

HORIZONTAL BUDGETING

HORIZONTAL BUDGETING:
RESULTS-BASED BUDGETING AND THE CO-ORDINATION
OF HORIZONTAL POLICIES IN CANADA AND THE UNITED STATES

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Abstract

This dissertation examines how governments may use results-based budgeting to co-ordinate horizontal policies, and how a country's regime type may affect the incidence and success of such efforts. A rational choice institutional approach is used to frame the relations between "guardian" budget-makers in central budget agencies and "spender" civil servants in line departments. We undertake a quantitative analysis of primary budget documents of selected departments in the federal governments of Canada and the United States, and confirm our findings through a series of interviews with budget-makers, departmental officials and academics in both countries.

Our findings suggest that, regardless of regime type, results-based budgeting is rarely used to help co-ordinate horizontal policies, for two main reasons. First, results-based budgeting's potential to co-ordinate is limited by methodological difficulties. In particular, it is often difficult to fully understand the causal theory behind programs and to fully measure all the relevant aspects of programs. Second, the motivation of budget-makers to so use results-based budgeting is limited by political disincentives. In particular, there are many disincentives to publicize the true objectives of programs and to reveal the actual performance of programs. On balance, the theoretical potential of and incentives to adopt "horizontal budgeting" is often outweighed by the practical difficulties and disincentives.

This research contributes to existing knowledge of the public administration of expenditure budget-making by highlighting similarities between current budgeting systems in Canada and the U.S. and the program budgeting experiments of the 1960s and 1970s, by exploring the potential and incentives to use results-based budgeting to co-ordinate horizontal policies, and by advancing the research methodology of comparative budgeting studies. Furthermore, by increasing our knowledge of the *process* of budgeting, we also inform understandings of the *contents* of budgets, and so inform understandings of the contents of a wide range of policies and programs.

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Glossary

AECB	Atomic Energy Control Board
ANOVA	analysis of variance
APP	Annual Performance Plan
APR	Annual Performance Report
CIDA	Canadian International Development Agency
DOD	Department of Defense
DOE	Department of Energy
DOL	Department of Labor
DOT	Department of Transport
DPR	Departmental Performance Report
EC	Environment Canada
EMS	Expenditure Management System
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FY	fiscal year
GAO	General Accounting Office
GPRA	Government Performance and Results Act
HHS	(Department of) Health and Human Services
HRDC	Human Resources Development Canada
HUD	(Department of) Housing and Urban Development
INS	Immigration and Naturalization Services
MBO	Management by objectives
NAFTA	North American Free Trade Agreement
NPR	National Performance Review
NRC	Nuclear Regulatory Commission
OECD	Organisation for Economic Co-operation and Development
OMB	Office of Management and Budget
P&F	Program and Financing
PEMS	Policy and Expenditure Management System
PPB	Planning-Programming-Budgeting
PPBS	Planning Programming Budgeting System
RPP	Report on Plans and Priorities
SPI	Sectoral Partnerships Initiatives
TBS	Treasury Board Secretariat
TC	Transport Canada
USAID	United States Agency for International Development
USD	United States dollars
USDA	United States Department of Agriculture
VA	(Department of) Veterans Affairs
VAC	Veterans Affairs Canada
ZBB	zero-base budgeting

Chapter 1: Introduction

This dissertation examines how the federal governments of Canada and the United States may use results-based budgeting techniques to co-ordinate horizontal policies and programs, and how such use varies with each country's regime type.

A program is horizontal when the underlying policy issues being addressed by it are also being addressed by the programs of other departments, and the effects of one department's program on an underlying issue affects the success or failure of another department's program to address that same issue. When the effects of programs across departments interact in this way, those programs and departments are interdependent in a government's overall attempt to address the underlying policy issues. An enduring challenge for governments has been to co-ordinate programs across departments so that their interdependencies contribute to, rather than detract from, their combined efficiency and effectiveness.

The governments of Canada and the U.S. may be able to co-ordinate policies across departments by using results-based budgeting techniques to formulate their annual expenditure budgets. Results-based budgeting involves identifying the expected costs and results of departments' programs, and allocating funds to those programs on the basis of their contribution to departmental and government-wide priorities. Results-based budgeting may be used to identify how programs across departments interact with each other, and then to co-ordinate this interaction by selectively funding only those programs which are collectively the most efficient and effective in contributing to departmental and government-wide priorities.

This dissertation examines how results-based budgeting may be used to identify the underlying factors that give rise to issues, assess the effects of programs on issues, and co-ordinate policies by selectively funding programs. It also examines whether regime type affects either the capacity or the incentives of budget-makers to use results-based budgeting in this way. Of particular interest will be how results-based budgeting may strengthen the hand of central agency “guardians” in their perennial struggle with line department “spenders” over the contents of expenditure budgets.

In this chapter, we will outline the theoretical framework of rational choice institutionalism, introduce the subject matter of budgets and budget-making (including the guardian-spenders framework), discuss the administrative context of the new public management and rational decision-making, and present the challenge of co-ordinating programs across government departments. Then, we will turn more to the study at hand, summarizing its scope, hypotheses, methods, findings, and organization.

Rational choice institutionalism

This dissertation adopts a state-centred approach to public policy studies, an approach which examines how factors internal to states influence policy decisions. The state is important because public policy is the expression of state action or inaction, “whatever governments choose to do or not to do.”¹ The details of the process that is followed within the state to formulate policy can have great bearing on the details of the

¹ Thomas R. Dye, *Understanding Public Policy*, 5th edn. (Englewood Cliffs, N.J.: Prentice-Hall, 1984), p. 1. As is often attributed to Duc Gaston de Lévis (1720-1787), “*Gouverner, c’est choisir*”—to govern is to choose.

contents of the policies as they emerge and are implemented. Budget decisions, we will see, are among the most important policy decisions a government can make. To better understand the budget-making process, we draw from neo-institutional theory, which often focuses on the rules that influence the behaviour of policy-makers inside the state,² paying particular attention to the institutions that structure the actions and interactions of policy-making civil servants. Furthermore, since the role of civil servants in the policy process can be seen as a function not only of the policy-making environment that structures the behavioural options open to them, but also of their interests, we draw in particular from theories of rational choice institutionalism.

The Weberian model of bureaucracy is the model around which most Western governments have developed. One characteristic of this model is formal rules governing administrative behaviour. Many Western governments are currently implementing rule-reducing reforms, but these reforms have been slow to take hold, particularly in Canada.³ Many rules still exist concerning relationships involving bureaucratic actors in policy communities. For example, we can see formal rules concerning bureaucratic-executive relations, bureaucratic-legislative relations, and line department-central agency relations,

² B. Guy Peters, *Institutional Theory in Political Science: The 'New Institutionalism'* (London and New York: Pinter, 1999). As Peters explains, there are many variants of neo-institutionalism. While “all focus attention on the importance of structure in explaining political behavior” (144), not all define structure in terms of rules. Rather, some define structure in terms of values and norms. As we will see in the next section, the variant we use here—rational choice institutionalism—does define structure in terms of rules and so our definitions and discussions of institutions that follow hold only for this variant. See Peters, chapters 1, 3 and 9.

³ Donald J. Savoie, *Governing from the Centre: The Concentration of Power in Canadian Politics* (Toronto: University of Toronto Press, 1999), pp. 316, 360-362.

as well as informal rules concerning bureaucratic-public relations, political-public relations, as well as bureaucratic-political relations.

To the extent that actors involved in policy processes play co-operative and competitive games with each other to advance the policies they prefer, these rules constitute “rules of the game ... according to which conflict will be waged, interests articulated, and conflict resolved.”⁴ Under rational choice institutionalism, “institutions are conceptualized as collections of rules and incentives that . . . establish a ‘political space’ within which many interdependent political actors can function.”⁵ More specifically, Kiser and Ostrom have defined institutions as

rules used by individuals for determining who and what are included in decision situations, how information is structured, what actions can be taken and in what sequence, and how individual actions will be aggregated into collective decisions
⁶

In this study we adopt a neo-institutional approach to examine how rules at a variety of levels affect policy outputs and outcomes by “ruling in” and “ruling out” certain content- and process-related aspects of policies and policy-making.⁷ This approach help us identify how the institutions used to govern and otherwise alter the role of civil servants in the budgetary policy-making process affect policy outputs.

⁴ Bernard E. Brown and Roy C. Macridis, “Political Institutions,” in Bernard E. Brown and Roy C. Macridis, eds., *Comparative Politics*, 8th edn. (Belmont: Wadsworth, 1996), p. 279.

⁵ Peters, *op. cit.*, p. 44.

⁶ L. Kiser and E. Ostrom, “The Three Worlds of Action: A Metatheoretical Synthesis of Institutional Approaches,” *Strategies of Political Inquiry*, ed. E. Ostrom (Beverly Hills: Sage, 1982), p. 179.

⁷ Peters, *op. cit.*, pp. 43-54, 142. See especially p. 47, where Peters discusses how rules can “prescribe, proscribe and permit” behaviour.

But even within these rules, actors still have some measure of discretion. Institutions may channel behaviour, but they do not determine it completely. To understand how civil servants use their discretion, we draw from rational choice theory, which sees actors as self-interested utility-maximizers. This is a central tenet of rational choice theory, and it follows that the process of utility maximization involves identifying preferences and constructing utility functions, assessing strategies on the basis of their costs and benefits in relation to those utility functions, and selecting the strategy which provides the most expected utility.

Rational choice theory has been adapted from its economic origins to try to help explain a variety of social and political phenomena.⁸ Given that policy-making processes typically involve multiple actors within a state, the variant of rational choice theory we will use here is game theory, which models situations involving

a limited number of individual and corporate actors . . . that are engaged in purposeful action under conditions in which the outcomes are a joint product of separate choices. Moreover, these actors are generally aware of their interdependence; they respond to and often try to anticipate one another's moves.⁹

⁸ Including budgeting. See for example Douglas G. Hartle, *The Expenditure Budget Process of the Government of Canada: A Public Choice–Rent-Seeking Perspective* (Toronto: Canadian Tax Foundation, 1988), Albert Breton, *Competitive Governments: An economic theory of politics and public finance* (Cambridge: Cambridge University Press, 1996), Dirk-Jan Kraan, *Budgetary Decisions: A public choice approach* (Cambridge: Cambridge University Press, 1996), and Kenneth Shepsle and Barry Weingast, “Legislative Politics and Budget Outcomes,” *Federal Budget Policy in the 1980s*, eds. G. Mills and J. Palmer (Washington: Urban Institute, 1984), pp. 343–366. For a rational choice perspective on civil servants’ discretion more generally, see Randall L. Calvert, Mathew D. McCubbins and Barry R. Weingast, “A Theory of Political Control and Agency Discretion,” *American Journal of Political Science* 33(3) (August 1989), 588–611.

⁹ Fritz W. Scharpf, *Games Real Actors Play: Actor-centred institutionalism in policy research* (Boulder: Westview, 1997), p. 5.

We may then combine neo-institutionalism and rational choice theory into rational choice institutionalism. Rational choice institutionalism presumes that institutions affect public policies by creating conditions in which actors are more likely to follow some strategies than others, and are thus more likely to influence the policy process and by extension the contents of policies in certain ways than in others. As “rules of the game,” institutions structure the particular strategies that actors can pursue when participating in policy-making, e.g. to co-operate or defect in a particular game. Each strategy leads to a certain payoff, and typically, the strategies and payoffs of each actor are known to all participants.¹⁰ Exactly which outcome is arrived at is thus a function of two factors: the preferences of each actor entering the game, and the structure of strategies and payoffs created by the institutional rules.

Rational choice theories in general have been criticized for making heroic assumptions about the ability and motivation of actors to fully recognize their preferences and construct accurate utility functions, identify all the strategies available to them, comprehensively assess the payoffs of each strategy, and actually select the utility-maximizing one.¹¹ The validity of these assumptions aside, however, rational choice institutionalism can be used to at least help explain how certain policies were arrived at, and to help modify or maintain institutions so as to create or maintain utility-maximizing strategies for the participants which, when pursued, lead to policies that are stable and

¹⁰ Rational choice theory does not always assume that actors have perfect information, and can incorporate informational deficits into its models.

¹¹ See e.g. Donald Green and Ian Shapiro, *Pathologies of Rational Choice Theory* (New Haven: Yale University Press, 1994), and Jeffrey Friedman, ed., *The Rational Choice Controversy* (New Haven: Yale University Press, 1995).

politically, economically, or socially desirable. Rational choice institutional theory could, for instance, be useful in situations resembling the tragedy of the commons or the prisoner's dilemma.¹²

As a group, civil servants can be very heterogeneous and so their preferences may vary widely. Downs, for example, argued that their preferences may include power, money, prestige, convenience, security, loyalty, pride, commitment to a cause, and a sense of public duty.¹³ We also believe that, as a group (e.g. a department), civil servants primarily pursue the more central preference of power, of which there are two elements. The first concerns the size of the group's budget. According to Niskanen's "budget-maximizing" thesis, civil servants seek large salaries and job security, as well as perquisites and prestige, which they pursue by attempting to maximize the size of their group's budget.¹⁴ The second concerns the amount of autonomy the group has in spending that budget, where autonomy is defined as "discretion resulting from the absence of restrictions imposed by external actors."¹⁵ According to Dunleavy, civil servants may limit their attempts to maximize the size of their group's budget when their autonomy over spending additional—and existing—funds could decline due to collective

¹² Rational choice institutionalism is the subject of a much more elaborate discussion in Scharpf, *op. cit.*, particularly chapter 2.

¹³ Anthony Downs, *Inside Bureaucracy* (Boston: Little, Brown and Company, 1967).

¹⁴ W. A. Niskanen, *Bureaucracy and Representative Government* (Chicago: Aldine-Atherton, 1971). See also Jeffrey S. Banks, "Agency Budgets, Cost Information, and Auditing," *American Journal of Political Science* 33(3) (August 1989), 670-699.

¹⁵ See James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (New York: Basic Books, 1989), pp. 182-184, 192-193.

action problems within the civil service, variations in types of departments, and natural limits to growth.¹⁶ Here, we will define power, as Niskanen later did, as the product of the size of the budget available to be spent by departments and the amount of autonomy they have in spending those resources.¹⁷

Budgets and budget-making

Budgets are of high importance to governments. By specifying how much each department is authorized to spend, on what inputs each department may spend, and often for what purpose each department may spend, the budget establishes the broad parameters of the activities that departments may undertake and so of the results that departments' programs may achieve. We are particularly interested in how institutions shape the actions and interactions of those in government who decide on the contents of budgets. One such institution is that which tends to divide governments into two types of departments, each with distinct roles and incentives.

The first type of department consists of line departments that are primarily responsible for programs in traditional policy areas such as defence, environment, and labour. The incentive of civil servants in these departments is typically to spend, as it is generally by spending more that a department can accomplish more results, or less charitably, it is by spending more that civil servants, à la Niskanen, can build their own

¹⁶ Patrick Dunleavy, *Democracy, Bureaucracy and Public Choice* (New York: Prentice Hall, 1991). For a more generic statement of this idea, see J.-L. Migue and G. Belanger, "Toward a General Theory of Managerial Discretion," *Public Choice* 17 (1974), 27-48.

¹⁷ W. A. Niskanen, "Bureaucrats and Politicians," *Journal of Law and Economics* 18 (1975), 617-643.

empires. While such spending risks becoming excessive, these civil servants may be the only voice inside government ostensibly speaking for interests in genuine need of policy action, and so serve a valuable function.

The second type of department consists of central agencies that are primarily responsible not for programs of their own, but rather for aspects of the programs of line departments.¹⁸ The central agencies responsible for determining the budgets of line departments, which we call central budget agencies, are staffed by civil servants we call budget-makers. Their incentive is to guard against excessive and/or inappropriate line department spending, as it is by guarding that a central budget agency can best further the interests of the government as a whole, and so enhance their reputations in government circles and earn promotions from their political superiors, who tend to be the most senior politicians, those with responsibilities for governments as wholes.¹⁹

Central budget-makers may attempt to construct budgets which ensure that the amounts of departments' spending reflect the priority of their policy issues and programs within the government. They may also attempt to ensure that the means and ends of

¹⁸ See Sharon L. Sutherland and G. Bruce Doern, "Introduction," *Bureaucracy in Canada: Control and Reform*, eds. Sharon Sutherland and G. Bruce Doern (Toronto: University of Toronto Press, 1986).

¹⁹ Savoie, *op. cit.*, chapter 1. Here, we will assume that the interests of budget-makers and the senior politicians in the executive branch they support are similar, and thus that they are co-operating rather than competing. We could however instead set up the core budgeting "game" being played in government as one between civil servants and politicians, where budget-makers compete rather than co-operate with senior politicians in the executive branch (and perhaps in turn co-operate rather than compete with civil servants in line departments). We feel that this scenario, while more appropriate for some specific budgeting decisions, has less explanatory power in general (see also the concurring opinion in Peter Aucoin, "The Politics and Management of Restraint Budgeting," *The Budget-Maximizing Bureaucrat: Appraisals and Evidence*, eds. Andre Blais and Stephane Dion (Pittsburgh: University of Pittsburgh Press, 1991), p. 126). For an application to budgeting, see Albert Breton, *Competitive Governments: An economic theory of politics and public finance* (Cambridge: Cambridge University Press, 1996).

departmental programs contribute to the overall objectives of the government, that the extent of this contribution is reasonable given the funds devoted to it, that the programs of departments are co-ordinated with each other, and that funds are spent honestly and efficiently. While such guarding also risks becoming excessive, central agency civil servants are often the only voice inside government ostensibly speaking for the collective good of departments and counterbalancing the often parochial views and behaviour of line departments. “Central agencies,” according to Hart, “safeguard the whole against the parts.”²⁰

A common approach to the study of budget-making is to focus on the actions and interactions of these two groups of departments, known as “spenders” and “guardians,” respectively. The guardian-spenders framework, as it is called, sees the contents of budgets as the outcomes of struggles between spenders and guardians over how much departments will be able to spend and on what they may spend. The terms “spenders” and “guardians” were popularized by Heclo and Wildavsky in their study of the British civil service, but the essentials of the framework, as applied specifically to budget-making, have been most extensively used in Canada by Donald Savoie and in the U.S. by Aaron Wildavsky.²¹

²⁰ John Hart, “Central Agencies and Departments: Empowerment and Coordination,” *Taking Stock: Assessing Public Sector Reforms*, eds. B. Guy Peters and Donald J. Savoie (Montreal and Kingston: McGill-Queen’s University Press, 1998), p. 305.

²¹ Hugh Heclo and Aaron Wildavsky, *The Private Government of Public Money: Community and Policy inside British Political Administration*, 2nd edn. (London: Macmillan, 1981); Donald J. Savoie, *The Politics of Public Spending in Canada* (Toronto: University of Toronto Press, 1990); Aaron Wildavsky, *The Politics of the Budgetary Process*, 3rd edn. (Boston: Little, Brown, 1979). See also Roy T. Meyers, *Strategic Budgeting* (Ann Arbor: University of Michigan Press, 1994).

The guardian-spenders framework fits neatly with game theory as it is based on the interaction of multiple actors who are attempting to satisfy divergent interests. In this case, as rational actors, spenders seek to increase their power, and guardians by the same token seek to limit that power. Wildavsky has categorized a number of strategies that are used by spenders to maintain or increase the size of their budgets, strategies with varying payoffs depending on the actions and reactions of guardians.²² The availability and attractiveness of these strategies are, however, influenced by the institutions governing the budget-making process and thus the actors' interaction.

The traditional application of the guardian-spenders approach focuses on the games played over the first element of power, the amount of resources available to be spent. However, the second element of power—the amount of autonomy departments have in spending their resources—is also important for understanding the contents of budgets and thus the contents of policies, perhaps of growing importance given recent trends in public administration reforms, discussed below. As rational actors, spenders seek to increase their autonomy while guardians seek to limit it. The availability and attractiveness of strategies that spenders and guardians may use in these games are also influenced by the institutions of the budget-making process. It is this set of institutions that will be the focus of this study.

²² Aaron Wildavsky and Naomi Caiden, *The New Politics of the Budgetary Process*, 3rd edn. (New York: Addison-Wesley, 1997), pp. 57-66. For a similar list that may be more applicable to Westminster systems, see Kenneth Kernaghan and David Siegel, *Public Administration in Canada*, 3rd edn. (Toronto: ITP Nelson, 1995), pp. 630-631, and also Meyers, *op. cit.*, *passim*.

The new public management and the rational decision-making model

The environments within which guardian-spenders games are played are changing. A variety of forces external to governments, such as fiscal crises, the increased complexity and heterogeneity of society, increasing expectations and desires of citizens to participate in the policy process, and declining public confidence in government and rising popularity of neo-conservatism,²³ are combining and prompting governments in most Western countries to make one or all of a series of reforms to their bureaucracies, reforms which are collectively known as the “new public management” (NPM).²⁴

One key element of the new public management is, as Osborne and Gaebler termed it, a separation of “steering” from “rowing,” that is, a separation of the formulation of policy from the implementation of policy, and a separation of the determination of program objectives from the determination of how programs should operate to meet those objectives.²⁵ Echoing the advice of the Glassco Commission in

²³ For similar lists, see: Christopher Hood, “A Public Management for All Seasons?”, *Public Administration* 69(1) (Spring 1991), 3-19; Peter Aucoin, *The New Public Management: Canada in comparative perspective* (Montreal: IRPP, 1995), especially chapter 1; Sandford Borins, “The new public management is here to stay,” *Canadian Public Administration* 38(1) (Spring 1995), 122-132; B. Guy Peters and Donald J. Savoie, *Managing Incoherence: The Coordination and Empowerment Conundrum* (Ottawa: CCMD, 1995); and Donald J. Savoie, *Thatcher, Reagan, Mulroney: In Search of a New Bureaucracy* (Toronto: University of Toronto Press, 1994).

²⁴ See again Hood, *op. cit.*, and Leslie A. Pal, *Beyond Policy Analysis: Public Issue Management in Turbulent Times* (Scarborough: ITP Nelson, 1997), p. 158.

²⁵ David Osborne and Ted Gaebler, *Reinventing Government: how the entrepreneurial spirit is transforming the public sector* (New York: Plume, 1993). While these terms have lost some of the popularity they enjoyed in the 1990s, they have not lost any of their relevance or metaphorical accuracy. See also Fred Thompson, “Mission-driven, Results-oriented Budgeting: Fiscal Administration and the New Public Management,” *Public Budgeting and Finance* 14(3) (Fall 1994), 90-105.

1962 to “let the managers manage,”²⁶ the new public management advocates a decentralization of authority over rowing so that program managers have the flexibility they need to use their resources as they see fit. As Pollitt has noted, this decentralization may come in three forms: from central agencies to departments; from politicians to civil servants within departmental structures; and from governments to partners in the private sector.²⁷ Of particular interest to us here is the decentralization from central agencies to departments, and how central agencies are encouraged to reduce the amount of control they have over the details of departmental transactions.

The new public management also advocates a centralization of authority over steering, in each of the three forms listed above. Again of particular interest to us is the centralization from departments to central agencies, which can help counteract “the inevitable fragmentation that results from genuine devolution of authority and empowerment of line officials.”²⁸

The forces listed above are, at the same time, also contributing to a renewed interest amongst these same Western countries in rational decision-making and thus in

²⁶ See Canada, Royal Commission on Government Organizations, *Volume One: Management of the Public Service*, abridged edition (Ottawa: Queen’s Printer, 1962), especially pp. 48-63. This particular phrase does not appear in the Commission’s Report, but has since come to be associated with it and does encapsulate one of its key themes. See also Colin Campbell and George J. Szablowski, *The Superbureaucrats: Structure and Behaviour in Central Agencies* (Toronto: Macmillan, 1979), p. 204, and Donald J. Savoie, *The Politics of Public Spending in Canada* (Toronto: University of Toronto Press, 1990), pp. 53-56.

²⁷ Christopher Pollitt, “Management Techniques for the Public Sector,” *Governance in a Changing Environment*, eds. B. Guy Peters and Donald J. Savoie (Montreal and Kingston: McGill-Queen’s University Press, 1995), 203-238.

²⁸ Hart, *op. cit.*, 304.

rational policy-making.²⁹ Rational decision-making is the decision-making process followed by the rational actors described earlier in this chapter.³⁰ Rational policy-makers identify policy objectives, assess policy and program options, and select the policies and programs that best meet the objectives.³¹

In a rational policy-making environment, program options are assessed in terms of the extent to which they are expected to achieve certain objectives. Achievement is measured in terms of cost-effectiveness: how much the program will cost, and how effective will it be in achieving the stated objectives. Cost-effectiveness is often referred to as “results” or “performance,” and processes by which policies and programs are selected on the basis of expected cost-effectiveness are often referred to as “results-based management,” “managing for results,” and “performance management.”

Results-based management is one tool that central agencies may attempt to use to steer the policies and programs of departments. Central agencies may be able to so steer by assessing the expected performance of departmental programs and blocking whatever programs are not heading in the desired direction. In particular, central budget agencies

²⁹ See also Evert Lindquist, “Getting Results Right: Reforming Ottawa’s Estimates,” *How Ottawa Spends 1998-99: Balancing Act: the Post-Deficit Mandate*, ed. Leslie A. Pal (Toronto: Oxford University Press, 1998), 166-7; Canada, Treasury Board Secretariat, *2000-2001 Estimates - A Report on Plans and Priorities* (Ottawa: TBS, 2000); and Peters and Savoie, *op. cit.* For more on the link between new public management and rational behaviour, see John Shields and B. Mitchell Evans, *Shrinking the State: Globalization and Public Administration “Reform”* (Halifax: Fernwood, 1998), pp. 58-60.

³⁰ For a more in-depth discussion of rational decision-making, see Pal, *op. cit.*, pp. 18-20, and Kernaghan and Siegel, *op. cit.*, p. 619.

³¹ The rational policy-making method is outlined and critiqued in more detail in Charles E. Lindblom, “The Science of ‘Muddling Through’,” *Public Administration Review* 19(2) (Spring 1959), 79-88. See also Beryl A. Radin, “The Government Performance and Results Act (GPRA): Hydra-Headed Monster or Flexible Management Tool?”, *Public Administration Review* 58(4) (July/August 1998), 313.

may be able to block undesirable programs by using their role in the budget-making process to simply not allocate funds to those programs in the expenditure budget.

Many Western countries are reforming their budget-making systems to increase the ability of central budget agencies to do just that.³² Many governments are adopting results-based budgeting³³ practices which elevate the results of programs to a central position in at least the rhetoric if not the practice of central budget agency deliberations, making them the basic unit of analysis around which funding decisions are made.

This is not the first time that the federal governments of Canada and the U.S. have tried to budget more rationally through results-based budgeting. In the 1960s and 1970s, both governments adopted Planning, Programming, Budgeting (PPB) systems that, building on the work of academics such as Dror,³⁴ attempted to predict program performance and then allocate resources on the basis of those predictions. As we will see in chapter 4, these rational methods did not work as well as hoped, and both governments abandoned their “program budgeting”³⁵ systems after a few years. Nevertheless, the

³² Naomi Caiden, “A New Generation of Budget Reform,” *Taking Stock: Assessing Public Sector Reforms*, eds. B. Guy Peters and Donald J. Savoie (Montreal & Kingston: McGill-Queen’s University Press, 1998), 252-284; Allen Schick, “The Changing Role of the Central Budget Office,” *OECD Journal on Budgeting* 1(1) (2001); Evan H. Potter, “Treasury Board as Management Board: The Re-Invention of a Central Agency,” *How Ottawa Spends 2000-2001: Past Imperfect, Future Tense*, ed. Leslie A. Pal (Toronto: Oxford University Press, 2000), 95-130.

³³ Results-based budgeting is currently also known as performance budgeting, performance-based budgeting, performance funding, and results-oriented budgeting. We chose the term results-based budgeting as that name seems to be the most popular in Canadian circles, as well as to differentiate it from a different budget-making system, popular in the 1950s, that was also known as performance budgeting.

³⁴ See e.g. Yehezkel Dror, *Public Policymaking Reexamined* (Scranton, PA: Chandler, 1968).

³⁵ As will be discussed, the theoretical core of budgeting systems called “program budgeting” in the 1960s and 1970s—and later in some academic literature—is essentially identical to that of today’s results-based budgeting systems. Therefore, in subsequent chapters we will consider theoretical descriptions and

current governments may have more success with results-based budgeting due to a greater capacity to analyze programs and more hospitable policy environments.

If so, the increased emphasis on results and their more prominent role in budget-making may in turn increase the ability of central budget agencies to influence the objectives of departmental policies and programs. Central budget agencies would then be better able to limit the autonomy of line departments.

Co-ordination

Of particular interest is the role of central budget agencies in co-ordinating the programs of various departments. As suggested at the beginning of this chapter, and as we will explore in more detail in chapter 2, departments are often interdependent in the sense that the operation of one department's programs may affect the success or failure of another department's programs. The number of departments involved in such a "horizontal" relationship may be small but it can also be quite large, as in cases where multiple programs from multiple departments are needed to accomplish a single government-wide objective. It is often seen as one of the roles of central agencies to, when departments are unwilling or unable to do so on their own, provide the co-ordination that is needed to ensure that programs across government are mutually supportive.

analyses of the old program budgeting systems to be valid descriptions and analyses of modern results-based budgeting systems as well.

Central budget agencies may be able to provide this co-ordination by selectively altering the composition of departmental budgets and by extension departmental programs. Indeed, as we will see in chapter 5, the return of results-based budgeting could facilitate such co-ordination due to its emphasis on identifying the expected effects of programs. Yet an increased role for central budget agencies in the co-ordination of programs spells a decreased role for departments themselves in the operation of their own programs, and thus a decline in their autonomy. Departments would then be understandably slow to support the development of results-based budgeting and thereby central budget agencies' use of results-based budgeting as a co-ordinating mechanism.

Central budget agencies may, however, be able to enlist the support of allies in their contest with departments. In congressional systems, the legislature performs an important "oversight" function when it scrutinizes the operation of departmental programs. The legislature also plays a significant role in the formulation of budgets. As such, legislatures may welcome the return of results-based budgeting and support central budget agencies in the development of its institutions. This support may even increase exponentially with the need for co-ordination of programs across government.

In Westminster systems, however, the legislature typically does not perform this oversight function to the same extent, nor does it play as significant a role in the formulation of budgets. As such, central budget agencies may not have as much support as their counterparts in congressional systems and results-based budgeting may not be as successful, particularly in the co-ordination of programs across government.

This introduction has raised many questions. While we are not able to address them all, in following the general themes outlined above, it is the core aim of this dissertation to explore the effect of regime type—whether the system of macro state institutions follows the Westminster or congressional model—on the use of results-based budgeting to co-ordinate horizontal policies.

Scope

Not all aspects of budgeting can be covered in a single study. The scope of this study is limited in the following six ways.

First, we focus on the meso level of budgeting, to the exclusion of the macro and micro levels.³⁶ The macro level “focuses on the aggregates of taxing and spending viewed from the perspective of the government and economy as a whole,” and examines issues such as the deficit. The micro level, predictably, “is anchored in the world of specific departments and their clientele groups in society,” and examines issues such as submarine purchases.³⁷ This dissertation focuses on the level in between: the meso level, which examines issues that are internal to government but external to any one department, such as the division of the total budget into smaller budgets for each department. This focus on issues that are internal to government also precludes

³⁶ G. Bruce Doern, Allan M. Maslove and Michael J. Prince, *Public Budgeting in Canada: Politics, economics, and management* (Ottawa: Carleton University Press, 1988), xiv-xvii. See also Christopher Pollitt, “Integrating Financial Management and Performance Management,” *OECD Journal on Budgeting* 1(2) (2001), 11.

³⁷ Doern *et al.*, *op. cit.*, xvi.

examination of issues that span levels of government, e.g. from the federal level to the provincial level, and the link between inter-governmental relations and budgets.

Second, we focus on the expenditure budget, to the exclusion of the revenue budget (including tax expenditures). While the size of the expenditure budget is typically influenced by the expected size of the revenue budget, the processes by which the two budgets are made are usually sufficiently separate that it is possible to study them in isolation. In this study of (expenditure) budgets, we begin from the assumption that the amount of money available to be spent is both known by budget-makers and fixed. Of course, this is rarely true in reality, but estimates are likely to be sufficiently close that flaws in this assumption are not consequential.

Third, we further focus on the discretionary portion of expenditure budgets, to the exclusion of statutory spending.³⁸ Statutory expenditures are part of the budget in the sense that they are duly authorized spending of public moneys. However, they are enacted in separate legislation, not in annual appropriations acts, and occur almost automatically, according to the terms of payment set out in the relevant statutes. Statutory expenditures may be presented for information in annual budget documents, but can be changed only by changing the statutes themselves, and short of changing those statutes, it is mandatory for governments to incur them. As changing these statutes is outside the reach of results-based budgeting and thus is less easily used by central budget agencies to co-ordinate departments, we will not consider it here.³⁹

³⁸ In the U.S., statutory spending is often referred to as “mandatory.”

³⁹ In later chapters we will incorporate statutory spending into our model to a limited extent.

Fourth, we will focus on the formulation of budgets, to the exclusion of their implementation. While there is some degree of overlap between the formulation and the implementation of any policy (including budgetary policy), in terms of the expenditure budget we can say that formulation concerns how governments decide key issues such as how much money should be spent, on what it should be spent, and how it should be spent, whereas implementation concerns how departments actually spend the funds allocated to them in the budget. It can be dangerous to ignore the implementation of budgets because how money is actually spent in the implementation of a budget does not always match how the money was supposed to be spent, according to the formulation of the budget. Spenders who lose a battle with guardians in formulation may carry on the war by searching for more funds or more autonomy during the implementation phase, and *vice versa*. Furthermore, implementation may (and to some extent must) also be used by central agencies, including possibly central budget agencies, to co-ordinate programs across departments. Nevertheless, budgets as formulated and adopted in legislation do establish meaningful parameters around actual spending, and again formulation is a sufficiently distinct process from implementation that we may study it separately.

Fifth, we focus on Canada and the U.S., fiscal years 1999 to 2001, and six substantive policy areas (namely, nuclear regulation, international development, veterans' affairs, transport, labour, and environmental protection) and so six pairs of departments (namely, the Atomic Energy Control Board (since renamed the Canadian Nuclear Safety Commission) and the Nuclear Regulatory Commission, the Canadian International Development Agency and the United States Agency for International Development,

Veterans Affairs Canada and the Department of Veterans Affairs, Transport Canada and the Department of Transport, Human Resources Development Canada and the Department of Labor, and Environment Canada and the Environmental Protection Agency.) Canada and the U.S. both use a form of results-based budgeting, and their differing regime type (Canada using the Westminster model, the U.S. using the congressional model) allows us to study the effects of regime type on results-based budgeting and co-ordination. Narrowing the range of the data allows us to look more deeply at events within those countries.

Sixth, we focus on positive aspects of budget-making, to the exclusion of normative aspects. We question how the rules of the results-based budgeting game can help governments align spending and results with their priorities, particularly when that requires co-ordinating programs across departmental jurisdictions, and how regime type affects the use of results-based budgeting. We approach Key's famous question "[o]n what basis shall it be decided to allocate X dollars to activity A instead of activity B?"⁴⁰ from the perspective of how the allocation in fact *is* decided, and why it is decided in that way, not from the normative perspective of how it *ought* to be decided.

In sum, the conceptual and empirical ground covered by this dissertation focuses on describing and explaining how a few factors influence—or fail to influence—how the federal governments of Canada and the U.S. formulate, at the meso level, the discretionary elements of their annual expenditure budgets.

⁴⁰ V. O. Key, Jr., "The Lack of a Budgetary Theory," *American Political Science Review* 34 (December 1940), 1137-1140.

Hypotheses, methods and findings

Following from the assumptions of the rational decision-making model, we develop three major hypotheses. First, the U.S. uses results-based budgeting more than Canada due to the oversight function of Congress. Second, both countries increase their use of results-based budgeting as the horizontality of departments and thus the need to co-ordinate increases. Third, due to the egalitarian nature of appropriations subcommittees in the American legislature and the need for their members to build trust with each other, the *rate* at which the U.S. increases its use of results-based budgeting as horizontality increases is greater than the rate at which Canada increases its use of results-based budgeting as horizontality increases.

Our methods were both qualitative and quantitative. We first conducted a content analysis of budget documents from both countries, measuring both use of results-based budgeting and horizontality by department. Then, we conducted a statistical analysis to test for a relationship between regime type, horizontality and use of results-based budgeting. Finally, we interviewed a number of civil servants from the departments and central budget agencies we studied, as well as American legislative staff and academic observers of budgeting, to gain more insight on how results-based budgeting was actually being used in the two governments.

The findings were largely negative. The first hypothesis was clearly not substantiated by the data. If anything, it seems that the presence of congressional oversight tends to lower the use of results-based budgeting. The second and third

hypotheses were supported by some of the data but not by others, leaving the ultimate assessment inconclusive. The interviews suggest that these negative findings may be a result of flaws in either our methodology or our assumptions concerning the potential of and incentives to use results-based budgeting to co-ordinate. Rational decision-making may be bound to fail in government due to major difficulties in predicting the cost-effectiveness of programs and political pressure to select policies and programs for reasons other than their cost-effectiveness.

Organization

Seven chapters follow this introduction. In chapter 2, we describe the nature of horizontality and the need for the co-ordination of programs across departments. In chapter 3, we discuss budgeting theory and the major approaches to budget-making. In chapter 4, we detail both the theory and the practice of results-based budgeting in Canada and the U.S. In chapter 5, we assess how results-based budgeting can be used to co-ordinate horizontal policies, and specify the hypotheses. In chapter 6, we outline the methodology. In chapter 7, we present and analyze the results. In chapter 8, we summarize the study, and highlight the implications and significance of the findings.

Summary

This dissertation examines the potential of results-based budgeting to help budget-makers co-ordinate horizontal policies and the motivation of budget-makers to so use results-based budgeting. It adopts a rational choice institutional approach in general and

a guardian-spenders framework in particular to frame the relations between budget-makers in central budget agencies and legislative committees and civil servants in line departments. We undertake a quantitative analysis of primary budget documents of selected departments in the federal governments of Canada and the U.S., and confirm the findings through a series of interviews with practitioners and academics in both countries. The findings suggest that, regardless of regime type, results-based budgeting is rarely used to co-ordinate horizontal policies due to methodological difficulties and political disincentives. By contributing to existing knowledge of the public administration of expenditure budget-making, we also inform understandings of the contents of budgets and so of the contents of a wide range of policies and programs.

Chapter 2: Horizontal Policies

This chapter explores the concept of “policy area,” a cluster of issues that are thematically linked and may be the object of public policies. We will suggest that policy areas overlap, creating interdependencies both between those areas and between the policies and programs within them. As such we will suggest that the jurisdictions of departments and legislative committees established to further policies in those areas also overlap, and that they too are interdependent. The perennial challenge of horizontal government, which we may define as “using the programs of multiple departments to address policy issues that span policy areas,” is finding ways to manage these interdependencies. In examining this challenge, we will focus on how the process of formulating the expenditure budget—through results-based budgeting in particular—could help governments co-ordinate horizontal policies.

Policy space

Governments act in the public sphere in response to what we may term a “policy challenge,” that is, to either mitigate a problem facing society or exploit an available opportunity to improve the conditions in society. A response is articulated through a public policy, the “course of action or inaction chosen” by a government.¹ Governments give effect to policies through programs, the actual activities carried out by civil servants and others to address policy challenges in the manner chosen in the policies. Programs

¹ Leslie A. Pal, *Beyond Policy Analysis: Public Issue Management in Turbulent Times* (Scarborough: ITP Nelson, 1997), pp. 1-2.

may use a variety of policy instruments, such as spending, regulation, exhortation and taxation.² Policy action, then, is simply the use of a policy instrument or instruments. By engaging in policy action, a government “occupies” what we may call its “policy space,” i.e. the area contained in the public sphere.³

Before a government can act in its policy space, it must understand the space, which in turn requires conceptual organization. Policy space could be conceptually organized in terms of the activities governments must perform in order to deliver services to the public. For example, the “industry” concept can be used to distinguish between direct service activities and indirect support activities.⁴ However, given that this study is focussed more on the formulation of policy than on its implementation, we will use policy issues, rather than program activities, as the basis of conceptual organization. The issue cleavage may overlap or cross-cut the activity cleavage. Using issues rather than activities may also be more appropriate since activities rarely have intrinsic value, but rather are valuable only to the extent that they effectively address issues; if activities should be considered in the context of issues, conceptualization would rationally begin with issues and then move to activities.⁵

² See e.g. Pal, *op. cit.*, chapter 4.

³ Policy spaces are also of course subject to jurisdictional limitations imposed by constitutions. Both the Canadian and American policy spaces are therefore shared by multiple governments (*viz.* federal and provincial/state governments). For the purposes of this discussion, however, policy space will refer to the policy space that may be occupied by the federal governments.

⁴ See e.g. Joe S. Bain, *Industrial Organization* (Berkeley and Los Angeles: University of California Press, 1959).

⁵ Later in this chapter we will discuss how governments themselves may be organized. While we again focus on issue as the basis for organization, the question is distinct from that of conceptual organization and is addressed separately.

Obviously, any government's policy space will contain many issues. More importantly, there are multiple ways of *defining* the issues. Furthermore, many issues, regardless of how they are defined, are inter-related. Issues tend to be connected to each other in some way, and these connections are important to understand since they add to our understanding of the reasons behind social phenomena and how policy can change those phenomena. One may thus wish to identify both the issues and the connections between the issues, but such a conceptualization would risk information overload and thus be practically useless for understanding the dynamics of the policy space. The only practical approach may be to adopt a single definition of issues and categorize them along few dimensions.

Leaving aside the more theoretical question of issue definition, how are issues to be categorized? There are a vast number of connections that can be used as the basis for categories or divisions, and so a vast number of valid ways to divide policy space.

