complete secondary education	4.1	1	%						
080000	Well-Educated <insert country name>ns	080500	All <insert country name>ns have access to high quality vocational education	080500	General	01029	% of providers of vocational and technical education with average course cost of 30% or less of average income?)	4.3	1	%						
080000	Well-Educated <insert country name>ns	080500	All <insert country name>ns have access to high quality vocational education	080500	General	01750	% of students who receive free skills training		1	%						
080000	Well-Educated <insert country name>ns	080500	All <insert country name>ns have access to high quality vocational education	080501	All <insert country name>n youth have access to high quality vocational education	01034	% change in the number of youth with technical and vocational skills	4.4	1	%						10
080000	Well-Educated <insert country name>ns	080500	All <insert country name>ns have access to high quality vocational education	080501	All <insert country name>n youth have access to high quality vocational education	01036	% of youth completing technical or vocational education that find employment in a related field within 3 months of graduation	4.4	1	%						10

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
080000	Well-Educated <insert country name>ns	080500	All <insert country name>ns have access to high quality vocational education	080501	All <insert country name>n youth have access to high quality vocational education	01035	% of youth completing technical or vocational education that find employment that is superior to their previous employment prior to undertaking study	4.4	1	%						10
080000	Well-Educated <insert country name>ns	080500	All <insert country name>ns have access to high quality vocational education	080502	All <insert country name>n adults have access to high quality vocational education	01040	% change in the number of adults with technical and vocational skills	4.4	1	%						10
080000	Well-Educated <insert country name>ns	080500	All <insert country name>ns have access to high quality vocational education	080502	All <insert country name>n adults have access to high quality vocational education	01046	% change in the number of scholarships available from developed countries for enrollment in information and communications technology	4.b	1	%						
080000	Well-Educated <insert country name>ns	080500	All <insert country name>ns have access to high quality vocational education	080502	All <insert country name>n adults have access to high quality vocational education	01045	% change in the number of scholarships available from developed countries for enrollment in vocational training	4.b	1	%						
080000	Well-Educated <insert country name>ns	080500	All <insert country name>ns have access to high quality vocational education	080502	All <insert country name>n adults have access to high quality vocational education	01041	% of adults completing technical or vocational education that find employment in a related field within 3 months of graduation	4.4	1	%						10

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
080000	Well-Educated <insert country name>ns	080500	All <insert country name>ns have access to high quality vocational education	080502	All <insert country name>n adults have access to high quality vocational education	01042	% of adults completing technical or vocational education that find employment that is superior to their previous employment prior to undertaking study	4.4	1	%						10
080000	Well-Educated <insert country name>ns	080600	All <insert country name>ns have access to high quality tertiary education	080600	General	01057	% change in the number of scholarships available from developed countries for enrolment in higher education	4.b	1	%						
080000	Well-Educated <insert country name>ns	080600	All <insert country name>ns have access to high quality tertiary education	080600	General	01046	% change in the number of scholarships available from developed countries for enrolment in information and communications technology	4.b	1	%						
080000	Well-Educated <insert country name>ns	080600	All <insert country name>ns have access to high quality tertiary education	080600	General	01055	% change in the number of scholarships available from developed countries for enrolment technical, engineering and scientific programmes	4.b	1	%						
080000	Well-Educated <insert country name>ns	080600	All <insert country name>ns have access to high quality tertiary education	080600	General	01054	% of nations with “quality” tertiary education, including university (How to measure quality?)	4.3	1	%						100

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
080000	Well-Educated <insert country name>ns	080600	All <insert country name>ns have access to high quality tertiary education	080600	General	01053	% of providers of tertiary education with average unit cost of 10% or less of average income?)	4.3	1	%						100
080000	Well-Educated <insert country name>ns	080700	<Insert country name> is recognized for its education research	080700	General	01781										
090000	Compassionate and equitable society	090000	General	090000		01076	% change in the proportion of youth not in employment, education or training	8.6	2	%						
090000	Compassionate and equitable society	090000	General	090000		01079	% of countries with which <insert country name> has implemented duty-free and quota-free market access, consistent with World Trade Organization decisions	17.12	1	%						99.9
090000	Compassionate and equitable society	090000	General	090000		01075	Estimated average variance in remuneration within professional and nonprofessional job classifications (%)	8.5	2	%						5
090000	Compassionate and equitable society	090000	General	090000		00048	Fundamental Rights Score in the World Justice Project Rule of Law Index		1	index		0.52	0.525	0.530	0.536	0
090000	Compassionate and equitable society	090000	General	090000		00021	GINI Coefficient for <insert country name>									
090000	Compassionate and equitable society	090000	General	090000		01081	Number of lives lost as a result of natural disasters									