If one wished to employ a rational policy-making process, it would be necessary to conceptually group some issues together in a single category and separate other issues into other categories. Governments may define and adopt categories on the basis of two factors. First is the strength of the connections between issues. Simon suggests that, while all issues are connected to others, these connections will not always be of equal strength.⁶ If so, issues may be clustered in groups, where the connections between issues within a cluster are stronger than the connections between issues in the cluster and issues

⁶ Herbert A. Simon, "The Architecture of Complexity," *Proceedings of the American Philosophical Society* 106 (1962), 467-482.

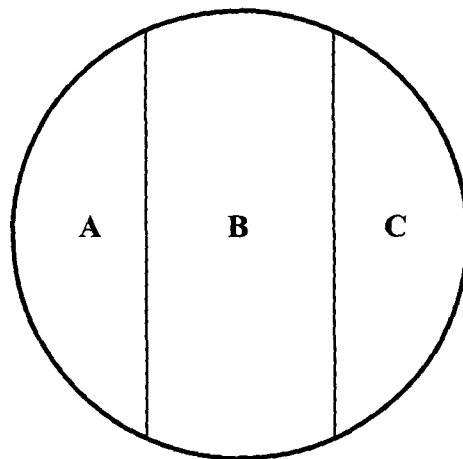
outside of it. Second is the importance of the connections between issues. Regardless of internal cohesiveness, clustering issues will be useful to policy-makers only if the theme of the association is relevant in the context of the policy challenges facing the government. Governments may prefer to focus on connections that reflect the way policy challenges have already been conceptualized by the public, the media, and other stakeholders.

These categorical definitions give rise to generally accepted “policy areas,” also known as “policy spheres” or “policy domains,”⁷ such as foreign affairs, national defence, the environment, health, education, etc. Notwithstanding debates over the exact boundaries of policy areas, we can say that in general, governments’ definitions of policy areas allow them to conceptually divide up policy space and examine issues or groups of issues on their own. Figure 1 shows how policy space (inside the circle) can be divided into several policy areas (in this example, three policy areas: A, B and C).

In this figure, the policy areas are mutually exclusive; any given issue can be part of only one policy area at a time. In reality, however, policy areas are not mutually exclusive; issues can be part of multiple policy areas at the same time. This overlapping of policy areas can occur in two ways.

The first way is through what we may call a primary connection. As the hypothetical government in this example has evidently considered the cleavages dividing issues into policy areas A, B and C to be of primary importance, let us term those cleavages the primary policy cleavages, and term those policy areas the primary policy

Figure 1. Division of policy space into policy areas



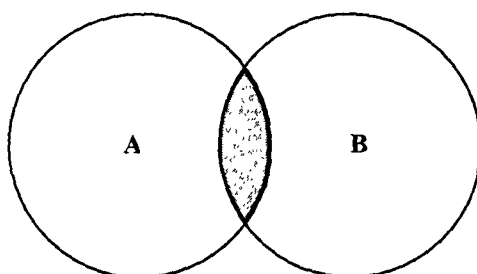
areas. To remain useful as a heuristic device, the primary policy cleavages must be solid and impermeable; to the extent that these cleavages or boundaries are not solid but rather are fuzzy, one's reference point for understanding the issues will be fuzzy as well. It is therefore important to clearly draw these boundaries and definitively place issues on one side or the other.

Yet issues cannot always be so neatly grouped. Some issues straddle boundaries, no matter how precisely the boundaries are drawn. For example, the issue of war can in its own right be seen as part of both the foreign affairs and the defence policy areas, and the issue of environmental taxes can be seen as part of both the environmental and the finance policy areas. The primary policy areas will therefore overlap to the extent of those issues, as figure 2 illustrates.

⁷

These terms are synonymous. We use "policy areas" as it seems to be the most popular in the

Figure 2. Policy areas overlapping through a primary connection



In figure 1 we drew the lines dividing policy space with a vertical orientation, making the segments of policy space vertical as well.⁸ Let us therefore say that the policy areas created in this fashion are “vertical.” In figure 2 we showed how these vertical boundaries are porous since some issues may be considered to be part of multiple primary policy areas. These issues therefore link areas horizontally, perpendicular to the original vertical policy area boundaries.

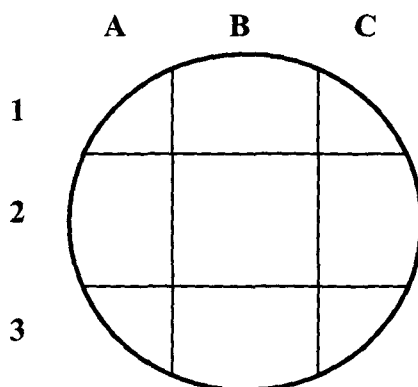
The second way that policy areas can overlap is through what we may call a secondary connection. Primary cleavages, as we saw, are defined on the basis of the strongest and/or most important connections between issues. Given, however, that there exist many connections between issues, the acceptance of a primary cleavage necessarily ignores other connections and other cleavages; in choosing one theme around which to organize issues, one neglects countless others. These themes, or potential cleavages in

public policy literature.

⁸ Later in this chapter we will explain why the lines were drawn vertically and not horizontally.

the policy space, often cross-cut one another, as depicted in figure 3. Here, A, B and C are the primary policy areas, and 1, 2 and 3 are what we may term the secondary policy areas. For example, the secondary policy area of children often cross-cuts the primary policy areas of education and health, and the secondary policy area of inter-governmental relations often cross-cuts the primary policy areas of industry and transportation.

Figure 3. Policy areas overlapping through secondary connections



Ideally, in a rational decision-making setting, the theme that is chosen to be the primary division is one which is the most strongly connected and of the greatest importance, and the themes that are not chosen are relatively less strongly connected and of less importance. Themes that are not chosen, however, should not be ignored altogether, for they do still matter and can be used to conceptualize and address policy issues. Moreover they should be so used when they would do a better job than alternative issue groupings of meeting certain policy challenges.

Again, in figure 1 we drew the lines dividing policy space with a vertical orientation, making the segments of policy space vertical as well, and so we may say that the policy areas created in this fashion are “vertical.” In figure 3 we added lines dividing policy space with a horizontal orientation. These lines or secondary cleavages cross-cut the primary cleavages. These secondary themes and areas cut horizontally across primary themes, both including and excluding parts of many primary policy areas. Issues can, therefore, be part of multiple policy areas, depending on which cleavage is salient and thus which way of defining policy areas is chosen.

Due to these two types of overlap, it is incorrect to treat the categories created by the primary policy areas as mutually exclusive. We may therefore define horizontality as “the extent to which a primary policy area contains issues that are also part of other primary policy areas, or is cross-cut by secondary policy-thematic cleavages and linked to other primary policy areas through those overlapping policy themes.” The more the space in a policy area is either part of another primary policy area or part of a secondary policy area which includes parts of other primary policy areas, the more horizontal it is. For example, we could say that environmental policy areas are more horizontal than defence policy areas, because environmental policies overlap more with policies in other areas than do defence policies.

Horizontality is important to identify and analyze because the effects of policy action can travel from one primary policy area to another through overlapping issues. Policy action in one area can thereby affect the success or failure of policy action in other areas.

All policy areas are horizontal to some extent, and the more horizontal a policy area is, the greater these side effects will be and the more interdependent policy areas will be. In a rational decision-making environment, policy areas would be considered jointly, except in cases where the transaction costs of considering these side effects outweighed the benefits to be gained by having a greater understanding of them.

Dividing policy space into policy areas can help governments do more than simply conceptualize policy issues. It can also help them organize for policy action. Modern governments often have three organizational elements or “branches”: the executive, the legislature, and the judiciary (although their separation may in practice be less-than-total). Each branch performs a different function in a government’s response to the issues and policy challenges contained within the policy space.

Policy space is heterogeneous, and to the extent that the issues are different, the challenges they pose will be different and so must be a government’s responses if they are to be effective. Differentiation between branches does help governments respond to the different challenges. However, more differentiation is needed beyond that of simply conducting executive, legislative and judicial functions through separate organizations. Differentiation is also needed *within* each branch. This differentiation may follow the same lines as those which differentiate the policy space itself; i.e., the organization of each branch may mirror how policy space has been conceptually organized, with separate units dedicated to addressing separate policy areas. Let us focus on how this is done in the executive and legislative branches, and how organizations within each of these branches may, like the policy areas they act in, be considered horizontal.

Executive horizontality

The executive branch exists primarily to execute or implement policy, as well as to help formulate and advise on policy proposals, particularly in Westminster systems. Just as it can be difficult to conceptualize issues in a government's policy space without the benefit of categories to break issues into a manageable number of groups, so it can be difficult to formulate and implement policies on those issues without the benefit of categories to divide the associated activities into groups which may be undertaken by different, specialized units. Any organization larger than a few people will find it necessary to introduce specialization and create an organizational structure that has units responsible for different tasks of one sort or another. In a seminal article on the topic, Gulick wrote that

[e]very large-scale or complicated enterprise requires many men to carry it forward. Wherever many men are thus working together the best results are secured when there is a division of work among these men. . . . [I]t is not possible to determine how an activity is to be organized without, at the same time, considering how the work in question is to be divided. Work division is the foundation of organization; indeed, the reason for organization.⁹

As the British Cabinet Office put it, categories or “boundaries” that differentiate one part of the organization from another can help organizations

exploit the basic concepts of comparative advantage and division of labour – dividing an organisation into sections with defined responsibilities means that

⁹ Luther Gulick, “Notes on the Theory of Organization,” *Papers on the Science of Administration*, 3rd edn., eds. Luther Gulick and L. Urwick (New York: Institute of Public Administration, [1937] 1954), p. 3.

staff know what job they are expected to do, and can acquire the knowledge, skills and experience to do it well.¹⁰

Governments thus tend to be divided into a number of departments and/or agencies.¹¹

Of particular importance here is the basis on which the categories or jurisdictional boundaries for departments are based. According to Gulick, there are four possible bases for boundaries within which homogeneous activities and staff can be grouped: 1) purpose, e.g. controlling crime or conducting education; 2) process, e.g. engineering or accounting;¹² 3) persons or things, e.g. immigrants or forests; and 4) place, e.g. Ontario or Hamilton.¹³ As these bases are to some extent mutually-exclusive, and so the cleavages they give rise to are to some extent cross-cutting, in selecting one basis we cannot but “ignore” the others.¹⁴ Governments usually select purpose as the basis for boundaries, perhaps because the transaction costs of managing across those boundaries are smaller than the transaction costs of managing across other boundaries. We thus find that the jurisdictions of line departments typically match segments of policy space as defined by the primary cleavages. That is, governments tend to be divided into departments along the same lines as policy spaces are divided into policy areas, with departments having the authority (and in some cases, the responsibility) to undertake policy action on issues

¹⁰ United Kingdom, Cabinet Office, *Wiring it up: Whitehall's Management of Cross-cutting Policies and Services* (London: The Stationary Office, 2000), p. 42.

¹¹ Which we will collectively term “departments.” More will be said in chapter 6 about the characteristics of departments and what qualifies as a department.

¹² Process is the basis of the industry concept, as previously discussed.

¹³ *Op. cit.*, p. 15.

¹⁴ *Ibid.*

contained within their respective policy areas.¹⁵ For example, in the foreign affairs policy area one finds a department of foreign affairs, in the defence policy area one finds a department of defence, and so on. Figure 1 also illustrates the division of policy space into departmental jurisdictions.

If we conceptualize policy space as being roughly circular or square, the vertical lines dividing policy space into multiple policy areas and multiple jurisdictions create departmental jurisdictions that are taller than they are wide. These dimensions better match those of “typical” departments operating within those jurisdictions, as such departments are organized hierarchically. Hierarchically-organized departments are structured around authority relationships within which formal decision-making authority is seen to flow downward from the (superior and therefore more elevated) head, and accountability for one’s use of that authority is seen to flow upward to that head, in both cases, vertically rather than horizontally. This structuring makes the vertical dimension of departments seemingly more important than their horizontal dimension and, when depicting them graphically, prompts most to define them using lines that highlight the importance and strength of these relationships, as vertical lines do better than horizontal lines.

When the boundaries of departmental jurisdictions are based on the boundaries of policy areas, and the boundaries of policy areas are based on the strength and importance of the connections between issues, at least some of the policy activities of departments will concern issues that fall exclusively within those departments’ policy areas and thus

¹⁵ See Gulick, *op. cit.*, pp. 21-30 for a discussion of the pros and cons of each basis.

those departments' jurisdictions. In these cases, the effects of those policy activities do not spill over into other policy areas and affect the success or failure of other departments' policy activities; nor is the success or failure of these departments' policy activities affected by the policy activities of other departments in other policy areas. To the extent that this holds, these departments, like the policy areas they occupy, are vertical.

As we have seen, though, the boundaries separating policy areas are not watertight; rather, policy areas are linked through primary and secondary forms of overlap. The policy activities of departments cannot be but so linked as well, reflecting Gulick's observation of "the impossibility of cleanly dividing all of the work of any government into a few such major purposes which do not overlap extensively."¹⁶ Even when governmental divisions are "nearly decomposable" in the sense that issue interdependencies *within* departments are stronger or more important than issue interdependencies *between* departments,¹⁷ and therefore departments are as vertical as possible, overlap and thus some degree of horizontality will persist. As the U.S. General Accounting Office reported in 1997, their recent studies revealed that, in the U.S., "most federal agencies addressed more than one [issue] and, conversely, most [issues] were

¹⁶ *Op. cit.*, p. 22. Gulick also suggests that even if the purposes of departments were mutually-exclusive, they would still be cross-cut by common processes, places and persons, commonalities that, to the extent that they create interdependencies, might, as we saw in earlier examples, also need to be co-ordinated (*op. cit.*, pp. 15-20).

¹⁷ Simon, *op. cit.*; Fritz W. Scharpf, *Games Real Actors Play: Actor-Centered Institutionalism in Policy Research* (Boulder: Westview, 1997), p. 176. The strength and importance of issue interdependencies could be assessed in terms of either how well divisions maximize the effectiveness of policy responses, or how well divisions minimize the transaction costs of policy responses.

[addressed by] multiple departments and agencies,” producing “widespread . . . overlap” of jurisdictions.¹⁸ This overlap of jurisdictions in turn produces interdependencies between departments.

In the case of primary overlap, there will be issues that, since they are part of multiple primary policy areas, also fall within the jurisdictions of multiple departments. The policy actions of one department can thus affect the policy spaces occupied by other departments. To the extent that departments affect or are affected by other departments through these issues, they are horizontal.

For example, in their study of interest group activity in the American policy process, Heinz *et al.* found that some aspects of federal agricultural policy fell under the jurisdiction of departments other than the United States Department of Agriculture (USDA), and that some issues contained within the USDA’s jurisdiction were not part of the agricultural policy area.¹⁹ In this case, we could say that USDA, as a department, is horizontal, because the success of its agricultural programs may be affected by the programs of other departments acting in the agricultural policy area, and because some of its own program activities affect the success of programs offered by other departments in other policy areas. Two departments may affect and be affected by each other through a shared issue as illustrated in figure 2.

¹⁸ United States, General Accounting Office, “Managing for Results: Using the Results Act to Address Mission Fragmentation and Program Overlap,” GAO/AIMD-97-146 (August 1997), 4-5. See appendix 1 of that report for a complete listing of their studies.

¹⁹ John P. Heinz, Edward O. Laumann, Robert L. Nelson and Robert H. Salisbury, *The Hollow Core: Private Interests in National Policy Making* (Cambridge, Mass.: Harvard University Press, 1993), p. 28.

In the case of secondary overlap, the presence of cross-cutting, secondary policy areas constitutes links through which primary policy areas connect, and through which the policy activities of some departments may affect the policy spaces occupied by other departments. To the extent that departments affect or are affected by other departments through these secondary policy areas, they are, like those areas, horizontal.

For example, in 1995 the GAO

identified over 160 employment training programs scattered across 15 departments and agencies [in the U.S.]. While about 60 percent of the programs were administered by two departments, the remainder resided in departments not generally expected to provide employment training assistance.²⁰

In this example, the thirteen departments who administered 40 percent of the programs did so not because they wished to address the policy challenge of employment training *per se*, but rather because they wished to address skills gaps in various—and different—sectors of the economy. In terms of their primary cleavage (*viz.*, sector), the jurisdictions of these departments did not overlap. In terms of their secondary cleavage (*viz.*, policy activity in employment training), however, their jurisdictions did overlap, and through this overlap the departments did affect each other. Three departments may affect and be affected by each other due to the cross-cutting nature of secondary policy areas as illustrated in figure 3.

Due to these two types of overlap, departmental jurisdictions are clearly not mutually exclusive. We may define executive horizontality as “the extent to which a department’s jurisdiction includes issues which are also directly part of other

²⁰ United States, General Accounting Office, “Managing for Results,” 5.

departments' jurisdictions or is cross-cut by secondary policy-thematic cleavages and is linked to other departments through those overlapping policy themes." Departments are executively horizontal when more than one of them undertake policy action in the same policy area and so affect the success or failure of each other's actions, and are executively horizontal to the extent of that overlap. The implication of executive horizontality is that this overlap creates interdependencies between the affected departments.

In this section we have so far selected departments as the unit of analysis. That is, we see departments as the units which can be either vertical or horizontal, depending on whether issues and policy space in their jurisdictions overlap with those of other departments. We have selected departments, and not a higher or lower level of organizational structure, primarily because the data used to test this dissertation's hypothesis come aggregated at the level of departments and cannot always be disaggregated to study smaller, intra-departmental organizations in isolation.

There is also a more theoretical reason for selecting departments. As an example, consider that the lead department for Canada's search and rescue policy is the Department of National Defence. All three services within this department (army, navy, air force) contribute to this initiative, yet we do not consider the policy to be horizontal until we incorporate the contributions of actors in other departments, such as the Coast Guard. If we consider search and rescue to be a vertical issue when it is contained within a department but spans multiple services, why do we not still consider it to be vertical when it is contained within the Government of Canada but spans multiple departments?

To determine the level at which issues spanning units should be considered horizontal but issues contained within units vertical, we must consider the key concept that underlies horizontality: autonomy. An issue that has inter-organizational effects would not make those organizations executively horizontal if it did not make sense to consider the organizations as separate entities rather than as a single unit. We may consider organizations to be separate, even when it is clear that they are all part of a larger single organization (*viz.*, the government as a whole), because of their *de facto* autonomy. Organizations can be considered autonomous from each other if they may act without their activities being co-ordinated, either directly through negotiation with the others, or indirectly through the analysis and instructions of a common hierarchical superior.

The ability of a common hierarchical superior to control and manage the interdependencies of subordinate organizations is facilitated by two factors. First is knowledge of the policy spaces and issues of the various sub-units. If this superior wanted to make decisions rationally, he or she would first gain an understanding of the issues and policy activities of subordinates in order to conceptualize the issues that link them. Second is a cultural fit with the various sub-units. A superior's ability to understand sub-units' issues and control their behaviour may vary with the extent to which the superior can relate to them on their own organizational-cultural terms. If, as Wilson said, "[c]ulture is to an organization what personality is to an individual,"²¹

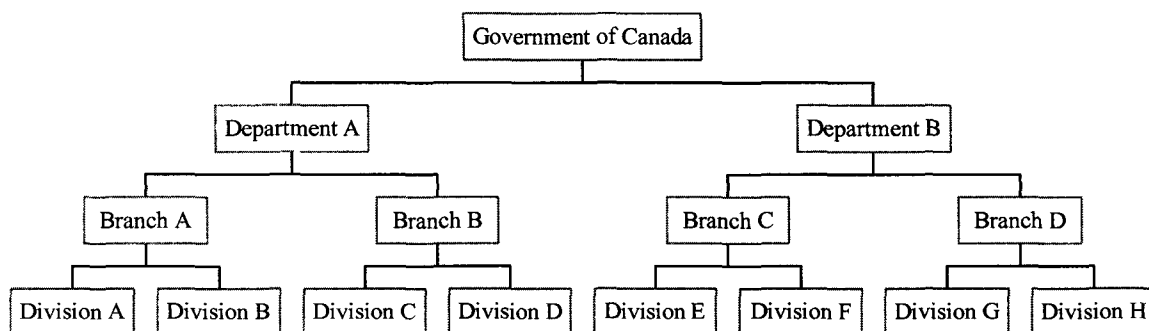
²¹ James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (New York: Basic Books, 1989), p. 91.

organizational culture could affect the relationships between groups of administrative actors as well.

Both of these factors will be of more help to the superior when the policy spaces and sub-units are more similar, as similarities reduce both the amount of additional knowledge that is required and the number of cultural differences that must be bridged.

Consider figure 4, which represents the organization chart of a hypothetical Canadian government with two departments.

Figure 4. Hypothetical organization chart



As can be seen, the higher in the organization one goes, the further apart are the bottom-most organizational sub-units for which a superior is the lowest common authority, and furthermore, the further away the superior is from the sub-units themselves. Thus, the higher one goes, the harder it may be to manage the issues that cross-cut sub-units, and thus the harder it may be to contain cross-cutting issues within one organization, that is, to address them vertically.

We are therefore likely to find the level in question at or near the top of organizations, specifically, at the level of departments, for two reasons. First, span of control, at least in the federal governments of Canada and the U.S., tends to be greater between the chief executive and the next level down (departmental heads) than it is between departmental heads and the next level down from that.²² The greater the number of sub-units that must be managed, the harder it is both to gain all the knowledge that is required and to fit culturally with all of them. Second, the relationship between the chief executive and his or her subordinates (departmental heads) is qualitatively different from the relationship between departmental heads and their own subordinates, particularly in Canada. The latter relationship is a better conduit of control and co-ordination than is the former, due to the greater legal authority of departmental heads and the fewer political counterbalances to departmental heads coming from within their own departments.

In short, the sub-units of department heads are closer to each other and to department heads than are, due to their number and nature, department heads to each other and chief executives. As such, sub-units may be controlled more easily and the issues which span them may be addressed in a more vertical fashion. Relative to both higher and lower formations, then, departments both have more control over internal

²² In Canada, there are twenty portfolios (groups of organizations centred around a core department) underneath the Prime Minister, each of which is headed by a cabinet minister. No minister or deputy minister, and certainly not an average of them, has twenty subordinates to control at the same time. In the U.S., there are eighteen portfolios under the President, along with a host of smaller, independent agencies. Secretaries and Deputy Secretaries tend to have fewer subordinates underneath them, although some have more. For current listings of cabinets and links to departmental web sites, see web sites: <http://www.gc.ca> and <http://www.whitehouse.gov>.

operations to manage issues that link sub-units, and have more autonomy to weaken external management of issues that link departments.

This is consistent with the findings of Page, who noted that differentiation in function between departments gives them some measure of autonomy, which can produce a condition of “bureaucratic pluralism.”²³ This conforms to the common perception of government being composed of many “silos and stovepipes,” organizations (viz. departments) that are arranged vertically and with “thick walls” so that, in terms of the formulation of policies, there are few direct connections with other departments.²⁴ Departments may be quite autonomous in the U.S., where departments and agencies have traditionally resisted attempts at central control,²⁵ and in Canada, where the capacity and/or the desire of the centre to adopt a more horizontal perspective on government and manage horizontal issues appears to have declined.²⁶

²³ Edward C. Page, *Political Authority and Bureaucratic Power: A Comparative Analysis* (Knoxville: University of Tennessee Press, 1985), chapter 3.

²⁴ See e.g. Wilson, *op. cit.*, especially chapter 10. Connections, particularly informal ones, with other departments may be stronger in terms of the implementation of policies. See especially Donald Chisholm, *Coordination Without Hierarchy: Informal Structures in Multiorganizational Systems* (Berkeley: University of California Press, 1989), *passim*. To our knowledge, the term “silos and stovepipes” was not coined by either Wilson or Chisholm, but regardless has become part of the public administration vernacular.

²⁵ See, for example, William S. Livingston, “Britain and America: The Institutionalization of Accountability,” *Journal of Politics*, 38(2), who argues that in the U.S. the “effectiveness [of political institutions] has always taken second place to the preservation of liberty” (p. 882), Hugh Heclo, “One Executive Branch or Many?,” *Both Ends of the Avenue: The Presidency, the Executive Branch, and Congress in the 1980s*, ed. Anthony King (Washington: American Enterprise Institute for Public Policy Research, 1983), who notes the relationship between the lack of cabinet solidarity and the difficulty of controlling civil servants (p. 27), and Richard Rose, *The Postmodern President: The White House Meets the World* (Chatham, N.J.: Chatham House, 1989), who likens the executive branch to “organized anarchy” (p. 183).

²⁶ Donald J. Savoie, *Governing from the Centre: The concentration of power in Canadian politics* (Toronto: University of Toronto Press, 1999), *passim*; Evan H. Potter, “Treasury Board as Management

For the purposes of this study, we may say that in general, the level of departments is the level at which issues spanning units may be considered horizontal but issues contained within units may be considered vertical, and thus select departments as the units of analysis.

Let us conclude this section by highlighting the interdependence of departments: they may have some measure of organizational autonomy, but since the policy spaces they occupy are overlapping due to their porous nature and cross-cutting secondary themes, the effects of their policy activities are bound be felt not only in their own policy areas, but also in those of other departments. Departments may not be equally executively horizontal, but no department is perfectly executively vertical.

Legislative horizontality

The legislative branch exists to, among other things, pass legislation in the name of “the people” who elected it. This legislation provides the departments in the executive branch with the authority and financial resources they need to undertake policy action. Most legislatures will find it necessary to introduce specialization,²⁷ and so divide their work amongst a number of committees.

Of particular importance is the basis on which the categories and therefore jurisdictional boundaries of committees are based. In the legislatures of both Canada and

Board: The Re-Invention of a Central Agency,” *How Ottawa Spends 2000-2001: Past Imperfect, Future Tense*, ed. Leslie A. Pal (Toronto: Oxford University Press, 2000), *passim*.

²⁷ See D. Roderick Kiewiet and Mathew D. McCubbins, *The Logic of Delegation: Congressional Parties and the Appropriations Process* (Chicago: University of Chicago Press, 1991).

the U.S., the jurisdictions of policy committees tend to match segments of policy space as defined by the primary cleavages; that is, legislatures tend to divide themselves into committees along the same lines as governments divide policy space into policy areas and departmental jurisdictions.²⁸ For example, in the foreign affairs policy area one finds a committee on foreign affairs, and in the defence policy area, a committee on defence.

Some of the legislative activity of committees will concern issues that fall exclusively and completely within their policy areas and thus their jurisdictions. In these cases, the effects of their legislation do not spill over into other policy areas and affect the success or failure of other committees' legislation; nor is the success or failure of these committees' legislation affected by the legislative activity of other committees in other policy areas. To the extent that this holds, these committees, like the policy areas they occupy, are vertical.

As we have seen, though, the boundaries separating policy areas are not watertight; rather, policy areas are linked through primary and secondary forms of overlap. The legislative activities of committees, like the executive activities of departments, are linked in the same way as policy areas. For example, as the GAO reported, in the U.S.,

federal employment training programs are not only spread across multiple departments and agencies but are also subject to multiple congressional authorization, oversight, and appropriations jurisdictions. In fact, for the major departments and agencies providing employment training programs, seven

²⁸ For explanations of why legislatures are divided in this manner, see the previous discussion on how the executive branch is divided, and David C. King, *Turf Wars: How Congressional Committees Claim Jurisdiction* (Chicago: University of Chicago Press, 1997).

different appropriations subcommittees currently review and determine funding levels.²⁹

In the case of primary overlap, there will be issues that fall within the jurisdictions of more than one committee. The legislative activity of one committee can thus affect the policy spaces occupied by other committees. To the extent that committees affect or are affected by other committees through these issues, they are horizontal.

In the case of secondary overlap, the presence of cross-cutting, secondary policy areas links primary policy areas, and the legislative activities of some committees affect the policy spaces occupied by other committees. The committees that affect or are affected by other committees through these secondary policy areas are, like those areas, horizontal. Figure 3 illustrates how three committees (A, B and C) may affect and be affected by each other due to the cross-cutting nature of secondary policy areas 1, 2 and 3. For example, the U.S. House of Representatives committees on Education and the Workforce, Transportation and Infrastructure, and International Relations are linked through the horizontal issues of health, children, and security.

Due to this overlap, committee jurisdictions are rarely mutually exclusive. We define legislative horizontality as “the extent to which a committee’s jurisdiction includes issues which are also directly part of other committee’s jurisdictions, or is cross-cut by secondary policy-thematic cleavages and is linked to other committees through those overlapping policy themes.” Committees are legislatively horizontal when more than one of them provide authority and/or financial resources to one or more departments to

²⁹ United States, General Accounting Office, “Managing for Results,” 14.

conduct policy action on a single policy issue (i.e. operate in the same policy area), and so affect the success or failure of each other's actions. Overlap between jurisdictions creates interdependencies between the affected committees.

A department is legislatively horizontal when a policy issue it acts on is being acted upon by a department or departments who collectively receive authority and/or financial resources from multiple committees. Legislative horizontality is significant because departments who operate in policy areas that are under the jurisdiction of multiple legislative committees will be able to co-ordinate their activities only as well as those committees did. If the committees who are jointly funding activity in a given policy area do not co-ordinate their legislation, departments will not be able to co-ordinate their program activities either.

In this section we have so far selected committees as the unit of analysis. That is, we see committees as the units which can be either vertical or horizontal, depending on whether or not issues and policy space in their jurisdictions overlap with those of other committees. To appreciate why we have selected committees, we must explore the committee systems of each country.

In Canada, the Westminster system supports a legislature (Parliament) which comprises the Crown, the Senate, and the House of Commons.³⁰ The House of Commons is the most effective of these three decision-making fora. The House of Commons currently comprises 301 Members of Parliament (MPs). Appropriations bills

³⁰ For more on Canada's Westminster system, see Keith Archer *et al.*, *Parameters of Power: Canada's Political Institutions* (Toronto: ITP Nelson, 1995) and C. E. S. Franks, *The Parliament of Canada* (Toronto: University of Toronto Press, 1987).

are introduced by the President of the Treasury Board and voted on by MPs, of whom a majority must vote in favour for the bill to be passed. The President of the Treasury Board is a minister in the cabinet that, headed by the Prime Minister, also heads the executive branch. The Prime Minister and cabinet are generally also MPs and the senior members of the party with the most seats in the House of Commons.

When the Prime Minister is able to secure the voting loyalty of his or her party members—as is usually the case, particularly when they are voting on appropriations (i.e. budget) bills as they are seen as matters of confidence³¹—he or she is generally able to ensure that the appropriations bills are passed by the House of Commons in exactly the same form as they were tabled by the President of the Treasury Board. The bills are at one stage vetted by legislative committees, but as these committees are controlled by the Prime Minister's party (or coalition, as the case may be), they almost never change the bills. As, then, the Westminster system limits the scope for legislative committees to affect the contents of budgets, legislative horizontality is of little importance in Canada.

In the U.S., the separated system supports a legislature (*viz.* Congress) that comprises the Senate and the House of Representatives.³² The consent of both elements is required for a bill to become a law, and in the U.S., largely because both chambers are popularly elected, both chambers actively propose, modify, pass and refuse to pass

³¹ See Franks, *op. cit.*, pp. 99-114 for an excellent comparison of Canada's parliament and Britain's parliament which identifies some of the key reasons behind Canada's strong party loyalty.

³² For more on the separated system and the American legislative process in general, see e.g. Charles O. Jones, *The Presidency In A Separated System* (Washington: Brookings, 1994), George Breckenridge, *United States Government and Politics* (Toronto: McGraw-Hill Ryerson, 1998), and R. Douglas Arnold, *The Logic of Congressional Action* (New Haven: Yale University Press, 1990).

legislation. This is particularly true as concerns appropriations legislation, as it is here that legislators can secure the much-sought-after benefits for their constituents by directing public spending towards their constituencies.

Budget legislation is introduced into the House of Representatives by a member of Congress, but the starting point for deliberations is not that member's own proposals but rather the President's budget, i.e. the budget proposed, as in the Westminster model, by the executive branch. Unlike in a Westminster system, though, the executive has almost no formal membership or representation in the legislature, and has few ways of ensuring that Senators and Members of Congress support the President's budget, other than by proposing from the outset budget contents that Congress would be inclined to support. In a separated system, the legislature has real power independent of the executive.

Furthermore, in the U.S., weak party loyalty and formal rules concerning committee powers and membership combine to give individual Senators and Members of Congress—and by extension, the committees on which they sit—considerable independence from congressional leaders and other committees within their chambers. In the American separated system, budget legislation can and does get changed by legislative committees, independently of the executive branch and even, as we will see, independently of each other.

Committees are also often divided into subcommittees. So far we have assumed that issues which span committees are horizontal, while issues which span subcommittees—but not committees themselves—are vertical. There is, however, no

prima facie reason for selecting committees as the organizational units between which issues are horizontal but within which issues are vertical, just as there was no *prima facie* reason to select departments as the organizational units between which issues are horizontal but within which issues are vertical. For example, if we assert that the issue of toxic pollutants, which spans the Health and Environment subcommittees of the House Committee on Energy and Commerce, is vertical because it is contained within a single committee, why would we not assert that the issue of terrorist money laundering, which spans the House committees on Intelligence and Finance Services, is also vertical because it is contained within the single chamber of the House?

The level of organizational aggregation at which we say an issue ceases to be vertical and begins to be horizontal will again vary depending on the amount of autonomy the organization has from control by other organizations at the same level and at higher levels. This dissertation is concerned with the budget-making role of the American legislature and so focuses on the role of the House and Senate Appropriations committees. Both of these committees are divided into the same thirteen subcommittees,³³ each responsible for drafting an appropriations bill for the discretionary spending of the departments under its jurisdiction which is subsequently voted on by the full Appropriations committee and then by the entire chamber.

³³ Namely: 1) Agriculture, Rural Development And Related Agencies; 2) Commerce, Justice, State And Judiciary; 3) Defense; 4) District Of Columbia; 5) Energy And Water Development; 6) Foreign Operations; 7) Interior; 8) Labor, Health, And Human Services, Education; 9) Legislative Branch; 10) Military Construction; 11) Transportation; 12) Treasury, Postal And General Government; and 13) VA-HUD-Independent Agencies.

Assuming that the members of neither the House nor the Senate can adequately consider all policy issues at the same time and treat all policy issues in a vertical fashion, and thus that the full appropriations committees in each chamber have some measure of autonomy from their higher formations,³⁴ how autonomous are the subcommittees from the full appropriations committees?

Allen Schick found in his review of the American budgetary process³⁵ that the subcommittees are fairly autonomous since the full appropriations committees must consider the entire range of issues and policy areas in which the government is active using discretionary funds. It is true that the appropriations committees must consider and decide on only discretionary expenditures, and for that matter, only the details rather than the overall amounts of their bills, but the range of issues is quite wide and they can be quite different. Furthermore, the subcommittees can gain autonomy by “logrolling” with other subcommittees.³⁶ It is doubtful that the full appropriations committees can effectively consider and address all the policy issues funded by the entire range of the subcommittees. To the extent, then, that resource allocation decisions taken by the appropriations subcommittees are not challenged on the basis of overlapping

³⁴ This autonomy has been reinforced by institutional provisions as well. See Steven S. Smith and Christopher J. Deering, *Committees in Congress*, 2nd edn. (Washington, D.C.: Congressional Quarterly, 1990), pp. 208-209, and James A. Thurber, “Congressional Budget Reform: Impact on the Appropriations Committees,” *Public Budgeting and Finance* 17(3) (Fall 1997), 62-73.

³⁵ Allen Schick, *The Federal Budget: Politics, policy process* (Washington, D.C.: Brookings, 1995), pp. 133, 141, and 162. This finding is echoed in Beryl A. Radin, “The Government Performance and Results Act (GPRA): Hydra-Headed Monster or Flexible Management Tool?”, *Public Administration Review* 58(4) (July/August 1998), 311.

³⁶ Logrolling is the *quid pro quo* practice of supporting one member’s or committee’s bill in exchange for the promise of that member’s or committee’s support for one’s own bill in the future.

considerations, either in full committee or on the floor of their chamber, we may consider the level of subcommittees to be the level where issues that span organizations are considered legislatively horizontal, and subcommittees to be the unit of analysis.

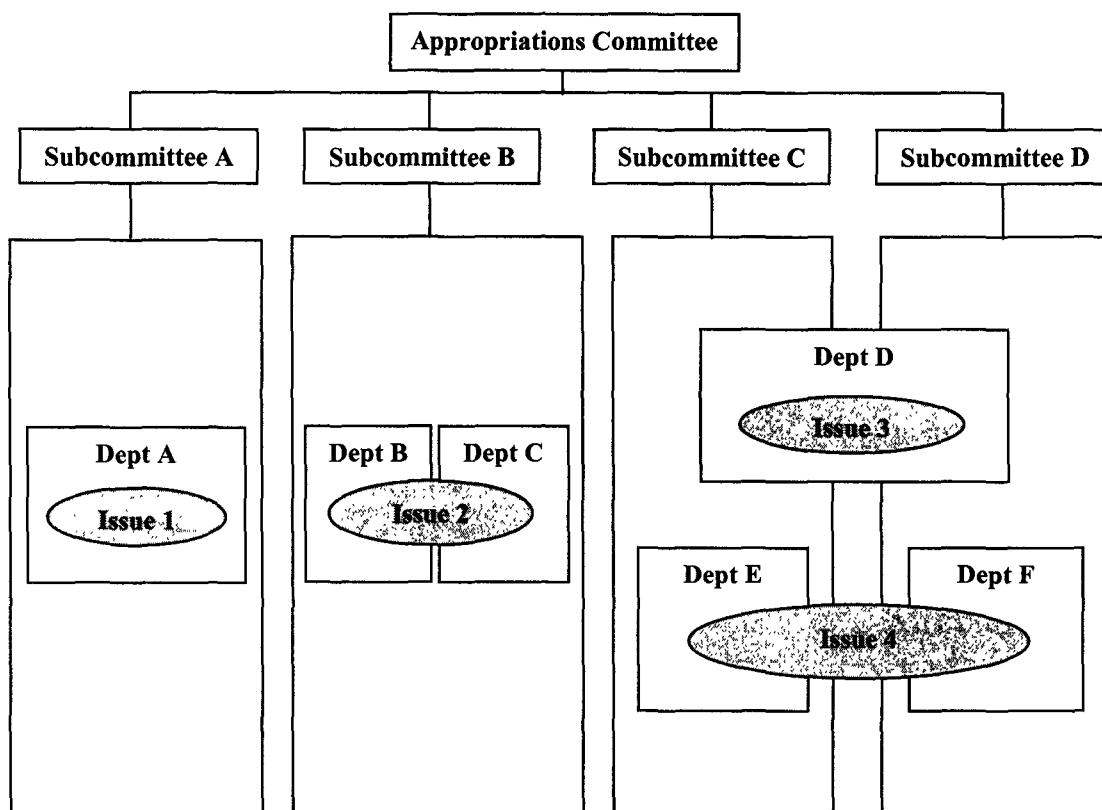
Let us conclude this section by highlighting the interdependence of appropriations subcommittees: in a separated system they may have some measure of legislative autonomy, but since the policy spaces they occupy are overlapping due to their porous nature and cross-cutting secondary themes, the effects of their legislative activities are bound be felt not only in their own policy areas and departments, but also in those of other subcommittees. Subcommittees and departments may not be equally legislatively horizontal, but no subcommittee or department is perfectly legislatively vertical.

Co-ordination

A government that decides to occupy a particular policy space will address the issues contained in it by formulating policies and delivering programs. As we have seen, to better understand the issues, formulate policies and deliver programs, governments divide their policy spaces into policy areas, divide their executive branches into departmental jurisdictions, and divide their legislative branches into committee jurisdictions. As we have also seen, American departments and appropriations subcommittees can act relatively autonomously within their jurisdictions and independently address the issues that fall within their jurisdictions. Some of these issues are entirely contained within their respective jurisdictions. Other issues, however, also spill over into the jurisdictions of other departments and other subcommittees. Figure 5

illustrates the four types of issues we might find in the American government, with boxes representing subcommittee and departmental jurisdictions, and ovals representing areas of policy space.

Figure 5. Four types of issues in the American government



In this figure, the area of policy space known as issue one is entirely contained within the jurisdictions of a single department (A) and a single subcommittee (A), and so it may be entirely addressed by Department A and Subcommittee A working independently of other departments and other subcommittees. To the extent that it is

concerned with issue one, Department A is both executively vertical and legislatively vertical because issue one does not spill over, horizontally, into the jurisdiction of another department or subcommittee.

The area of policy space known as issue two spans the jurisdictions of two departments (B and C) but is entirely contained within the jurisdiction of a single subcommittee (B). To the extent that they are concerned with issue two, Departments B and C are executively horizontal but legislatively vertical because issue two spills over, horizontally, into the jurisdiction of another department, but does not spill over into the jurisdiction of another subcommittee.

The area of policy space known as issue three is entirely contained within the jurisdiction of a single department (D) but spans the jurisdictions of two subcommittees (C and D). To the extent that it is concerned with issue three, Department D is executively vertical but legislatively horizontal because issue three does not spill over into the jurisdiction of another department but does spill over into the jurisdiction of another subcommittee.

The area of policy space known as issue four spans the jurisdictions of both two departments (E and F) and two subcommittees (C and D). To the extent that they are concerned with issue four, Departments E and F are both executively horizontal and legislatively horizontal because issue four spills over into the jurisdictions of both another department and another subcommittee.

The effectiveness and efficiency of a government's programs may be threatened when issues span departmental and/or subcommittee jurisdictions. Since the phenomena

underlying the issues span those jurisdictions as well, departments and subcommittees are interdependent in that they affect and are affected by the activities (or lack of activity) of other departments and subcommittees. These side effects can influence the success or failure of departments' and subcommittees' activities, and there may be no common authority to control or direct those side effects. When this lack of a common authority results in a lack of co-ordination, effectiveness and efficiency may decrease, for the following reasons.³⁷

First, policies and programs may be contradictory. If departments and subcommittees address an issue from different perspectives, their activities may at least partially cancel each other out. For example, in the U.S., the Department of the Interior takes steps to protect wetlands, but the side effects of some of the Department of Defense's activities are harmful to wetlands. Second, policies and programs may contain negative redundancies. If departments and subcommittees address an issue from the same perspective, they may unnecessarily duplicate each other's effort.³⁸ Third, policies and programs may leave gaps. If departments and subcommittees fail to address certain

³⁷ See especially B. Guy Peters, *Managing Horizontal Government: The politics of coordination* (Ottawa: Canadian Centre for Management Development, 1998), pp. 1-4, and United States, General Accounting Office, "Managing for Results," 5. It should be stressed that a common authority is neither a necessary nor a sufficient condition for co-ordination. Co-ordination can be effected through other means, and common authorities are not always able to effectively co-ordinate effects.

³⁸ Positive redundancies are duplications of effort where the marginal benefits of duplication exceed the marginal costs. Positive redundancies may occur when, for example, the consequences of policy failure are high, since excess (i.e. redundant) capacity to undertake policy action can reduce the risk of failure by acting as a buffer or "insurance policy" to be used in the event of demands on an organization that could arise in the future. See Martin Landau, "Redundancy, Rationality and the Problem of Duplication and Overlap," *Public Administration Review* 29 (July/August 1969), 346-358; for other rationale and examples, see United States, General Accounting Office, "Managing for Results," 7-8, and Tom Arnold *et al.*, "'Not prepared' for bioterror: Hospital survey finds lack of equipment and training in the event of a Canadian attack," *National Post*, November 3, 2001, A1.

aspects of an issue because they believe the other departments and subcommittees will either address those aspects or be blamed for not addressing those aspects, those aspects may not be addressed at all.

Fourth, policies and programs may have interactive effects. The immediate effects of the policy activities of departments and subcommittees may combine with those of other departments and subcommittees to produce ultimate effects that are both unintended and unwanted. Conversely, the failure of departments and subcommittees to undertake policy action could, by preventing combination with the policy actions of other departments and subcommittees, be responsible for the failure of other departments or the government as a whole to produce ultimate effects that are both intended and wanted.³⁹ For example, in the U.S., “the ability of the Department of Health and Human Services [HHS] to achieve its goal of self-sufficiency and parental responsibility for welfare recipients is likely to depend on [the presence of certain] employment, training, and education programs administered by the Departments of Labor and Education”⁴⁰ If the programs of these two departments were not present to combine and interact with those of HHS, the welfare policy challenge would not be as well addressed.

Finally, the overall regime of policies and programs may be overly complicated. All the pieces of the regime may be in place, but the more complicated and fragmented it

³⁹ As Mary Parker Follett wrote in her classic article “The Process of Control” (*Papers on the Science of Administration*, 3rd edn., eds. Luther Gulick and L. Urwick (New York: Institute of Public Administration, [1937] 1954)), the determinants of phenomena can “interact” and influence phenomena not only “one by one . . . [but also] as they [are] related to one another” (p. 163). Governments seeking to address such phenomena would also then have to consider their policies in an integrated fashion, seeking optimal “inter-functioning of all the parts” (p. 168).

⁴⁰ United States, General Accounting Office, “Managing for Results,” 15.

is, both the more difficult it may be for clients and citizens more generally to understand and fully access the policy benefits it provides, and the more difficult it may be for civil servants and politicians to make fundamental changes to it. For example, in 1995 the GAO reported that, in the U.S., poor co-ordination among federal departments with community development programs was making it more difficult for urban communities to access and make the most of federal resources.⁴¹

When departments fail to co-ordinate their activities, the total resources of the government may not be employed in the most efficient and effective way possible, a state which may be referred to as “organizational suboptimality.”⁴² Not all, however, of these threats to effectiveness and efficiency can be fully addressed, and not all the threats that *can* be addressed *should* be addressed. Co-ordination may be appropriate only when its benefits outweighs its costs.

The benefits of co-ordination may be small in conditions of uncertainty. When not enough is known about the policy challenge or possible responses to successfully select the one best set of responses (e.g. in the field of scientific research), eliminating redundancy by eliminating multiple responses could in fact lower the benefits produced.⁴³

⁴¹ United States, General Accounting Office, “Community Development: Challenges Face Comprehensive Approaches to Address Needs of Distressed Neighborhoods,” GAO/T-RCED-95-262, August 1995.

⁴² Chisholm, *op. cit.*, p. 5.

⁴³ For more on the limits of co-ordination, particularly co-ordination based on hierarchical models, see Chisholm, *op. cit.*

The costs of co-ordination can be high for three reasons.⁴⁴ First is due to transaction costs. The activities associated with co-ordination can consume many resources; for example, co-ordinating the computer systems of the Department of Human Resources Development and the Department of Veterans Affairs to decrease instances of overpayment of pension benefits could incur costs associated with new software, training, and lost productivity during the transition phase. Transaction costs can also appear when co-ordination is based on a hierarchical models: since information has further to travel to co-ordinators and those co-ordinators have more information to process, information can become distorted or overload co-ordinators, leading to an overall decline of effectiveness, efficiency or responsiveness. Second is due to complication of accountability relationships. Increasing co-ordination usually entails increasing the number of actors contributing to a policy objective, increasing the difficulty of determining who is responsible for failures and successes. Third is due to removal of competition. Eliminating redundancies can reduce competition between organizations and thus incentives for organizations to perform.⁴⁵

In cases where co-ordination is appropriate, the challenge it poses is so pervasive and intractable that its solution has been referred to as both the “administrative Holy Grail” and the “philosopher’s stone” of our day.⁴⁶ Indeed, this challenge was identified

⁴⁴ See e.g. United Kingdom, *Wiring it Up*, pp. 16-17; Peters, *op. cit.*, pp. 23-25.

⁴⁵ See e.g. Albert Breton and Ronald Wintrobe, “The Bureaucracy of Murder Revisited,” *Journal of Political Economy* 94(5) (1986), 905-926.

⁴⁶ Peters, *op. cit.*, p. 1; Canada, Task Force on Managing Horizontal Policy Issues, *Managing Horizontal Policy Issues* (Ottawa: Canadian Centre for Management Development, 1996), i.

and tackled in previous generations of public administration literature, but no satisfactory solution was found.⁴⁷ It may be that the current generation of literature has new ideas to apply, but it is more likely that the renewed interest in the challenge of co-ordination is due to the influx of new scholars and new practitioners, as well as a fading of the memories of the veterans of the past efforts to find a solution. As with other topics, interest can be cyclical.

Co-ordination can potentially be effected in a variety of ways.⁴⁸ In keeping with our focus on the formulation of policies, let us concentrate on how the process by which policies are formulated may be used to help governments co-ordinate. In particular, let us follow Gulick's suggestion of using "process departments [i.e. central agencies] as a routine means of co-ordinating the purpose departments [i.e. line departments]."⁴⁹

As Sproule-Jones notes, proposed solutions are typically derived from Weberian "assumptions about hierarchy as a necessary condition for effective management and hence for coordination."⁵⁰ This is not a bad assumption if we are talking about the management and co-ordination of bureaucracies (a central, but by no means the only, characteristic of which is that they are hierarchically organized).⁵¹ Despite some

⁴⁷ See for example the bibliographies of Peters, *op. cit.*, Chisholm, *op. cit.*, Mark Sproule-Jones, "Horizontal Management," *Canadian Public Administration* 43(1) (Spring 2000), 93-109, and Canada, Task Force on Managing Horizontal Policy Issues, *op. cit.*

⁴⁸ Comprehensive lists of examples can be found in Peters, *op. cit.*, and Canada, Task Force on Managing Horizontal Policy Issues, *op. cit.*

⁴⁹ Gulick, *op. cit.*, p. 34.

⁵⁰ Page 94.

⁵¹ See Max Weber, "Bureaucracy," *From Max Weber: Essays in Sociology*, ed. and tr. H. H. Gerth and C. Wright Mills (Oxford: Oxford University Press, [1922] 1946).

decentralizing “new public management” reforms since the 1980s, Canadian and American governments are still fairly hierarchical.

Assumptions of hierarchy may however be inapplicable in Congress, where, as we saw, committee structures (especially in the Senate) have typically been less formally hierarchical than departmental structures. The two houses of Congress do not have the same hierarchical relationships and practices on which to build as do the bureaucracies, and so proposals and tools which assume hierarchy stand less chance of succeeding there. The best solution for Congress might be to find tools that do not assume hierarchy.

It would seem that, at least in the American context, we have a need for multiple tools, some of which assume hierarchy, others of which assume non-hierarchy, to meet the varied needs of the executive and legislative actors. This fragmented approach to co-ordination does however have the drawback of not directly co-ordinating the efforts of the executive and the legislature in the U.S., which may be desirable since each branch is autonomous of the other yet interdependent in the budgetary process. If the co-ordinators in each branch are not themselves co-ordinated, their efforts may ultimately be limited in the five ways noted above. To co-ordinate the two branches one may need to use a single process, which can be used by actors in both hierarchical and non-hierarchical networks.

The expenditure budget, or rather the process by which expenditure budgets are made, may fill this need, for six main reasons.

First, budgets are outputs (of a legislative process), and as such the interest of stakeholders may be more on the contents of budgets than on the process by which they are made. If so, the actors involved in the process may have more flexibility to adapt

their co-ordinating mechanisms to meet the unique characteristics of their environments.

Second, the expenditure budget is made by both branches, reducing the need to then co-ordinate the two branches themselves in a separate process. Furthermore, all departments participate and so a very wide range of horizontal issues may be addressed.

Third, expenditure budgets in Canada and the U.S. are prepared by central agencies that have the “whole-of-government” perspective recommended by Follett⁵² and so may be able to, in simultaneously considering the effects of many departments’ programs, also co-ordinate them.

Fourth, these central agencies may be more insulated from the external political pressure of interest groups and other constituencies, and so not have to sacrifice as many of the collective benefits that would be gained through co-ordination as the departments that deal more closely with such groups would have to if they co-ordinated themselves through another process.⁵³

Fifth, the expenditure budget is made on a regular (annual) basis, so the process guiding its formulation is more likely to be formalized and adhered to than it would be if the co-ordination process were irregular or temporary.⁵⁴ The iterative nature of the process may also decrease the chance that participants will fail to honour their co-ordinating agreements.⁵⁵

⁵² *Passim.*

⁵³ See B. Guy Peters, “Managing Horizontal Government: The Politics of Co-ordination,” *Public Administration* 76(2) (Summer 1998), 302.

⁵⁴ Allen Schick, “The Road to PPB: The Stages of Budget Reform,” *Public Administration Review* 26(4) (December 1966), 253.

⁵⁵ Peters, “Managing Horizontal Government,” 305. More will be said on this point in chapter 5.

Finally, the expenditure budget may be described as a “superpolicy” or a “metapolicy” in that it sets the policy framework within which almost all other policies operate.⁵⁶ By setting this overarching framework, expenditure budgets can be used to direct money into and away from activities on the basis of their contribution to the achievement of horizontal policy objectives.

There are many possible ways of making an expenditure budget, and it is reasonable to suspect that some ways would facilitate co-ordination more than other ways would. Given that a defining characteristic of horizontality is how the effects of policy actions can travel across primary policy areas, the kind of budget-making process that would facilitate the co-ordination of such effects would be one that identifies the effects of policy actions and allocates funds to programs and departments on the basis of those effects. At the same time, actors in both hierarchical and non-hierarchical networks would have to be able to so identify effects and allocate funds.

Results-based budgeting may be one such way. As we will discuss in chapters 4 and 5, results-based budgeting can help the top level of bureaucracies and central agencies co-ordinate horizontal policies, as it can help them break complex policy issues into programs and program elements and apportion policy and program responsibilities to various departmental actors in accordance with the centre’s understanding of how those

⁵⁶ For example, policies are often designed with certain fiscal limitations in mind, limitations which are established in budgets. In this sense the budget establishes the overall fiscal framework which specifies both how much money can be spent by departments, and on what that money must be spent. Subsequent policies thus find themselves operating within certain parameters which have been pre-defined by the budgetary policy. Budgets can therefore act as metapolicies in much the same way that constitutions act as “master institutions”: they are institutions themselves, but they also affect the way that other institutions develop and operate.

actors could best contribute to the achievement of horizontal policy objectives.⁵⁷ Results-based budgeting can also help subcommittees co-ordinate, as the identification and valuation of the policy and program elements necessary to achieve collective goals can help autonomous legislative actors both understand their role in achieving horizontal policy objectives and bargain or logroll with greater certainty that the others will not defect on these commitments to include their share of horizontal initiatives in their own appropriations bills. Results-based budgeting is not without its own limitations, but it does have the potential to help both executive and legislative actors co-ordinate horizontal policies.

Summary

In this chapter we found that there are many ways of dividing policy space into policy areas, and suggested that even the “best” way still leaves important policy issues spanning policy areas. Policy areas overlap and so are interdependent. The jurisdictions of departments and legislative subcommittees tend to be based on the contours of policy areas, and so their jurisdictions tend to overlap and be interdependent as well. Due to these overlaps, the policy activities of departments and subcommittees can affect the success or failure of the policy activities of other departments and subcommittees. Managing these interdependent, horizontal elements is important, because failure to co-ordinate can lead to contradictions, redundancies, and gaps, all of which limit the efficiency and effectiveness of government.

⁵⁷ See e.g. United States, General Accounting Office, “Managing for Results,” *passim*.

The costs of co-ordination can sometimes outweigh the benefits, and co-ordination can occur at different stages in the policy process. Furthermore, co-ordination is difficult because there are few actors who are both high enough in organizations to see all the issues, and low enough to affect them. When appropriate, co-ordination may be effected through the process of formulating the expenditure budget, because it allows both executive and legislative actors to see from a high level the horizontal components, responsibilities, and funds of policies and programs, while at the same time act at a low level by making program-specific allocations, and also allows flexibility for varying degrees of hierarchy in that decision-making process.

Let us now turn to a closer examination of results-based budgeting, considering first the purpose of budgeting and the ways of formulating budgets (chapter 3), and then the theory and practice of results-based budgeting itself (chapter 4).

Chapter 3: Budgeting Theory

This chapter explores the role that budgets play in politics, and examines the three major ways of formulating expenditure budgets: line-item budgeting, performance budgeting, and results-based budgeting.¹ We will suggest that each way allows budget-makers to emphasize different aspects of a budget's purpose, and that results-based budgeting's emphasis on effectiveness better suits the political interests of the politicians who are ultimately responsible for budgets, as well as better co-ordinates horizontal policies.

The purpose of a budget

Governments never have enough money to fund all potential programs, so they must choose which of them they will fund. These choices are recorded in an expenditure budget, which specifies, for each department, which programs are to receive how much money over the course of the following budget period.

Expenditure budgets are considered to be well-formulated if their implementation secures the three objectives of economy, efficiency and effectiveness. These three objectives correspond to the three budgeting functions of control, management and planning, respectively.²

¹ As previously mentioned, results-based budgeting is for our purposes essentially identical to what used to be known as program budgeting.

² See Allen Schick, "The Road to PPB: The Stages of Budget Reform," *Public Administration Review* 26(4) (December 1966), 243-258.

Economy refers to how well funds are spent to purchase inputs, and may concern either the quantity or the quality of the inputs. In terms of quantity, economy is spending the least to buy a specified amount of inputs, or buying the most inputs with a specified amount of money. In terms of quality, economy is buying inputs that are appropriate given the outputs that are to be produced. Economy is important because an economical budget allows the government to either undertake more policy activity given its revenue base or take in less revenue given a certain level of policy activity. Economy reflects the control that the government has over how much and on what inputs programs spend.

Efficiency refers to how well program inputs are deployed to produce program outputs. An efficient program design is one that produces the most outputs with a given amount of inputs, or uses the fewest inputs to produce a certain amount of outputs. Efficiency is important because an efficient budget allows the government to either undertake more policy activity given its revenue base or take in less revenue given a certain level of policy activity. Efficiency reflects how well the operations of programs are managed.

Effectiveness refers to how well a program addresses the policy challenge that it was established to address. Simply put, it asks whether the effect of the program on the policy challenge and its underlying issues was positive. To considerations of effectiveness we may add considerations of cost, asking how much it costs to run that program and produce those effects. A cost-effective program is one that produces the most effect with a given amount of outputs, or uses the fewest outputs to produce a certain amount of effect. Cost-effectiveness is important because a cost-effective budget

allows the government to either successfully address more policy challenges given its revenue base, or take in less revenue given a certain amount of effects. Effectiveness reflects how well policies and programs have been planned to affect policy challenges in the desired way.

Budgets help governments control, manage and plan—and so secure the objectives of economy, efficiency and effectiveness—in two ways. First is by directly specifying the inputs to be purchased, the outputs to be produced, and the effects to be pursued. Second is by specifying how much money is available to be spent on each activity, which can in turn constrain the controlling, managing and planning decisions that others in the policy process make.³ By specifying and/or constraining the details of programs, the process of budgeting can be used by central agencies to limit the autonomy of departments.

Ways of making a budget

The various ways of formulating expenditure budgets can be grouped into three major budgeting systems: line-item budgeting, performance budgeting, and results-based budgeting. Each system performs to some extent each of the three functions and secures some measure of economy, efficiency and effectiveness. As Schick stressed, “we are

³ In some circumstances, budgets can promote these objectives by being less—not more—specific about inputs, outputs, outcomes and effects. This would be so if budget-makers were too far removed from the actual operations of programs to appreciate the details of optimal spending, if they had to budget for too many programs to have the time or expertise to make such specific decisions, or if the program environments were changing too quickly for them to properly adjust their decisions. In these cases, economy, efficiency and effectiveness are best secured by not making budgets too specific and by giving those who design and manage specific programs more discretion over how much and on what they spend.

dealing with relative emphases, not with pure dichotomies.”⁴ The systems may be best seen as taxonomic devices that are not in reality “mutually exclusive.”⁵ Nevertheless, they do have significant differences both in theory and in practice. Let us briefly examine each of these systems, and determine and compare how well each secures the three objectives and performs the three functions.

Line-item budgeting

Line-item budgeting, also known as object budgeting, specifies the objects of expenditure or items that a cost centre (typically a department) may buy.⁶ For example, an environmental protection department may be so authorized to spend \$x on salaries, \$y on travel, and \$z on supplies. It must then adhere to these conditions. Attempts to deviate from the prescribed conditions may prompt the senior levels of the executive branch and/or the legislature to introduce new controls over the offending department by reducing its funding, re-organizing it, or re-assigning key personnel.

Line-item budgeting has a number of advantages.⁷ First, it is possible to determine exactly what the appropriated funds are being spent on. Second, it facilitates

⁴ Schick, *op. cit.*, p. 245.

⁵ Kenneth Kernaghan and David Siegel, *Public Administration in Canada*, 3rd edn (Toronto: ITP Nelson, 1995), p. 615.

⁶ See Donald J. Savoie, *The Politics of Public Spending in Canada* (Toronto: University of Toronto Press, 1990), pp. 48-53.

⁷ See also Kernaghan and Siegel, *op. cit.*, pp. 616-617, C. Lloyd Brown-John, André LeBlond, and D. Brian Marson, *Public Financial Management: A Canadian Text* (Scarborough: Nelson, 1988), pp. 147-172, and Aaron Wildavsky, “A Budget for All Seasons? Why the Traditional Budget Lasts,” *Public Administration Review* 6 (November/December 1978), 501-509.

comparisons across departments and thus identification of instances where departments spend more on a given input than is necessary. Third, it facilitates longitudinal comparisons of single departments and thus further identification of paying too much for an input. Fourth, it facilitates agreement by the multiple stakeholders involved in the budget-making process; as Lindblom asserted, decision-makers do not need to be able to agree on the desired ends of a policy in order to agree on the program means they will employ.⁸

Line-item budgeting does, however, also have a number of disadvantages.⁹ Most importantly for this discussion, the focus on inputs at the expense of outputs and effects makes it difficult to determine what the effects of changes to budgets would be. As a result, increases and decreases to budgets tend to be incremental and indiscriminate, even when changing policy issues or changing priorities in government would seem to require deeper or more targeted changes.

In terms of the functions of budgeting, line-item budgeting scores high on control but low on management and planning. It scores high on control because one can determine if departments are spending as the legislature authorized and if they are being economical in their purchases of inputs. It scores low on management however because there is no means of ensuring that the inputs being bought are being used efficiently, and scores low on planning because there is no means of ensuring that the use of those inputs is effective in achieving the objectives of the policies. Thanks to their emphasis on

⁸ Charles E. Lindblom, "The Science of 'Muddling Through'," *Public Administration Review* 19(2) (Spring 1959), 79-88.

⁹ See once again Kernaghan and Siegel, *op. cit.*, Brown-John *et al.*, *op. cit.*, and Wildavsky, *op. cit.*

inputs, line-item budgets may deter official malfeasance, but they do not protect against program futility stemming from poor program design or poor program operation.

Performance budgeting

Performance budgeting, also known as functional budgeting or activity budgeting, specifies not only the inputs that a cost centre may buy, but also the activities that will be performed and the outputs that will be produced with those inputs.¹⁰ For example, a performance budget would specify that our environmental protection department that was authorized to spend \$x on salaries, \$y on travel, and \$z on supplies would inspect *v* refineries and issue *w* licences. With this information, one can compare inputs to outputs to see how efficiently the inputs are being used and identify the activities that were responsible for that level of efficiency. According to Schick, “performance budgeting is concerned with the *process of work* (what methods should be used)”¹¹ to transform inputs into outputs, as opposed to the economy of the inputs or the effectiveness of the outputs.

Performance budgeting has a number of advantages. First, it is possible to determine both how economically and how efficiently the appropriated funds are being spent. Second, it facilitates comparisons of activities across departments and thus identification of inefficient operations. Third, it facilitates longitudinal comparisons of single departments and thus further identification of inefficient operations.

¹⁰ Catheryn Seckler-Hudson, “Performance Budgeting in Government,” *Advanced Management* (March 1953), 5-32.

¹¹ Schick, *op. cit.*, 252.

Performance budgeting does, however, also have a number of disadvantages. First, the amount of data that must be collected is large, and so collection can consume many resources and may not be adequately performed.¹² Second, since many data are collected, their analysis may consume many resources and may not be adequately performed either. Third, and most important for this discussion, the focus on outputs as opposed to outcomes still makes it difficult to tell if the program is successfully addressing the policy challenge. Since “work and activities are treated virtually as ends in themselves,” and are not examined in light of their contribution to ultimate objectives, performance budget-makers run the risk of doing the wrong thing well.¹³ This is especially likely to happen if the organization of government into cost centres does not coincide with the organization of government into programs, since multiple cost centres would contribute to multiple programs, blurring the contribution of any one cost centre to any one program’s effects.¹⁴

In terms of the functions of budgeting, performance budgeting scores high on control and management but low on planning. It scores high on control because one can determine if departments are spending as the legislature authorized and if they are being economical in their purchases of inputs, and high on management because one can determine if the inputs being bought are being used efficiently. Performance budgeting

¹² Albert C. Hyde and Jay M. Shafritz, “PPBS and the Systems Approach: Introduction,” *Government Budgeting: Theory, Process, Politics*, 1st edn, eds. Albert C. Hyde and Jay M. Shafritz (Oak Park, Ill.: Moore, 1978), 120-121.

¹³ Schick, *op. cit.*, 251.

¹⁴ See Schick, *op. cit.*, and Seckler-Hudson, *op. cit.*

scores low on planning though because there is no means of ensuring that the use of those inputs is effective in achieving the objectives of the policies. Thanks to their emphasis on outputs, performance budgets may help budget-makers and managers improve the operation of programs, but they do not help governments ensure that the programs they fund are having the desired effects on society.

Results-based budgeting

Results-based budgeting specifies not only the inputs that a cost centre (in most cases, a program) may buy, the activities that will be performed, and the outputs that will be produced with those inputs,¹⁵ but also the outcomes and possibly the effects that will be produced with those outputs. For example, a results-based budget would specify that our environmental protection department that was authorized to spend \$x on salaries, \$y on travel, and \$z on supplies would inspect v refineries and issue w licences, activities that in turn would achieve u level of, and possibly t net reduction in, pollutant emission. The key to results-based budgeting lies in this specification of predicted outcomes and effects of a program in relation to its intrinsically-valued objectives. With this information, one can compare inputs or outputs to effects to see how effectively the inputs are being used and see what outputs are responsible for that level of effectiveness. These comparisons in turn aid the analysis and sometimes comparison of the cost-benefit, cost-effectiveness, or cost-utility of programs as wholes.

¹⁵ As Hyde and Shafritz note, this aspect of performance budgeting may or may not be present. Albert C. Hyde and Jay M. Shafritz, "Performance Budgeting and Work Management: Introduction," *Government Budgeting: Theory, Process, Politics*, 1st edn, eds. Albert C. Hyde and Jay M. Shafritz (Oak Park, Ill.: Moore, 1978), p. 79.

Results-based budgeting has a number of advantages. First, it is possible to determine how economically, efficiently and effectively the appropriated funds are being spent. Second, it facilitates comparisons across programs and thus identification of activity where the cost-effectiveness or “bang for buck”¹⁶ is relatively low. Third, it facilitates longitudinal comparisons of single programs and thus further identification of low cost-effectiveness. Fourth, and most importantly for this discussion, it can be used by budget-makers in the centre—who have a “whole-of-government” perspective—to identify the effects of various programs and selectively fund those programs and program elements so as to better co-ordinate their horizontal aspects.

Results-based budgeting does, however, also have a number of disadvantages. First, the amount of data that must be collected is large, and thus collection may consume many resources and not be adequately performed. Second, because many data are collected, their analysis may consume many resources and not be adequately performed either. Third, it can be difficult to predict what the effects—intended or otherwise—of a program will be, and even more difficult to measure them. Fourth, the effects of programs are not always comparable across time and space. Fifth, even if budget-makers do understand how programs fit together, it does not always follow that they will then be able to manipulate that fit to achieve greater synergies.

In terms of the functions of budgeting, results-based budgeting—at least in theory—scores high on control and management and planning. It scores high on control

¹⁶ See Mary Ann Scheirer, “Getting More ‘Bang’ For Your Performance Measures ‘Buck’,” *American Journal of Evaluation* 21(2) (Spring-Summer 2000), 139-149.

because one can determine if departments are spending as the legislature authorized and if they are being economical in their purchases of inputs, high on management because one can determine if the inputs being bought are being used efficiently, and high on planning because one can determine if the use of those inputs is effective in achieving the objectives of the policies. Thanks to their emphasis on effects, results-based budgets can help budget-makers and managers improve both the design and the operation of programs to ensure that the programs they fund are having the desired effects on society.

Comparison

Table 1 highlights some of the key similarities and differences between line-item budgeting, performance budgeting, and results-based budgeting.

At the beginning of this section we noted that each budgeting system performs to some extent each of the three functions and secures some measure of economy, efficiency and effectiveness. However, the systems vary considerably in the extent to which they secure economy, efficiency and effectiveness. Furthermore, economy, efficiency and effectiveness are not equally valuable.

Four general points may be made on this matter. First, economy is necessary for efficiency; to achieve efficiency, one must also achieve economy. Second, efficiency is necessary for cost-effectiveness; to achieve cost-effectiveness, one must also achieve efficiency. Third, cost-effectiveness is not necessary for efficiency; one can achieve efficiency without also achieving cost-effectiveness. Fourth, efficiency is not necessary for economy; one can achieve economy without also achieving efficiency.

Table 1. Characteristics of the major budgeting systems

System Character.	LINE-ITEM	PERFORMANCE	RESULTS- BASED
Building Block	Object of expenditure	Unit cost and units of service	Program
Direction Of Construction	Bottom-up	Bottom-up	Top-down
Key Agency	Operating department	Operating department	Central agencies
Criterion of Evaluation	No overspending	Minimizes unit cost	Maximizes program cost-effectiveness
Type of Decision-making	Decentralized	Decentralized	Centralized
Dominant Philosophy of Decision-making ¹⁷	Incremental	Incremental	Rational
Strong Points	Emphasizes control; discourages conflict	Emphasizes productivity improvement and cost minimization	Emphasizes planning and rational decision-making
Weak Points	Emphasizes status quo; little information for decision-makers	Few cross-program comparisons	High cost; difficult to implement

Source: Adapted from Table 26.1, "Comparison of different styles of budgeting," Kernaghan and Siegel, *op. cit.*, p. 615.

¹⁷ Author's note: line-item and performance budgeting are often considered to be more "incremental" than results-based budgeting because, under these systems, resource allocation decisions tend to be made at the margins, considering only incremental additions to or (less often) subtractions from the base of ongoing funding, as opposed to potentially considering all the new funds available to the government and entire departmental bases more comprehensively, as rational budgeting systems such as results-based budgeting are generally expected to do. The classical statement of differences between incremental and rational/comprehensive scopes and forms of analysis can be found in Lindblom, *op. cit.*

What follows from these four points is that only when cost-effectiveness is achieved can we be sure that economy, efficiency and cost-effectiveness have all been achieved. A budgeting system that secures cost-effectiveness will also secure efficiency and economy. While the emphasis of such a system would be on cost-effectiveness, it would not, in its pursuit thereof, neglect and fail to secure economy and efficiency. Importantly, the same cannot be said of systems with different emphases. Because cost-effectiveness is not necessary for efficiency, a budgeting system that emphasized efficiency may neglect and fail to secure cost-effectiveness. Similarly, because efficiency is not necessary for economy, a budgeting system that emphasized economy may neglect and fail to secure efficiency and by extension cost-effectiveness as well.

Securing cost-effectiveness seems then to be the most appropriate goal of a budgeting system, as it is only by doing so that it can assuredly secure all three objectives of a budget. Of the three budgeting systems examined above, only results-based budgeting has securing cost-effectiveness for a goal. Line-item budgeting and performance budgeting seem to be inferior to results-based budgeting in that they seek to secure fewer objectives and promote fewer budgeting functions.¹⁸ Figure 6 illustrates the approximate coverage of each budgeting system relative to the stages of a program's operation, the three functions of budgeting, and the three objectives of a budget.

¹⁸ For a similar argument, see Albert C. Hyde, "A Review of the Theory of Budget Reform," *Government Budgeting: Theory, Process, Politics*, 1st edn, eds. Albert C. Hyde and Jay M. Shafritz (Oak Park, Ill.: Moore, 1978), pp. 72-73.

Figure 6. Budgeting system coverage of functions of budgeting and objectives of a budget

Stage:	Inputs	Outputs	Outcomes
Function:	Control	Management	Planning
Objective:	Economy	Efficiency	Effectiveness
Budgeting System:	<div> <div>-- Line-item --</div> <div> <div>----- Performance -----</div> <div>----- Results-based -----</div> </div> </div>		

Political uses of a budget

In the previous section we outlined the three different ways of making a budget. It would seem from this analysis that, to the extent that it works, results-based budgeting is the best of the three ways since it enables budget-makers to control, manage and plan, whereas the other two do not. But does it follow that budget-makers would or should use results-based budgeting? To answer that question, we must first determine who the budget-makers themselves actually are.

We saw in the first section of this chapter that the role of the expenditure budget is to fund programs. We also saw that the demand for program funding will outstrip its supply. The market for budget dollars is not, however, self-regulating; deliberate choices about which program demands to satisfy must be made. Note though that choosing between programs and the values they embody is a quintessentially political activity. While civil servants analyze funding options and make recommendations, many important decisions, at least in liberal democracies such as Canada and the U.S., are taken by elected politicians.

These budgetary decisions affect practically the entire range of government policies and programs, and so are very visible and hotly contested. What guides the politicians who must make these choices? Assuming that they are—either individually or collectively—rational actors, politicians will be guided by self-interest, in this case, the desire to be re-elected.¹⁹

The core goal of re-election can start to help us answer V. O. Key's famous question, "[o]n what basis shall it be decided to allocate x dollars to activity A instead of activity B?"²⁰ While politicians base their budgetary decisions on a variety of factors, in a democracy, re-election and thus popularity will certainly be a leading consideration. Popularity can thus be seen as one of the currencies which help keep the political market at equilibrium: as the demand for a program (as measured by the popularity of that program) rises, so may the funds supplied to that program. Of course, the ideal allocation of funds alone is not enough to guarantee popularity, and a good budget is not sufficient for re-election, but it can help, so long as politicians can claim credit for the effects of their decisions.

Lest this formulation seem too crass, let us remember that one of the roles of politicians in a democracy is to listen to the *vox populi* and adopt policies and programs that meet with public approval. If one of the roles of public policy is to improve the lives of citizens, in a democracy, the citizens themselves should consider and communicate to

¹⁹ Such is the traditional assumption of politicians' motivations in rational choice theory. See for example David Mayhew, *Congress: The Electoral Connection* (New Haven: Yale University Press, 1974), and Douglas R. Arnold, *The Logic of Congressional Action* (New Haven: Yale University Press, 1990).

²⁰ V. O. Key, Jr., "The Lack of a Budgetary Theory," *American Political Science Review* 34 (December 1940), 1137-1144.

their representatives in government what they think would improve their lives, and so collectively, what they think is in the “public interest.”²¹ As Key maintained, the answer to his question “represents a judgment upon how scarce means should be allocated to bring the maximum return in social utility;”²² and since members of a society will have different values and interests, their conceptions of “social utility” will differ as well, and it is politicians who must choose between them and select a course of (policy) action. Indeed, Key himself acknowledged that “[t]he most advantageous utilization of public funds resolves itself into a matter of value preferences between ends lacking a common denominator” and thus cannot be determined through purely technocratic means.

If, as Lewis asserted, “[b]udget analysis . . . is basically a comparison of the relative merits of alternative uses of funds,” and “[c]omparison of relative merits can be made only in terms of relative effectiveness in achieving a common objective,” what is this common objective or common denominator?²³ Given that politicians are making the decisions, popularity seems a likely candidate.

To assess the popularity of alternative uses of funds, rational politicians could construct a governmental “policy vision,”²⁴ a vision of the state of affairs that would on

²¹ David M. Cameron, “Whither the Canadian Polity?: Program Review and the Idea of the Public Good,” *Hard Choices or No Choices: Assessing Program Review*, eds. Amelita Armit and Jacques Bourgault (Toronto: IPAC, 1996), 113-119.

²² Key, *op. cit.*

²³ Verne B. Lewis, “Toward a Theory of Budgeting,” *Public Administration Review* 12(1) (Winter 1952). This implicit preference for cost-utility analysis over both cost-benefit analysis and cost-effectiveness analysis will be addressed later in this chapter and in subsequent chapters.

²⁴ See David Zussman, “The Third Annual George Davidson Memorial Lecture - Shaping Public Policy in the Next Decade,” June 15, 1999, web site: http://www.tbs-sct.gc.ca/other_speech99/0615_e.html

the whole be popular and so maximize a government's chance of re-election. Politicians could then try to bring about that state of affairs through public policy, including—and perhaps especially—through budgetary policy.

Budgeting criterion: policy vision

“Vision” is an apt word for this concept, as it implies that a government's impression of what state of affairs would be popular can be vague, contradictory, ephemeral, and unachievable. As such, policy visions may not be sufficiently explicit, coherent, fixed, and relevant to serve as the ultimate yardstick against which policy proposals and budgets can be assessed. A yardstick does not, however, have to yield a final, incontestable answer to be useful. Policy vision can provide a rough idea of what changes in the existing state of affairs would be improvements, and thus which policies and programs would increase a government's popularity. The idea of policy vision takes into account politicians' rational needs to both pursue popular ends and select effective (policy) means, and so successfully combines the “multiple rationalities” present in government.²⁵ We thus see achievement of the policy vision as the ultimate budgeting

(accessed May 3, 2000), and Evert Lindquist, “How Ottawa Plans: The Evolution of Strategic Planning,” *How Ottawa Spends 2001-02: Power in Transition*, ed. Leslie A. Pal (Toronto: Oxford University Press, 2001), 61-93.

²⁵ For a more detailed discussion and empirical examination of multiple rationalities, see Kurt Thurmaier, “Decisive Decision Making in the Executive Budget Process: Analyzing the Political and Economic Propensities of Central Budget Bureau Analysts,” *Public Administration Review* 55(5) (September/October 1995), 448-460. See also James Iain Gow, “Accountability, Rationality, and New Structures of Governance: Making Room for Political Rationality,” *Canadian Journal of Program Evaluation* 16(2) (2001), 55-70, and Aaron Wildavsky, “The Political Economy of Efficiency: Cost-Benefit Analysis, Systems Analysis, and Program Budgeting,” *Public Administration Review* 26(4) (December 1966), 292-310.

criterion, and contribution to the achievement of the policy vision as the answer to Key's question.

Some policy visions, e.g. the complete elimination of poverty, are impossible to fully achieve. When this is the case, policies alone can, at best, help governments achieve only a portion of the policy visions. This portion—the greatest extent to which policy action by itself could possibly change the existing state of affairs into (or keep the existing state of affairs at) the desired state of affairs—will be called “potential policy benefits.”²⁶

By allowing and disallowing certain programs to operate, budgeting allows and disallows programs to produce effects and thus contribute to the policy vision. Budgeting thus affects the extent to which the group of programs which are funded realizes the potential benefits of programs which could have been funded with that same amount of money.

As previously mentioned, the expenditure budget will not be large enough to fund all the programs that could conceivably contribute to the policy vision. Budget-makers must fund some programs but not others. For rational budget-makers, the goal of budgeting may therefore be to fund only those programs which, in combination, do in fact realize the potential benefits of an expenditure budget of a given size.

Rational budget-makers would therefore fund programs not solely on the basis of their effects *per se*, but rather on the basis of how their effects contribute to the

²⁶ To take account of natural environmental change we should actually define potential policy benefits as the most that policy action could change what would be the future state of affairs in the absence of policy action into the desired state of affairs. For more on policy benefits, see Albert Breton and Ronald Wintrobe, *The Logic of Bureaucratic Conduct* (Cambridge: Cambridge University Press, 1982).

government's policy vision. There are two reasons why rational budget-makers would not judge and compare the funding-worthiness of competing program options solely in terms of their effects. First, effects have no intrinsic political value; rather, they are valuable only with respect to their contribution to the policy vision. Second, programs generally aim at doing different things and thus measure their effects differently, and it is difficult to compare effects that are measured in different units, in other words, trying to compare "apples and oranges." The upshot of these two reasons is that, in a rational budget-making environment, cost-effectiveness analysis gives way to cost-utility analysis, translating effects into the common unit of contribution to policy vision.

Assessing and comparing programs on the basis of their contribution to achieving the government's policy vision is a central aspect of prioritizing programs. Governments may use an implicit or explicit policy vision to determine their priorities, and then rank programs on the basis of the extent to which they advance those priorities. When an objective of the budget-making process is to prioritize programs and fund them on that basis, we may say that it seeks "allocative efficiency," that is, it seeks to "allocate resources in accord with government priorities."²⁷ We may thus see allocative efficiency as the central objective of a rational budget-making system.²⁸

Rational budget-makers may calculate which programs are part of the elusive potential benefit-realizing combination by comparing information on program costs and

²⁷ Allen Schick, "The Changing Role of the Central Budget Office," *OECD Journal on Budgeting* 1(1) (2001), 13, 19-24. According to Schick, allocative efficiency is one of three "basic budget tasks," the others being to "maintain aggregate fiscal discipline" and to "promote the efficient delivery of services" (13).

effects to the criterion of policy vision. To be comprehensive, this comparison should look at both qualitative and quantitative aspects of effects, which, for ease of understanding, we may refer to as direction and distance, respectively. Direction refers to *whether* the program makes society more or less like the envisioned society. For example, if the policy vision hopes for a lower rate of unemployment, budget-makers would determine if the program's effect on the rate of unemployment would in fact be to lower it, rather than to raise it or leave it unchanged. Distance refers to *how much* the program makes society more or less like the desired or envisioned society. For example, if the policy vision hopes for a lower rate of unemployment, budget-makers would, after determining that the program would indeed lower the rate, assess by how many percentage points the program would lower it.

Rational budget-makers using the results-based budgeting model may conceive of programs as effects with price tags. If we assume that programs need not be accepted or rejected *in toto*, but rather can be partially funded, there is an almost infinite variety of combinations of different programs (directions) at different funding levels (distances). To find the particular combination of programs and funding levels that maximizes the whole's contribution to the policy vision, rational budget-makers must maximize the marginal contribution to the policy vision of each dollar spent. To do this, they must know two things. First is the inter-program contribution differentials, that is, how the marginal contribution of a dollar spent on one program will differ from the average contribution of a dollar spent on another program. Second is the intra-program

contribution differentials, that is, how the marginal contribution of one dollar (e.g. the 10th) spent on a program will differ from the marginal contribution of another dollar (e.g. the 9th or the 11th) spent on the same program.

This last point about intra-program contribution differentials bears some exploration. The marginal contribution of spending can vary within a single program for two reasons. First, each dollar of spending will not produce the same amount of effect. We can say that every program will have a funding level at which it operates the most efficiently, where efficiency is measured as the effect-to-input ratio (not the ratio of outputs or contribution to inputs), and that the marginal effect of spending might, if plotted against total money spent, approximate a normal curve, which has an inverted U shape (\cap). Efficiency will be a function of both how the program's delivery unit is organized and the extent to which the policy challenge can be influenced by policy activity. When the program is operating below this optimal funding level, many dollars must be spent before the optimal amount of effects are generated. When the program is operating above this optimal funding level, even spending many more dollars will not produce many more effects. The further the funding level is from the optimal level, either above it or below it, the lower the marginal contribution of spending to the policy vision will be.

For example, the Sectoral Partnerships Initiatives (SPI) program of the Canadian government's Department of Human Resources Development is designed to reduce the rate of unemployment. The first billion dollars of spending could reduce the rate by 1%, the second billion could reduce it by (an additional) 2%, the third billion could reduce it

by (an additional) 1%, and subsequent billions would further reduce it negligibly, perhaps because the labour market has by this point reached its “natural” rate of unemployment. The marginal effect of each dollar (or in this case, increment of one billion dollars) is not constant. This is not to say that rational budget-makers should never fund programs past the point at which the effect-to-input ratio is highest. The point is simply that not all dollars spent on a given program are equal; the effect and thus contribution produced by dollar n will likely vary from that produced both by dollar $n-1$ and by dollar $n+1$, something rational budget-makers should keep in mind when selecting combinations of programs and program funding levels.