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
090000	Compassionate and equitable society	090000	General	090000		01078	Unemployment rate for women (%)/ Unemployment rate for men (%)	8.5	2	ratio of women to men						
090000	Compassionate and equitable society	090000	General	090000		01077	Unemployment rate for young people (under 26 and older than 14) (%)	8.5	2	%						5
090000	Compassionate and equitable society	090000	General	090000		01782	% of population needing food subsidization									
090000	Compassionate and equitable society	090000	General	090000		01783	Estimated % of people needing food subsidization/ Estimated % of people receiving food subsidization		2	ratio						
090000	Compassionate and equitable society	090000	General	090000		01784	Estimated % of people living at or below the povery line that hold an <insert country name>n Smart Card (KIP)		1	%						
090000	Compassionate and equitable society	090100	<Insert country name>'s vulnerable sick and disabled are treated fairly with compassion	090101	<insert country name>ns have equitable access to health insurance	01090	% of <insert country name>ns who are members of the Health Social Security Program		1	%						
090000	Compassionate and equitable society	090100	<Insert country name>'s vulnerable sick and disabled are treated fairly with compassion	090101	<insert country name>ns have equitable access to health insurance	01091	% persons with disabilities in school/% of population with disabilities	4.5	1	rate of school attendees to population rate						1
090000	Compassionate and equitable society	090100	<Insert country name>'s vulnerable sick and disabled are treated fairly with compassion	090101	<insert country name>ns have equitable access to health insurance	00935	Equal Treatment and Absence of Discrimination score in the World Justice Project report	4.1	1	index		0.49				

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
090000	Compassionate and equitable society	090100	<Insert country name>'s vulnerable sick and disabled are treated fairly with compassion	090101	<insert country name>ns have equitable access to health insurance	01096	Number of reported breaches of labor rights	8.8	2	Number of breaches reported						1
090000	Compassionate and equitable society	090100	<Insert country name>'s vulnerable sick and disabled are treated fairly with compassion	090101	<insert country name>ns have equitable access to health insurance	01095	Number of reported incidents of child labor in any form	8.7	2	Number of incidents reported						
090000	Compassionate and equitable society	090100	<Insert country name>'s vulnerable sick and disabled are treated fairly with compassion	090101	<insert country name>ns have equitable access to health insurance	01093	Number of reported incidents of human trafficking	8.7	2	Number of incidents reported						
090000	Compassionate and equitable society	090100	<Insert country name>'s vulnerable sick and disabled are treated fairly with compassion	090101	<insert country name>ns have equitable access to health insurance	01094	Number of reported incidents of recruitment and use of child soldiers	8.7	2	Number of incidents reported						
090000	Compassionate and equitable society	090100	<Insert country name>'s vulnerable sick and disabled are treated fairly with compassion	090101	<insert country name>ns have equitable access to health insurance	01092	Unemployment rate for persons with disabilities (%)	8.5	2	%						5
090000	Compassionate and equitable society	090200	<Insert country name>'s vulnerable aged people are treated fairly with compassion	090200	General	00935	Equal Treatment and Absence of Discrimination score in the World Justice Project report	4.1	1	index		0.49				
090000	Compassionate and equitable society	090300	<Insert country name>'s vulnerable families and children are treated fairly with compassion	090300	General	01107	Average % change in the number of detected or reported cases of child abuse, exploitation, trafficking, violence or torture of children	16.2	2	%						-99.9
090000	Compassionate and equitable society	090300	<Insert country name>'s vulnerable families and children are treated fairly with compassion	090300	General	00935	Equal Treatment and Absence of Discrimination score in the World Justice Project report	4.1	1	index		0.49				