The second reason why the marginal contribution of spending can vary within a single program is because each unit of effect will not contribute equally to the policy vision. Policy vision is heterogeneous in that as a rather utopian vision, it contains elements that are both “need to have” and “nice to have”. The former are more important parts of the vision than are the latter, as governments are more likely to be rewarded for delivering the fundamentals (and punished for not delivering them) than they would be for delivering the peripherals (and punished for not delivering them).²⁹ Some issues on a government’s policy agenda are simply higher priorities than others. Importantly, this distinction between the “cake” and its “icing” holds even within a single program. We can say that the value of each successive unit of effect is constantly decreasing since each

²⁹ The drinking water crisis in Ontario (starting in Walkerton but extending elsewhere) in early 2000 demonstrates how citizens may take fundamentals for granted and thus not reward governments for delivering them, but certainly punish governments who fail to do so.

unit of effect addresses the issue a little more, which can make it appear to be less of an issue and thus less of a priority.

For example, imagine that the rate of unemployment stood at 10% and the SPI would reduce unemployment at a constant rate of 1% for each billion dollars of funding. If the policy vision indicated that a rate of 2% would be optimal but 6% was the most important target, the first four percent of effect (reducing the rate from 10% to 6%) would be highly valued, but the next four percent of effect (reducing the rate from 6% to 2%) would be only moderately valued. Here, the marginal value of each unit of effect is not constant. Again, this is not to say that rational budget-makers should never fund “icing”. The point is simply that not all effects produced by a program are equal; the contribution to the policy vision produced by a given effect x will likely vary from that produced by a given effect y , even if x and y are the same size, something rational budget-makers must also keep in mind when selecting combinations of programs and program funding levels.

Realizing the potential benefits of the expenditure budget and so achieving allocative efficiency requires finding the combination of programs and funding levels that maximizes the marginal contribution of each dollar to the policy vision. This in turn requires identifying the marginal contribution of each dollar on each program, and then comparing that contribution to that of all the other dollars and programs.

If, then, the aim of budget-making politicians is to be re-elected, and that entails bringing about a particular policy vision, it would seem that results-based budgeting may be the best budgeting system for them since its focus on the effects of program

spending—something the other two systems lack—can help them plan policy action so as to maximize programs' contributions to their policy vision.

It is true that the zero-base budgeting (ZBB) method of making expenditure budgets is more explicit than is results-based budgeting in comparing potential funding levels. ZBB, like results-based budgeting, identifies the expected costs and effects of programs and program elements, and presents various alternative combinations to budget-makers. Unlike results-based budgeting, however, ZBB involves a very elaborate system of ranking and aggregating these combinations up through various levels of a bureaucracy. Under ZBB, budget-makers in central agencies are usually presented with highly aggregated funding options, and so cannot change individual programs and program elements within those options without affecting the status of the other programs and program elements in those options. As ZBB thereby affords central budget-makers less opportunity to make the micro-level changes in departmental budgets that are necessary to co-ordinate the horizontal elements of their programs than does results-based budgeting, we have not made it the focus of this study.³⁰ Rather, we focus on results-based budgeting, which still aims at comparing programs to see which is the best value, and can be used to change funding levels to reflect government priorities.

³⁰ Furthermore, ZBB has not experienced the same resurgence of interest amongst budget-makers and academics that results-based budgeting has. For more on ZBB, see e.g. Peter A. Pyhrr, *Zero-Base Budgeting* (Toronto: John Wiley, 1973); Joseph S. Wholey, *Zero-base budgeting and program evaluation* (Lexington, Mass.: Lexington Books, 1978); Thomas H. Hammond and Jack H. Knott, *A Zero-Based Look at Zero-Base Budgeting* (New Brunswick, N.J.: Transaction, 1979); Allen Schick, "The Road from ZBB," *Public Administration Review* 38 (March/April 1978), 177-180; and especially Graeme Taylor, "Introduction to Zero-Base Budgeting," *The Bureaucrat* 6(1) (Spring 1977), 33-55. For a similar argument, see Wildavsky, *op. cit.*, 503.

Summary

In this chapter we posited that society's demand for collective action, provided by the government through policies and programs, generally exceeds its willingness or ability to pay for that action. As such, governments must decide to fund some programs but not others. Expenditure budgets reflect those choices and by extension the priorities of governments.

Budgets aim to secure economy, efficiency and effectiveness so that budget-makers can better control, manage and plan policy actions. Our assessment of the three ways of making budgets found that line-item budgeting focuses on economy and so can help budget-makers control, performance budgeting focuses on efficiency and so can help budget-makers manage, and results-based budgeting focuses on effectiveness and so can help budget-makers plan. If politicians seek re-election and this requires funding programs that produce beneficial effects—including those produced by co-ordinating horizontal policies—results-based budgeting would seem to be the rational way to prepare expenditure budgets. Results-based budgeting also seems to be the system that most favours guardians over spenders, as by specifying and constraining more aspects of their activities, it limits spenders' autonomy to a greater extent.

Results-based budgeting is not, however, without its flaws and limitations. In the next chapter, we turn to a more thorough and critical examination of results-based budgeting theories and practices.

Chapter 4: Results-based budgeting

In this chapter we will examine results-based budgeting in more detail.

Specifically, we will: explain the theoretical foundations of results-based budgeting; outline how, according to the theory of results-based budgeting, results-based budgets are made; highlight ten key limitations of results-based budgeting; and describe and compare the past and present incarnations of results-based budgeting in Canada and the U.S., finding both similarities and differences.

Systems analysis and causal theory

In chapter 3 we examined the idea of policy visions, and suggested that budgets may be used by rational politicians to realize the potential benefits of programs and bring about a particular policy vision. Central to this use of budgets is an identification of the effects of programs: what benefits would they actually produce, in terms of contribution to the policy vision?

Analyzing the effects of programs, including the benefits they produce, is an application of systems analysis.¹ Systems analysis views society as being made up of systems within which underlying policy issues and governmental policy actions interact to produce social phenomena. Systems analysis “builds models that abstract from reality but represent the crucial relationships” between components of those systems,² so that

¹ Not to be confused with systems theory. See e.g. David Easton, *The Political System* (New York: Alfred A. Knopf, 1953).

² Aaron Wildavsky, “The Political Economy of Efficiency: Cost-Benefit Analysis, Systems Analysis, and Program Budgeting,” *Public Administration Review* 26(4) (December 1966), 299.

policy-makers can better understand how the addition, modification, or withdrawal of specific policy actions would interact with policy issues and perhaps with other policy actions, and thus what effects programs would have on a given policy challenge.³ The key feature of systems analysis is that it does not simply identify the characteristics of existing social phenomena, but also seeks to identify the reasons why those particular phenomena came to be, as this can help policy-makers understand how policy action might then change those phenomena. Underlying this feature of systems analysis is causal theory.

Causal theory examines the relationships between components of policy systems, and attempts to discover if the relationships between them are causal in nature. By causal, we do not necessarily mean that the relationship is deterministic, i.e. that one component completely determines another. In most policy systems, the presence or particular value of one component is rarely sufficient to, by itself, cause the presence or particular value of another component, since the presence of certain contextual or environmental conditions are generally necessary for such relationships to hold. The presence or particular value of one component is rarely even necessary to cause the presence or particular value of another component due to the multiplicity of ways that those latter components may typically be affected. Rather, the relationship is more influential, where the presence or particular value of one component merely influences or contributes to the presence or value of another. One might find, for example, that two

³ See also J. R. Levesque, "New Dimensions in Government Budgeting and Control," March 13, 1969 (mimeo).

components such as the health of a country's citizens and the existence of public health care programs are correlated, and that their values simply tend to rise and fall together as one examines multiple systems at one point in time, or one system over multiple points in time.

Systems analysis uses causal theory to explain what underlying policy issues cause social phenomena in policy systems, so that policy-makers can better understand the nature of policy challenges. Systems analysis then uses causal theory to identify what the effect of particular programs in policy systems on social phenomena would be, so that policy-makers can better understand how well various policy responses would address policy challenges. Systems analysis is the analytical tool that may be used to identify the potential effects of programs and the benefits that would be produced.

Planning, programming and budgeting

Systems-analytical identifications of program effects may then be used to make more specific decisions and plans about the desired combination of programs and funding levels. The first step in rational decision-making⁴ is to determine one's objectives. Results-based budget-makers may begin by comparing the existing policy environments to the envisioned policy environment and identifying gaps (i.e. policy challenges) to be addressed by policy action. Results-based budget-makers may then seek programs that

⁴ See for example Charles E. Lindblom, "The Science of 'Muddling Through'," *Public Administration Review* 19(2) (Spring 1959), pp. 79-88. Although written over forty years ago, this article's description—and critique—of rational decision-making is still highly relevant. For a more recent examination of rational decision-making in government, see George Boyne, "Planning, performance and public services," *Public Administration* 79(1) (2001), 73-88.

change their policy environments in ways that close these gaps; such changes or effects become the goals of policies and programs.

The second step in rational decision-making is to examine the goal-attaining means at one's disposal. What policies and programs would successfully produce the desired effects, and at what cost? Different combinations of programs and funding levels may be developed and costed.

The third step in rational decision-making is to select the best option by comparing the available means to the desired ends. In results-based budgeting, the predicted effects and costs of the various combinations of programs and funding levels are compared against the desired effects and available funds. In order to compare the options against each other, they may be assessed on the common basis of the extent to which they realize potential benefits and contribute to the policy vision. This cost-utility analysis allows for an assessment of "the *relative* merit of the various alternatives"⁵ and an identification of the utility-maximizing strategy for results-based budget-makers to follow.

While the politicians' objective of maximizing contribution to the policy vision may be both known from the outset and stable throughout the process, the specific objectives of the programs to be selected may not be.⁶ In this respect, it is not necessary that the rational decision-making process under results-based budgeting be so linear.

⁵ E. S. Quade, "Systems Analysis Techniques for Planning-Programming-Budgeting," Report P-3322 (Santa Monica, Calif.: Rand, March 1966) (emphasis in original). See also Gene H. Fisher, "The role of cost-utility analysis in program budgeting," *Program Budgeting: Program Analysis and the Federal Government*, ed. David Novick (Santa Monica, Calif.: Rand, 1965), 33-48.

⁶ Wildavsky, "The Political Economy of Efficiency," 299.

Rather, the process may be iterative where the goals are changed in light of the available options. In Wildavsky's words, "[w]hat is worth doing depends on whether it can be done at all, how well, and at what cost. Hence, objectives really cannot be taken as given; they must be made up by the analyst,"⁷ sometimes after the analyst has examined the means. Regardless, though, the effects that are selected are, under systems analysis, utility-maximizing when utility is measured as contribution to the policy vision.

Using results-based budgeting to make decisions about the desired combination of programs and funding levels can aid planning as it may help budget-makers ensure that programs are effective in meeting their objectives and in contributing to policy vision.

Indeed, a rational view of planning might be seen as

visualizing future situations, making estimates concerning them, identifying the issues, needs and potential danger points, analyzing and evaluating the alternative ways and means for reaching desired goals according to a certain schedule, estimating the necessary funds and resources to do the work, and initiating action in time to prepare what may be needed to cope with changing conditions and contingent events.⁸

Certainly, results-based budgeting could help budget-makers plan for the future and select the programs that best address the policy challenges facing the government. The expenditure budget, at that point, becomes a record of the decisions made in the planning process and the basis for actually funding the selected programs, and results-based

⁷ *Ibid.*, pp. 299-300.

⁸ Charles M. Mottley, "Strategic Planning," Release No. 56, Office of Management Research, U.S. Department of the Interior, September 1967.

budgeting, “a mere mechanical translation of the results of high-level systems studies into convenient storage in the budgetary format.”⁹

Results-based budgeting may therefore be seen as little more than using systems analysis to evaluate and compare the effectiveness and utility of existing and new programs.¹⁰ Nevertheless, it may be useful to highlight what the Government of Canada considered to be the key aspects of results-based budgeting:

- a) the setting of specific objectives;
- b) the systematic analysis to clarify objectives and to assess alternative ways of meeting them;
- c) the framing of budgetary proposals in terms of programs directed toward the achievement of the objectives;
- d) the projection of the costs of these programs a number of years in the future; and
- e) an information system for each program to supply data for the monitoring of achievement of program goals and to supply data for the reassessment of the program objectives and the appropriateness of the program itself.¹¹

As we can see from the final aspect, results-based budgeting also involves evaluating the effectiveness of programs—both in terms of achieving the objectives and in terms of contributing to the policy vision—and using this information to inform future decisions regarding both the design and operation of programs, and the desired combination and funding levels of programs.¹²

⁹ Wildavsky, “The Political Economy of Efficiency,” 306.

¹⁰ Werner Z. Hirsch, “Toward Federal Program Budgeting,” *Public Administration Review* 26(4) (December 1966), 259-269; Wildavsky, “The Political Economy of Efficiency,” 303.

¹¹ Canada, Treasury Board, *Planning Programming Budgeting Guide* (Ottawa: Queen’s Printer, 1968), p. 1. See also David Novick, “The Origin and History of Program Budgeting,” *California Management Review* 11(1) (1968), 7-12, for a similar outline of the steps followed in results-based budgeting.

¹² For more on feedback in results-based budgeting, see Sharon L. Sutherland, “The evolution of program budget ideas in Canada: Does Parliament benefit from Estimates reform?”, *Canadian Public*

Limitations of results-based budgeting

The federal governments of both the U.S. and Canada experimented with results-based budgeting in the 1960s and 1970s. Both known as Planning-Programming-Budgeting systems, these experiments were generally seen as unsuccessful. In this section we will briefly describe how the two systems operated, describe the ways in which they failed, and identify ten key limitations of those and any other attempts to implement results-based budgeting.

In the U.S., the federal government adopted the Planning Programming Budgeting (PPB) system in 1965. PPB attempted to put into practice the techniques of results-based budgeting listed above, such as setting objectives, assessing the effects of programs, and comparing funding options. However, the practice of PPB did not quite live up to the theory. Schick observed that departments “produced reams of unsupported, irrelevant justification and description,” and plans were “formulated without serious attention to objectives, resource constraints, and alternative opportunities.” As opposed to the theorized “majestic scrutiny of objectives and opportunities,” PPB found budget-makers simply “going through the motions of doing a program structure, writing a program memorandum, of filling in the columns of a program and financial plan.” Results-based

Administration 33(2) (Summer 1990), 133-164, and Robert S. Kravchuk and Ronald W. Schack, “Designing Effective Performance-Measurement Systems under the Government Performance and Results Act of 1993,” *Public Administration Review* 56(4) (July/August 1996), 348-358.

budgeters had little impact on the *status quo* of resource allocations.¹³ It was officially abandoned in 1971.

In Canada, the federal government adopted the Planning Programming Budgeting System (PPBS) in 1969.¹⁴ PPBS also attempted to put into practice the results-based budgeting techniques listed above. However, the practice of PPBS also failed to live up to the theory. As Savoie reported, program objectives were often not defined or were too vague to be used to determine effects, and budget-makers found it difficult to compare the effects of programs across departments.¹⁵ Hartle also found that objectives tended to be “simplistic,”¹⁶ and that

[t]he effectiveness of existing programs or policies was seldom if ever analyzed. In essence, PPBS was a program classification and description scheme that, although an improvement on the past, was light years from its own stated purposes.¹⁷

It would seem that PPBS made little impact on the allocation of resources, and may even have been counterproductive in that under the results-based budgeting model, the

¹³ Allen Schick, “Systems Politics and Systems Budgeting,” *Public Administration Review* 29(2) (March/April 1969), 149-150. Resource allocations may however have remained close to the *status quo* simply because results-based budgeters realized that the existing combination of programs and funding levels already came close to maximizing the potential contribution to the policy vision. Indeed, it may be argued that since policy challenges tend to be enduring, rather than being extinguished by policy action, so long as priorities remain similar, governments typically do not need to make but minor adjustments to the overall combination of programs and funding levels in any given year, and thus that there is little need for a budgeting system that, like results-based budgeting, reviews on a yearly basis the entire range of existing programs.

¹⁴ For an extensive explanation of how PPBS was intended to operate, see Canada, Treasury Board, *Planning Programming Budgeting Guide*.

¹⁵ Donald J. Savoie, *The Politics of Public Spending in Canada* (Toronto: University of Toronto Press, 1990), pp. 56-61.

¹⁶ Douglas G. Hartle, *The Expenditure Budget Process of the Government of Canada: A Public Choice–Rent-Seeking Perspective* (Toronto: Canadian Tax Foundation, 1988), p. 273.

Treasury Board gave departments more control over the inputs they used, control that they may have abused.¹⁸ PPBS was officially abandoned in 1979.

Various “post-mortems” of these results-based budgeting experiments in the two countries highlight a number of reasons behind their failure and limitations of results-based budgeting in general.¹⁹ Some of these reasons are specific to the precise form of results-based budgeting that was used and the situational context in which it was used,²⁰ and thus are not necessarily applicable to future experiments. Other reasons are more generic and speak to flaws in the general theory and practice of results-based budgeting which limit its usefulness to budget-makers in almost any democracy and in almost any age. These limitations may be grouped into three categories: methodological, practical, and political.

¹⁷ Ibid., p. 166.

¹⁸ Savoie, *Politics*, p. 60. This concern was also highlighted by the Auditor General in his 1976 Report to Parliament when he wrote that he was “deeply concerned that Parliament—and indeed the Government—[had] lost, or [was] close to losing, effective control of the public purse” (Auditor General of Canada, *Report of the Auditor General for the Fiscal Year Ended March 31, 1976* (Ottawa: Minister of Supply and Services, 1976), p. 9).

¹⁹ See for example Allen Schick, “A Death in the Bureaucracy: The Demise of Federal PPB,” *Public Administration Review* 33 (March/April 1973), 146-156; Aaron Wildavsky, “A Budget for All Seasons? Why the Traditional Budget Lasts,” *Public Administration Review* 6 (November/December 1978), 501-509; Hartle, *op. cit.*; and Sutherland, *op. cit.* Many of these limitations were also highlighted by results-based budget-makers in United States, General Accounting Office, “Results-Oriented Budget Practices in Federal Agencies,” GAO-01-1084SP (August 2001), 25-27, and in a recent study of results-based budgeting in American states (Julia E. Melkers and Katherine G. Willoughby, “Budgeters’ Views of State Performance-Budgeting Systems: Distinctions across Branches,” *Public Administration Review* 61(1) (January/February 2001), 62-63). For a similar list and excellent discussion of the limitations of performance measurement, see Burt Perrin, “Effective Use and Misuse of Performance Measurement,” *American Journal of Evaluation* 19(3) (1998), 367-379.

²⁰ See especially Schick, “A Death in the Bureaucracy.”

Methodological limitations

The first category of limitations concerns difficulties that results-based budgeters may have with conceptualizing policy systems and determining how to study them. For a variety of reasons, it can be quite difficult to find the appropriate methodology to predict the cost-effectiveness of programs.

First, the policy vision and the goals of programs are often, for technical and/or political reasons, vague or unstated. It can thus be difficult to fully understand exactly what a program is supposed to accomplish, as well as to clearly identify the indicators which measure its success.²¹ For example, some programs are desired for their symbolic characteristics, the effects of which are difficult to specify and even more difficult to measure. Related to this is the challenge posed by programs which are flexible and change according to the needs of the day. Since the goals will tend to change as well, indicators and thus predictions of effects could become outdated and thus of limited use to results-based budget-makers.

Second, programs often have multiple goals. Results-based budgeters should therefore have multiple indicators of effectiveness, especially when a single goal has multiple dimensions and thus itself requires multiple indicators. However, as the United States General Accounting Office has found, “[a] large number of measures diminishes the importance of any single measure,” as well as overwhelming actors and obscuring

²¹ See James Q. Wilson’s typology of agencies in *Bureaucracy: What Government Agencies Do and Why They Do It* (New York: Basic Books, 1989), pp. 159-171, and Barbara Wake Carroll’s discussion of the nature of policy problems and public goods in “Some Obstacles to Defining and Measuring Results,” *Optimum* 31(1) (2000), *passim*, as well as Henry Mintzberg, “Managing government, governing management,” *Harvard Business Review* (May-June 1996), 75-83.

important trends.²² Two potential solutions present themselves. First, results-based budgeters can aggregate the indicators into indexes. However, the indicators may not be aggregatable if the objectives are contradictory or measure “apples and oranges”. Furthermore, if the indicators are aggregatable, since each represents a particular benefit provided by the program, there may be a dispute among stakeholders as to how the various elements should be weighted. Since there will generally not be a technically or objectively “right” way to do this, political pressures and the biases of results-based budgeters can influence the weights selected and thus the prediction of program effects. Second, results-based budgeters can exclude some indicators. Again, though, it can be difficult to determine just which indicators are the “least important” and thus can safely be excluded. Results-based budgeters may also face indirect political pressure from stakeholders to retain indicators which highlight a particular aspect of a program and thus demonstrate commitment to their concerns.

Third, it can be difficult to establish targets, i.e. the predicted amount of effects as measured by the indicators. One basic reason why it may be difficult to predict the amount of effects is because to predict the amount of effects, results-based budgeters must first hypothesize what would happen in the future if there were no policy activity and what measurements their indicators would return if there were no program. Since the causal theories underpinning programs and thus logic models are not always known, results-based budgeters cannot always know what forces besides the program affect the

²² United States, General Accounting Office, “National Laboratories: DOE Needs to Assess the Impact of Using Performance-Based Contracts,” RCED-99-141, 1999.

outcome indicators.²³ It can therefore be difficult to gather the key pieces of information which would tell them what would happen if a given program did not operate, and thus determine the true results of the program, that is its effect on the outcome indicators. Results-based budgeters may use as second-best indicators those which measure program outputs as opposed to outcomes, since in the absence of a program those indicators would be zero, making them simple to predict. While these measures can be obtained more reliably, the performance information (i.e. information on the costs and effects of programs) generated may not be as useful.²⁴ Even outputs can be intangible and thus difficult to measure, especially when quality (as opposed to quantity) is a concern.

Other reasons why it can be difficult to predict the amount of effects are particular to the three different methods of prediction.²⁵ The first method is to estimate the maximum productive capacity of a program. Capacity can be difficult to estimate, even for policy analysts who are experts on the program's causal theory and program managers who are experts on the program's production function. The second method is to examine past performance. This method cannot be used when the program is new as there is no past performance to examine. The third method is to benchmark, i.e. use the

²³ A logic model is a graphical representation, similar to a flow chart, of the causal forces behind a social phenomenon. A logic model will depict how the intervention of a program affects—often indirectly—a phenomenon, and can be used to both design more effective program interventions and develop more valid indicators. See also J. A. McLaughlin and G. B. Jordan, "Logic Models: A Tool for Telling Your Program's Performance Story," *Evaluation and Program Planning* 22 (1999), 65-72.

²⁴ For a useful schematic and discussion of the validity/usefulness trade-off, see Tim Irwin, "An Analysis of New Zealand's New System of Public-Sector Management," *Performance Management in Government: Contemporary Illustrations*, Public Management Occasional Paper no. 9 (Paris: OECD, 1996), p. 19.

results from similar programs in other jurisdictions as a baseline measure for comparison. There is often no “right” way to select the most appropriate comparative jurisdiction and identify what modifications should be made to that jurisdiction’s indicators and targets to compensate for inter-jurisdictional differences in policy environment, program design, funding level, procedural limitations, and administrative efficiency.

Practical limitations

The second category of limitations concerns difficulties that results-based budgeters may have with collecting, analysing and applying performance information. For a variety of reasons, it can be quite difficult to actually perform this step of results-based budgeting.

Fourth, data on effectiveness are not always available. This may be because the side effects of programs are unpredictable, making it impossible to identify indicators which measure their incidence and leading to the possible problem of overlooking the detrimental “unintended outcomes.” Or, data may not be available because it is expensive to measure the indicators, or because measurement requires special access which the government cannot obtain, or because the effects of a program simply will not be realized until far in the future. Furthermore, data on spatial comparison groups may be unavailable or incompatible due to jurisdictional issues, or data on temporal comparison groups unavailable since the program had already been implemented.

²⁵ See Gary T. Henry and Kent C. Dickey, “Implementing Performance Monitoring: A Research and Development Approach,” *Public Administration Review* 53(3) (May/June 1993), 208. Each of these three methods is also limited by the basic difficulty outlined in the previous paragraph.

Fifth, results-based budgeters may suffer from information overload. On the one hand, performance information must be specific and detailed enough that results-based budgeters can actually base opinions and decisions on it. On the other hand, performance information must not be so specific and detailed that it confuses and overwhelms results-based budgeters to the point that they look elsewhere for information or, even worse, draw from it erroneous (or at least unrepresentative) conclusions and thus make poor decisions.²⁶ Striking a workable balance can be difficult. Furthermore, performance information must be collected on a wide range of diverse programs across government, covering billions of dollars of spending every year, and thus performance information cannot be easily aggregated due to the diversity of programs. Even if the amount and detail of performance information on individual programs is appropriate, when performance information on all programs is added together, the sheer mass can tax cognitive abilities to identify and address horizontal relationships.

Sixth, results-based budgeting requires many highly-skilled people to implement the various processes and keep them working properly and smoothly. Earlier in this chapter we said that the results-based budgeting process entails a number of complex steps, including determining program objectives, selecting valid and reliable indicators, estimating effects, and identifying costs. Each of these steps takes some skill to perform, and so governments need skilled employees—and enough of them to budget for all the programs across government. Tight budgets cannot always attract sufficient numbers of

²⁶ See also Lindblom, *op. cit.*

such highly-skilled employees, particularly when restrictive personnel policies constrain managers' hiring authority.

Political limitations

The third category of limitations concerns difficulties that results-based budgeters may have with encouraging bureaucratic and political actors in government to support the results-based budgeting process, especially in terms of producing good performance information. For a variety of reasons, it can be quite difficult to overcome the political disincentives to adopt results-based budgeting.

Seventh, program managers may be reluctant to produce good performance information when that information could reveal flaws in their program. A dog, it is said, will not fetch the stick with which it will be beaten.²⁷ The perceived threat of this stick may be especially high during periods of restraint or political tension, when managers sense that results-based budgeters are looking for a pretence to make cuts. Managers may therefore have an incentive to not predict effects or to predict them selectively. Managers may justify these actions by emphasizing the difficulties of predicting effects that were listed above. It is also possible for managers to ensure that more favourable performance information is produced by setting easy targets for themselves, e.g. by overestimating the costs of administration or underestimating the effects of the program, or by selecting certain indicators over others. Determined minds can usually find a way to "game" formal control mechanisms such as results-based budgeting targets.

Eighth, politicians may also be reluctant to produce good performance information, for much the same reasons. Politicians naturally do not wish to be associated with programs that have few beneficial effects, large costs, or otherwise carry the risk of unpopularity. However, when for political reasons they cannot improve or fail to advocate what appears likely to be a “poorly”-performing program, they both appear to be captured by the special interests which support the program, and reveal the “true” objectives behind the program. While advocating poorly-performing programs for political reasons is itself often justifiable, the exposure of this practice can bring attention and criticism which politicians would rather avoid. A similar situation can occur when, for political reasons, politicians cannot advocate the creation, maintenance or expansion of what appears likely to be a well-performing program. While not advocating well-performing programs for political reasons is again often justifiable, the exposure of this practice can also bring unwanted criticism. In both cases, “increasing the visibility of budgetary trade-offs”²⁸ could simply create lose-lose situations. Politicians may thus, if not adopt similar performance information-diluting tactics as their civil servants or sanction such tactics (e.g. concerning indicator and target selection), at least withhold

²⁷ See Douglas G. Hartle, *The Expenditure Budget Process in the Government of Canada* (Toronto: Canadian Tax Foundation, 1978), especially chapter 5.

²⁸ Meagan M. Jordan and Merl Hackbart, “Performance Budgeting and Performance Funding in the States: A Status Assessment,” *Public Budgeting and Finance* 19(1) (Spring 1999), 73, drawing from United States, General Accounting Office, “Performance Budgeting: State Experiences and Implications for the Federal Government” (GAO/AFMD-93-41), 1993.

vital political support for results-based budgeting in general when they fear it will limit their discretion over the details of programs and spending.²⁹

Ninth, identifying indicators can have a perverse effect on civil servants' behaviour. Goal displacement can occur when civil servants re-orient their activities so as to maximize program performance *as measured by the indicators*. As Wilson has noted, "[w]ork that produces measurable outcomes tends to drive out work that produces unmeasurable outcomes."³⁰ If the multiple indicators were able to measure all the dimensions of "desirable" results, while excluding all possible kinds of "undesirable" results, then the goals would be well-placed and this kind of re-orientation would be unproblematic. Unfortunately, such a scenario is unrealistic: indicators almost always leave uncaptured some dimensions of desirable results since not all dimensions are known or have good indicators, and even when there are good indicators, they often cannot all be included out of political concerns or concerns over trying to manage too many indicators simultaneously. This problem may also tend to increase over time, if program environments and objectives change faster than do the indicators.

The consequences of goal displacement may then be that civil servants fail to pursue and achieve truly desirable results which happen not to be measurable, or were only recently selected, but do succeed in pursuing and achieving results which do happen

²⁹ See especially Wildavsky, "The Political Economy of Efficiency," 305; Peter Aucoin, *The new public management: Canada in comparative perspective* (Montreal: IRPP, 1995), p. 188; and Evert A. Lindquist, "Getting Results Right: Reforming Ottawa's Estimates," *How Ottawa Spends 1998-99: Balancing Act: the Post-Deficit Mandate*, ed. Leslie A. Pal (Toronto: Oxford University Press, 1998), p. 165.

³⁰ *Op. cit.*, page 161. Or more simply, "what gets measured, gets done" (and, presumably, what does not get measured does not get done). This phenomenon is especially likely to occur when rewards and incentives are linked to scores on performance indicators.

to be measurable and actually were selected, but (marginally) are not worth the cost or do not contribute as much to either the program's aims or the policy vision as other results would. Senior civil servants and politicians who fear these consequences may as a result not support results-based budgeting.

Finally, both civil servants and politicians in "spender" departments may be reluctant to provide performance information to the "guardian" departments who, as central budget agencies, direct the results-based budgeting process. Spenders may fear that guardian use of performance information would only serve to limit their autonomy, which, as we suggested in earlier chapters, runs counter to their rational self-interest. Furthermore, as Mitchell has suggested and the GAO has observed, this fear could be heightened if spenders believed that guardians used performance information to not only control the vertical elements of programs but also co-ordinate their horizontal elements, since such co-ordination could result in loss of "turf" or even being held responsible for the actions (or lack of action) of other departments.³¹

Table 2 summarizes the limitations listed above. From this review of results-based budgeting's methodological, practical, and political limitations, we may surmise that any results-based budgeting system, particularly in a democracy such as the U.S. or Canada, is unlikely to work as well in practice as it might in theory.

³¹ James R. Mitchell, "Organizing for the Future: Notes for an Address to the TBS Government Operations Sector Retreat," Strathmere, Ontario, June 26, 2001; United States, General Accounting Office, "Managing for Results: Using the Results Act to Address Mission Fragmentation and Program Overlap," GAO/AIMD-97-146, August 1997, p. 5. For a similar concern involving the accountability of actors in networks spanning governments, see Beryl A. Radin, "The Government Performance and Results Act (GPRA): Hydra-Headed Monster or Flexible Management Tool?", *Public Administration Review* 58(4) (July/August 1998), 311.

Table 2. Limitations of results-based budgeting

<i>Methodological</i>
1) uncertain policy vision, program goals and indicators of success
2) multiple program goals and indicators of success
3) uncertain targets of success
<i>Practical</i>
4) unavailable data
5) information overload
6) human resources requirements
<i>Political</i>
7) program managers fear reprisal
8) politicians fear loss of policy-making discretion
9) goal displacement
10) spenders protect turf

Current practices

Despite these limitations, both the U.S. and Canada began fresh experiments with results-based budgeting in the 1990s. A number of factors have been suggested as responsible for its revitalization.³²

First was the fiscal crisis. As budgets became tighter and a greater number of worthwhile programs had to be foregone, it became more important to at least appear to carefully scrutinize spending and ensure that the choices made concerning which programs to fund and to what extent were in keeping with overall government priorities.

³² See Aucoin, *op. cit.*, chapter 1; Lindquist, *op. cit.*, pp. 166-167; Naomi Caiden, "A New Generation of Budget Reform," *Taking Stock: Assessing Public Sector Reforms*, eds. B. Guy Peters and Donald J. Savoie (Montreal & Kingston: McGill-Queen's University Press, 1998), 252-254; and Allen Schick, "The Changing Role of the Central Budget Office," *OECD Journal on Budgeting* 1(1) (2001), *passim*. For more on broader developments in Canadian fiscal policy in the 1990s, see Robert M. Campbell, "The Fourth Fiscal Era: Can There Be a 'Post-Neo-Conservative' Fiscal Policy?", *How Ottawa Spends 1999-2000: Shape Shifting: Canadian Governance Toward the 21st Century*, ed. Leslie A. Pal (Toronto: Oxford University Press, 1999), pp. 113-149.

Second was the neo-conservative revolution of the 1980s. Publics became less accepting of profligate spending and expected greater accounting by governments for the results of programs funded with their tax dollars. Third was the availability of better information technology. Increased computing capacity facilitated the generation, communication, analysis and application of information on both the costs and results of programs.³³

Fourth was the growing popularity of new public management ideas. As governments became more accepting of new public management ideas such as separating the authority and responsibility for the formulation of policy from its implementation, central budget staffs grew more interested in the results that programs were expected to produce. Fifth was globalization. As the need for governments to co-ordinate and direct departments as part of larger, government-wide industrial, economic, and social policy strategies increased, so did their need to understand and respond to how the programs of those departments did or did not work together.³⁴ More generally, we might also suggest that enough time had passed since the previous attempts at results-based budgeting that enough politicians and practitioners inside government, by the 1990s, either had forgotten how poorly it worked in the past or were in fact too young to have been directly involved

³³ Joseph S. Wholey and Harry P. Hatry, "The Case for Performance Monitoring," *Public Administration Review* 52(6) (November/December 1992), 605.

³⁴ B. Guy Peters and Donald J. Savoie, *Managing Incoherence: The Coordination and Empowerment Conundrum* (Ottawa: Canadian Centre for Management Development, 1995), pp. 12-13; Canada, Treasury Board Secretariat, *Report on Plans and Priorities 2000-01* (Ottawa: PWGSC, 2000), *passim*.

in those attempts, and so did not fully appreciate the limitations of the approach. These two governments may be suffering from a loss of institutional memory.³⁵

Caiden has noted that the 1990s reforms of both the U.S. and Canada, as well as those of other countries such as the U.K., Australia, New Zealand and Sweden, aim to: 1) reduce and control deficits by reducing expenditures; 2) allow for more flexible and responsive policy; 3) strengthen and centralize policy-making; 4) improve the responsiveness of the bureaucracy to political direction; 5) improve the effectiveness of policy; and 6) allow citizens to hold their governments more accountable.³⁶

Let us now examine the American and Canadian reforms in greater detail.

United States

In the U.S., results-based budgeting was revitalized in 1993 when, following recommendations made by Vice President Gore's National Performance Review,³⁷ Congress enacted the Government Performance and Results Act of 1993, also known as the Results Act or GPRA.³⁸ GPRA legislation affects both the preparation and the

³⁵ See also Phillip G. Joyce, "The Reiterative Nature of Budget Reform: Is There Anything New in Federal Budgeting?", *Public Budgeting and Finance* 13(3) (Fall 1993), 36-49, and Perrin, *op. cit.*, 368.

³⁶ Caiden, *op. cit.*, p. 258.

³⁷ United States, *From Red Tape to Results: Creating a Government That Works Better and Costs Less* (Washington: Report of the National Performance Review, 1993). See also Beryl A. Radin, "The Government Performance and Results Act (GPRA): Hydra-Headed Monster or Flexible Management Tool?", *Public Administration Review* 58(4) (July/August 1998), 308, Michael J. Curro, "Federal Financial Management and Budgeting: NPR Recommendations and GAO Views," *Public Budgeting and Finance* 15(1) (Spring 1995), 19-26, and Michael J. Wargo, "The Impact of the President's Reinvention Plan on Evaluation," *Evaluation Practice* 15(1) (February 1994), 63-72.

³⁸ P.L. 103-62, 107 Stat. 285. For the entire text, see web site: <http://www.whitehouse.gov/omb/mgmt-gpra/gplaw2m.html>.

adoption of the expenditure budget, and as such, both the executive and the legislature in their budget-making roles.

The Results Act's stated objectives are to:

- 1) improve the confidence of the American people in the capability of the Federal Government, by systematically holding Federal agencies accountable for achieving program results;
- 2) initiate program performance reform with a series of pilot projects in setting program goals, measuring program performance against those goals, and reporting publicly on their progress;
- 3) improve Federal program effectiveness and public accountability by promoting a new focus on results, service quality, and customer satisfaction;
- 4) help Federal managers improve service delivery, by requiring that they plan for meeting program objectives and by providing them with information about program results and service quality;
- 5) improve congressional decisionmaking by providing more objective information on achieving statutory objectives, and on the relative effectiveness and efficiency of Federal programs and spending; and
- 6) improve internal management of the Federal government.³⁹

The Results Act's main thrust is to improve the reporting relationship between departments and the Office of Management and Budget (OMB)—the American government's central budget agency—and Congress. To do this, GPRA requires departments⁴⁰ to generate three new documents which are cleared through OMB and transmitted to Congress.⁴¹

³⁹ Section 2(b).

⁴⁰ GPRA applies to executive agencies as defined by 5 U.S.C. 105, viz. "cabinet departments and other establishments of the Federal government, including independent agencies and Government corporations." Excluded are the legislative branch, the judicial branch, the District of Columbia, the Central Intelligence Agency, the Panama Canal Commission, the Postal Rate Commission, and the U.S. Postal Service. GPRA provides for the further exclusion of "any agency with annual outlays of \$20,000,000 or less," although it "does not authorize any exemption of a component of a department or independent agency, such as a bureau or office, that annually spends \$20 million or less." See United States, Office of Management and Budget, Circular A-11, July 19, 2000, section 200.3, and P.L. 103-62, 107 Stat. 285, section 4. For a complete list of organizations in the American federal government, see web site: http://www.whitehouse.gov/WH/Independent_Agencies/html/independent_links.html.

The first document is the multi-year strategic plan. In the strategic plan, a department outlines, for five years in the future, such high-level information as its mission statement, long-term goals, and general activities. There is no scheduled timetable for the preparation, central review, or transmission of strategic plans.

The second document, and the most important for our purposes, is the annual performance plan, or APP. In the APP, departments present the details of their programs for the budget year, focusing especially on the results to be achieved, the resources used and activities undertaken to achieve those results, and how they will verify performance.

The Results Act does not mandate a specific and common format for departments to follow when preparing their plans. It does, however, require that a plan will:

- 1) establish performance goals to define the level of performance to be achieved by a program activity;
- 2) express such goals in an objective, quantifiable, and measurable form;
- 3) briefly describe the operational processes, skills and technology, and the human, capital, information, or other resources required to meet the performance goals;
- 4) establish performance indicators to be used in measuring or assessing the relevant outputs, service levels, and outcomes of each program activity;
- 5) provide a basis for comparing actual program results with the established performance goals; and
- 6) describe the means to be used to verify and validate measured values.⁴²

It is clear from OMB guidance to departments on the preparation of APPs that they are supposed to clearly identify the outcomes and results of programs, and link them to the costs of programs. According to the OMB,

⁴¹ See also Radin, *op. cit.*, 308.

⁴² Section 4(b).

[t]he linkage between the annual plan and the budget is based on the program activities in the program and financing (P&F) schedules in the president's Budget. . . . The program activity structure is the foundation for defining and presenting performance goals and indicators.⁴³

Aligning program format with that of budget accounts—and thus performance goals with budget resources⁴⁴—can facilitate budgeting by results, so that “performance plans can help Congress determine . . . whether the benefits of performance justify the expected costs.”⁴⁵

The OMB also asks departments to highlight in their APPs the activities and performance targets that address horizontal policy issues, and discuss how achieving the performance target supports a comprehensive governmental response to the issue.⁴⁶

The third document is the annual performance report, or APR. Submitted by departments to Congress in March, the performance report is the feedback mechanism where departments report and explain the performance of their programs for the previous fiscal year, using the indicators and targets set out in the previous fiscal year's APP.

The APPs figure prominently in the executive branch's expenditure budget-making process. The key events of that process, focussing in particular on micro- and meso-level allocation decisions, are as follows.⁴⁷

⁴³ United States, Office of Management and Budget, Circular A-11, scn. 220.8. Departments may however deviate “by consolidating, aggregating, or disaggregating the program activities included in the P&F schedules . . . if this would enhance the plan's informative value” (ibid). In this case, departments should provide a crosswalk.

⁴⁴ OMB, Circular A-11, scn. 220.3.

⁴⁵ United States, General Accounting Office, “Agencies' Annual Performance Plans Under The Results Act: An Assessment Guide to Facilitate Congressional Decisionmaking,” Version 1, GAO/GGD/AIMD-10.1.18, February 1998, pp. 12-13.

⁴⁶ Circular A-11, scn. 220.7.

Winter: President and Cabinet establish overall spending priorities for the budget year

Spring: OMB issues planning guidance to departments on priorities and spending limits

Spring and summer: OMB works with agencies to identify major issues, develop and analyze program options; OMB issues Circular A-11, outlining reporting requirements for APPs

September: departments submit initial APPs to OMB

October-November: OMB reviews initial performance plans in light of presidential priorities, budget constraints, and expected program performance

November: OMB advises President on allocations; “passback”: OMB informs departments of its decisions regarding allocations

December: departmental appeals to OMB and President

January: OMB finalizes allocation decisions; departments prepare final APPs taking into account OMB’s decisions; OMB reviews congressional budget justification materials, including final APPs

February: President transmits budget to Congress; departments submit final APPs to Congress

Late fall (optional): departments may prepare a revised APP reflecting congressional appropriations action.

APPs do not figure as prominently in the congressional expenditure budget-making process, but can provide members of Appropriations subcommittees with valuable information concerning the costs and results of programs, information they can use when making decisions on the allocation of funds within and between departments.

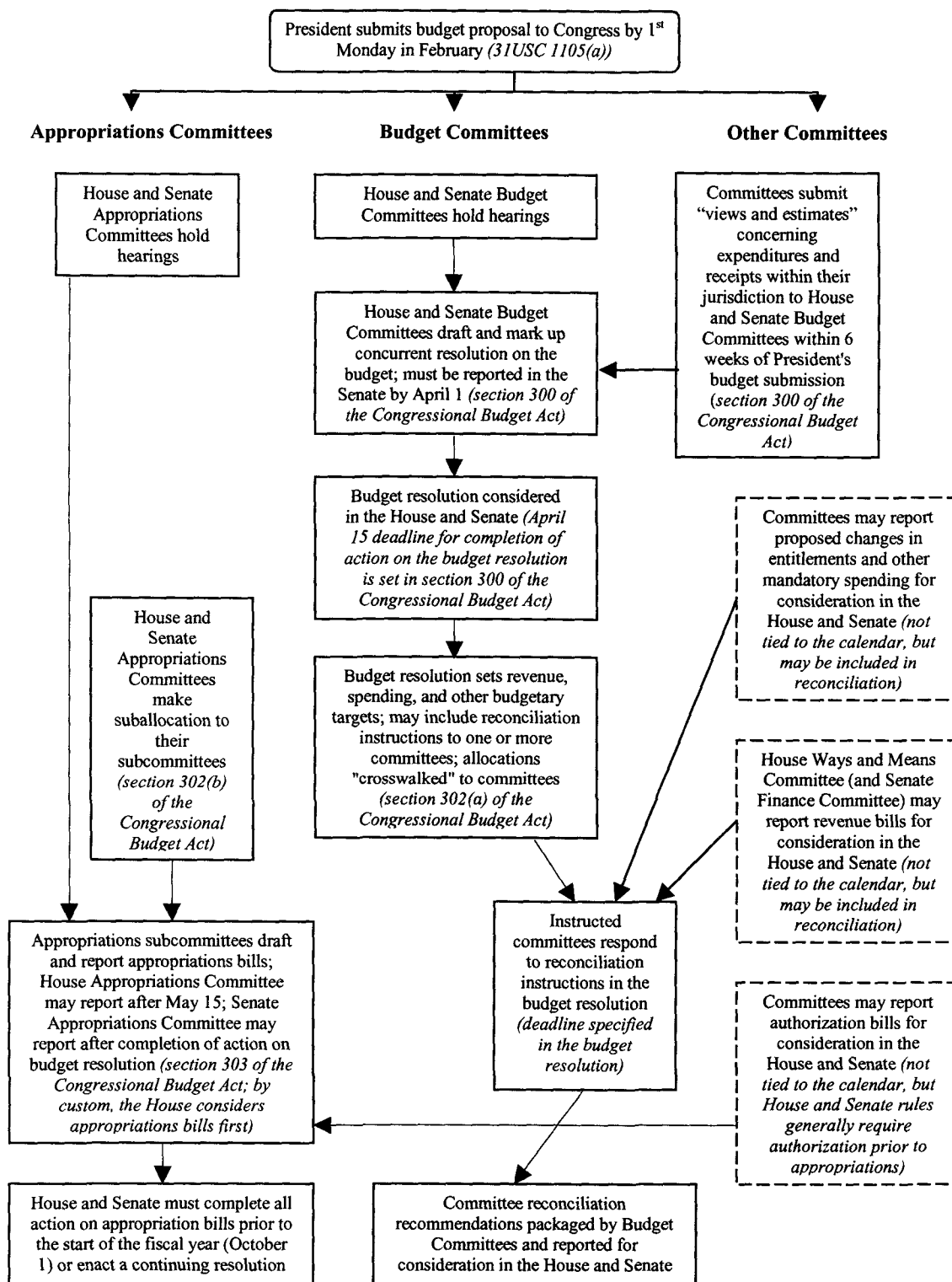
The congressional process may be illustrated as in figure 7.⁴⁸

From this brief look at GPRA we may highlight four important features. First, the president establishes priorities early in budget cycle, so departments can focus on and

⁴⁷ Drawn from OMB, Circular A-11, scn. 10, Peter Sperry, *The Heritage Foundation Guide to the Federal Budget Process* (Washington: Heritage Foundation, 2000), pp. 8-11, and Radin, *op. cit.*, 309. Of course, the actual process may not unfold in such a linear fashion. This representation does however have heuristic value.

⁴⁸ James V. Saturno, “The Congressional Budget Process: A Brief Overview,” Congressional Research Service Report RS20095 (December 1, 2000), p. 6. For a similar illustration, see Wildavsky and Caiden, *op. cit.*, p. 310.

Figure 7. Congressional expenditure budget-making process



assess the utility of program results.⁴⁹ Second, departments identify the expected results of programs and link them to costs. Third, OMB has the opportunity to use this performance information when advising the president on how to manage horizontal issues. Fourth, appropriations subcommittees can use the same information when deciding on the contents of appropriations acts.

Canada

In Canada, results-based budgeting was revitalized in 1995 when the federal government adopted the Expenditure Management System, or EMS. The EMS also affects both the preparation and the adoption of the expenditure budget, and as such both the executive and the legislature in their budget-making roles, but since as we have said the Canadian legislature has a very minor role in budgeting (particularly as concerns the details of the expenditure budget), we will focus on the use of the EMS within the executive branch.

The EMS was designed primarily to help the government control its expenditures and achieve its deficit reduction target of 3% of GDP by 1996-97.⁵⁰ A major reason why the Policy and Expenditure Management System (PEMS)—the budgeting system which preceded the EMS—was not successful in either controlling aggregate expenditures or achieving allocative efficiency is because of the existence of policy reserves and the ease with which departments could access those reserves to fund new policy initiatives:

⁴⁹ Allen Schick, *The federal budget: politics, policy, process* (Washington: Brookings, 1995), p. 55.

⁵⁰ Canada, Treasury Board, *The Expenditure Management System of the Government of Canada* (Ottawa: Treasury Board, 1995), p. 1.

departments had a ready source of new money and little incentive to reallocate funds from within their own organizations.⁵¹ The EMS corrected this flaw by eliminating policy reserves, although it retained small and truly difficult-to-access emergency reserves for contingencies.

The absence of policy reserves for new initiatives forced departments to re-allocate from within if they wanted to fund new initiatives. To draw a link between the EMS and PEMS, we could say that the EMS is a “departmental envelope” system.⁵² The EMS thus promoted an “ongoing review of programs and spending” as departments looked within for sources of funds with which to finance new, higher-priority programs.⁵³ With any such review, there is a danger that the re-allocated funds will inadvertently come from well-performing and/or high priority programs, and go to poorly-performing and/or low priority programs. To guard against this, the EMS emphasized a departmental “focus on performance” and the generation of “performance information on the results achieved in meeting strategic goals and program objectives” so that funds would be more

⁵¹ OECD, *Budgeting in Canada* (PUMA/SBO(99)5/FINAL) (Paris: OECD, 1999), p. 8. See also G. Bruce Doern, Allan M. Maslove and Michael J. Prince, *Public Budgeting in Canada: Politics, economics, and management* (Ottawa: Carleton University Press, 1988), pp. 115-128, and Donald J. Savoie, *Governing from the Centre* (Toronto: University of Toronto Press, 1999), *passim*. PEMS could be seen as a results-based budgeting system in that it was hoped that the existence of policy envelopes would prompt departments not only to re-allocate, but in fact to do so on the basis of expected program costs and results. See also Richard Van Loon, “The Policy and Expenditure Management System in the Federal Government: The First Three Years,” *Canadian Public Administration* 26 (Summer 1983), 255-285.

⁵² Jacques Bourgault, Maurice Demers and Cynthia Williams, “Conclusion,” *Public Administration and Public Management: Experiences in Canada*, eds. Jacques Bourgault, Maurice Demers and Cynthia Williams (Sainte-Foy, Québec: Les publications du Québec, 1997), p. 383.

⁵³ Canada, Treasury Board, “The Expenditure Management System,” p. 3. In PPBS terminology, we would say that departments had to generate X budgets that were as large as their B budgets.

likely to be re-allocated away from the poorly-performing and/or low priority programs.⁵⁴

Strategic planning was to combine with a constant, critical review of existing programs and spending to produce the optimal re-allocation of funds from low to high priority initiatives and so achieve allocative efficiency.⁵⁵

The EMS promoted such strategic budgeting by mandating that departments,⁵⁶ as part of the annual budget cycle, prepare and submit to Treasury Board for approval business plans covering the Estimates year (i.e. the budget year) and two out-years.⁵⁷ These plans would describe, program by program, the policy challenge, policy response, program activity, resources required, and more importantly, expected results.⁵⁸ Business planning of this sort was to help departments think strategically and align limited resources and programs with government priorities, as well as help the reviewing TBS ensure that departmental agendas were co-ordinated and consistent with the overall governmental policy strategy.⁵⁹

Tied to the introduction of the EMS was a reform of the Estimates. The Estimates is the appropriations bill that the government tables in Parliament for its approval. The Estimates comprise three parts, which contain increasingly detailed information on the

⁵⁴ Canada, Treasury Board, "The Expenditure Management System," pp. 3, 5.

⁵⁵ Canada, Treasury Board, "The Expenditure Management System," p. 1.

⁵⁶ Virtually all departments and agencies, numbering 87 in fiscal year 2001-2002, submit RPPs and DPRs. For a complete list see web site: <http://www.tbs-sct.gc.ca/tb/estimate/ESTIME.HTML>.

⁵⁷ Out-years are the fiscal years following the budget year.

⁵⁸ Canada, Treasury Board, "The Expenditure Management System," p. 6.

estimated expenditures of the government, and of each department, for the upcoming fiscal year.⁶⁰

In the past, the Estimates had not provided parliamentarians or the public with clear indications of departmental activities or program results. In 1997, the government divided Part III of the Estimates into two sections.⁶¹ The first section, tabled in the spring, is known as the Departmental Reports on Plans and Priorities (RPPs). Originally based on the departmental business plans, the RPPs outline program inputs, activities, performance indicators, and performance expectations for the Estimates year and the two following years. The RPPs are also expected to highlight the horizontal aspects of departmental operations.⁶² The second section, tabled in the fall with the Report of the President of the Treasury Board to Parliament, is known as the Departmental Performance Reports (DPRs). The DPRs report program performance from the previous fiscal year, and are to use the same categories and indicators found in the RPPs, so that readers can clearly match expected results to actual or obtained results.

The operation of the EMS has changed slightly since its inception. In 1998 the business plans were replaced with less-detailed—and less regular—Deputy Head's

⁵⁹ Evan H. Potter, "Treasury Board as Management Board: The Re-Invention of a Central Agency," *How Ottawa Spends 2000-2001: Past Imperfect, Future Tense*, ed. Leslie A. Pal (Toronto: Oxford University Press, 2000), pp. 114, 98.

⁶⁰ See also Kenneth Kernaghan and David Siegel, *Public Administration in Canada*, 3rd edn (Toronto: ITP Nelson, 1995), p. 628.

⁶¹ For a full account of the developmental phase of this reform, see Lindquist, *op. cit.*, 156-9.

⁶² Canada, TBS, "Guidelines for the Preparation of the 2000-2001 Report on Plans and Priorities," October, 1999, pp. 14, 19.

strategic letters and *ad hoc* business plan/business case submissions.⁶³ The RPPs, however, remained, as did the need for TBS to approve them as part of the annual budget cycle. Also, since FY 1999, funds for new policy initiatives have been available and departments have not faced the same need to re-allocate from within. According to the Department of Finance, most new initiatives are now approved by cabinet out of the surplus.⁶⁴

The key events of the expenditure budget-making process, again focussing in particular on micro- and meso-level allocation decisions, are as follows.⁶⁵

June: Minister of Finance presents his economic update to the Cabinet and indicates how large the next expenditure budget will be and how large the “surplus for planning” is (repeated in October and January)

September: Cabinet establishes expenditure strategy in a priorities exercise

September-October: the two cabinet policy committees⁶⁶ review and approve in principle departmental policy proposals

October-November: TBS issues guidance to departments on the preparation of RPPs

December: Cabinet prioritizes approved proposals and determines which will be funded

December-January: TBS reviews draft RPPs

January-February: Minister of Finance and Prime Minister make final decisions

Late February: Minister of Finance delivers budget speech; President of the Treasury Board tables Parts I and II of the Estimates

March: departments modify RPPs as required to reflect budget announcements

Late March: final submission and tabling of RPPs

⁶³ Canada, TBS, “Renewed Approach to Business Planning,” Letter from the Secretary of the Treasury Board to Deputy Ministers and Agency Heads (with enclosures), February 11, 1999.

⁶⁴ Canada, Department of Finance, Fiscal Policy Branch, “The Hitchhiker’s Guide to the Budget Process” (Presentation slides), September 2000.

⁶⁵ Canada, Department of Finance, “Hitchhiker’s Guide”; OECD, “Budgeting in Canada”; TBS RPP Call Letters from FY 1996-1997 to FY 2001-2002 (web site: <http://www.tbs-sct.gc.ca/tb/estimate/ESTIME.HTML>, accessed March 3, 2001).

⁶⁶ Namely, the Cabinet Committee on the Economic Union (CCEU) and the Cabinet Committee on the Social Union (CCSU).

From this brief look at the EMS we may highlight three important features. First, the Cabinet establishes its priorities early in the budget cycle, so departments can focus on and assess the utility of program results. Second, departments may identify the expected results of programs and link them to costs. Third, TBS may have the opportunity to use this performance information when advising the Cabinet, Prime Minister and Minister of Finance on resource allocation and how to co-ordinate horizontal issues. Treasury Board's role under the EMS could be quite strategic, using its knowledge of departmental performance to guide and co-ordinate resource allocation decisions.⁶⁷

Comparisons

The Results Act and the EMS share a number of important similarities. First, they both allow for the early establishment of a policy vision by responsible politicians. Second, they both attempt to identify and measure key aspects of programs at all stages of their logic models (*viz.* inputs, activities, outputs, outcomes and effects), with an emphasis on outcomes and effects, and both attempt to link those outcomes and effects to the costs of programs. They even have similar reporting structures: the APPs mirror the RPPs and the APRs mirror the DPRs, and in both countries, departments predict performance and then report actual performance. Third, both central budget agencies collect and can use performance information when making allocation decisions and in so

⁶⁷ Peter Harder and Evert A. Lindquist, "Expenditure Management and Reporting in the Government of Canada: Recent Developments and Backgrounds," *Public Administration and Public Management: Experiences in Canada*, eds. Jacques Bourgault, Maurice Demers and Cynthia Williams (Sainte-Foy, Quebec: Les publications du Québec, 1997), p. 89; Potter, *op. cit.*, *passim*.

doing co-ordinate the effects of horizontal policy issues. Table 3 summarizes and compares other aspects of the Results Act and the EMS.

Table 3. Characteristics of GPRA and EMS

Country	Legislation/ policy	Year adopted	Central budget office	Strategic plan	Internal planning document	External performance plan	External performance report
U.S.	GPRA	1993	OMB	Strategic plan	APP	APP	APR
Canada	EMS	1995	TBS	[none]	Business plan/ strategic letter/ business case	RPP	DPR

The Results Act and the EMS also share two important similarities with PPB and PPBS.⁶⁸ First, central to all these budgeting systems is an identification of the anticipated costs and results of existing and proposed programs. Second, these costs and results are to be compared to each other by the central budget agency as it selects a combination of programs and funding levels. The Results Act and the EMS may not be exactly identical to PPB and PPBS,⁶⁹ but the characteristics they have in common are perhaps more important than the characteristics that differentiate them, because it was problems with

⁶⁸ See also United States, GAO, "Performance Budgeting: Past Initiatives Offer Insights for GPRA Implementation," GAO/AIMD-97-46, March, 1997, and Radin, *op. cit.*, 309.

⁶⁹ For some differences, see again United States, GAO, "Performance Budgeting," Radin, *op. cit.*, 309, and Julia Melkers, "Changing Communication Patterns in the Budget Process," Paper presented at the Annual Meeting of the Association for Budgeting and Financial Management, Washington, D.C., January 17-19, 2002, 4-7.

the characteristics they have in common that likely caused the demise of PPB and PPBS and so may threaten today's initiatives as well. The limitations of results-based budgeting listed above apply just as much to GPRA and the EMS as they did to PPB and PPBS.

Evidence of problems with GPRA and the EMS is already accumulating. It can be difficult to evaluate the success or failure of GPRA and the EMS at this time, since such systems generally take time to become established enough to be fairly assessed, and both countries are phasing them in gradually. Furthermore, it is methodologically difficult to measure and attribute effects to budgeting systems.⁷⁰

Nevertheless, we may observe that, in the U.S., a GAO review of twenty-four FY 1999 APPs found that

[m]ost of the plans . . . contained major weaknesses that undermined their usefulness in that they (1) did not consistently provide clear pictures of agencies' intended performance, (2) generally did not relate strategies and resources to performance, and (3) provided limited confidence that agencies' performance data will be sufficiently credible [F]ew plans consistently included a comprehensive set of goals that focused on the results that programs were intended to achieve.⁷¹

⁷⁰ Lindquist, "Getting Results Right," p. 154; Caiden, *op. cit.*, pp. 279-280; John Hart, "Central Agencies and Departments: Empowerment and Coordination," *Taking Stock: Assessing Public Sector Reforms*, eds. B. Guy Peters and Donald J. Savoie (Montreal and Kingston: McGill-Queen's University Press, 1998), pp. 289-293; Melkers and Willoughby, *op. cit.*, 60. One should probably wait even longer to evaluate the success of a results-based budgeting system's efforts to co-ordinate horizontal policies since, being more difficult than vertical control, horizontal co-ordination would likely not be fully attempted until after the system and its operators had proven able to use results-based budgeting to exercise vertical control over policies.

⁷¹ GAO, "Managing for Results: An Agenda To Improve the Usefulness of Agencies' Annual Performance Plans," GAO/GGD/AIMD-98-228, September 1998, pp. 2-3.

A subsequent GAO review of the FY 2000 APPs of those same departments found “continuing weaknesses in the plans’ clarity of intended performance, discussions of strategies and resources, and confidence in the credibility of performance information.”⁷² The OMB has been just as critical, commenting recently that “[t]he structure of the federal budget makes it impossible to identify the full cost associated with individual programs,” “[a]gency performance measures tend to be ill defined and not properly integrated into agency budget submissions,” and that while “scarce federal resources should be allocated to programs and managers that deliver results . . . this is seldom done because agencies rarely offer convincing accounts of the results their allocations will purchase.”⁷³

In Canada, the Office of the Auditor General reviewed the RPPs of forty-seven departments for fiscal years 1995-96 through 2000-2001, and found that the quantity and quality of the performance information provided in the RPPs, while improving, was on the whole still below expectations.⁷⁴ TBS reviews also suggest that information on the costs and results of programs provided in the RPPs is not of sufficiently high quality to help TBS make resource allocation decisions.⁷⁵

⁷² United States, GAO, “Managing for Results: Opportunities for Continued Improvements in Agencies’ Performance Plans.” GAO/GGD/AIMD-99-215, July 1999, p. 7.

⁷³ United States, OMB, *The President’s Management Agenda: Fiscal Year 2002*, August 2001, p. 27.

⁷⁴ Canada, Auditor General of Canada, *2000 Report of the Auditor General of Canada to Parliament*. Ottawa: Office of the Auditor General of Canada, 2000.

⁷⁵ Canada, TBS, *Results for Canadians: A Management Framework for the Government of Canada*, March 30, 2000, pp. 3, 12-13; Canada, TBS, “Summary of Round Table Discussions: Peer Review of RPPs,” April 13, 1999; Canada, TBS, “Managing for Results: Business Planning and Modern Comptrollership.” See also Savoie, *Governing from the Centre*, pp. 219, 293; Lindquist, “Getting Results Right,” pp. 168, 176; Potter, *op. cit.*, p. 113; and Evert Lindquist, “Business Planning Comes to Ottawa:

In chapter 7 we will also find that the amount of performance information contained in APPs and RPPs can vary widely and in cases be quite low. In all, it is by no means clear that central budget agencies in either country receive the performance information they think they need to make results-based budgets.

While the Results Act and the EMS share many similarities as results-based budgeting systems, the political institutions within which they operate are different in one important respect: regime type. As we saw in chapter 2, the U.S. is a separated system where the legislature plays a large role in the formulation of expenditure budgets, whereas Canada is a Westminster system where the legislature does not play a large role. Results-based budgets under GPRA are effectively made by more legislative budget-makers than are results-based budgets under the EMS, and are more likely to be allocatively inefficient due to the additional problems associated with legislative horizontality. The key difference to note is that the greater role of the legislature in the U.S. increases the amount of co-ordination that is needed and so possibly increases the need for a budget-making system that can so co-ordinate.

Summary

In this chapter we examined the theory of results-based budgeting and its practice in the U.S. and Canada, finding that GPRA and the EMS are similar to both each other and previous results-based budgeting experiments, but that the macro political institutions

within which they operate are different. We suggested that the methodological, practical, and political limitations that plagued PPB and PPBS in the 1960s and 1970s remain and may be responsible for the limited success of GPRA and the EMS in the 1990s and 2000s. But are the experiences with GPRA and the EMS the same across departments? In the U.S., PPB was retained by the Department of Defense long after it had been abandoned by the federal government as a whole; might it be that, in the U.S. and Canada, results-based budgeting enjoys more success in some departments than it does in others? In particular, is results-based budgeting more successful in departments that are more horizontal due to its ability to help governments co-ordinate horizontal policy issues in addition to controlling the vertical aspects of departments' policy areas? Before turning to this question, let us examine in greater detail how—and under what conditions—results-based budgeting may help central budget agencies co-ordinate horizontal policy issues.

Chapter 5: Horizontal Budgeting

In this chapter we will discuss horizontal budgeting, or how budget-makers may use results-based budgeting to co-ordinate horizontal policies. We will begin by discussing results-based budgeting's potential to help budget-makers co-ordinate, paying particular attention to how it may be used in the American appropriations committees, where decentralized institutions do not seem to lend themselves to such centralizing budgeting systems. Then, we will examine the incentives and disincentives for budget-makers to use results-based budgeting to co-ordinate, identifying incentives and disincentives that are shared by both central budget agencies and American appropriations subcommittees, as well as incentives and disincentives that apply to one group of budget-makers but not the other. Finally, we will describe the most similar comparative method and present the hypothesized relationships between the use of results-based budgeting, the horizontality of policies, and regime type: that results-based budgeting will be used more in the United States than it is in Canada; that the use of results-based budgeting will rise in both countries as the horizontality of policies rises; and that this rise in use will be sharper in the U.S. than it is in Canada.

Potential to use results-based budgeting to co-ordinate horizontal policies

Results-based budgeting can help governments co-ordinate horizontal policies. Budget-makers in central agencies and legislatures can use performance information to identify the interactive effects of programs that cross-cut departmental and/or committee jurisdictions, and then use their knowledge of those effects to select the combination of

programs and funding levels that maximizes the actual contribution of funds to their policy visions. Results-based budgeting's potential to help budget-makers co-ordinate horizontality is not the same for executively horizontal policies as it is for legislatively horizontal policies, so our discussion will separate the two and proceed in two parts.

Executively horizontal policies

As discussed in chapter 2, the key characteristic of executive horizontality is that, since policy areas overlap, the effects of the programs of one department, although resting primarily in that department's own policy area, will spill over into other policy areas and so affect the success or failure of the programs of other departments.

This problem is similar to the one identified by Peter Drucker in The Practice of Management.¹ Here, Drucker notes that in large and complex organizations, work will be divided into multiple, differentiated functions, and workers become specialized in their labour.² The danger with such specialization, according to Drucker, is that the more workers focus on the intricacies of their own tasks, the less they may focus on the organization as a whole. When workers do not focus on the organization as a whole, they are less likely to appreciate how their tasks and outputs combine with those of other workers to produce a good or service that can be profitably sold on the market. This inward orientation can become problematic if the workers and the managers of

¹ Peter F. Drucker, *The Practice of Management* (New York: Harper & Row, 1954).

² Classic rationales for such differentiation may be found in, for example, Adam Smith, *The Wealth of Nations* (New York: Random House, 1994 [1776]), and Frederick W. Taylor, *Principles of Scientific Management* (New York: Harper and Row, 1911).

specialized units begin to see their “functional work [as] an end in itself,” rather than as one contribution to a greater end.³ Drucker goes on to assert that

[t]he functional manager’s legitimate desire for workmanship becomes, unless counterbalanced, a centrifugal force which tears the enterprise apart and converts it into a loose confederation of functional empires, each concerned only with its own craft, each jealously guarding its own “secrets,” each bent on enlarging its own domain rather than on building the business.⁴

The basic problem that Drucker analyzes here is the same as our problem of executive horizontality. Governments, like Drucker’s enterprises, are large and complex organizations that divide work into the multiple, differentiated functions of departments. Civil servants become specialized in the objects and processes of their labour, according to the unique challenges and policy responses found in different policy areas, and may focus on departmental business at the expense of taking a wider, government-wide view of their programs.⁵ Indeed, this focus was observed by the Director of the OMB in 1997, when he acknowledged that “agencies understandably have first focused on their own programs, and are only beginning to look at enhancing interagency coordination for programs or activities that are crosscutting in nature.”⁶

Departmental executives may then engage in “empire-building” and “turf protection,” building their budgets and undertaking activities with little regard for other

³ Drucker, *op. cit.*, p. 123.

⁴ Ibid.

⁵ See also C. W. Churchman and A. H. Schainblatt, “PPB: How can it be Implemented?” *Public Administration Review* 29(2) (March/April 1969), 178-189, who make a similar point about the focus of departmental managers, and Anthony Downs, *Inside Bureaucracy* (Boston: Little, Brown, 1967), who discusses why civil servants might adopt such a focus.

⁶ Statement of Franklin D. Raines, Director, Office of Management and Budget, before the Senate Appropriations and Governmental Affairs Committees, June 24, 1997, p. 3.

departments or for the aims of the government as a whole.⁷ Left to their own devices, most executives in line departments have few incentives to identify the effects of their programs on the initiatives of other departments, much less to modify their programs so as to mitigate negative effects or strengthen positive effects.

Drucker's solution involves co-ordination of effort, directed towards a common purpose.

Each member of the enterprise contributes something different, but they all must contribute toward a common goal. Their efforts must all pull in the same direction, and their contributions must fit together to produce a whole—without gaps, without friction, without unnecessary duplication of effort. Business performance therefore requires that each job be directed toward the objectives of the whole business.⁸

For our purposes, two aspects of this co-ordination are particularly important. First, it is performed by senior managers as it is they who may be high enough in the organization to know (and have as their own) the goals of the whole business, and may also be high enough to see how the outputs of the various workers and units fit together to meet those goals. Second, senior managers co-ordinate workers and units by assigning them objectives. By objectives, Drucker is careful to point out that he means the results or ends of activities, not those activities themselves.⁹ According to Drucker, “[t]hese objectives should always derive from the goals of the business enterprise,” and when

⁷ See also W. A. Niskanen, *Bureaucracy and Representative Government* (Chicago: Aldine-Atherton, 1971).

⁸ Drucker, *op. cit.*, p. 121.

⁹ *Op. cit.*, pp. 130-133.

combined should produce the same. This approach has been termed Management by Objectives, or MBO.

If Drucker's problem is similar to our own, perhaps his solution could help us as well. Certainly, the efforts of departments must "pull in the same direction" if they are to combine to maximize actual policy benefits. This co-ordination could be performed in government by senior politicians and the central agencies they head. A central budget agency, acting as a centripetal counterbalance to the centrifugal tendencies of departments, may be the most appropriate co-ordinator as, according to Schick, it

can reallocate more broadly among sectors than can a line department or ministry . . . has a more comprehensive and possibly more objective view of the government's strategic interests and program priorities than a single department that is likely to be beholden to sectoral interests . . . [and] can promote reallocations based on evidence of program effectiveness rather than subjective criteria¹⁰

These politicians and civil servants would be responsible for determining what were the goals of the whole government (the "policy vision"), and deriving from those goals the objectives of individual departments and individual programs. Just as Drucker's senior managers may use objectives to ensure that the outputs of managers contribute to the overall aims of an organization, so may the centre use objectives to ensure that the results of programs contribute to an overall governmental policy vision.¹¹

In the results-based budgeting model, the centre can identify the results of programs in two ways. The first is reactively. Departmental submissions to the centre as

¹⁰ Allen Schick, "The Changing Role of the Central Budget Office," *OECD Journal on Budgeting* 1(1) (2001), 20. See also Aaron Wildavsky, "The Political Economy of Efficiency: Cost-Benefit Analysis, Systems Analysis, and Program Budgeting," *Public Administration Review* 26(4) (December 1966), 304.

¹¹ As well as being cost-effective and cost-beneficial.

part of the annual budget cycle highlight the expected costs and results of programs. Central budget-makers can use their knowledge of the policy vision to identify which combination of programs and funding levels best maximizes departments' contribution to the policy vision. In particular, they can look not only at the vertical aspects of departmental programs, but also at their horizontal aspects.

When performance information is available, central agencies, acting on behalf of senior politicians, can take a "whole-of-government" view and identify not only overall government objectives, but also issues of importance to those overall objectives that cross-cut departmental jurisdictions. Most importantly, they can also identify what programs departments have that address those issues—at least, their "portion" of those issues—and identify how the effects of those programs combine or fail to combine to produce or fail to produce the desired effects.¹² Central budget-makers may then make their funding decisions and codify them in the results-based budget.

The second is proactively. Rather than reacting to departmental proposals, where programs may be "solutions in search of a problem,"¹³ the centre may start with the problem and facilitate the development of a solution of multiple programs across departments, each contributing a piece to the overall policy response.

¹² See United States, General Accounting Office, "Managing for Results: Using the Results Act to Address Mission Fragmentation and Program Overlap," GAO/AIMD-97-146, August 1997, p. 9. Chisholm also highlights the necessity of obtaining "information about goals and cause-effect relationships" before one can adequately co-ordinate horizontal policies (Donald Chisholm, *Coordination Without Hierarchy: Informal Structures in Multiorganizational Systems* (Berkeley: University of California Press, 1989), p. 29).

¹³ M. D. Cohen, James G. March and Johan Olsen, "A garbage can model of organizational choice," *Administrative Sciences Quarterly* 17 (1972), 1-25.

Regardless of whether the centre is reactive or proactive, it may be able to use its knowledge of the causal theory behind policy challenges and policy responses to identify program elements that address the challenges in the benefit-maximizing way, and then apportion responsibility for the production of the results associated with those program elements to the various departments. Systems analysis (and thus results-based budgeting) may be particularly useful for co-ordinating horizontal policy issues as it “involves the skilful analysis of the major factors that go into the attainment of an interconnected set of objectives,”¹⁴ and the analysis of how the activities of departments affect the success or failure of the programs of other departments¹⁵ and contribute to the achievement of broader, government-wide goals.¹⁶ Systems analysis can allow central budget-makers to identify the factors that must be addressed in order to adequately respond to horizontal issues, translate those factors into program terms, and ensure that they are produced across departments by “buying” the relevant “effects” in the budget, that is, by specifying program resources and objectives in the budget.

There are however limits to the ability of central budget agencies to co-ordinate in this fashion. As noted in chapter 2, central agencies may simply be too distant from the actual operations of programs to effectively understand and control departmental activities; indeed, it is this limitation that creates the problem of horizontality in the first

¹⁴ Allen Schick, “The Road to PPB: The Stages of Budget Reform,” *Public Administration Review* 26(4) (December 1966), 253.

¹⁵ Churchman and Schainblatt, *op. cit.*

¹⁶ United States, General Accounting Office, “Managing for Results: Using the Results Act to Address Mission Fragmentation and Program Overlap,” p. 2.

place. Nevertheless, central budget agencies, assuming they have sufficient internal capacity, may be able to effect some measure of co-ordination due to their gatekeeper function in the budgetary process.

The expected results of the programs funded in the results-based budget can then be seen, from the centre's perspective, as the objectives of those programs and the basis on which the centre co-ordinates horizontal policy issues. This approach could perhaps also be termed Management by Objectives, as the centre manages (in this case, co-ordinates) horizontal policy issues by assigning departments and programs results-based objectives through the results-based budget. Indeed, the link between MBO and results-based budgeting was noted by Fuller and Hyde, who saw MBO as

a rationally oriented process in which individual managers will have goals established, objectives defined, resources allocated, priorities determined, and final evaluation made based on those initial goals and objectives. In essence, MBO functions as both a planning and control system, whereby managers can concentrate attention and resources on their highest priority objectives.¹⁷

To avoid confusion, though, we will term this approach "horizontal budgeting" instead.¹⁸

To summarize, the potential for results-based budgeting to help governments co-ordinate executively horizontal policies is high, since central budget agencies can use systems analysis to identify the effects of programs, including their interactive effects, and from their perch atop the entire governmental organization, are in a position to co-ordinate by using their knowledge of the results of programs to select a government-wide

¹⁷ Harrell Fuller and Albert C. Hyde, "Management by Objectives through Budgeting: A Case Study," *Government Budgeting: Theory, Process, Politics*, 1st edn, ed. Albert C. Hyde and Jay M. Shafritz (Oak Park, Ill.: Moore, 1978), p. 524.

¹⁸ Horizontal budgeting is also the term used by educators George H. Delaney and Gloria Timmer (web site: http://www.idlsystems.com/phrma/Docs/1/budget_toc.html, accessed October 9, 2001).

combination of programs and funding levels that maximizes their contribution to the policy vision.

Legislatively horizontal policies

The essential problem of legislative horizontality is similar to that of executive horizontality: since policy areas overlap, the effects of programs funded by one subcommittee, although resting primarily in that subcommittee's own policy area(s), will spill over into other policy areas and so affect the success or failure of the programs funded by other subcommittees.

This problem is also similar to the one identified by Drucker.¹⁹ Large legislatures, like Drucker's corporations, tend to divide their work into multiple, differentiated functions, and workers become specialized in their labour. Such specialization is particularly likely when, as in the U.S. due to seniority and succession rules, there is little mobility between committees and between subcommittees. Subcommittee members may focus on issues within their own jurisdictions, to the neglect of issues in other jurisdictions or government-wide issues. As such, they may not appreciate how the effects of the programs they fund in their own jurisdictions affect the success or failure of programs funded by subcommittees in other jurisdictions, or combine with those programs to produce—or fail to produce—effects of government-wide importance. From a lack of appreciation of extra-jurisdictional effects may come a lack of effort to ensure that those effects are optimal, when compared to the government-

¹⁹

The Practice of Management (*op. cit.*).

wide policy vision; appropriations subcommittees may act more as independent empires that make allocations decisions in isolation from the other subcommittees than as partners in a common exercise of achieving a single government-wide policy vision.

Although this problem is similar to Drucker's, his solution is not entirely applicable. Drucker suggests that objectives be used to co-ordinate the various organizational units, objectives that are derived from the overall goals of the organization and when combined produce the same. Certainly, objectives could be set for subcommittee-funded programs that reflected the government-wide policy vision; as we have suggested, systems analysis may be used to identify the effects of programs funded by one subcommittee both on the success or failure of programs funded by another subcommittee and on the achievement of broader, government-wide goals, and once so identified, results-based budgeting may be used to codify the optimal combination of programs and funding levels in the various appropriations bills.

The cause of the inapplicability lies not in systems analysis itself, but rather in its institutional environment. Systems analysis requires that some one or some group determines the single government-wide policy vision, compares all program costs and effects to that policy vision, decides on a benefit-maximizing combination of programs and funding levels, and ensures that that combination is codified in the budget. Drucker assumes the presence of a single co-ordinator who sits atop an organizational hierarchy and can both see all programs across the organization and make authoritative decisions concerning programs and budgets for the entire organization. However, as we saw in chapter 2, there is no such actor who sits atop the American appropriations

subcommittees and can effectively specify a policy vision, analyze all programs, compare their effects to the policy vision, and authoritatively decide for the subcommittees which programs shall be funded and to what extent. Unlike in the executive branch, there is no single gatekeeper who can authoritatively co-ordinate on the basis of performance information gained from departments across subcommittees. In short, there is no single actor who can ensure that the program elements and objectives needed across government to maximize their contributions to the policy vision are actually funded in the budget.

It would thus seem that the potential for results-based budgeting to help the American government co-ordinate legislatively horizontal policies is low, since even though subcommittees could use systems analysis to identify the effects of programs, including their interactive effects, there is no single actor in a position to authoritatively co-ordinate across all subcommittee jurisdictions by using that knowledge to select a government-wide combination of programs and funding levels that maximizes their contribution to the policy vision.

While it may have been the assumption of Drucker—as well as of traditional public administration theory²⁰—that horizontal budgeting would require a single, authoritative co-ordinator, others are not so sure.²¹ Instead of a single actor surveying programs across subcommittees, deciding on the optimal combination of programs and

²⁰ As noted by Mark Sproule-Jones, “Horizontal Management,” *Canadian Public Administration* 43(1) (Spring 2000), 94. The Weberian assumption of hierarchical organization has been particularly influential (Max Weber, “Bureaucracy,” *From Max Weber: Essays in Sociology*, ed. and tr. H. H. Gerth and C. Wright Mills (Oxford: Oxford University Press, [1922] 1946).

²¹ Chisholm, *op. cit.*, chapter 1, and Luther Gulick, “Notes on the Theory of Organization,” *Papers on the Science of Administration*, eds. Luther Gulick and L. Urwick (New York: Institute of Public Administration, 1937), 3-45.

funding levels, and unilaterally imposing a budget on subcommittees, it is possible that these “formally independent but functionally interdependent”²² (that is, independent in terms of formulating their own appropriations bills, but interdependent in that the effects of programs funded by those bills cross subcommittee boundaries) subcommittees could continue to formally act unilaterally but co-ordinate these acts—and so their programs—through bilateral and multilateral negotiations.

There is some evidence to support the contention that egalitarian (as opposed to hierarchical) forms of co-ordination, such as independent subcommittees would use, have the potential to work. In some cases, egalitarian forms of co-ordination could work even better than hierarchical forms.²³

Sproule-Jones suggests four possible ways in which this could be accomplished.²⁴ First is to “restructure the character of the coupling from reciprocal into sequential or pooled couplings, where the coordination tasks are less complex.”²⁵ However, subcommittees’ budget-making acts are already pooled (the easiest to manage), and so co-ordination cannot be improved by changing this aspect of the coupling.

Second is to obtain “new resources to finance existing work-flow commitments.” However, new resources for appropriations subcommittees to allocate in the budget cannot always be counted on, and even when they are available, they are also subject to

²² Chisholm, *op. cit.*, p. 196.

²³ Chisholm, *op. cit.*, especially chapter 2; Fritz Scharpf, *Games Real Actors Play: Actor-Centered Institutionalism in Policy Research* (Boulder: Westview, 1997), especially chapter 5.

²⁴ “Horizontal Management,” 99-101.

²⁵ See also James D. Thompson, *Organizations in Action* (New York: McGraw Hill, 1967).

demands from more vertical considerations, and so co-ordination likely cannot be improved much in this way.

Third is to postpone activities until a “window of opportunity” emerges due to changes in individuals, organizations, or resources. However, budget-making activities may not be postponed for very long, certainly not long enough to witness a significant change in individuals, mandates or resources. This is so because, in the United States, failure to have passed the bills by October 1, the start of the fiscal year, risks depriving departments of all but emergency funds, as happened over the fiscal year 1996 budget.²⁶ Co-ordination thus likely cannot be improved much in this way.

Fourth is to change the institutions so as to exclude less co-operative actors and/or include more co-operative actors. However, the overall institutions of the appropriations committees and the congressional budgetary process are not easily changed because they are of high importance to a wide range of budgetary stakeholders, are highly visible, and are often based in legislation. Co-ordination thus likely cannot be improved much in this way either.

It thus seems that appropriations subcommittees must use existing funds, existing actors, and existing timetables, to address existing interdependencies. Subcommittee members and their (often extensive) staff may be able to identify interactive effects and

²⁶ Aaron Wildavsky and Naomi Caiden, *The New Politics of the Budgetary Process*, 3rd edn. (New York: Addison-Wesley, 1997), pp. 320-335. Here, eleven of the thirteen appropriations bills had not been signed into law by October 1, and by November the two branches could not even agree on a Continuing Resolution to temporarily extend funding at existing levels while they continued to negotiate. As a result, the federal government actually shut down all non-essential activities for a number of days until a Continuing Resolution was signed by the President.

work “consensually”²⁷ with members of those other subcommittees to determine how best to address cross-cutting issues, by reading the performance plans (and other budget justification material) of departments funded by other subcommittees and holding hearings with departmental officials.

However, the capacity of subcommittee members and their staff to analyze policy challenges and possible policy responses—including their interactive effects—may be low. Even if we were to assume that the subcommittees were able to arrive at a consensus on the goals they wished to achieve—and this is a large assumption, given the variety of and political strength of constituencies served by subcommittees²⁸—there would still likely be “uncertainty about cause-effect relationships”²⁹ and thus uncertainty about what program elements were needed to achieve the policy goals. This is especially likely in the U.S., where most subcommittees allocate billions of dollars to programs that are often ambitious and complex. Applying such knowledge to horizontal policy issues would also be complicated by having multiple actors, since they would need to find a way to “pool” their knowledge. However, having multiple actors could in fact facilitate gathering such knowledge in the first place as they would be both more numerous and closer to the policy action than a single hierarchical co-ordinator would be.