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
090000	Compassionate and equitable society	090400	<Insert country name>'s vulnerable unemployed are treated fairly with compassion	090400	General	01116	% of citizens with access to means-tested social security support payments	1.3								99.9
090000	Compassionate and equitable society	090400	<Insert country name>'s vulnerable unemployed are treated fairly with compassion	090400	General	01114	% of formal workers who are members of the Workers Social Security Program		1	%						
090000	Compassionate and equitable society	090400	<Insert country name>'s vulnerable unemployed are treated fairly with compassion	090400	General	01115	% of informal workers who are members of the Workers Social Security Program		1	%						
090000	Compassionate and equitable society	090400	<Insert country name>'s vulnerable unemployed are treated fairly with compassion	090400	General	01117	Average % of citizens covered by a means-tested income support framework for disadvantaged and at-risk persons (How would you like to calculate the average? Weighted by national populations or just a straight average across nations?)	1.3								99.9
090000	Compassionate and equitable society	090400	<Insert country name>'s vulnerable unemployed are treated fairly with compassion	090400	General	00935	Equal Treatment and Absence of Discrimination score in the World Justice Project report	4.1	1	index		0.49				
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01142	% change in reported cases of female genital mutilation	5.3	2	%						-99.9

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01141	% change in reported child, early and forced marriages	5.3	2	%						-99.9
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01130	% female of primary education population/% female primary school age children population	4.5	1	ratio of attendees to population						1
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01132	% female of tertiary and vocational education population/% female tertiary and vocational school age children population	4.5	1	ratio of attendees to population						1
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01131	% of female secondary school education population/% female secondary school age children population	4.5	1	ratio of attendees to population						1
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01127	% of providers of technical education that limit access to one or more courses on the basis of sex	4.3	2	%						1
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01129	% of providers of tertiary education that limit access to one or more courses on the basis of sex	4.3	2	%						1

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01128	% of providers of vocational education that limit access to one or more courses on the basis of sex	4.3	2	%						1
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01143	% of regulatory instruments and government practices that contain mechanisms that prevent women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	5.5	2	%						0
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01144	% of regulatory instruments that have legislative or institutionalised blocking mechanisms that prevent universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences	5.6	2	%						0

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01145	% of regulatory instruments with one or more legal or institutionalised impediments to equal rights to economic resources, ownership and control over land and other forms of property, financial services, inheritance and natural resources	5.a	2	%						0
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01126	% persons with indigenous background in school/% of population that is indigenous (How to define indigenous or mixed?)	4.5	1	ratio of attendees to population						1
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01140	Average % change in reported sexual and other types of exploitation of girls	5.2	2	%						-99.9
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01139	Average % change in reported sexual and other types of exploitation of women	5.2	2	%						-99.9
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01138	Average % change in reported trafficking of girls	5.2	2	%						-99.9
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01137	Average % change in reported trafficking of women	5.2	2	%						-99.9

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01136	Average % change in reported violence against girls	5.2	2	%						-99.9
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01135	Average % change in reported violence against women	5.2	2	%						-99.9
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01134	Average % change in the number of complaints of discrimination against girls	5.1	2	%						-99.9
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01133	Average % change in the number of complaints of discrimination against women	5.1	2	%						-99.9
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01146	Average % of women and girls and those in vulnerable situations with access to equitable sanitation (How do you propose to measure "equitable"? What constitutes "vulnerable"?)	6.2	1	%						99.9
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	00935	Equal Treatment and Absence of Discrimination score in the World Justice Project report	4.1	1	index		0.49				