²⁷ Sproule-Jones, “Horizontal Management,” 98.

²⁸ See Chisholm, *op. cit.*, chapter 8. As Lindblom argued, however, actors need not agree on objectives in order to agree on means (Charles E. Lindblom, “The Science of ‘Muddling Through’,” *Public Administration Review* 19(2) (Spring 1959), 79-88).

²⁹ Chisholm, *op. cit.*, p. 194.

If subcommittees are to invest their time in analyzing horizontal policy issues and identifying co-operative policy responses, they must first be convinced that they stand to gain from such co-operation. These actors are, after all, formally independent: for the most part, they cannot be forced to co-ordinate with each other, nor are their outputs co-ordinated for them at a later stage in the budgetary process.

Certainly, members of subcommittees stand to gain from their budget-making behaviour in ways that are unrelated to the substance of their policy areas or to the extent to which the contents of the bills effectively address broad public issues and meet their stated objectives. According to rational choice theory, the primary concern of these legislators is to be re-elected, and in part they attempt to secure this by using their appropriations bills to deliver resources to specific regions of the country or to programs that serve a particular partisan purpose. These criteria are unrelated to and may even conflict with the criterion of program cost-effectiveness in relation to its stated objectives. When this is the case, concern for the substance of the programs they fund, and so the incentive to co-ordinate the effects of those programs, may be low.

When, however, there are political benefits to be gained by maximizing their programs' contributions to a policy vision, and they can claim credit for those contributions, there are many benefits that may accrue to subcommittees that successfully co-ordinate: in filling a gap in policy, money that is already being spent will become more productive, possibly more than recouping the investment required to fill the gap; in eliminating redundancy, committees will be free to spend some of their funds in other, more productive areas; and in resolving contradictions, spending will not be negated and

so will be more productive. It is often in the interests of all horizontal subcommittees to co-ordinate their spending.

But co-ordination comes with risks. In instances where changes in the funding of programs by say two subcommittees is needed to maximize the allocative efficiency of their combined spending, and they both agree to make specific funding decisions, if one does its part to co-ordinate but the other does not, the former may in the end be worse off than it would have been if it had not tried to co-ordinate at all.

Risks may be found in three types of situations. The first occurs when co-ordination is needed to fill a gap in programming, two subcommittees agree to spend money so that together they would completely fill the gap, and money spent to fill that gap produces no benefits unless the gap is completely filled. When one subcommittee spends to fill that gap and the other does not, the former produces fewer benefits in its own policy area than it could have by spending that money on issues that are more vertical.

The second occurs when co-ordination is needed to reduce program duplication in a given part of policy space, two subcommittees agree to both partially withdraw from the space, and occupying the space returns benefits to a subcommittee. When one subcommittee partially withdraws from the space and the other does not, the former risks being dominated in that space by the latter and losing further ability to spend funds and produce benefits for itself.

The third occurs when co-ordination is needed to reduce the extent to which the programs of two subcommittees are contradictory, and these two committees agree to

modify their programs in a way that equally balances the benefits each is to forgo. When one subcommittee modifies its programs and the other does not, the former forgoes certain benefits without in return gaining from the latter's removal of activities which contradict the former's and so neutralize some of the former's remaining benefits.

In each of these situations, the subcommittee that lives up to its agreement loses benefits. At the same time, in some instances of these situations, the subcommittee that does not live up to its agreement could capture some of those benefits.³⁰ It is difficult to be more specific about the potential benefits and costs of living (or not) up to subcommittees' agreements, because the "payoffs" for each subcommittee will vary across policy areas and programs. Regardless, it does appear that the situations and games the subcommittees play resemble that of "assurance,"³¹ and so we can say that when they do live up to their agreements, subcommittees risk purchasing fewer policy benefits with their budgets than they could purchase if they do not live up to their agreements.

In many cases—and certainly the cases that would be negotiated by independent actors—co-ordination requires action and thus investment from both parties if it is to increase allocative efficiency and produce benefits for subcommittees. The problem of co-ordinating appropriations subcommittees appears to be a collective action problem of

³⁰ See for example Mark Sproule-Jones, "The Theory of Horizontal Management Revisited," unpublished mss., McMaster University, Hamilton, Ontario, April 2001.

³¹ See Scharpf, *op. cit.*, chapter 4.

preventing subcommittees from attempting to “free ride” on the efforts and sacrifices of others.³²

One possible solution sees it as important for subcommittees to be able to trust each other to live up to their ends of their co-ordination agreements, for if they do not, the cautious subcommittee may decide that the benefit-maximizing strategy is to not live up to their end of the agreement. Trust is in fact specifically mentioned by Sproule-Jones as being another way to co-ordinate horizontal policies, as it is through trust that actors feel committed to maintaining reciprocal relationships.³³

Trust is in this case more than simply a certainty that a partner subcommittee will pass a bill that contains agreed-upon amounts for programs with horizontal aspects, for passage of a bill does not in itself affect policy space or legislators in the other subcommittee. Trust also entails a certainty that the effects that will actually be produced with partner subcommittees’ funds will be those that were anticipated when the subcommittees examined each others’ programs.³⁴ Indeed, the trust of a subcommittee is not so much in another subcommittee, as in the departments and programs that are being funded by that subcommittee. When considering whether or not to make and honour co-ordinating agreements, and so buy fewer immediate effects of value to itself than it would if it did not participate, a subcommittee may ask itself, can the departments funded by the

³² For more on collective action problems in budgeting, see e.g. James D. Savage, “Budgetary Collective Action Problems: Convergence and Compliance under the Maastricht Treaty on European Union,” *Public Administration Review* 61(1) (January/February 2001), 43-53.

³³ “Horizontal Management,” 99. The importance of trust in assurance games is also discussed in Scharpf, p. 138, and the value of reciprocity is discussed at length in Chisholm, *op. cit.*, pp. 114-120.

³⁴ And of course that the effects of each program will interact in the expected way.

other subcommittee be trusted to produce the effects they promise, the effects that must be produced if our own co-ordinating efforts are to succeed?

Trust can be built in a number of ways, including sanctions.³⁵ A subcommittee will have more trust in the word of another subcommittee if it knew that the threat of sanctions for failure to produce the promised effects kept it from over-promising. Subcommittees could potentially draw up formal performance contracts with each other. However, as Sproule-Jones notes, such contracts could bring with them transactions costs that are higher than the (at least perceived) benefits of co-ordination.³⁶ Furthermore, it is unclear if subcommittees as organizations are sufficiently formal to enter into legally enforceable contractual relationships with each other. Subcommittees could, however, make informal agreements with each other. Of course, the value of those agreements would hinge on their expected enforcement; the trust in subcommittees engendered by such agreements would be only as great as their faith that the other truly believes that it would be punished if it failed to live up to its promises.

However, it is by no means clear who would enforce such agreements. As no hierarchical superior exists to perform that function, subcommittees would have to enforce the agreements themselves. Fortunately, budgets are made once a year and so, since there would be multiple plays of the budget-making game, there would be opportunities for subcommittees to punish defectors through a strategy of “tit-for-tat,” whereby the offending subcommittee is in the future denied the opportunity to co-operate

³⁵ See also Savage, *op. cit.*

³⁶ Sproule-Jones, “The Theory of Horizontal Management Revisited,” 4-7.

(either in horizontal co-ordination or some other form of logrolling), or is tricked into co-operating by a subcommittee that later defects. So long as agreements involve only small numbers of subcommittees—and we believe they would (since horizontal policy issues are rarely global, but rather tend to significantly affect only a few policy areas, and since most subcommittees fund multiple departments and so multiple policy areas already)—defectors could be sanctioned without the whole co-operative experiment crumbling through mass defections.³⁷ Faith in the power of sanctions, if well-founded, can generate trust that agreements will be honoured, and so make co-operation the rational strategy. When options and incentives have been so structured, “nice guys finish first.”

Thus it is important for subcommittees to be able to tell, *pre hoc*, what a department is promising to do with its funds. Subcommittees need to be able to see what effects would be produced by their partners before they commit funds of their own. It is also important to be able to tell, *post hoc*, whether the department was successful: if subcommittees had no way to verify that the effects actually produced by the departments funded by other subcommittees were as promised, subcommittees would realize that their own departments could make promises they never meant to keep and never be caught, and the subcommittees would never be punished for defecting.

Results-based budgeting can provide subcommittees with the ability to both identify co-ordinated policy actions and ensure that partners co-operate. Performance plans can be used to analyze horizontal policy areas and promise effects, and performance reports can be used to determine whether or not departments actually

³⁷ See Scharpf, *op. cit.*, pp. 76-77. Actors would also have to believe that there was no end (i.e.

delivered the promised effects and thus underpin the enforcement mechanism needed to maintain subcommittees' trust in the promises of the departments of other subcommittees.

Using results-based budgeting to co-ordinate when the institutional framework is egalitarian rather than hierarchical seems unusual because, as Wildavsky noted, results-based budgeting "contains an extreme centralizing bias,"³⁸ and here there is no centre to collect, analyze or use performance information. Nevertheless, as we have suggested, performance information can be used by more than just a single, central co-ordinator; subcommittees can still use it to co-ordinate themselves. Results-based budgeting probably has less potential to co-ordinate legislatively horizontal issues than it does to co-ordinate executively horizontal issues, especially when we consider that the advantages of using an egalitarian structure can be gained by departments in the executive branch who reach co-operative agreements amongst themselves and then use the central budget agencies as enforcers of those agreements.³⁹ Nevertheless, there seem to be few alternatives to results-based budgeting of similar merit, and results-based budgeting has the advantage of being able to be used in both branches, which both reduces the reporting requirements of departments and facilitates the co-ordination of branches.⁴⁰ In sum,

final play) of the game.

³⁸ Wildavsky, *op. cit.*, 305.

³⁹ See Scharpf, *op. cit.*, chapter 8.

⁴⁰ See also Albert C. Hyde, "Budgeting and Intragovernmental Relations: An Instrument for Correlating Legislative and Executive Action," *Government Budgeting: Theory, Process and Politics*, 2nd edn., ed. Albert C. Hyde (Pacific Grove, Cal.: Brooks/Cole, 1992), 95-100.

results-based budgeting seems to have the potential to help governments in both Westminster and congressional systems co-ordinate their horizontal policies.

Incentives and disincentives to use results-based budgeting to co-ordinate horizontal policies

Assuming rational behaviour, central budget agencies and legislative subcommittees would use results-based budgeting to co-ordinate only if the incentives to do so outweighed the disincentives.⁴¹

There are incentives for both central budget agencies and legislative subcommittees to use results-based budgeting to co-ordinate horizontal policies. Central budget agencies have an incentive to use results-based budgeting to co-ordinate because the gains in allocative efficiency benefit the government as a whole, and the centre is made up of and responsible to politicians, e.g. the President, the Prime Minister, and the President of the Treasury Board, who have a “whole-of-government” perspective. Results-based budgeting can allow governments to maximize the contribution of budgets to their policy visions by improving both the results of programs and their relevance to government-wide priorities. Subcommittees have an incentive to use results-based budgeting to co-ordinate because the gains in allocative efficiency can also be shared amongst themselves, making their own budgets more productive. According to Chisholm, “interdependence provides . . . commonality of purpose Their

⁴¹ As previously mentioned, this discussion applies only to potential uses where the costs of using results-based budgeting to co-ordinate, in terms of resources consumed and corollary decreases in effectiveness or responsiveness, are less than the benefits. Instances of horizontal budgeting where transaction costs would exceed benefits or would be greater than those of another co-ordinating mechanism are not considered here.

interdependence means that cooperation for joint purposes is essential . . . to achieve their individual goals.’’⁴²

There are, however, also disincentives for both central budget agencies and legislative subcommittees to use results-based budgeting to co-ordinate horizontal policies. A key element of results-based budgeting is setting objectives for programs. Setting objectives can be a politically dangerous strategy for both civil servants and politicians when one is not certain if the objectives will be met, as failure would be obvious and, since the objectives would be self-determined, difficult to avoid being blamed for. Setting objectives can also be dangerous when results-based budgeting is used to co-ordinate horizontal policies, as such co-ordination may require making explicit trade-offs; for example, if two programs are found to be contradictory, results-based budgeting increases the transparency of which program—and thus constituency—loses as a result of the co-ordination. Even if the resulting gains of allocative efficiency provide resources to compensate such losers, the political costs may be high. Finally, setting objectives can be dangerous when civil servants or politicians feel compelled to initiate, maintain or expand programs that appear to be poor performers, or scale back or eliminate programs that appear to be good performers. Results-based budgeting can call unwelcome attention to such decisions.

In terms of disincentives, we must also question whether civil servants and especially politicians are genuinely motivated by the desire to improve the effectiveness of government or the provision of policy benefits. Ideally, in a democracy, they would be

⁴² *Op. cit.*, p. 37.

so motivated because citizens would desire the most policy benefits for their tax dollars and would reward with re-election only those politicians they thought had done this by carefully selecting programs and funding levels. However, the connection between voters and politicians is not always strong enough to have this effect, at least once voters have satisficed due to lack of competition in electoral markets and high costs of information, as they appear to do in Canada and the U.S. Rather, politicians may be more motivated to use programs to enhance re-election prospects by “pork barrelling.”⁴³

Not all the incentives and disincentives are symmetrical for central budget agencies and legislative subcommittees. Results-based budgeting’s “lock-in” effect (in this case, publicly announcing and committing a department to do or achieve a certain thing) may be a disincentive for central budget agencies but an incentive for legislative subcommittees.

Central agencies’ control over departmental activities as they implement budgets may be high because, as part of the executive branch, they can be in constant, direct contact with the administration of programs and make changes to programs through *ad hoc* interventions. Central agencies’ ability to do so may, however be limited by, *inter alia*, the legislature. In both Canada and the U.S., funds may not be spent by departments unless and until they have been appropriated by the legislature, and they may be spent only as the legislature directs in the Appropriations Act. The more specific the legislature is about how the funds are to be spent (i.e. spent to produce throughputs,

⁴³ In Canada, see e.g. Fred Thompson and W. T. Stanbury, “Looking Out for No. 1: Incumbency and Interest Group Politics,” *Canadian Public Policy* 10(2) (1984), 239-244; in the U.S., see e.g. R. Douglas Arnold, *The Logic of Congressional Action* (New Haven: Yale University Press, 1990).

outputs, and outcomes), the more “locked-in” to specific spending (i.e. program) activities the departments may be, and the less control the central agencies may have to influence these things after the budget has been passed. This makes it more difficult for central agencies to change programs throughout the year for policy or administrative reasons if, for example, the policy environment changes, priorities change, or learning takes place. To respond to these changes, central agencies may have to wait and make the desired program changes in the next budget cycle, or go to the legislature specially during the year to seek changes in the Act’s details. With increased legislative specificity, program change could be slower and, from the perspective of the executive branch, less effective; less charitably, central agencies could be emasculated.

Results-based budgeting can increase such specificity in appropriations acts. Annual Performance Plans (APPs) and Reports on Plans and Priorities (RPPs) are supposed to detail inputs, throughputs, outputs, outcomes and effects, and departments are supposedly committed to doing and achieving those things. For central budget agencies, lock-in may provide some benefits if it locks departments into producing the things the central agencies want. Lock-in can, however, be disadvantageous to central budget agencies in that, when their program preferences change over the budget year, or when the program details they originally wanted were denied by the legislature in the first place, they have less discretion to change program details through *ad hoc* interventions.

In the U.S., appropriations subcommittees’ control over departmental activities as departments implement budgets may be low because, not being part of the executive branch, they are not in constant, direct contact with the administration of programs and so

cannot easily make changes to programs through *ad hoc* interventions. Subcommittees can, however, influence program activity by specifying in appropriations acts exactly how the funds are to be spent, effectively “locking-in” departments to spending in the desired ways. Again, results-based budgeting is one way that appropriations subcommittees can legislate so specifically. APPs are supposed to detail inputs, throughputs, outputs, outcomes and effects, and departments are supposedly committed to doing and producing those things. For appropriations subcommittees, lock-in is advantageous as it locks departments into producing the things the subcommittees want, but does not reduce their own ability to respond throughout the year to changing environments, changing preferences or increased information through *ad hoc* interventions, because they did not have the ability to make *ad hoc* interventions to begin with.

The long-term effects of lock-in, however, may be symmetrical. For both central budget agencies and legislative subcommittees, increased scrutiny by the other branch and by the public can make it more difficult to change budgets from year to year: the more specific they are about funding in the current year, the more specific they may have to be in future years, and the easier it would be for others to see what they have changed, thereby decreasing the amount of room they have to manoeuvre by making clandestine changes. Again, this could be advantageous if they think the policies and administrative details they specify will meet their needs for years to come; but who would want to give up the flexibility to change programs in response to the changes in policy environments, priorities, and information that can occur over *years*? As Wildavsky wrote,

[i]t is well and good to talk about long-range planning; it is another thing to tie a President's hands by committing him in advance for five years of expenditures. Looking ahead is fine but not if it means that a President cannot negate the most extensive planning efforts on grounds that seem sufficient to him.⁴⁴

Long-term considerations aside, central budget agencies may have a disincentive to use results-based budgeting as lock-in limits their ability to make *ad hoc* and direct interventions in departmental programs between budgets, whereas American subcommittees may have an incentive to use results-based budgeting for the exact same reason: lock-in limits the ability of central budget agencies to make *ad hoc* interventions in programs, and so shifts influence over budget results away from *ad hoc* interventions that are available solely to the executive branch and towards *pre hoc* determinations that are shared by the executive branch and the legislative branch. Results-based budgeting can even help appropriations subcommittees battle for overall policy influence with authorization committees, as APPs can be used to encroach upon authorization committees' substantive policy-making role, and lock-in affects authorization committees too.

Overall, central budget agency and legislative subcommittee incentives and disincentives with respect to the use of results-based budgeting to co-ordinate horizontal policies are identical in many ways. For both sets of actors, the incentive is increasing allocative efficiency (although this incentive may be slightly lower for subcommittees due to their decreased potential to use results-based budgeting in this way, as suggested in the previous section), and the disincentives are increased transparency and reduced

⁴⁴ Wildavsky, *op. cit.*, 305.

long term discretion due to lock-in. Central budget agency and legislative subcommittee incentives and disincentives also differ: lock-in reduces central budget agencies' discretion over the short term, which is a disincentive to central budget agencies but an incentive to legislative subcommittees who wish to exercise a greater degree of oversight.

Hypotheses

There is evidence to suggest that the central budget agencies in both the U.S. and Canada, and the Appropriations subcommittees in the U.S., appreciate how results-based budgeting can help them co-ordinate horizontal policy issues, and seek to use performance information to do so.

In the U.S., neither the text of the Results Act itself nor the accompanying committee report⁴⁵ indicate that GPRA was intended to help the government co-ordinate the effects of policies and programs across departments. Nevertheless it would seem that since 1993, both the OMB and Congress have warmed to this idea.

In its annual guidance to departments on the preparation of APPs, the OMB asks departments to include performance information on horizontal policies. According to the guidance, APPs should

indicate those programs or activities that are being undertaken with other agencies to achieve a common purpose or objective; i.e., interagency and cross-cutting

⁴⁵ Web site: <http://www.whitehouse.gov/omb/mgmt-gpra/gplaw2m.html>; United States, Senate, "Government Performance and Results Act of 1993 Report of the Committee on Governmental Affairs," June 16, 1993.

programs . . . [and] indicate those goals and indicators being undertaken in support of programs or activities of an interagency, cross-cutting nature⁴⁶

The OMB was also reorganized so as to enhance its capacity to use this horizontal performance information.⁴⁷ This reorganization sought to “integrate budget analysis, management review and policy development,” particularly as concerns cross-cutting themes.⁴⁸ Departmental provision of such horizontal performance information would help the OMB: identify key horizontal issues; assess agencies’ programs to address those issues; and develop a budget around those programs.

For its part, in 1997, Congress’ General Accounting Office acknowledged that

[t]he Results Act will present the Congress and the administration with a new opportunity to address mission fragmentation and program overlap. . . . [T]he act’s emphasis on results implies that federal programs contributing to the same or similar outcomes should be closely coordinated, consolidated, or streamlined, as appropriate, to ensure that goals are consistent and that program efforts are mutually reinforcing.⁴⁹

That same year, the GAO began to give members of appropriations subcommittees analytical support in the identification of horizontal policy issues,⁵⁰ and highlighted the usefulness of the government-wide performance plan in identifying and addressing both

⁴⁶ United States, Office of Management and Budget, Circular A-11 (July 2000), Scns. 220.7 and 220.9(f).

⁴⁷ United States, General Accounting Office, “Office of Management and Budget: Changes Resulting From the OMB 2000 Reorganization,” GAO/GGD/AIMD-96-50, December 1995.

⁴⁸ Wildavsky and Caiden, *op. cit.*, p. 274.

⁴⁹ United States, General Accounting Office, “Managing for Results: Using the Results Act to Address Mission Fragmentation and Program Overlap,” p. 8.

⁵⁰ United States, General Accounting Office, “20 Agencies’ Strategic Plans Under GPRA: Key Questions to Facilitate Congressional Review,” GAO/GGD-10.1.16, May 1997.

horizontal issues and the contribution of various departments (and, often, thereby Appropriations subcommittees) to the policy responses to those issues.⁵¹

In Canada, it also does not seem that, at the time of the introduction of the EMS, a major intended use was the co-ordination of horizontal policy issues. For example, the touchstone document of the EMS in 1995 does not contain a single reference to how the performance information generated by the EMS could help TBS or anyone else co-ordinate the effects of policies and programs across departments.⁵² Nevertheless, as in the U.S., the attention paid to this use has been growing. Using the EMS to co-ordinate horizontal policy issues has figured in recent reports from the President of the Treasury Board,⁵³ and in its annual guidance to departments on the preparation of RPPs, TBS asks departments to include performance information on horizontal policies. According to the guidance, RPPs should discuss external factors influencing their operations (including the activities of other departments) and initiatives that “are government-wide in nature or are of concern to a number of departments.”⁵⁴

Both countries indicate that they are in fact attempting to use results-based budgeting to co-ordinate horizontal policies. As we will see in the next chapter, though,

⁵¹ United States, General Accounting Office, “Managing for Results: Using the Results Act to Address Mission Fragmentation and Program Overlap,” p. 11.

⁵² Canada, Treasury Board Secretariat, *The Expenditure Management System of the Government of Canada* (Ottawa: Treasury Board, 1995).

⁵³ Canada, Treasury Board Secretariat, *Results for Canadians: A Management Framework for the Government of Canada* (Ottawa: Treasury Board, 2000); Canada, President of the Treasury Board, *Managing for Results 2000* (Annual Report to Parliament) (Ottawa: Treasury Board, 2000); Canada, President of the Treasury Board, *Canada's Performance 2001* (Annual Report to Parliament) (Ottawa: Treasury Board, 2001).

it is difficult to determine whether or not governments' use of results-based budgeting to co-ordinate is actually working. We can however make an initial attempt to determine the extent of the efforts of budget-makers in central budget agencies and legislative subcommittees to use results-based budgeting in this way. Also as discussed in the next chapter, we will measure effort by examining the extent to which departments provide central budget agencies and appropriations subcommittees, through APPs and RPPs, with performance information on the costs and results of programs that these budget-makers demand and could use to co-ordinate. A key question for this study is whether the extent of these efforts varies with the country in question and with the horizontality of the programs in question.

In chapter 4 we discussed how a primary objective of results-based budgeting is to maximize programs' contribution of policy benefits to a government's policy vision. To do this, budgets must achieve allocative efficiency, which may in turn require that budget-makers predict the costs and effects of programs. For any given program, there will be two kinds of effects: vertical, which are contained within a single policy area, and horizontal, which cross-cut policy areas. Thus, we may say that to achieve allocative efficiency, budget-makers must first predict both the vertical and the horizontal effects of government programs.

Budget-makers predict the effects of programs on the basis of performance information on those programs. Importantly, the amount of performance information that budget-makers need may vary across those programs. If the vertical effects of programs

are of equal importance to budget-makers, then it follows that they will require an equal amount of performance information addressing those effects. However, we know that the horizontal effects of programs are not of equal importance to budget-makers because some programs have more such effects than others. It then follows that budget-makers will require unequal amounts of performance information addressing the horizontal effects of programs. The required amount of performance information on programs' horizontal effects will vary with their degree of horizontality, and can be added to the constant required amount of performance information on vertical effects. In short, the amount of performance information that results-based budget-makers need on programs in order to maximize allocative efficiency varies with programs' degrees of horizontality, reflecting the additional complexity that stems from interdependence.

In general, central budget agencies may gain from results-based budgeting as it facilitates the achievement of allocative efficiency, but lose from results-based budgeting due to the increased transparency and both short-term and long-term lock-in. Appropriations subcommittees may gain from results-based budgeting as it facilitates the achievement of allocative efficiency and locks-in the executive branch over the short-term, but lose from results-based budgeting due to the increased transparency and long-term lock-in. In comparing these two actors' motivations to use results-based budgeting, it stands to reason that subcommittees will be more motivated than central budget agencies and so should demand more performance information from departments,

prompting departments to provide performance information for them over and above that which they otherwise would provide to central budget agencies.

In particular, let us focus on the horizontality of programs being funded. The more horizontal the programs are, the more reason subcommittees have to use results-based budgeting: it can help them gather the information and build the trust they need to co-ordinate. Subcommittees wishing to co-ordinate may make their co-operation conditional on the provision of performance information by the departments funded by their partner subcommittees, which in turn will make their co-operation conditional on the provision of performance information by the original subcommittees; each subcommittee therefore has an additional incentive to demand additional performance information from its own departments. The more legislatively horizontal the departments in a given subcommittee's jurisdiction are, the more that subcommittee will be motivated to co-operate with others and thus the more it will demand performance information from its own departments. Central budget agencies, on the other hand, enjoy a hierarchical relationship over departments, and so have no need for such trust and do not share this additional reason to use results-based budgeting. So, we would expect that the amount of performance information demanded by American subcommittees increases with legislative horizontality, and that the amount demanded by central budget agencies also increases with executive horizontality, *but to a lesser extent*. We expect that this gap between the amount of performance information demanded by central budget agencies and the amount demanded by subcommittees increases with the degree of legislative horizontality of the programs in question.

What makes subcommittees in the U.S. different from central budget agencies in terms of their budget-making behaviour is their oversight role and their need to build trust with one another. Results-based budgeting, in particular the demand for performance information, could help subcommittees provide oversight and build trust. The first difference between central budget agencies and subcommittees could create a gap between the two actors in terms of how much performance information they demand. The second difference could widen that gap as the programs in question become more horizontal. It is difficult to study this phenomenon directly because one cannot easily separate the demands for performance information of central budget agencies from the demands for performance information of subcommittees, since demands may be made too privately and subtly to be directly measured. It may be that the best way to study this demand is by studying the response in supply, namely, departmental provision of performance information. But if departments provide a single response to these demands (the APPs), it can be difficult to determine how much of the performance information they provide is due solely to the (additional) pressure of subcommittees.

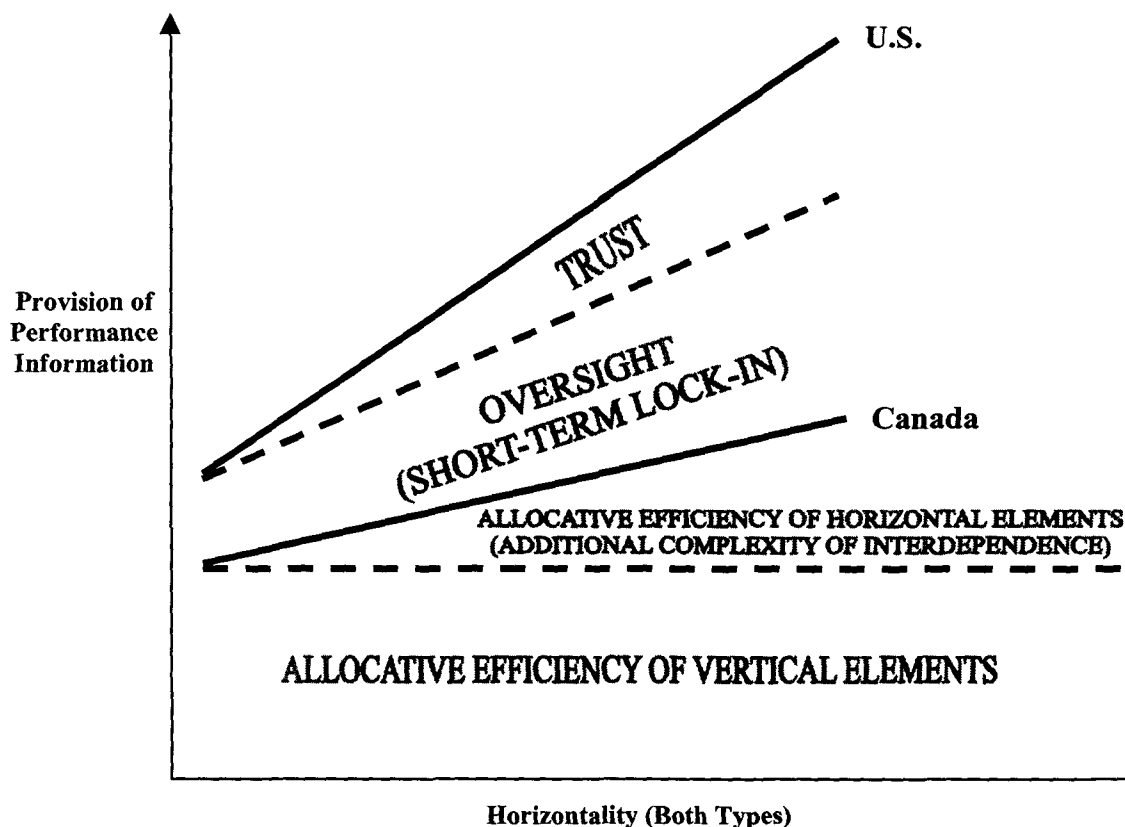
Using the comparative method can help us make this determination. If we compare the provision of performance information in a country with effective subcommittees to the provision of performance information in a country without effective subcommittees, differences in the level of provision may be attributed to the presence of those subcommittees. This most similar comparative design requires that the countries chosen are similar in terms of their characteristics that may affect provision of performance information, with one exception: they are different in terms of regime type,

which is the characteristic whose role and effect we wish to isolate. More will be said in chapter 6 about the selection of Canada and the U.S. as our test cases, but suffice it to say at this point that Canada and the U.S. appear similar in terms of important characteristics such as experimentation with results-based budgeting and the role of the central budget office, and different in terms of regime type and so the presence of effective legislative subcommittees and of legislative horizontality. By holding other factors constant, the most similar design allows us to isolate the effect of the subcommittees and legislative horizontality on provision of performance information.⁵⁵

If subcommittees exert more pressure on departments to provide performance information than do central budget agencies, then, *ceteris paribus*, countries with both significant appropriations subcommittees and central budget agencies would (assuming departments actually respond to greater pressure for performance information with more performance information due to congressional carrots, sticks and exhortation) produce more performance information than countries with only central budget agencies. In this study, we expected to find that for highly vertical programs, U.S. departments provide more performance information than do Canadian departments, and for highly horizontal programs, U.S. departments again provide more performance information than do Canadian departments, and that this differential will be greater than that found for highly vertical policies. A general depiction of the expected findings is presented in figure 8.

⁵⁵ For more on comparative designs, see Adam Przeworski and Henry Teune, *Logic of Comparative Social Inquiry* (New York: John Wiley and Sons, 1970).

Figure 8. Hypothesized relationships between the provision of performance information and horizontality



In this figure, all budget-makers demand (and departments provide) a set amount of performance information to achieve allocative efficiency given the common amount of vertical elements of programs. This amount is represented by the rectangular area labelled "allocative efficiency of vertical elements" (underneath the horizontal dashed line). All budget-makers demand progressively more performance information as programs increase in horizontality, since increasing horizontality reflects increasing interdependence and thus increasing complexity. Budget-makers require additional

information to achieve the allocative efficiency of the (differently-sized) horizontal elements of programs. This amount is represented by the area labelled “allocative efficiency of horizontal elements (additional complexity of interdependence).” The entire area under the solid line labelled “Canada” represents the amount of performance information that we expected budget-makers in Canada demand from departments. This is also the same amount we expected the OMB to demand from departments in the U.S.

Also in this figure, we depict the budget-makers in the U.S. Congress overseeing the executive branch by demanding performance information from departments above and beyond that which the OMB demands. This additional amount is represented by the area labelled “oversight (short-term lock-in),” and is a constant percentage of the amount that OMB demands, regardless of the degree of horizontality. We also expected budget-makers in the American appropriations subcommittees to build trust with each other by demanding even more performance information from departments as horizontality increases. This additional amount is represented by the area labelled “trust.” The entire area under the solid line labelled “U.S.” represents the total amount of performance information that we expected budget-makers in the U.S. demand from departments, that is, the amount that the OMB demands plus the additional amount that Congress demands.

We developed three hypotheses. First is that American departments provide proportionally more performance information than do Canadian departments due to the legislature’s oversight function. Second and third is that American departments, like Canadian departments, provide more information as the horizontality of their programs increases, but do so at an even greater rate due to the unique need for legislators to use

performance information to build trust (as well as co-ordinate programs). These

hypotheses may also be expressed as:

H₁: the U.S. uses results-based budgeting more than Canada

H₂: both countries increase their use of results-based budgeting as the horizontality of departments increases

H₃: the *rate* at which the U.S. increases its use of results-based budgeting as horizontality increases is greater than the rate at which Canada increases its use of results-based budgeting as horizontality increases

Summary

In this chapter we discussed horizontal budgeting, or how budget-makers may use results-based budgeting to co-ordinate horizontal policies. Horizontal budgeting involves using performance information to identify the interactive effects of programs that cross-cut departmental and/or committee jurisdictions, and then using knowledge of those effects to select the combination of programs and funding levels that maximizes the actual contribution of funds to the policy vision.

We suggested that results-based budgeting has the potential to help budget-makers co-ordinate horizontal policies, but that it is more difficult to do in the legislative branch than in the executive branch because the institutions are egalitarian rather than hierarchical. Because appropriations committees are egalitarian, subcommittee members who wish to co-ordinate must generate higher levels of trust, and so may demand more performance information from departments.

We also suggested that both central budget agencies and appropriations subcommittees have incentives and disincentives to actually use results-based budgeting to co-ordinate. The common incentive is that horizontal budgeting can increase

allocative efficiency, and the common disincentives are the increased transparency and decreased discretion stemming from long-term lock-in. Short-term lock-in, however, may be an incentive for subcommittees but a disincentive for central budget agencies.

Finally, we observed that central budget agencies in both Canada and the U.S., as well as American appropriations subcommittees, may be starting to use the EMS and GPRA to co-ordinate horizontal policies. If so, they need performance information from departments, and as the American legislature has more of an incentive to use results-based budgeting than does the OMB, American departments may be asked to supply more performance information than Canadian departments are.

From this discussion flowed three hypotheses. First, since the U.S. has a instrumental legislature while Canada does not, American departments will tend to provide more performance information to the centre and the legislature than Canadian departments do. Second, in both countries, budget-makers will demand more and departments will provide more performance information as the horizontality of policies rises. Third, since American appropriations subcommittees need performance information to co-ordinate more than OMB does (due to the need to build trust), the gap noted in the first hypothesis will widen with the horizontality of the department, that is, the rate of increase in the amount of performance information provided as horizontality rises will be greater in the U.S. than it is in Canada.

As outlined in this chapter, the most similar comparative method is an appropriate one to use to test these hypotheses. In the next chapter, we will discuss in more detail how we did so.

Chapter 6: Methodology

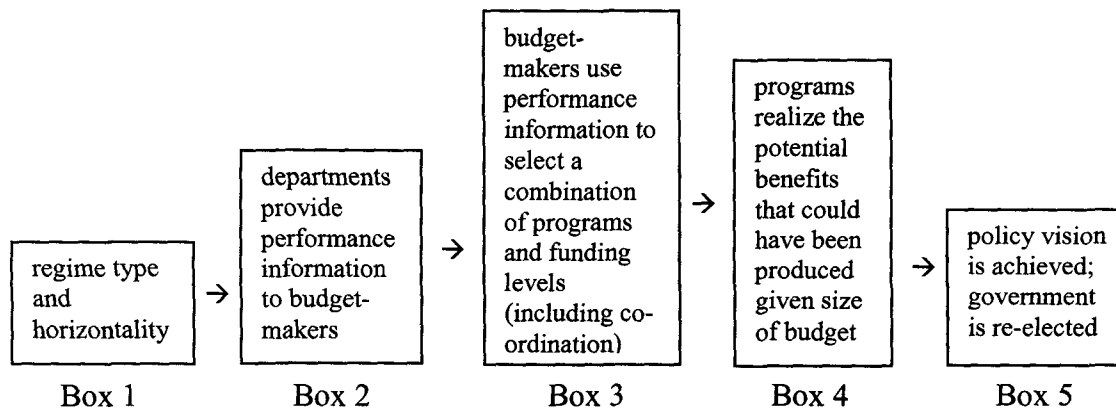
The intent of this study was to test the relationship between use of results-based budgeting, horizontality and regime type. We did this by performing both a content and a statistical analysis of Canadian and American budgetary documents, and by validating the results with interviews of civil servants and academic observers. In this chapter, we review the results-based budgeting model, operationalize the variables, discuss the cases we studied, and present the method of analysis.

The results-based budgeting model

The discussion from chapter 5 about results-based budgeting can be summarized in the form of if-then statements and a logic model (figure 9). At this point, these statements and causal links are assumptions of results-based budgeting as an “ideal-type.”

- 1) regime type and the degree of horizontality affect the extent to which performance information is demanded by and supplied to budget-makers
- 2) if performance information is supplied to budget-makers, they will use it to select a particular combination of programs and funding levels. This selection includes co-ordinating the effects of horizontal policies
- 3) if budget-makers use performance information to select a particular combination of programs and funding levels, the budget will contribute to the realization of the potential benefits that could be achieved given the size of the expenditure budget
- 4) if the budget contributes to the realization of the potential benefits that could be purchased given the size of the expenditure budget, more of the governmental policy vision will be achieved
- 5) if more of the governmental policy vision is achieved, the government will be more popular and thus more likely to be re-elected.

Figure 9. Results-based budgeting logic model



In this model we made six assumptions concerning actors' behaviour. First, we assumed that budget-makers are concerned about policy. We suggested that politicians are motivated by re-election, and that one way they can increase their chances of being re-elected is by using results-based budgeting to ensure that the expenditure budget produces the most and best benefits possible. However, the link between policy benefits and re-election is often a tenuous one. The popularity of politicians is based on many factors besides policy—and even when policy does matter, simply taking a position on policy issues may be just as good as actually addressing those policy issues through programs.¹ Furthermore, if sub-optimal production of policy benefits is sufficient to secure re-election, there will be little incentive to use results-based budgeting to squeeze more benefits out of the expenditure budget, particularly when politicians are not able to

¹ For more on "position-taking," see David R. Mayhew, *Congress: The Electoral Connection* (New Haven: Yale University Press, 1974), pp. 61-73. See also Fred Thompson and W. T. Stanbury, "Looking Out for No. 1: Incumbency and Interest Group Politics," *Canadian Public Policy* 10(2) (1984), 239-244.

claim credit for the policy benefits their programs produce.² In these cases, where the production of policy benefits does not significantly increase politicians' chances of being re-elected—or at least does not increase their chances as much as another budgeting strategy would—use of results-based budgeting could be low, and equally so for vertical and horizontal policy areas.

Second, we assumed that budget-makers who are concerned about policy in general attempt to co-ordinate the horizontal elements of policies. We suggested that for expenditure budgets to realize potential benefits, the horizontal elements of programs must be considered, and thus, the effects of programs—in particular their interactive effects—must be co-ordinated. However, this need to co-ordinate may not always be self-evident, especially if budget-makers see their job as primarily one of controlling the vertical aspects of programs. Furthermore, as Chisholm noted, co-ordination, when it is desired by budget-makers, is just one of many objectives that these actors pursue.³ When not all desirable objectives can be simultaneously pursued due to resource limitations or other conflicts, co-ordination may go by the board. In these cases, increases in the horizontality of programs and thus in the need to co-ordinate will not be matched by increased use of results-based budgeting.

Third, we assumed that budget-makers who attempt to co-ordinate the horizontal elements of policies would want to do so using results-based budgeting. We suggested that one way budget-makers could co-ordinate the horizontal elements of programs is to

² For more on “credit-claiming,” see Mayhew, *op. cit.*, pp. 52-61.

³ Donald Chisholm, *Coordination without Hierarchy: informal structures in multiorganizational systems* (Berkeley: University of California Press, 1989), pp. 200-201.

use results-based budgeting, and thus to seek performance information on programs and use that information to select a particular combination of programs and funding levels. However, budget-makers and their superiors can co-ordinate the horizontal elements of programs using a variety of methods other than results-based budgeting.⁴ These other methods may be considered superior to results-based budgeting if they require less disclosure and allow budget-makers greater discretion, or have fewer transaction costs, and at the same time are believed to be just as effective as results-based budgeting in co-ordinating horizontal policies.⁵ In these cases, increases in the horizontality of programs may increase the use of a range of co-ordinative mechanisms, but not use of results-based budgeting.

Fourth, we assumed that budget-makers who wish to co-ordinate using results-based budgeting need and pressure departments for more performance information as policies grow in horizontality. We suggested that the more and more specific performance information budget-makers have, the better able they will be to appreciate how programs contribute to the policy vision and thus select a combination of programs and funding levels that realize the potential benefits of the expenditure budget. However,

⁴ See, for example, the methods listed and discussed in: B. Guy Peters, *Managing Horizontal Government: The politics of coordination* (Ottawa: Canadian Centre for Management Development, 1998); United Kingdom, Cabinet Office, *Wiring it up: Whitehall's Management of Cross-cutting Policies and Services* (London: The Stationary Office, 2000); Canada, Task Force on Managing Horizontal Policy Issues, *Managing Horizontal Policy Issues* (Ottawa: Canadian Centre for Management Development, 1996); and Chisholm, *op. cit.*

⁵ See Evert A. Lindquist, "Getting Results Right: Reforming Ottawa's Estimates," *How Ottawa Spends 1998-99: Balancing Act: the Post-Deficit Mandate*, ed. Leslie A. Pal (Toronto: Oxford University Press, 1998), pp. 164-165, and Donald J. Savoie, *The Politics of Public Spending in Canada* (Toronto: University of Toronto Press, 1990), p. 57.

more and more specific performance information is not necessarily better. More and more specific performance information can actually frustrate results-based budgeting and co-ordination when results-based budgeters reach a point of “information overload.” If results-based budgeters are overloaded with information, and do not have the capacity to use additional performance information, as horizontality grows they may demand not *more* performance information but rather *better* performance information, performance information that is more suited to horizontal co-ordination than vertical control. In these cases, increased horizontality would not be correlated with a net increase in provision of performance information.

Fifth, we assumed that budget-makers who pressure departments for more performance information would get it. We suggest that budget-makers would be able to elicit the desired performance information from departments by employing “carrots” and “sticks,” e.g. either promising to increase funding if the information is supplied or threatening to decrease funding if the information is not supplied, respectively. However, budget-makers may not actually have this flexibility: for political and technical reasons budgeting is often incremental, which limits their credibility to either promise or threaten changes in budgets. Credibility is further weakened when money is “loose”⁶ and it is harder to justify cuts, even cuts relative to planned or routine increases. In these cases,

⁶ I.e., when there is new money available in the overall expenditure budget to add new programs or expand existing programs, as opposed to when there is no new money available and departments must either maintain their programs at existing budgets or reduce the budgets of some of their programs if they wish to add or expand other programs. Money tends to be loosest when governments are in a surplus situation as they both have excess funds and face increased political pressure to spend it (through departments), and tightest during deficits. These meanings of “loose” and “tight” are not to be confused with those used in studies of monetary policy, where the terms refer to interest rates, the cost of borrowing and the growth of the money supply.

increased horizontality may spur increased demand for performance information, but not increased supply of it.

Finally, we assumed that budget-makers who receive more performance information would actually be able to use it to co-ordinate horizontal policies. We suggested that budget-makers would identify a policy vision, identify costs and results of programs, compare these costs and results to the policy vision, and actually use these comparisons to select a specific combination of programs and funding levels. However, these tasks are easier said than done. Policy visions can be vague and rife with internal contradictions. Accounting systems often do not clearly indicate the true cost of programs. Knowledge of programs' causal theories are often unequal to the task of producing valid indicators of performance to measure the direction of effects, let alone targets to predict the distance of effects or any performance information on the interactive effects of programs. Then, "insuperable difficulties of calculation" emerge when options are analyzed and compared in the search for the optimal combination of programs and funding levels. In short, "*no one knows how to do [results-based] budgeting.*"⁷ Furthermore, we also suggested that there are opportunities for budget-makers to use performance information to co-ordinate horizontal policies. However, tight time frames and limits to the number of actors who may participate in budget-making may constrain these opportunities, to the point that budget-makers, even if they wish and know how to co-ordinate, may not be able to. It has also been suggested that both OMB and TBS

⁷ Aaron Wildavsky, "Rescuing Policy Analysis from PPBS," *Public Administration Review* 29(2) (March/April 1969), 193 (emphasis in original). The original text reads "program budgeting" in place of "results-based budgeting."

suffer from a lack of human resources capacity to collect, analyze, and apply performance information to the co-ordination of horizontal policies.⁸ In all these cases, enthusiasm for using results-based budgeting could fall and the amount of performance information both demanded and supplied would be low, perhaps even lower in the more complex and therefore more demanding horizontal policy areas.

Dependent variables

An ideal design would look at instances from a congressional system and a Westminster system where expenditure budgets were being prepared for horizontal policy areas, to see if policies that were funded from results-based budgets were better co-ordinated than were policies funded by line-item or performance budgets, taking into account other factors that influence co-ordination. However, this design is not possible since governments tend not to use results-based budgets for some policies and performance or line-item budgets for others. Other designs could study governments that use results-based budgets in all policy areas, and select realization of potential benefits, successful co-ordination of programs, or even use of performance information as a dependent variable, and then test for a relationship with horizontality and regime type.

⁸ Beryl A. Radin, "The Government Performance and Results Act (GPRA): Hydra-Headed Monster or Flexible Management Tool?", *Public Administration Review* 58(4) (July/August 1998), 315; Evan H. Potter, "Treasury Board as Management Board: The Re-Invention of a Central Agency," *How Ottawa Spends 2000-2001: Past Imperfect, Future Tense*, ed. Leslie A. Pal (Toronto: Oxford University Press, 2000), pp. 112, 121, 116. Jordan and Hackbart, in their study of state governments in the U.S., also found that this capacity is an important determinant of the effective use of results-based budgeting. Meagan M. Jordan and Merl Hackbart, "Performance Budgeting and Performance Funding in the States: A Status Assessment," *Public Budgeting and Finance* 19(1) (Spring 1999), 68-88.

However, these designs are also not possible due to difficulties with developing valid measures.⁹

Ultimately, we selected “provision of performance information” as the dependent variable. If, as hypothesized, the performance information produced under results-based budgeting was actually useful and effective in selecting programs and funding levels, budget-makers would want more performance information on horizontal policies than they would want on vertical policies. This would be so because, as previously discussed, all issues have vertical elements, and so budget-makers would want performance information on those, but some issues have horizontal elements as well, and so budget-makers would want additional performance information on those elements. We may also assume that when budget-makers demand performance information from departments, it is supplied (i.e. provided).

Our design becomes one which looks at two countries using results-based budgeting—one congressional, the other Westminster—to see if there are relationships between the provision of performance information on policies and programs and the horizontality of those policies and programs, and then compares those relationships to identify the role that regime type plays.

Let us now examine in more detail the specific measures we used to construct dependent variables of the provision of performance information: targets, cost centres, and budget.

⁹ For an interesting survey-based design to examine the use of results-based budgeting in general, see Jordan and Hackbart, *op. cit.*

Targets

Information on a program's predicted effects can be difficult to generate. To predict effects, one must know what the external environment would look like in the absence of the program and how the program would affect the environment. This knowledge can be limited by the difficulty of predicting what future conditions will be like, what precise form the program will take, and how theory dictates program elements would produce effects. If the program in question is not new but rather already in operation, one can look to past effects as a guide to the future; but even here, evaluations may not be done, or not done well, or may analyze the effect of a specific program on a specific environment that will not be repeated in the future due to changes in the program and/or the environment. If the program is new, one must rely on even more theoretical analyses of the environment and interventions.

Assuming that rational budget-makers would rather have partial information than no information, it follows that at least some of the predictions of effects they receive will be of questionable validity. This is particularly true given that "spenders" may attempt to increase their autonomy from "guardians" by providing them with information that emphasizes certain aspects of programs and de-emphasizes others, and thus that central budget-makers may suspect that departmental performance information is deliberately misleading.¹⁰

¹⁰ See Aaron Wildavsky and Naomi Caiden, *The New Politics of the Budgetary Process*, 3rd edn. (New York: Addison-Wesley, 1997), especially pp. 57-66. See also Kenneth Kernaghan and David Siegel, *Public Administration in Canada*, 3rd edn. (Toronto: ITP Nelson, 1995), pp. 627-633.

In our model, a prediction will be used by budget-makers only to the extent that they consider it to be an accurate prediction of effect. If provision of predictions was the dependent variable, it would be necessary to discount a simple count of predictions to the extent that budget-makers doubted their accuracy.¹¹ However, assessing the accuracy of predictions is not easy for either budget-makers or outside researchers, since even experts in the given policy areas can often disagree about assumptions about future conditions and the theory underlying the program.

Furthermore, even when the program is already in existence, one cannot base assessments of accuracy on the extent to which predictions are themselves based on past evaluations of the same program. Not all accurate predictions of future effects are based on evaluations of past effects, and not all evaluations of past effects will properly inform predictions of future effects, because the more programs and knowledge of programs change, the more the validity of the indicators used to evaluate program effects tends to fall. So, if we were to weight all predictions of effect equally, we would risk overestimating the availability of performance information since, to the extent that predictions are considered inaccurate, we would measure even performance information that is not used.

We could also risk overestimating the provision of performance information if the performance information we measured was produced not for the benefit of budget-makers but rather for the benefit of interested observers outside government. Governments may set targets emphasizing a particular aspect of a program simply to

¹¹ According to Jordan and Hackbart (*op. cit.*, 72), budget-makers in many American states have

convince outside observers that their interests are being taken seriously. The danger of this form of overestimation is particularly acute when performance information is measured by analysing public documents, as opposed to confidential documents for internal government use only. It can be difficult to identify and exclude from study those targets the government does not “really mean” and thus use in budget-making.

Fortunately, the overestimation of the availability of performance information is likely to be counteracted by an underestimation of the same stemming from the esoteric nature of budgets. Outside observers, and even participant-observers, of budget-making cannot always get so close to the process that they can determine all the effects that a program is supposed to produce. For example, the Sectoral Partnerships Initiatives (SPI) program has multiple aims which are stated publicly (e.g. increase employment), more which are stated only in internal documents (e.g. foster better business-labour relations), and even more which are not stated at all but rather are implicit in the policy and the organization (e.g. establish a federal presence across regions).¹² Governments do not always clearly specify the program objectives that are peripheral or politically sensitive.

That does not mean, however, that these esoteric objectives never generate performance information for budget-makers. To the extent that information on these objectives is used by budget-makers to help select programs and funding levels, if it is neglected we may underestimate the amount of available performance information. This underestimation would probably not however counteract all of the overestimation caused

similarly discounted the utility of departmental predictions.

¹² David I. Dewar, *The Sectoral Partnerships Initiatives*, Concordia University (mimeo), 1997, p. 95.

by counting invalid predictions. Nevertheless, since this study is concerned more with comparing provision across departments than with assessing provision in absolute terms, over-estimation is not particularly problematic, so long as we over-estimate consistently across departments.

The best dependent variable seems to be the provision of performance information on the expected inputs, throughputs, outputs, outcomes and effects of programs, presented in the form of targets or indicators measuring both direction and distance. It is important to include throughputs, outputs and outcomes—as opposed to just the inputs and effects used to assess cost-effectiveness—for two reasons.

First, if the theory underpinning the program is not sufficiently developed to allow budget-makers to identify effects, performance information from other stages can be used as proxies for performance information on effects. Take, for example, the SPI. It is very difficult to measure the extent to which the SPI achieves its (effects) goals of increasing national employment and economic competitiveness. However, the theory of the program suggests that these goals are likely to be achieved as a result of the three intermediate outcomes: 1) the creation and continued operation of sector councils and other sectoral partnerships; 2) delivery of sector council programs; and 3) an increase in the amount and relevancy of workers' skills.¹³ Budget-makers can use data on the achievement of these intermediate outcomes to make informed guesses as to the effects of the program on the ultimate objectives of employment and competitiveness.

¹³ Dewar, *The Sectoral Partnerships Initiatives*, p. 114. The causal theory suggests that the intermediate outcomes simply contribute to—not determine—ultimate outcomes.

Second, programs are often selected for multiple reasons, not all of which may relate to the effects stage of the logic model. In a sense, programs should have multiple logic models, one for each of the distinct aims of the program. This is so because, as Mohr has argued,¹⁴ we should measure effects where the first intrinsically valued event in a program's logic model occurs, and the multiple aims of a program are likely to fall at different stages in the logic model. Some of these aims will fall at the stage of throughputs, outputs, and outcomes; indeed, it may be the case that a program's means are just, as or even more important than, its ends and so should also be seen as ends in themselves. For example, the SPI's intermediate outcome of creation and continued operation of sector councils has intrinsic value to the government as it satisfies the aim of maintaining a federal presence in the policy area and across the country, independently of its effect on employment and competitiveness.

Here, we did not "double count" measures, i.e. count the same measures repeatedly, when they appeared multiple times in the same document. We did however count multiple measures of the same effects, if they were presented from a different (and so cross-cutting) perspective. For example, the effect of HRDC helping an Asian woman secure employment could be counted twice, once as part of a measure relating to visible minority employment, and once as part of a measure relating to women's employment. It is, after all, one of results-based budgeting's objectives to allow budget-makers to identify all the effects of programs so as to better co-ordinate their horizontal aspects, an objective which can be aided by such multiple presentations of the effects of programs.

¹⁴ Lawrence B. Mohr, *Impact Analysis for Program Evaluation*, 2nd edn. (Thousand Oaks: Sage,

Thus, while performance information at all stages was collected, there was some question as to whether or not it should be collected separately for each stage. Separately has the advantage that effects targets can be examined individually and weighted more heavily to reflect their greater utility. However, budgetary documents such as performance plans rarely make clear the differences between the stages, perhaps because some targets relate to both means and ends. As a result, there was little choice but to examine them together.

Examining targets together raises the problem of weighting. Targets should be weighted equally if performance information on all aspects are equally useful to budget-makers. In the results-based budgeting model, this is unlikely to be the case: performance information on effects would be more useful than performance information collected at other stages. However, the marginal utility of effects targets is probably small. As such we will weight targets at different stages in the logic model equally, with the exception of targets on inputs. We will not count these targets for two reasons. First, variance in the number of input targets will be captured, as we will see later in this chapter, by a second dependent variable. Second, input targets are likely to be of similar quality. It is true that quality could vary with the type of accounting system used,¹⁵ the probity of program managers, and the ability of everyone involved to predict future

1995), pp. 15-23.

¹⁵ See e.g. Maurice Wright, "Resource Budgeting and the PES System," *Public Administration* 73(4) (Winter 1995), 580-590; Canada, TBS, Financial Information Strategy (FIS) Book (Ottawa: TBS, 1999) (http://www.tbs-sct.gc.ca/fin/fis/sigs/fis_overview/fisbook_May1999.htm); and Christopher Pollitt, "Integrating Financial Management and Performance Management," *OECD Journal on Budgeting* 1(2) (2001), 7-37.

conditions. However, since departments by law cannot spend more than the appropriations acts allot them, and departments are likely to spend most of these funds, the input targets set out in the budget are likely to be roughly met in almost all cases.

Two major methodological issues relating to the operationalization of targets had to be addressed. First was definition of a target. A target is supposed to be something that tells budget-makers, with some degree of specificity, what the effects of a program will be.¹⁶ A target should indicate direction, answering the question, “will the program change society in the direction of the envisioned society?” Budget-makers can get a sense of the direction of change from a narrative description. Not much specificity is needed for a budget-maker to be able to tell what would change and how. For example, one of the objectives of the Environmental Protection Agency is to reduce the “public health risk from agricultural use of pesticides.”¹⁷ This is sufficient to indicate direction.

However, budget-makers who wish to compare effects per dollar within and across programs and to the policy vision need to know more than this. They also need to know distance, for example, how much risk will be reduced by the program. To know distance one must first define risk and understand how it is being measured, so one can determine that the program will, say, decrease risk from x units of measurement to y units of measurement. For our purposes, a target must have an indicator.

¹⁶ See United States, Office of Management and Budget, “Review of Agency Annual Performance Plans,” November 22, 1997 (<http://www.financenet.gov/fed/cfo/gpra/perfplan.htm>, accessed September 8, 2000) and United States, Office of Management and Budget, Circular A-11, July 19, 2000.

¹⁷ United States, Environmental Protection Agency, *FY 2001 Annual Plan* (EPA 205-R-00-002) (Washington: Government Printing Office, 2000), p. 58.

The indicator used must be unambiguous, so that everyone may agree on its magnitude and achievement. The litmus test is replicability: the description should be sufficiently specific that another researcher could replicate the measurement and get the same result.¹⁸ This way, budget-makers have a clear idea of just what would be measured and thus a clearer idea of what would happen if the program were funded. For example, the indicator of risk would have to define as comprehensively as possible public health, risk, a pesticide, and agricultural use.

Targets were measured subjectively and grouped along three degrees of specificity: high, medium and low.¹⁹ Ideally, the target would indicate the effect of the program on the measure. Results-based budgeting essentially concerns buying results, and a results-based budget should show results with price tags. We asked of each target, “what value would the measure return if no money were spent on that program?” To return to the example of pesticide, the EPA anticipates that, if the program is funded, the risk will be half of what it was in 1995. In this case, it is difficult to tell what the level of risk would be if the program were not funded, because there are many forces other than the program that could cause the level of risk to rise or fall over time. Results-based budget-makers would need to know what the level of risk would be if the program was not funded, so they could compare that level to the predicted level of risk and so calculate the program’s effects on risk. If results-based budgeters cannot estimate the level of risk

¹⁸ See e.g. United States, Office of Management and Budget, Circular A-11, sections 220.9 and 220.15.

¹⁹ In all cases, the performance predicted by the target must be for the budget year and not for the out years.

in the absence of the program, they cannot tell if the input costs are resulting in a lot of risk reduction or only a little, and thus do not know if they are spending funds in a way that is consistent with the priorities of the government. If they could however estimate that risk would say remain constant in the absence of the program, they could tell that the input costs of the program would result in a 50% decrease in risk. When the full effects of the program have been predicted, they were scored as high specificity targets.

Distance is more easily measured when the targets indicate not effects but rather throughputs and outputs. For example, to reduce the risk of pesticides to public health, the EPA registers many chemicals, and for FY 2001 predicted registering seventeen safer chemicals and biopesticides.²⁰ Here, it is easy to tell how many safer chemicals and biopesticides would have been registered in the absence of the program: zero, because there are no forces other than the government program that could cause the government's rate of registration to be higher than zero. In these cases, the full effects of the program have been predicted, and so were also scored as high specificity targets.

In other cases the value the measure would return in the absence of the program will not be given and will not be implicit. Requesting departments may, however, say both what the value of the measure will be and what it was in the past. For example, the EPA predicts that the risk of pesticides to health will fall by 50%. Such a target does not relate the effect of the program as it does not tell us *how much less* risk we would have than if the government spent \$0 on the program. Indicating the change from t1 to t2 does not indicate how much risk the \$x is reducing.

²⁰ United States, Environmental Protection Agency, *op. cit.*, p. 58.

However, this kind of performance information is still somewhat useful in determining effects. Under results-based budgeting, budget-makers would prefer to use \$0 as their reference point (as with ZBB). However, most budgeting is incremental and so it may be worthwhile using the previous year's²¹ level as a reference point. Budget decisions may be more about how much more or less to spend, and so the effect of a change in spending can still be useful. In the pesticide risk example, the requested funding for FY 2000 was \$30.4 million and for FY 2001 was \$34.6 million. If it were estimated that risk would be reduced 30% in FY 2000 35% in FY 2001, this does not tell us the full effects of the program as we would not know how much risk reduction the full \$34.6 million buys, but by using the status quo as a reference point, and calculating marginal values, we could say that 4.2 million more dollars is buying 4.2% more risk reduction.²² As such we may term this marginal effect.

There are, however, two additional problems with using marginal effect. First, indicators may change over time. Departments do not always call attention to changes in the program or in the way the program reports, and finding such changes oneself is unfeasible if one is studying multiple departments. Second, a program's method of production may not be the same. Using marginal effect assumes that if, for example, a \$30 million program that achieved 30% effectiveness were repeated, its effectiveness

²¹ We accepted values going back up to three years, e.g. for the fiscal year 1999 budget, values had to be current for no earlier than fiscal year 1996.

²² In this example, since the FY 2001 budget of \$34.6 is associated with risk reduction of 35%, we can calculate that it costs \$1 million to reduce risk by 1%, and that (on average) each increment of \$4.2 million results in 4.2% of risk reduction.

would be 30% again. This may not be the case: the same \$30 million could produce more or less effectiveness depending on a number of internal and external (to government) variables. Again, departments do not always call attention to such matters and finding them oneself is not always feasible. We assume that budget-makers—who know those policy areas and departments much better than we do—will be able to compensate for these additional limitations and get some use from predictions of marginal effect. Still, they are of less use to them than full effect and so were scored as medium specificity targets.

In yet other cases, the value the measure would return in the absence of the program will not be given and will not be implicit, and past performance on the given measure will not be provided. Departments may however provide the basic unit of distance-related information: a prediction of what value the measure will return, or what we can term a simple target. For example, the EPA could predict a specific level of risk. Budget-makers would have no indication of what the level of risk would be without the program or what it was in the previous year, but such performance information is still better than nothing since it precisely describes a state of affairs that can be compared to the policy vision. As they are somewhat useful, they were scored as low specificity targets.

The second methodological issue relating to the operationalization of this dependent variable concerns program structures. Policies and programs may be complex or simple, depending on the policy issue being addressed. Aligning the complexity of programs to that of issues can promote cost-effectiveness, as the policy response may be

more likely to adequately affect the issue. However, such alignment hampers the efforts of researchers to study programs, since by differentiating programs it makes them harder to compare as like objects. Some programs will have more measures than others, not because their managers are trying harder to implement results-based budgeting, but simply because the policy challenges and responses are more complex and so there are more unique things to be measured. Instead of “apples and apples,” program structures tend to leave us with “apples and oranges.”

One solution to this problem of incomparability is to re-constitute program structures by re-arranging program elements according to a standardized program format. However, there is no such thing as a “natural” program structure, and thus no self-evident way that program elements and targets ought to be grouped together. This dissertation simply used definitions of program as expressed in the budgetary documents themselves.

Since the size and complexity of programs differ, budget-makers need different amounts and types of performance information from different programs. Since program sizes and complexities (and therefore the needs of budget-makers) differ, the measure of provision of performance information should allow for these differences, and to some extent vary by program.

If they are to select the best combination of programs and funding levels, budget-makers should make both gross decisions about programs as wholes and fine decisions about particular program elements. Budget-makers may thus need both overarching program targets and specific program element targets. Some programs, however, have more elements than others due to different sizes and complexities, and thus budget-

makers need more targets from some programs than they do from others. Ideally, then, the dependent variable would have measured the extent to which the number of targets that are actually available matches the number of targets that they need, on a program-by-program basis. However, it is difficult to determine how many elements a program has, and thus the optimal number of targets, due to a typical lack of specificity in program rationale, justification, or causal theory.

We thus counted targets absolutely, but also controlled for the heterogeneity of program sizes and complexities. We controlled for complexity by aggregating all the programs offered by a department or agency, so that each group was likely to have a similar mix of simple and complex programs, and controlled for size by dividing the target count by the number of dollars associated with those targets. Aggregating is also useful when the department's reporting structure does not match its funding structure, that is, when it reports targets using different classifications and grouping of activities (programs) than it uses to define cost centres. In these cases, it is very difficult to match program performance information to the dollars allocated for program activities and thus create a targets-per-dollar variable. This aggregated count of "targets per dollar" allowed us to compare countries and departments to each other, and thus test the hypotheses.

One way of measuring the ability of central budget-makers to make fine allocation decisions is to examine the amount of disaggregation of targets and the number of tiers or levels departments use to present their targets. For example, USAID operates in every region of the world. Its first level of targets presents performance information on the basis of major regions: Africa, South America, Eastern Europe etc. It then

proceeds to disaggregate its targets within each region by country. These disaggregated measures “roll up” to the higher level in that by simply adding them one can calculate the higher level target. Disaggregation of this sort should be captured in a study of results-based budgeting since it can help budget-makers appreciate both the gross and the fine aspects of departmental performance and, when cost centres have been similarly disaggregated, make finer funding decisions. This measure can also help even when “roll down” of targets is not accompanied by disaggregation of cost centres. We therefore collected performance information reflecting the levels into which it has been disaggregated, recording targets at three levels: one (the highest level of aggregation), two and three (the lowest level of aggregation).

Performance information can be found in a variety of sources. Budget-makers may have access to performance information through formal budget justification material, informal departmental documents, and testimony of departmental officials. In this study, however, we examined only the performance information contained, as described in chapter 4, in the American APPs and the Canadian RPPs, for three reasons. First, under GPRA and the EMS these documents are supposed to be the centrepieces of results-based budgeting, a compilation and synthesis of all available information about the expected results of programs. Second, APPs and RPPs are typically shorter and more focussed on performance than are other sources. Third, APPs and RPPs are public documents whereas other sources are often not.

APPs have been reviewed and “scored” by other sources,²³ but they did not use comparable criteria or cover multiple years, and the criteria used were too vague to be reliably applied to Canadian RPPs.

Cost centres

A cost centre is simply an organization or network of organizations with an identifiable budget of its own. Given our focus on the budget-making process followed in central budget agencies and appropriations committees, cost centres will refer to organizations or networks of organizations whose budgets are identified in the performance information that is provided to budget-makers, as opposed to organizations or networks of organizations whose budgets are identified in the financial statements that are used for accounting purposes. Counting cost centres also allows us to measure the ability of budget-makers to make fine allocation decisions. The greater the disaggregation of cost centre structure (and thus presentation of performance information on cost), and assuming concurrent and identical disaggregation of program structure (and thus presentation of performance information on effectiveness), the greater the budget-maker’s ability to buy the desired results. It is a matter of control and how fine or gross the allocative interventions can be. To measure this ability, we identified and counted the cost centres that had targets “attached” to them, that is, cost centres where there was a

²³ See for example the General Accounting Office’s reviews at web site: <http://www.gao.gov/new.items/gpra/gpra.htm>, and the review co-ordinated by the former House Majority Leader at web site: <http://www.freedom.gov/results/measure/finalscores.asp>.

connection drawn between the money spent on a program or program element and the indicators used to measure the performance of that program or program element.

An entire department could be a cost centre, in which case the value of the variable “cost centres” would be one. Most departments do, however, break down both costs and performance. If the performance of each program is measured with unique indicators, budget-makers can see what results are being purchased at what price for *each* program. This should allow the budget-maker to make both gross decisions concerning overall department operations, and fine decisions concerning the operations of individual programs and program elements. This ability, and the provision of performance information from which it is derived, is important to our study of results-based budgeting but is not captured by the targets-per-dollar measure, and so constitutes another dependent variable. The variable “average size of the smallest cost centre with targets attached” examines the cost centre breakdown across a department, identifies the smallest cost centres with targets attached to them, and calculates their average size in dollars. The smaller the average size of the smallest cost centre with targets attached, the greater the provision of performance information.

Budget

Finally, we controlled for the size of the department by dividing the number of targets by the number of dollars of budgetary authorization it requested. For Canadian departments, this was gross program spending, the cost of all business lines as found in the RPPs; for American departments, it was program spending as found in the APPs.

Three issues related to the size of departmental budgets bear exploration. First is whether to use discretionary budget or total (discretionary plus statutory) budget. Ideally we would select whatever dollars the performance measures report on, using discretionary if only activities funded with discretionary funds had performance targets, and total if all activities (including those funded with statutory funds) had performance targets. Unfortunately, departmental plans rarely specify the nature of the funds used to fund activities, and so we are reluctant to use just discretionary budget since departments who have relatively large percentages of their total budgets coming from statutory funds and report on the uses of those funds would score artificially higher than departments who have relatively low percentages of their total budgets coming from statutory funds. On the other hand, effective pressure to provide performance information cannot come from sources of statutory funds and so we were reluctant to use total budget since the strength of the relationship between horizontality and availability of performance information would be artificially weak in departments that received a relatively large percentage of their total budgets from statutory sources. Thus we used both discretionary and total budgets,²⁴ running multiple tests on the data. Regardless of whether we use discretionary or total budget, since our interpretation of these data compares departments to each other rather than to a more absolute standard, it is consistency that is important.

²⁴ Canadian data on the statutory/discretionary split were obtained from Part II of the Estimates; American data on the statutory/discretionary split were obtained from United States, *Budget of the United States Government: Historical Tables, Fiscal Year 2001* (Washington: U.S. Government Printing Office, 2000).

Second, in order to ensure longitudinal comparability, we controlled for inflation by converting budgets into 1998 dollars.²⁵ Third, in order to ensure cross-sectional comparability, we controlled for differences in the exchange rate by converting budgets into U.S. dollars.²⁶ Together, all targets were divided by 1998 USD of requested discretionary authority and 1998 USD of requested total authority, and the average size of the smallest cost centres with targets attached were measured in 1998 USD of requested discretionary authority and 1998 USD of requested total authority.

Independent variables

We measured five independent variables: year, policy area, regime type, executive horizontality, and legislative horizontality.²⁷

Year

The value of the dependent variables may be affected by the year of a department's budget request. Departments could provide more or less performance information due to learning, tightening or loosening of funds (and thus changes in the

²⁵ Government deflators provided by the Bureau of Economic Analysis (web site: <http://www.bea.doc.gov/bea/dn/cpcw.txt>, accessed March 10, 2001) and Statistics Canada, "Implicit Price Indexes, Gross Domestic Product – Net current government expenditure on goods and services" (web site: <http://www.statcan.ca/english/pgdb/economy/economic/econ06.htm>, accessed March 10, 2001).

²⁶ Conversion rate for 1998 provided by the U.S. Federal Reserve, "Canada – Spot Exchange Rate, Canadian\$/US\$" (web site: http://www.federalreserve.gov/releases/h10/hist/dat96_ca.txt, accessed August 23, 2000). We converted Canadian dollars into U.S. dollars, rather than the other way around, because American dollars is the "common denominator" used most often in comparative studies of public finance.

²⁷ For other possible independent variables which may be particularly useful for studies comparing a large number of jurisdictions, see Meagan M. Jordan and Merl Hackbart, "Performance Budgeting and

amount of pressure placed on departments to provide performance information), or the waxing or waning of political importance and thus scrutiny of departmental submissions over time. We thus recorded the fiscal year of a department's budget request by creating an independent variable "year."

Policy area

The value of the dependent variables could be affected by the policy area in which the department operates. As Wilson has noted, policy areas differ in terms of their amenability to measurement.²⁸ The outputs and outcomes of one policy area may be more or less easy to measure than the outputs and outcomes of another policy area.²⁹ Policy areas may also differ in terms of their amenability to linking and disaggregation of costs and results. The costs and results of one policy area may be more or less easy to link to one another and disaggregate into discrete programs and program elements. To our knowledge, no one³⁰ has developed measures of amenability to measurement or amenability to linking and disaggregation that can be readily applied to multiple

Performance Funding in the States: A Status Assessment," *Public Budgeting and Finance* 19(1) (Spring 1999), 68-88.

²⁸ James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (New York: Basic Books, 1989), pp. 158-171.

²⁹ See also Beryl A. Radin, "The Government Performance and Results Act (GPRA): Hydra-Headed Monster or Flexible Management Tool?", *Public Administration Review* 58(4) (July/August 1998), 309.

³⁰ With the partial exception of Patrick Dunleavy, "The Architecture of the British Central State, Part I: Framework for Analysis," *Public Administration* 67(3) (Autumn 1989), 249-275 and "The Architecture of the British Central State, Part II: Empirical Findings," *Public Administration* 67(4) (Winter 1989), 391-417. For a good start, see G. Bouckaert and A. Halachmi, "The Range of Performance Indicators in the Public Sector: Theory vs. Practice," *Re-engineering and Performance Measurement in Criminal Justice and Social Programmes*, eds. A. Halachmi and G. Bouckaert (Perth: International Institute of Administrative Sciences, 1996).

departments and, upon reflection, we found that such measures would indeed be difficult to create. We controlled for measurability and disaggregatability by comparing departments that occupy the same policy space, as their outputs and outcomes—the subject of performance information—would be of equal measurability and disaggregatability.

Regime type

As discussed in the previous chapter, the regime type of the government (congressional or Westminster) can also affect the value of the dependent variables. We recorded regime type by creating a dummy variable “regime type,” with the null condition being the Westminster regime type and the positive being the congressional regime type.

Executive horizontality

We defined executive horizontality as the extent to which a department’s jurisdiction includes issues which are also directly part of other departments’ jurisdictions or is cross-cut by secondary policy-thematic cleavages and linked to other departments through those overlapping policy themes. We developed three measures of executive horizontality.

The first measure calculates overlap using the executive branch's breakdown of spending into purposes or "functions."³¹ (This measure can be used only in the U.S. as the Canadian government does not similarly divide or categorize all of its spending.) In the U.S., expenditure budgets are divided into twenty functions and seventy-five subfunctions.³² Considering subfunctions as proxies for policy areas, a department that spends funds on subfunctions in which another department also spend funds is executively horizontal. For example, both the United States Department of Agriculture (USDA) and the Federal Emergency Management Agency (FEMA) spend on Subfunction 605 (Food and Nutrition Assistance) and so both are to some extent executively horizontal. Appendix 1 presents the equation used to calculate the first measure of executive horizontality, "departmental subfunction overlap."

This measure has two major drawbacks. First, classifying funds as belonging to one subfunction ignores other subfunctions they could possibly be classified under. As the GAO said,

[e]ach federal activity is placed in a budget function and subfunction that best describes its most important purpose, even though many federal activities may serve more than one purpose. For example, Medicaid spending could be considered a health program or a form of income security benefits. To prevent double-counting and to reflect its primary purpose of financing health care for

³¹ As suggested in Stanley Collender, *Guide to the Federal Budget: Fiscal 1991* (Washington: Urban Institute, 1990) and by B. Guy Peters, private communication, October 28, 2000. For a similar but more rudimentary attempt, see United States, General Accounting Office, "Managing for Results: Using the Results Act to Address Mission Fragmentation and Program Overlap," GAO/AIMD-97-146, August 1997. For more on the American use of functions, see United States, General Accounting Office, "Budgeting Function Classifications: Origins, Trends, and Implications for Current Uses," GAO/AIMD-98-67, 1998.

³² For a full listing and description of budget functions and subfunctions, see United States, General Accounting Office, "Compendium of Budget Accounts: Fiscal Year 2001," GAO/AIMD-00-143, April 2000, 172-175.

specific beneficiaries, the Medicaid program is classified as “health care services” within the Health function.³³

Importantly, it is precisely these secondary and thus unrecorded purposes (and effects) that are the most likely to be horizontal—and as only the primary purposes are used by this measure to calculate horizontality, this measure may under-estimate the true amount of horizontality.

Second, we equate policy spaces with subfunctions and measure occupation of policy space by measuring spending in subfunctions, but spending is neither a necessary nor a sufficient condition for occupation. A department may occupy policy space without spending in it, and may spend in it without occupying it. Two departments could actually occupy the same policy space, but this co-occupation might not be captured by our measure because of how they classify spending. Or, two departments could actually not occupy the same policy space, but our measure would report co-occupation because of how they classify spending. Taken together, though, these threats may cancel each other out. Furthermore, the third measure of executive horizontality compensates for these problems.

Departmental subfunction overlap measures the extent of overlap but not how that overlap is distributed, that is, the number of departments involved in the overlap. There is good reason to believe that, given a constant amount of overlap, co-ordination increases in difficulty as more departments become involved. The second measure of executive horizontality measures how many departments a target department shares

³³ United States, General Accounting Office, “Budgeting Function Classifications,” p. 3.

policy space with. To calculate this, we counted how many other departments³⁴ spend money in the same subfunctions as the target departments. We term this variable “other departments in subfunctions.” Again, this variable can be calculated for American departments only.

For the third measure of executive horizontality, we relied on departments themselves to identify their own degree of horizontality. This is less a measure of *actual* horizontality than a measure of *perceived* horizontality—how horizontal the departments *think* they are. Departments’ perceptions of how horizontal they are may be flawed if compared to their actual horizontality, since they do not always appreciate how they affect other departments and how other departments affect them. This measure may therefore underestimate actual horizontality. For our purposes, however, perceived horizontality could, in fact, be a better indicator of executive horizontality, since it is primarily on the basis of perceived horizontality that departments engage in the hypothesized activity regarding provision of performance information. We therefore counted the number of departments that target departments list as either partners (departments with whom they co-operate in either the formulation or the implementation of policy) or external influences in their APPs and RPPs, and term this variable “other departments in plans.” This variable was calculated for both Canadian and American departments.

³⁴ For our purposes, and following from the discussion of autonomy in chapter 2, a department is an organizational unit such as a department or an agency that publishes its own APP and/or is listed separately in United States, General Accounting Office, “Compendium.”

We tested each of these three measures of executive horizontality against the dependent variables.

Legislative horizontality

Legislative horizontality is the extent to which a committee's jurisdiction includes issues which are also directly part of other committees' jurisdictions or is cross-cut by secondary policy-thematic cleavages and is linked to other committees through those overlapping policy themes. We developed three measures of legislative horizontality, measures closely related to the three used to measure executive horizontality. As noted earlier, legislative horizontality is not a useful concept when studying Canada since its legislature does not play a significant role in the formulation of expenditure budgets, and so these measures will be applied only to the U.S.

The first measure of legislative horizontality calculates overlap using the function/subfunction breakdown examined above. Again considering subfunctions as proxies for policy areas, departments who spend funds on subfunctions which receive funding from multiple subcommittees are legislatively horizontal. For example, Subfunction 605 is spent on by both USDA and FEMA, and they receive these funds from different subcommittees: Agriculture and Veterans Affairs, respectively, making the two organizations legislatively horizontal. Appendix 2 presents the equation used to calculate the first measure of legislative horizontality, "subcommittee subfunction overlap." This measure is subject to the same limitations as is the first measure of executive horizontality, departmental subfunction overlap.

Subcommittee subfunction overlap measures the extent of overlap but not how that overlap is distributed, that is, the number of subcommittees involved in the overlap. There is good reason to believe that, given a constant amount of overlap, co-ordination increases in difficulty as more subcommittees become involved. The second measure of legislative horizontality measures how many subcommittees fund program activities in a single policy area. To calculate this, we counted how many other subcommittees fund program activity in the same subfunctions as the target departments. We term this variable “other subcommittees in subfunctions.”

For the third measure of legislative horizontality, we rely on departments themselves to identify their own horizontality. Again, this is less a measure of *actual* horizontality than a measure of *perceived* horizontality—how horizontal they *think* they are, and so shares the same advantages and disadvantages as the third measure of executive horizontality. We counted the number of subcommittees that are the primary (i.e. absolute majority) sources of funds for the departments that the target departments listed as either partners or external influences in their APPs, and term this variable “other subcommittees in plans.”

We tested each of these three measures of legislative horizontality against the dependent variables.

Population and sample

Earlier in this chapter, we stated that the best dependent variable we could have used is the provision of performance information, and that our model examined in two

countries of dissimilar regime type the relationship between the provision of performance information on policies and the horizontality of those policies, and then compared those relationships to identify the role that regime type plays.

The two countries studied had to meet five criteria. First, one had to be a Westminster system, and the other a congressional system, so we could isolate the influence of regime type. Second, both countries had to use results-based budgeting to formulate expenditure budgets. Third, both countries had to be liberal democracies so as to increase the likelihood that their policy spaces were comparable. Fourth, both countries had to be either federations or unitary states, again in order to increase the likelihood that their policy spaces were comparable. Fifth, budgetary documents for both countries had to be published in English so as to facilitate their analysis. Canada and the U.S. best met all of these criteria.

Given that we could not study all the policy areas and all the departments in both countries, we had to focus on only a few. As we saw in chapter 4, the current American experiment with results-based budgeting began in 1993 with GPRA. The number of departments producing APPs under GPRA is growing, and is currently at least 34. As we also saw, the current Canadian experiment with results-based budgeting began in 1995 with the introduction of the EMS. The number of organizations producing RPPs under the EMS has also been growing, and is currently at 87.

To control for the measurability and disaggregatability of policy areas (and thus the amenability of departments' programs to measurement and disaggregation of performance information), we focussed our attention on departments that occupy the

same policy space in each country, so that they could be compared to each other and measurability and disaggregatability be cancelled out. It was difficult to find pairs of organizations that occupy similar, let alone identical, policy spaces as the two governments divide their policy spaces into departmental jurisdictions in different ways. Jurisdictions are often too large or too small to be directly compared to their nearest counterpart in the other country, or are simply constituted in ways that cross-cut those used by the other country. Furthermore, even when the policy spaces are identical, the relevant organizations are sometimes parts of larger organizations and so did not produce their own APPs or RPPs. In examining the 34 American organizations and the 87 Canadian organizations who produce APPs and RPPs, respectively, we found eight appropriate pairs and so sixteen appropriate organizations. These pairs, by policy area, are: foreign aid; environment; labour; transportation; veterans' affairs; nuclear regulation (civil); citizenship and immigration; and parks.

Finally, in selecting policy areas, we collected data for multiple years to minimize the influence of anomalous data from a single year. We limited the data search to the current experiments with results-based budgeting, and did not extend it to include the past experiments, as data on those experiments are largely unavailable. In the U.S., the current range of departments producing APPs dates from FY 1999, prior to which only a few pilot departments produced APPs. We therefore focussed our attention on APPs from fiscal years 1999, 2000 and 2001. In Canada, the current range of departments producing RPPs dates from FY 1998-99, prior to which only a few pilot departments produced RPPs. We therefore focussed our attention on RPPs from fiscal years 1998-99,

1999-2000, 2000-01, which we recoded into 1999, 2000 and 2001, respectively, so the RPPs may be compared directly with the APPs of those same fiscal years.

Of the eight pairs of organizations listed above, RPPs were available for all eight departments for all three years, but APPs for the Immigration and Naturalization Service and the National Parks Service were not available for all three years, so the policy areas citizenship and immigration and parks were excluded from the study, leaving the other six as the sample.

Method

To control for measurability and disaggregatability, we divided the targets per dollar dependent variables of American departments by the corresponding dependent variables of Canadian departments to create targets per dollar ratios, and divided the cost centre size dependent variables of Canadian departments by the corresponding dependent variables of American departments to create cost centre size ratios, which become the new dependent variables. Each division involved the American department and the Canadian department in a given policy area. Since the policy areas occupied by pairs of departments are similar, measurability and disaggregatability are similar. Thus, when the dependent variables are divided by each other, the influences of measurability and disaggregatability on provision of performance information cancel each other out. These ratios were then compared across policy areas and against the independent variables, e.g. horizontality. This process of making comparisons between departments in individual

areas to generate ratios, and then comparing the ratios across areas, may be referred to as a two-step comparative method.