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Code	High-Level OI Grouping	Code	Level 2 Sector OI Grouping	Code	Sub-category OI Grouping	OI_ID (unique)	OI Description	SDG Reference	Target Max or Min (2,1)	Unit of measure	Description of calculation methodology	Target 2016	Target 2017	Target 2018	Target 2019	Target 2030
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	28
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01809	% of parliament sitting members that are female		1	%						
090000	Compassionate and equitable society	090500	<Insert country name>ns are not discriminated against on the basis of their sex, race or ethnic grouping	090500	General	01810	% of judiciary that are female		1	%						
090000	Compassionate and equitable society	090600	Survivors of catastrophic events are treated fairly with compassion	090600	General	01154	% change in the number of people displaced by natural disasters	11.5	2	%						-99.9
090000	Compassionate and equitable society	090600	Survivors of catastrophic events are treated fairly with compassion	090600	General	01153	Average % change in the number of deaths caused by natural disasters	11.5	2	%						-10
090000	Compassionate and equitable society	090600	Survivors of catastrophic events are treated fairly with compassion	090600	General	01156	Average % change in the ratio (value of direct economic losses caused by natural disasters/gross domestic product) caused by natural disasters	11.5	2	%						
090000	Compassionate and equitable society	090600	Survivors of catastrophic events are treated fairly with compassion	090600	General	01155	Average % change in the value of direct economic losses caused by natural disasters	11.5	2	%						10
090000	Compassionate and equitable society	090600	Survivors of catastrophic events are treated fairly with compassion	090600	General	01157	Insurance payouts for natural disasters/ Insurance claims		1	$ payout rate						

GDP = gross domestic product, OI = outcome indicators, PISA - Programme for International Student Assessment, SDG Reference: Refers to the paragraph numbers of the sustainable development goals and targets listed in the "Draft outcome document of the United Nations summit for the adoption of the post-2015 development agenda" issued on 12 August 2015.

Source: Author.

APPENDIX 7

Criteria for Assessing Results-Based Budgeting Management Proposals

No.	Assessment Aspect	Criteria for Assessment
1	The results-based budgeting management (RBBM) logical framework specified for the national budgeting system	Planning logic differentiates between Final Outcomes, Intermediate Outcomes, Organizational Outcomes, Final Outputs, Intermediate Outputs, Internal Outputs, Outcome Indicators, Output Indicators (Service Delivery Standards). Clear linkages are defined and manuals and guidelines are clear.
2	Outcome classification framework	An outcomes classification framework has been developed that facilitates inter-temporally stable outcome descriptions and inter-temporally stable outcome indicator definitions that may be used for sector planning. A framework aligned with the classification of functions of government (COFOG) system is ideal. Changes in government policy may be reflected in changes to outcome indicator targets, not by redesign of the outcomes framework. An example is shown in Appendix 6.
3	Outcome descriptions and/or definitions	There should be a separate outcome description for each client population level variable to be targeted. Outcome descriptions should be brief and succinct, reflecting the aspirational subject.
4	Outcome indicator descriptions	Outcome Indicators should reflect the outcome description to which it relates. Outcome Indicators may be proxy indicators or direct indicators. Each outcome indicator should be expressed for only one variable. All other potential variables should be expressed as fixed numbers around which the variable may oscillate. No directional verbs or qualitative adjectives should describe the indicator. No target should be included in the description. All outcome indicators should express their aims in minimum or maximum targets.
5	Output classification framework (See Appendix 3 for an example of output type descriptions).	There are outputs across ministries that are similar in nature and may be described in the same way and with the same performance indicator (performance indicator) descriptions (although targets may differ and some wording variations may occur). Outputs are classified as Final Outputs, Intermediate Outputs, or Internal Outputs for costing purposes. A database coding system can be constructed to report on similar output types.

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Table *continued*

No.	Assessment Aspect	Criteria for Assessment

6	Output descriptions and/or definitions	• **Include an object (or subject)** such as "Advisory Services," "Regulatory Services," or "Hospital Services;"
		• **Include** a verb such as "Supply of...," or "Provision of ...;"
		• **Not** be worded as an objective statement (i.e., words such as "increasing," "decreasing," "improving," "enhancing," imply creating a change to a state-of-being, have no place in an Output Description, ***only*** in an ***Outcome*** description);
		• **Not** include directional movements referring to statistical measures (i.e., as per previous condition, these belong in Outcome statements, not Output descriptions);
		• Be **brief**, requiring approximately four or five words to describe the good or service.
		• To facilitate grouping of similar Outputs (e.g., different types of policy advice), the Agency Outputs **should not be narrowly defined**.
		• Wherever possible, Outputs should be aggregated into a limited number of Outputs that are crosscutting Programs or Activities.
		• If funding for a Sub-Output constitutes 10% or more of the total budget for the Agency, it should be a major determinant of the Agency Output description.
		• The description should
		  ▪ Describe in simple language the products or services (avoid the use of adjectives and superlatives);
		  ▪ Should help the Government, Parliament, and the public understand the nature of the goods or services for which public funding is being provided;
		  ▪ Should have a clearly identifiable "customer" (targeted client or community group);[a]
		  ▪ May include goods and services to be delivered through outsourced arrangements (reflected in the purchasing Agency's Outputs, not the provider's);
		  ▪ Suggest how the Output would be measured in quantity, quality, and timeliness; and
		  ▪ Reflect a core deliverable Output, or business line, of the Agency and will typically comprise a grouping of Program/Activity Outputs undertaken with a common Outcome in mind.
		  ▪ Should be within the Agency's control; and
		  ▪ May be an aggregation of Sub-Outputs that are similar in nature and able to be described by a common set of Performance Indicators .

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Table *continued*

No.	Assessment Aspect	Criteria for Assessment
7	Output performance indicator descriptions	Output Performance Indicators are service delivery standards. An Output performance indicator "Set" consists of four "Classes" of Performance Indicators, including quantity, quality, timeliness, and cost. A performance indicator Set should incorporate at least one performance indicator from each Class. They should clearly reflect the output description to which they relate. Each Output performance indicator should be expressed for only one variable. All other potential variables should be expressed as fixed numbers around which the variable may oscillate. No directional verbs or qualitative adjectives should be included in the performance indicator description. No target should be included in the performance indicator description. All Performance Indicators should express their aims in minimum or maximum targets. performance indicator descriptions should be written such that, they 1. Are **not** expressed as an objective statement (i.e., **Do not** include in the description superlatives or references to directional change, such as "Increase in...," "Decrease in...," "High-quality..."); 2. Refer to **only one variable**; 3. Refer to **only one class** of indicator (either: quantity, or quality, or timeliness, or financial/ cost, never a combination of one or more); 4. Be a **simple description** of what is being measured, nothing more; 5. **Never** include the target in the description; 6. Facilitate the calculation of averages and variances over long periods of time; 7. Facilitate the expression of the target as a single, numerical value; 8. Result in the expression of the target as a maximum or minimum target, never as a fixed number; and 9. Do not result in biased statistical measurements when actual results are compared against targets.
8	Quality assurance	The central agencies ensure quality of the specification of outcome descriptions, outcome indicators, output descriptions and output performance indicator definitions and targets to ensure that no new outcomes, outputs, or their associated indicators are created unnecessarily and without conforming to the formal classification criteria and guidelines. A centralized processing and approvals system is established through which new outcome descriptions and output descriptions must be processed prior to incorporation into formal budget processes.

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Table *continued*

No.	Assessment Aspect	Criteria for Assessment
9	Database management	A centralized database is maintained that formalizes the outcomes, outputs, and their associated indicators in a relational database that emulates the RBBM logical framework consistent with the business model. The database elements are tightly controlled through a centralized process that links with the quality assurance function. No new elements can be incorporated without strict adherence to the quality assurance approvals process.
10	Analytical reports (including budget documents)	Budget reports incorporate performance data for multiple years, including the estimated outturn for the last budget year against the target, the actual outturn for the 2 years prior to the last budget year and forecast for the coming budget year and 2 years forward. Analytical reports clearly explain divergences of performance from target, explaining why over or underperformance in outcome indicators may or may not have been due to government interventions, and why over or underperformance in delivering outputs was due to management action planning or unforeseen circumstances. Budget documents should only report on final outputs delivered to clients external to the Agency and should not include discussion of intermediate or internal outputs. Discussion outcomes should be in relation to Final Outcome and Intermediate Outcomes but should exclude discussion or Organizational Outcomes.
11	Output costing[b]	Output costing should reflect the current state of the accounting system in government. Where cash accounting is used, output costing can only be related to budget allocations and operating costs. Where accrual accounting is in use, output costing should include depreciation of capital, a capital use charge, and an allocation of debt interest cost. The cost of all overheads (internal outputs) should be allocated across final outputs. All intermediate output costs should be allocated to the final outputs to which they contribute.
12.	Coverage of formal manuals and guidelines[c]	Formal manual and guidelines should incorporate all of the advice above plus provide work examples, particularly for output costing.

RBBM = results-based budgeting management.

[a] Note that a client group can be identified with more than one Agency Output, and an Agency Output may impact on more than one outcome indicator and more than one segment of the population. However, we should always attempt to identify our primary target population and our first order OIs during the planning process. These should be stable over the term of the Output's delivery: 1 to 100 years, although additional statistical correlations with population segments and OIs may be identified and established along the journey.

[b] This aspect of RBBM was not assessed.

[c] This aspect was assessed as part of criteria 1.

Source: Author.

APPENDIX 8
Documents Consulted for Country Cases

Australia

Agency Resourcing 2005–2006, including Appropriation (Parliamentary Departments) Bill (No. 1) 2005–2006 Appropriation Bill (No. 1), 2005–2006 Appropriation Bill (No. 2) 2005–2006

Budget Measures, 2005–2006

Budget Strategy and Outlook, 2005–2006

Department of Agriculture Annual Report, 2013–2014

Department of Education Annual Report, 2013–2014

Department of Education, Training, and Youth Affairs Annual Report, 1999–2000

Department of Finance Annual Report. 2013–2014

Department of Finance Annual Report. *Guide to Preparing the 2015–16 Portfolio Budget Statements*

Department of Finance Annual Report. *Guidelines for the Preparation of Portfolio Budget Statements, 2001–2002*

Department of Finance Annual Report. *Outcome Statements Policy and Approvals Process, June 2009*

Department of Finance Annual Report. *Performance Information and Indicators Guide, October 2010*

Department of Finance and Administration. *The Outcomes and Outputs Framework Guidance Document*, November 2000

Department of Health Annual Report, 2013–2014, Volume 1

Department of Health Annual Report, 2013–2014, Volume 2

Department of Prime Minister and Cabinet Annual Report, 2013–2014

Portfolio Budget Statements, 2005–2006. Agriculture, Fisheries and Forestry Portfolio Budget Initiatives and Explanations of Appropriations Specified by Outcomes and Outputs by Agency Budget Related Paper No. 1.1

Portfolio Budget Statements, 2013–2014. Department of Infrastructure and Transport

Portfolio Budget Statements, 2014–2015. Budget Related Paper No. 1.1 Agriculture Portfolio: Budget Initiatives and Explanations of Appropriations Specified by Outcomes and Programmes by Agency

Portfolio Budget Statements User Guidelines, 2001–2002

Portfolio Budget Statements User Guidelines, 2015–2016. Education and Training Portfolio

Portfolio Budget Statements User Guidelines, 2015–2016. Finance Portfolio

Portfolio Budget Statements User Guidelines, 2005–2006. Treasury Portfolio

Portfolio Budget Statements User Guidelines, 2015–2016. Treasury Portfolio

Public Governance, Performance and Accountability, Act 2013

The Treasury Annual Report, 2003–2004

The Treasury Annual Report, 2012–2013

The Treasury Annual Report, 2013–2014

User Guide to the Portfolio Budget Statements, 2005–2006

Canada

Department of Finance Canada, Departmental Performance Report, 2003–2004

Department of Finance Canada, Departmental Performance Report for the period ending 31 March 2007

Department of Finance Canada, Departmental Performance Report, 2008–2009

Department of Finance Canada, Departmental Performance Report, 2009–2010

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Implementing Results-Based Budget Management Frameworks
An Assessment of Progress in Selected Countries

The use by governments of a results-based budgeting expenditure framework is well established around the world as a concept. However, its implementation as an analytical tool and policy driver is highly dependent on relationships that must be modelled with statistics. In this regard, there would appear to be significant gaps between concept and implementation. In order for governments to obtain clarity with respect to policy effectiveness and the assessment of bureaucratic effectiveness, a robust statistical framework must be developed to define outputs and outcome indicators. This publication examines a select group of countries that have led the foray into results-based budgeting and identifies weaknesses in their implementation from a statistical analysis perspective. It suggests some guidelines for the development of output descriptions, output indicators and outcome indicators, and provides a potential system for classifying output linkages to outcome groups and outcome indicators that might be easily identified through the classification of the functions of government (COFOG) expenditure classification system used today by most countries around the world.

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