Dividing American values by Canadian values (or *vice versa*) creates a single ratio variable involving both regime types, and so removes the regime type variable from the data set. However, we incorporated regime type into the analysis, as hypothesized in chapter 5, by considering the construction of the ratios when interpreting the direction of the relationships between the dependent variables and the remaining independent variables.

We may better illustrate this method with an example.³⁵ Suppose that the Nuclear Regulatory Commission (NRC) has a targets per dollar score of 20, and that the Environmental Protection Agency (EPA) has a targets per dollar score of 10. In this example, the NRC's score is twice that of the EPA. This difference could be due to factors such as greater measurability, greater horizontality, or greater political scrutiny. Suppose further that the Atomic Energy Control Board (AECB) had a score of 10, and Environment Canada (EC) had a score of 5. Again, the AECB's score is twice that of EC, a difference that could be due to greater measurability, horizontality, or other factors. It can be difficult to determine just why the scores of some departments and some policy areas are higher than those of others.

Dividing American by Canadian values in each policy area would create targets per dollar ratios. In this example, the nuclear regulation ratio is $(20 \div 10 =) 2$, and the environment ratio is also $(10 \div 5 =) 2$. By so dividing, the effects that measurability,

³⁵ A hypothetical example illustrates the method better than an actual example could.

horizontality, and other factors have on targets per dollar in some policy areas but not in others cancel each other out. Even though the departments in the nuclear regulation policy area provide twice as much performance information as do the departments in the environment policy area, the ratios are equal.

To exactly cancel each other out, though, these factors must affect each of the departments in a pair to exactly the same degree. If a factor affects one department in the pair more than it affects the other (in % terms), some of the effect will remain in the quotient. Importantly, a factor may affect one department in the pair more than it affects the other due to the different regime types within which those departments operate.

Comparing quotients can thus help us identify relationships involving regime type. When the quotients are compared across policy areas, the remaining effects will be noticeable as the difference between quotients.

In this example, let us add a third policy area: international development. If the targets per dollar score of the United States Agency for International Development (USAID) were 15, and the score of the Canadian International Development Agency were 5, the ratio would be 3. In comparison with the nuclear regulation policy area, the scores are lower, *but not uniformly so*, as indicated by the different ratio. USAID's score is three-quarters that of the NRC, and CIDA's score is half that of the AECB, so the international development ratio is larger. The larger ratio indicates that these policy areas are different in a way that affects the provision of performance information and which is itself affected by regime type.

Comparing the ratios across policy areas allows us to see how characteristics of policy areas interact with regime type to affect the provision of performance information. By dividing American by Canadian scores, we can measure the “gap” in reporting that we hypothesized in chapter 5, and by comparing ratios, we can chart how this gap swells and shrinks across policy areas. This allows us to isolate the portion of demand for performance information that originates with American legislators who use it to build trust (see figure 8).

As previously mentioned, a number of factors could cause this gap to change across policy areas. To determine if horizontality is the (or one of the) factors, we could plot, as described in chapter 5, the gap on the y axis against horizontality on the x axis. If there is no gap between countries, the value of all the ratios will be 1. If a gap exists, the value of the ratios will be greater than 1. If the gap changes with policy area, but its values in different policy areas are unrelated to the degrees of horizontality of those policy areas, the measures of correlation between ratio and horizontality will be zero.

All of the horizontality scores save other departments in plans have only American values and so in the quotient records will retain those American values. For the variable other departments in plans, the Canadian and American values were summed.

Multiple regression was used to test the direction and strength of the relationships between the dependent variables (targets per dollar ratios and cost centre ratios) and the independent variables (year, policy area, the three measures of executive horizontality, and the three measures of legislative horizontality).

To ensure that the data were valid and to confirm the reasons behind the results, we conducted a series of interviews with civil servants and academic observers of budgeting in the two countries. Specifically, we interviewed: a Director in TBS' Expenditure and Management Strategies Sector; the OMB project leader for GPRA implementation; the Assistant Director of Budget Issues in the GAO; Directors or Assistant Directors in the strategic planning divisions of each line department in the sample; the Reisman Fellow (academic-in-residence) at TBS; and a Fellow at the Brookings Institute in Washington.

These interviewees were found by searches of government phone books, government web sites, government publications, and through personal contacts. These interviewees were appropriate for this study because they were either directly involved in the preparation or review of departmental budget requests or were close observers of that process, and because they were drawn from both countries, from both the executive and (in the U.S.) the legislative branches, from both guardian and spender organizations, and from both the practitioner and the academic communities.

The interviews opened with a brief description of the hypotheses, methodology and findings of the study. They then proceeded to explore five questions: 1) how the interviewees would explain my findings; 2) the bases on which program-level budget decisions are made in executive and (if applicable) legislative branches; 3) the amount of support for GPRA or EMS in the government; 4) whether budget-makers pressure departments to provide performance information; 5) whether horizontal policies and programs are co-ordinated, in the budget or otherwise.

Interviews were conducted in the summer and fall of 2001, either by telephone, e-mail or in person, and lasted from 30 to 60 minutes.

Summary

We began this chapter by distilling the “ideal-type” results-based budgeting logic model, which identifies the determinants and determinates of the provision and use of performance information. From this model we then developed and operationalized the dependent variables targets, cost centres and budgets, as well as the independent variables year, policy area, regime type, executive horizontality and legislative horizontality. Following this, we identified the population and discussed how we selected the sample. Finally, we described the two-step comparative method, multiple regression analyses, and confirmatory interviews.

Chapter 7: Results

In this chapter we describe the results, analyze them, and discuss their significance in the context of public budgeting. We found little evidence to support the hypotheses, and suggest that this was due to flawed assumptions concerning both the ability of budget-makers to overcome the methodological difficulties in generating and applying performance information, and the predominance of political disincentives to use results-based budgeting over the political incentives. Due to the small size and non-random selection of the sample, the generalizability of the findings is uncertain.

Description of the sample

In this section we describe the departments in the sample in terms of the variables: budget, targets, cost centres, targets per dollar, cost centre size, targets per dollar ratio, cost centre size ratio, and horizontality.

Budget

Tables 4 and 5 present the average annual budgets (discretionary, statutory, and total)¹ of each department.

The amount of total budget varied widely between departments in both countries. In Canada, the largest department (HRDC) was authorized to spend \$28.9 billion in FY 2001, over five hundred times as much as the smallest (AECB) at \$0.05 billion in FY

¹ Until noted otherwise, budgets are in billions of dollars of the country and year specified.

Table 4. Average annual budgets (in billions), by department

Department	Country	Discretionary budget	Statutory budget	Total budget
DOT	U.S.	12.66	39.10	51.76
VA	U.S.	21.77	26.39	48.15
DOL	U.S.	11.58	25.74	37.32
HRDC	Canada	2.71	25.17	27.87
EPA	U.S.	7.41	0.08	7.49
USAID	U.S.	6.43	0.87	7.29
VAC	Canada	1.95	0.03	1.98
CIDA	Canada	1.51	0.29	1.80
TC	Canada	1.12	0.16	1.28
EC	Canada	0.60	0.05	0.65
NRC	U.S.	0.48	0.00	0.48
AECB	Canada	0.04	0.01	0.05

n=36

1999. In the U.S., the largest department (DOT) was authorized to spend \$58.3 billion in FY 2001, over one hundred times as much as the smallest (NRC) at \$0.5 billion in FY 2000. The size (and therefore cost) of programs are likely influenced by the scale of the policy challenge, the cost of the specific policy activity, and the priority attached to addressing the policy challenge. The variance between the budgets of departments in the same country may therefore reflect differences in these influences across policy areas and so departments, as reflected in the high standard deviations. For example, in both countries, the budgets of nuclear regulation departments tended to be relatively small, and the budgets of labour departments tended to be relatively large. For the measures where mean and median budgets vary considerably, the distribution is skewed by a few extraordinarily large departments,² which is likely a consequence of having purposively

² Namely, HRDC, and to a smaller extent, DOT, VA and DOL.

Table 5. Annual budgets (in billions), by country

Variable	Cases	Minimum	Maximum	Mean	Median	Annual average ³	Standard deviation
Discretionary budget	Canada	0.04 (AECB 1999)	2.8 (HRDC 2001)	1.3	1.3	7.9	0.9
	U.S.	0.5 (NRC 2000)	24.8 (VA 2001)	10.1	9.4	60.3	6.8
Statutory budget	Canada	0.01 (AECB 1999)	26.1 (HRDC 2001)	4.3	0.1	25.7	9.6
	U.S.	0.0 (NRC, all years)	44.3 (DOT 2001)	15.4	12.0	92.2	16.3
Total budget	Canada	0.05 (AECB 1999)	28.9 (HRDC 2001)	5.6	1.5	33.6	10.3
	U.S.	0.5 (NRC 2000)	58.3 (DOT 2001)	25.4	21.0	152.5	21.7
Percentage of budget that is discretionary	Canada	9.6 (HRDC 2000)	98.5 (VAC 2000)	76.9	89.5	23.6	31.4
	U.S.	24.1 (DOT 2001)	100.0 (NRC, all years)	64.6	67.0	39.6	32.8
Adjusted discretionary budget	Canada	0.03 (AECB 1999)	1.9 (HRDC 2001)	0.9	0.9	5.4	0.6
	U.S.	0.5 (NRC 2000)	23.3 (VA 2001)	9.7	9.3	58.4	6.5
	all	0.03 (AECB 1999)	23.3 (VA 2001)	5.3	1.6	63.8	6.4
Adjusted total budget	Canada	0.03 (AECB 1999)	19.3 (HRDC 2001)	3.8	1.1	23.1	7.0
	U.S.	0.5 (NRC 2000)	54.8 (DOT 2001)	24.6	20.5	147.6	21.0
	all	0.03 (AECB 1999)	54.8 (DOT 2001)	14.2	4.1	170.7	18.7

n=36

³ Annual average refers to the average amount of combined annual budget for the group of departments. When each country is studied individually, there are six departments in a group; when the two countries are studied together, there are twelve departments in the group. To calculate annual average, we totalled the budget of each department in the group over the three-year period studied, summed those departmental totals, and then divided by three. The resulting figure is how much the group of departments as a whole had to spend in an "average" year. Aggregating departmental budgets by country, and then averaging over the three years studied, improves Canada-U.S. comparisons because it reduces the influence of extraordinarily-large or -small departments and the influence of extraordinarily-strong or -weak years.

selected a fairly small number of departments in each country as opposed to having randomly selected a larger and so more representative (and likely more normally distributed) sample.

The breakdown of total budget into statutory and discretionary components (the “statutory/discretionary split”) also varied widely. In Canada, discretionary budget expressed as a percentage of total budget varied from a low of 10% (HRDC 2000) to a high of 98% (VAC 2000), although all the others fell in the range of 81% to 93%. In the U.S., discretionary budget expressed as a percentage of total budget varied from a low of 24% (DOT) to a high of 100% (NRC), with the other departments evenly spread out in between these extremes. Table 6 presents the splits for each department.

Table 6. Average statutory/discretionary split, by department

Department	Mean % of budget that is discretionary
NRC	100.0
EPA	98.9
VAC	98.5
EC	92.3
AECB	89.2
USAID	88.1
TC	87.8
CIDA	84.0
VA	45.1
DOL	31.1
DOT	24.5
HRDC	9.7

n=36

As discussed in chapter 6, this variance reflects different sources of funding authority, and since statutory sources are at least partially outside the reach of results-based budgeting, it seems that the variance in terms of the percentage of departmental funds which come from these sources is high enough to warrant studying both discretionary authorities and total authorities. Despite this variance, adjusted⁴ discretionary budget and adjusted total budget are very strongly correlated ($r = .89$). However, what is important for this study is not so much the correlation across all cases but rather the correlation within pairs. On this count, some differences are notable: on average, 98% of VAC's total budget was discretionary, compared to 45% of VA's; 88% of TC's budget was discretionary compared to 24% of DOT's; and 10% of HRDC's budget was discretionary compared to 31% of DOL's. It is not immediately apparent why these splits are so different, or why the splits are more different in these three policy areas than they are in the other three, where the average difference is 7% compared to 46%. Nevertheless, given that these three examples constitute half of the sample, we continued to address discretionary and total budgets separately.

Once more within countries but between departments, one finds different patterns of change in budget over the three year period. In both Canada and the U.S., in terms of both discretionary and total budgets, some departments increased both years, some decreased both years, and others increased one year but decreased the other. The

⁴ That is, in 1998 USD.

magnitude of the annual change ranged from 0.2%⁵ to 17.7%.⁶ There is no consistent pattern in this regard.

Between countries, the amounts of overall budgets also varied. The sum of the U.S. departments' adjusted budgets was many times larger than the total of the Canadian departments' budgets. The sum of the American adjusted discretionary budgets was 10.4 times as large in FY 1999, 10.7 times as large in FY 2000, and 11.1 times as large in FY 2001, and the sum of the American adjusted total budgets was 6.2 times as large in FY 1999, 6.3 times as large in FY 2000, and 6.7 times as large in FY 2001. American departments need more money due to that country's larger population⁷ and economy,⁸ which increase the scale of policy challenges (e.g. there are simply more veterans to serve, workplaces to regulate, and factories to inspect) as well as the size of the tax base and thus ability to fill public coffers. However, the American departments spend less in total per capita than do the Canadian departments, reflecting the U.S.'s lower tax rate and probably at root an anti-state tradition and lower predilection to occupy policy space.

⁵ HRDC's real total authority rose by 0.2% from FY 2000 to FY 2001.

⁶ TC's real total authority dropped by 17.7% from FY 1999 to FY 2000.

⁷ In 1999, America's population was almost nine times larger than that of Canada (272.9 million to 30.5 million). This figure comes close to matching how much larger the American discretionary budgets were that same year (10.4 times larger), as well as the "rule of thumb" figure of ten times larger which is often used in Canada-U.S. comparisons. OECD, "OECD in Figures 2001," pp. 6-7, web site: http://www.oecd.org/publications/figures/2001/anglais/006_007_Demog.pdf, accessed July 26, 2001.

⁸ In 2000, America's GDP was 11.5 times larger than that of Canada (9926.6 billion USD to 862.4 billion USD). This figure also comes close to matching how much larger the American discretionary budgets were that same year (10.7 times larger), as well as the "rule of thumb" figure of ten times larger. OECD, "OECD in Figures 2001," pp. 12-13, web site: http://www.oecd.org/publications/figures/2001/anglais/012_013_GDP.pdf, accessed July 26, 2001.

The three-year average percentage of total budget that was discretionary was 1.7 times higher in the U.S., 39.6% to 23.6%.⁹ This difference reinforced our decision to study both discretionary and total budgets.

In both countries, the budgets of the departments we studied tended to grow over time. Average¹⁰ discretionary departmental budgets grew over time in both countries, but Canadian budgets grew more.

Overall budgets also grew in both countries over the time period studied. Overall real Canadian discretionary budgets shrank 0.002% from FY 1999 to FY 2000 but grew 3.7% from FY 2000 to FY 2001, and real American discretionary budgets grew 2.4% and 7.2% over the same years. We found similar results for total budgets as well: real Canadian total budgets grew 1.6% from FY 1999 to FY 2000 and 0.8% from FY 2000 to FY 2001, and real American total budgets grew 3.6% and 7.0% over the same time periods.

For both countries, we find that the overall statutory/discretionary split was constant over time. In Canada, the percentage of total budgets that was discretionary ranged from 23.2% to 23.9% over the three fiscal years. In the U.S., the percentage of

⁹ These percentages vary somewhat from those commonly cited in reference to the splits found across the entire American government (35%) and Canadian government (30%) (Allen Schick, *The Federal Budget: Politics, Policy, Process* (Washington: Brookings, 1995), p. 7; Canada, Department of Finance, Fiscal Policy Branch, "The Hitchhiker's Guide to the Budget Process" (Presentation slides), September, 2000).

¹⁰ I.e., the average for the six departments aggregated in each country. Such aggregation hides the fact that, in some departments, real discretionary budgets did not grow at the same rate, grow in both years studied, or even grow at all. Indeed, the two countries are similarly heterogeneous as they both showed variation between departments in this regard.

total budgets that was discretionary ranged from 39.4% to 39.8% over those same three fiscal years.

In sum, we may make four key observations about budgets. First, Canada and the U.S. seem similar in terms of aggregate spending trends over time, confirming the choice of a longitudinal, most similar comparative design. Second, departments differ in size, affirming our decision to control for it by dividing the measure of the amount of performance information provided by departments by the size of their budgets. Third, departments differ in sources of budgetary authority, affirming our decision to examine both discretionary and total budgets. Fourth, departments differ in terms of whether their budgets are growing or shrinking, as well as at what rate. These differences could influence the dependent variable of targets per dollar and may be relevant to the interpretation of longitudinal changes in this variable.

From this point on we will discuss only adjusted discretionary budgets and adjusted total budgets, as measured in billions of 1998 USD, and refer to these measures as “discretionary dollars” and “total dollars,” respectively.¹¹

Targets

We collected data on nine types of targets, spanning three levels of disaggregation (one, two and three) and three degrees of specificity (high, medium and low). Table 7 presents the number of departments who reported targets, by category of target.

¹¹ Changes in the exchange rate do not distort this measure as Canadian budgets were converted to 1998 USD by first converting them to 1998 CND, and then into 1998 USD, rather than converting them to USD of whatever year, and then into 1998 USD. As such, only one exchange rate—that of 1998—was used in the conversion, so subsequent changes in it did not affect our calculations.

Table 7. Number of departments reporting targets, by category of target

Level one, high specificity	Level one, medium specificity	Level one, low specificity	Level two, high specificity	Level two, medium specificity	Level two, low specificity	Level three, high specificity	Level three, medium specificity	Level three, low specificity
36	21	24	2	4	3	0	0	1

n=36

We found that of these nine types of targets, only one (level one, high specificity) had enough entries to be useful. In all 36 cases, the plan contained at least one level one, high specificity target. Twenty-one plans contained level one, medium specificity targets, and 24 contained level one, low specificity targets. We decided to aggregate all the level one measures as it was the same plans that lacked medium and low specificity measures, and we did not want to reduce the effective size of the data set. Only four plans contained any of the remaining types of targets, and so we decided to aggregate all levels as well. Aggregating by level (i.e. into three measures: level one, all specificities; level two, all specificities; and level three, all specificities) proved fruitless as only four plans¹² out of the 36 contained level two or level three targets. Aggregating by specificity (i.e. into three measures: high specificity, all levels; medium specificity, all levels; and low specificity, all levels) also proved fruitless as only 22 cases contained medium specificity targets and only 24 cases contained low specificity targets, again presenting a small n problem which was compounded by the clustering of empty cells by

¹² Viz., those of NRC 1999, NRC 2000, USAID 1999, and USAID 2001. Of the ten level two or level three targets contained in these plans, two were high specificity, four were medium specificity, and four were low specificity.

department. Therefore, we aggregated all the measures into one single measure, covering all three levels and all three degrees of specificity, which we will refer to simply as “targets.” Tables 8 and 9 present the results.

The countries and departments in the sample demonstrate significant differences in terms of their targets. Within countries, there was much variation between departments. In Canada, the number of targets ranges from 1 to 44, and in the U.S., the

Table 8. Mean number of targets, by department

Department	Mean number of targets
EPA	116.3
USAID	103.7
VA	101.3
NRC	91.0
DOT	74.7
DOL	42.0
HRDC	33.3
EC	29.7
TC	22.3
VAC	12.0
AECB	8.3
CIDA	5.0

n=36

Table 9. Number of targets, by country

Variable	Cases	Minimum	Maximum	Mean	Median	Annual average	Standard deviation
Targets	Canada	1 (CIDA 1999)	44 (HRDC 2001)	18.4	16.5	110.7	13.2
	U.S.	28 (DOL 1999)	125 (USAID 2000)	88.2	84.5	529.0	28.8
	all	1 (CIDA 1999)	125 (USAID 2000)	53.3	39.5	639.7	41.7

n=36

number of targets ranges from 28 to 125, the largest being over four times as large as the smallest.

There were also changes over the time period. In both countries, some departments¹³ increased both years while others¹⁴ increased one year but decreased the other, and in the U.S., one decreased both years.¹⁵ Increases were as large as 700% (CIDA, FYs 1999-2000) and decreases as large as 32.5% (NRC, FYs 1999-2000).

Because American departments are larger than Canadian, they also had more targets: an annual average of 529.0 targets, almost five times as many as Canadian departments at 110.7 targets. This difference is likely a function of greater spending, but may also be a result of the U.S. having started its current experiment with results-based budgeting before Canada did, or even preliminary evidence of the influence of congressional oversight. Regardless, Canada appears to be closing the gap: in terms of change in total targets, Canada measured +76.1% from FY 1999 to FY 2000 and +8.8% from FY 2000 to FY 2001, compared to the U.S.'s +13.2% from FY 1999 to FY 2000 and -15.6% from FY 2000 to FY 2001. This decline in American targets may indicate that OMB and Congress had reached the point of "information overload" and actually asked departments to provide less—not more—performance information in their APPs.

¹³ In Canada: AECB; TC; and HRDC. In the U.S.: DOL.

¹⁴ In Canada: CIDA; VAC; and EC. In the U.S.: USAID; VA; DOT; and EPA.

¹⁵ NRC. Reasons for the variance in trends could be due to different starting points in terms of performance measurement capability, different changes in political importance, and (in the U.S.) different changes in the composition of congressional committees.

The mean number of targets varies somewhat from the median number of targets when the two countries are considered together. The distribution is slightly skewed in favour of large departments, which is likely a consequence of having purposively selected a fairly small number of departments in each country.

Key observations concerning targets are that departments in the same country can have vastly different amounts of targets and trends in growth or reduction, and that while American departments have more targets than Canadian departments, the latter are making overall gains. Shortly, we will look for more patterns in these data and determine if such patterns are correlated with horizontality and regime type.

Cost Centres

Table 10 presents the average number of smallest cost centres with targets attached for each department. We will refer to this measure as “cost centres.” Table 11 summarizes the data collected by this measure.

There were differences between countries and departments in terms of their cost centres. In Canada, the number of cost centres ranged from 1 to 10, and in the U.S., the number of cost centres ranged from 1 to 51. Differences in the size of departments could explain these variations (the larger ones being easier to disaggregate), as could differences in the complexity of departments (the more complex ones being easier to disaggregate). Over time, Canadian departments tended to remain static, but in the U.S., there was greater variability: three departments rose by at least three hundred percent while two departments showed no change and one fell by 85.7%.

Table 10. Mean number of cost centres, by department

Department	Mean number of cost centres
NRC	34.0
EPA	31.0
VA	8.0
CIDA	7.0
TC	5.7
HRDC	5.3
DOT	5.0
EC	4.0
VAC	3.7
DOL	3.0
USAID	3.0
AECB	1.3

n=36

Table 11. Number of cost centres, by country

Variable	Cases	Minimum	Maximum	Mean	Median	Annual average	Standard deviation
Cost centres	Canada	1 (multiple)	10 (TC 2001)	4.5	4.0	27	2.3
	U.S.	1 (multiple)	51 (NRC 2000)	14.0	5.5	84	17.3
	all	1 (multiple)	51 (NRC 2000)	9.3	5.0	111	13.1

n=36

The U.S. had an annual average of 84 cost centres, over three times as many as Canada at 27 cost centres. The U.S. also seems to be widening this gap: in terms of change in total cost centres, Canada measured +0.0% from FY 1999 to FY 2000 and +37.5% from FY 2000 to FY 2001, compared to the U.S.'s +250.0% from FY 1999 to FY 2000 and -3.6% from FY 2000 to FY 2001.

In the U.S., the mean number of cost centres varied considerably from the median number. The distribution was skewed by two extraordinarily large departments,¹⁶ which is likely a consequence of having purposively selected a fairly small number of departments in each country. It is unclear why the Canadian departments did not follow the same pattern.

Key observations concerning cost centres are that departments in the same country can have vastly different amounts of cost centres and trends in growth or reduction, and that American departments overall have more cost centres than Canadian departments.

Targets per dollar

We combined the data on adjusted budgets and data on targets to produce data on the average number of “targets per discretionary dollars” and “targets per total dollars.” Tables 12 and 13 present the results. Not surprisingly, given the variation we found in each of the two components of targets per dollar, we also found variation between departments and between countries in terms of their targets per dollar.

For discretionary dollars, Canadian targets per dollar ranged from 1.0 to 355.1, and American targets per dollar ranged from 2.5 to 248.3. These differences could be due to differences in measurability, horizontality, or simply because departments with relatively small budgets (e.g. the nuclear regulation departments, which scored considerably higher than the others) can score high on this measure by offering only a

¹⁶ Namely, the NRC and EPA.

Table 12. Mean targets per billion dollars, by department

Department	Mean number of targets per discretionary dollars	Mean number of targets per total dollars
AECB	273.3	244.1
NRC	195.6	195.6
EC	73.3	67.6
TC	29.6	26.7
EPA	16.2	16.0
USAID	16.7	14.7
VAC	9.0	8.9
CIDA	4.8	4.0
VA	4.8	2.2
HRDC	17.9	1.7
DOT	6.1	1.5
DOL	3.7	1.1

n=36

Table 13. Targets per billion dollars, by country

Variable	Cases	Minimum	Maximum	Mean	Median	Standard deviation
Targets per discretionary dollars	Canada	1.0 (CIDA 1999)	355.1 (AECB 2001)	68.0	21.1	100.9
	U.S.	2.5 (DOL 1999)	248.3 (NRC 1999)	40.5	10.1	73.3
	all	1.0 (CIDA 1999)	355.1 (AECB 2001)	54.3	14.6	88.0
Targets per total dollars	Canada	0.9 (CIDA 1999)	318.6 (AECB 2001)	58.8	12.2	91.6
	U.S.	0.7 (DOL 1999)	248.3 (NRC 1999)	38.5	7.4	74.3
	all	0.7 (DOL 1999)	318.6 (AECB 2001)	48.7	11.3	82.9

n=36

few targets. Over time, Canadian departments tended to rise, although at different rates, but in the U.S., most departments rose and then fell back to their original levels.

Between countries there was also variation, with Canada consistently scoring higher. In Canada, the average department had 68.0 targets per dollar, compared to 40.5 in the U.S. The annual average targets per dollar for all the departments combined was 20.2 in Canada and 9.1 in the U.S.¹⁷ Canada seems to be increasing its lead: in terms of change in total targets per dollar, Canada rose consistently from 13.1 in FY 1999 to 24.3 in FY 2001, while the U.S. rose from 9.2 in FY 1999 to 10.1 in FY 2000 but then fell to 8.0 in FY 2001. Scores for average departments also followed this trend: in Canada, the score rose from 54.6 to 66.0 to 83.3, and in the U.S., fell from 48.7 to 39.1 to 33.8. The patterns using total dollars were the same as they were for discretionary dollars.

In all cases, mean scores were considerably higher than median scores. The distribution was skewed by two extraordinarily large¹⁸ departments (AECEB and NRC), which is likely a consequence of having purposively selected a fairly small number of departments in each country.

Key observations concerning targets per dollar are that there is great variation between departments within both countries, that Canadian departments in general have more targets per dollar than American departments, and that this gap is widening.

¹⁷ This measure summed, by country, the discretionary dollars allocated to all the departments over the three fiscal years and the targets produced by all the departments over the three fiscal years and divided the targets by the dollars.

¹⁸ That is, large in terms of their targets per dollar scores.

Cost centre size

Combining the data on adjusted budgets and data on cost centres produced the “cost centre size in discretionary dollars” and “cost centre size in total dollars” dependent variables. Tables 14 and 15 present the results.

Table 14. Mean cost centre size (in billions of dollars), by department

Department	Mean cost centre size in discretionary dollars	Mean cost centre size in total dollars
VA	7.7	17.2
DOL	3.7	12.1
DOT	2.4	10.0
USAID	4.4	5.0
HRDC	0.35	3.6
VAC	0.39	0.39
EPA	0.37	0.37
TC	0.18	0.20
CIDA	0.15	0.18
EC	0.10	0.11
NRC	0.033	0.033
AECB	0.025	0.028

n=36

In discretionary dollars, Canadian cost centre sizes ranged in size from 0.02 to 0.5, and American sizes ranged from 0.01 to 19.3. In Canada, half the departments rose over time while the other half fell,¹⁹ and in the U.S., half the departments fell and two

¹⁹

CIDA, HRDC, and EC rose while the AECB, VAC, and TC fell.

Table 15. Cost centre size (in billions of dollars), by country

Variable	Cases	Minimum	Maximum	Mean	Median	Standard deviation
Size of cost centres in discretionary dollars	Canada	0.015 (AECB 2001)	0.45 (VAC 1999)	0.20	0.15	0.14
	U.S.	0.01 (NRC 2000)	19.3 (VA 1999)	3.12	2.1	4.5
	all	0.01 (NRC 2000)	19.3 (VA 1999)	1.7	0.3	3.5
Size of cost centres in total dollars	Canada	0.017 (AECB 2001)	3.9 (HRDC 2001)	0.76	0.18	1.3
	U.S.	0.01 (NRC 2000)	43.2 (VA 1999)	7.45	5.6	10.1
	all	0.01 (NRC 2000)	43.2 (VA 1999)	4.1	0.4	7.9

n=36

stayed steady, only one rising.²⁰

Canadian departments consistently scored lower on this measure, with the average department's size being 0.20, compared to 4.63 in the U.S. The annual average size for all the departments combined was 0.21 in Canada and 0.96 in the U.S. This measure summed, by country, the discretionary dollars allocated to all the departments over the three fiscal years and the number of cost centres reported by all the departments over the three fiscal years and divided the number of cost centres by the dollars. However, the U.S. seems to be making up this difference: in terms of change in overall size, Canada fell slightly from 0.23 in fiscal years 1999 to 0.17 in FY 2001, but the U.S. dropped much more, from 1.8 in FY 1999 to 0.57 in FY 2001. Scores for average departments also

²⁰

NRC, VA, and EPA fell while DOT and DOL stayed steady and USAID rose.

demonstrate this trend: in Canada, the score fell from 0.21 to 0.17, and in the U.S., fell from 4.5 to 2.5.

Using total dollars, once again we found much the same results. But, scores for average departments over time present a slightly different trend: in Canada, the score rose from 0.70 to 0.76, but fell in the U.S., from 11.1 to 5.8.

In sum, there was great variation between departments within both countries, Canadian departments had smaller cost centres, and the sizes of American cost centres shrank faster than did those of Canadian departments.

Targets per dollar ratio

We divided the American targets per dollar scores by the Canadian targets per dollar scores, for each pair of departments, to produce targets per dollar ratios. Tables 16 and 17 present the results.

Table 16. Mean targets per dollar ratio, by policy area

Policy area	Mean targets per discretionary dollar ratio	Mean targets per total dollar ratio
Foreign aid	7.0	7.1
Nuclear regulation	0.77	0.87
Labour	0.21	0.68
Veterans' affairs	0.92	0.42
Environment	0.23	0.25
Transport	0.37	0.11

n=18

Table 17. Targets per dollar ratio, by country

Variable	Minimum	Maximum	Average	Median	Standard deviation
Targets per discretionary dollar ratio	0.15 (transport 2001)	15.78 (foreign aid 1999)	1.58	0.41	3.63
Targets per total dollar ratio	0.04 (transport 2001)	15.84 (foreign aid 1999)	1.57	0.54	3.65

n=18

Using discretionary dollars, scores ranged from 0.15 to 15.78. Using total dollars, the scores ranged from 0.04 to 15.84. This difference reflects a difference in how the U.S. and Canada use results-based budgeting in different policy areas. If we were to equate targets per dollar with use of results-based budgeting, assuming that the more targets per dollar the greater the use of results-based budgeting, we could conclude that: in policy areas where the ratio is greater than one, the American government uses results-based budgeting more than the Canadian government; in policy areas where the ratio is less than one, the American government uses results-based budgeting less than the Canadian government; and in policy areas where the ratio is exactly one, the two governments use results-based budgeting to the same extent. In this sample, the average targets per dollar ratios were greater than one (1.58 using discretionary dollars, 1.57 using total dollars), but the median scores were below one (0.41 using discretionary dollars, 0.54 using total dollars) and scores were below one for a majority of cases (13 of 18

using discretionary dollars, 14 of 18 using total dollars).²¹ In only one policy area (foreign aid) was the score above one for all three years.

Over time, scores tended to fall. Using discretionary dollars, the average score fell from 3.34 in FY 1999 to 0.65 in FY 2001; using total dollars, the average score fell from 3.19 in FY 1999 to 0.71 in FY 2001. Using both discretionary and total dollars, scores in four policy areas²² consistently fell, and both fell and rose in the other two.²³

Proportionately speaking, scores were quite similar between discretionary and total dollars. The two sets of scores were almost perfectly correlated ($r = .995$).

In short, there was great variation between policy areas, the ratios tended to be less than one, and the ratios tended to fall over time.

Cost centre size ratio

We divided the Canadian cost centre size scores by the American cost centre size scores, for each pair of departments, to produce cost centre size ratios. Tables 18 and 19 present the results.

There was much variation across policy areas. Using discretionary dollars, scores ranged from 0.02 to 3.6, and using total dollars, the scores ranged from 0.007 to 4.0. This difference across policy areas reflects a difference in how the U.S. and Canada use results-based budgeting in different policy areas.

²¹ The cases where scores were greater than one were: nuclear regulation 1999; foreign aid, all years; and (using discretionary dollars) veterans' affairs 1999.

²² *Viz.*, nuclear regulation, foreign aid, veterans affairs, and transport.

²³ *Viz.*, labour and environment.

Table 18. Mean cost centre size ratio, by policy area

Policy area	Mean cost centre size in discretionary dollars ratio	Mean cost centre size in total dollars ratio
Nuclear regulation	1.8	2.0
Environment	0.47	0.50
Labour	0.09	0.30
Foreign aid	0.07	0.07
Veterans' affairs	0.13	0.06
Transport	0.07	0.02

n=18

Table 19. Cost centre size ratio, by policy area

Variable	Minimum	Maximum	Mean	Median	Standard deviation
Size of cost centres in discretionary dollars ratio	0.02 (veterans' affairs 1999)	3.6 (nuclear regulation 2000)	0.44	0.12	0.87
Size of cost centres in total dollars ratio	0.007 (transport 2001)	4.0 (nuclear regulation 2000)	0.50	0.14	0.97

n=18

If we were to equate size of cost centres with use of results-based budgeting, assuming that the larger the size of the cost centres the less the use of results-based budgeting, we could say that: in policy areas where the ratio is greater than one, the American government uses results-based budgeting more than the Canadian government; in policy areas where the ratio is less than one, the Canadian government uses results-based budgeting more than the American government; and in policy areas where the ratio is exactly one, the two governments use results-based budgeting to the same extent. In this sample, the average ratio is clearly less than one (0.44 using discretionary dollars,

0.50 using total dollars), and the ratio is less than one for almost all cases (using both discretionary and total dollars, 16 of 18).²⁴ Median scores are similarly low (0.12 using discretionary dollars, 0.14 using total dollars).

Over time, using discretionary dollars, annual averages grew from 0.14 in FY 1999 to 0.77 in FY 2000 and then shrank to 0.42 in FY 2001; using total dollars, annual averages grew from 0.16 in FY 1999 to 0.85 in FY 2000 and then shrank to 0.48 in FY 2001. Using both discretionary and total dollars, some policy areas grew, others shrank, and one remained steady.²⁵

Scores were again proportionally quite similar between discretionary and total dollars. The two sets of scores were again almost perfectly correlated ($r = .995$).

Mean ratios were considerably larger than median ratios, reflecting the skew of the extraordinarily large nuclear regulation policy area.

Overall, there was great variation between policy areas, the ratios tended to be less than one, and there was no discernible trend in change over time.

Horizontality

We collected data on three measures of executive horizontality and three measures of legislative horizontality. Table 20 summarizes the correlations between these measures.

²⁴ The two cases where the ratio is greater than one are nuclear regulation 2000 and 2001.

²⁵ Nuclear regulation, veterans' affairs and environment grew; foreign aid and transport shrank; labour held steady.

Table 20. Correlations between measures of horizontality

	Departmental subfunction overlap	Other departments in subfunctions	Other departments in plans	Subcommittee subfunction overlap	Other subcommittees in subfunctions	Other subcommittees in plans
Departmental subfunction overlap	1.00					
Other departments in subfunctions	.28	1.00				
Other departments in plans	-.45	.33	1.00			
Subcommittee subfunction overlap	.88	.66	-.15	1.00		
Other subcommittees in subfunctions	-.36	.60	.63	-.002	1.00	
Other subcommittees in plans	-.40	-.08	.71	-.28	.29	1.00

n=36

The executive horizontality scores are in two cases only weakly correlated, and in one case there is a moderate negative correlation.²⁶ As they do not seem to be measuring the same overlap, it is difficult to aggregate or eliminate any of these measures. The same can be said for the legislative horizontality scores. Amongst them, there is one weak correlation, one weak negative correlation, and one lack of any correlation. The correlations between the executive horizontality scores and the legislative horizontality scores are slightly stronger. There is one very strong and four strong positive correlations, but also a number of negative correlations, one moderate, one weak, one very weak, and one extremely weak. Due to these weak relationships, we did not feel justified in aggregating them or using only one set of measures of horizontality. More

²⁶ When variables are positively correlated, as one rises, the other tends to rise as well. When variables are negatively correlated, as one rises, the other tends to fall. The reported strength of the relationship indicates how closely the variables vary together, where r may vary from 0 to 1, 0 indicating a complete absence of correlation, 1 indicating perfect correlation.

will be said on this matter, particularly as regards the possibility of mis-measurement, in the discussion section of this chapter.

Table 21 presents the average departmental subfunction overlap, other departments in subfunctions and other departments in plans scores of executive horizontality, for each department.²⁷

Table 21. Executive horizontality scores, by department

Department	Departmental subfunction overlap	Other departments in subfunctions	Other departments in plans
DOT	0.01	11.0	27.7
DOL	0.2	20.7	22.7
VA	0.01	5.0	13.0
HRDC	-	-	11.0
NRC	0.5	1.0	9.3
EPA	0.02	4.0	9.0
EC	-	-	7.7
CIDA	-	-	7.3
VAC	-	-	5.7
USAID	0.6	20.0	2.7
TC	-	-	1.7
AECB	-	-	0.7

n=36

Table 22 presents the average subcommittee subfunction overlap, other subcommittees in subfunctions and other subcommittees in plans scores of legislative horizontality, for each department.²⁸

²⁷ As discussed in chapter 6, Canadian data on the first two measures were not collected as the Canadian government does not comprehensively classify departmental spending by function and subfunction.

²⁸ As discussed in chapter 6, Canadian data were not collected as legislative horizontality is of little importance in at least the Canadian version of the Westminster model.

Table 22. Legislative horizontality scores, by department

Department	Subcommittee subfunction overlap	Other subcommittees in subfunctions	Other subcommittees in plans
DOL	0.09	5.0	9.3
DOT	0.02	6.0	8.3
NRC	0.07	1.0	6.7
EPA	0.01	3.0	6.3
VA	0.003	1.7	6.3
USAID	0.12	3.0	2.0

n=18

Table 23 summarizes the data collected by all the measures of horizontality. The departmental subfunction overlap measure applies only to American departments. Between departments, there was much variation. Horizontality ranged from a low of 0.006 to a high of 0.72, given a possible range of 0 to almost 1. Most departments were not, however, very horizontal: the average score was 0.24, and the median score was 0.11. Evidently, departments tended to spend their funds in policy areas that they dominated, and not to spend their funds in policy areas that they shared with other departments. There were, however, two exceptions (both the NRC and USAID consistently scored over 0.5, and the EPA scored over 0.5 in two of the three years studied), and there was variation amongst those departments that consistently scored less than 0.5. Scores were fairly steady over time. The average score was 0.23 in FY 1999, 0.23 in FY 2000, and 0.25 in FY 2001. Scores for individual departments varied to a larger degree, but not in any discernible trend.

Table 23. Horizontality scores, by country

Variable	Cases	Minimum	Maximum	Average	Median	Standard deviation
Departmental subfunction overlap	U.S., combined	0.006 (DOT 2001)	0.72 (USAID 2001)	0.24	0.11	0.26
Other departments in subfunctions	U.S., combined	1 (NRC, all years)	21 (DOL, 1999 and 2000)	10.3	8.0	7.9
Other departments in plans	Canada	0 (multiple)	17 (HRDC 2000)	5.7	4.5	5.4
	U.S.	0 (multiple)	32 (DOT 2001)	14.1	12.5	10.0
	all	0 (multiple)	32 (DOT 2001)	9.9	7.5	9.0
	combined	3 (nuclear regulation 1999)	41 (labour 2000)	19.7	15.5	11.5
Subcommittee subfunction overlap	U.S., combined	0.002 (VA 2001)	0.13 (USAID 2001)	0.05	0.04	0.05
Other subcommittees in subfunctions	U.S., combined	1 (multiple)	6 (DOT, all years)	3.3	3.0	1.8
Other subcommittees in plans	U.S., combined	0 (multiple)	10 (multiple)	6.5	8	3.5

n=36

The other departments in subfunctions measure also applies only to American departments. Between departments, there was much variation. Horizontality ranged from a low of 1 to a high of 21. The average score was 10.3, and the median score was 8.0. Scores were extremely steady over time. The average score was 10.3 in fiscal years 1999 and 2000 and 10.2 in FY 2001. While the budgets of departments to spend in “shared” policy areas may change over time, as indicated in the previous paragraph, from this measure it would seem that the identity of those departments remains constant.

The other departments in plans measure applies to both American and Canadian departments. Within countries but between departments, there was much variation. In Canada, horizontality ranged from a low of 0 to a high of 17. In the U.S., horizontality ranged from a low of 0 to a high of 32. Change over time also varied across departments within countries. In both countries, we found examples of departments increasing, decreasing, remaining steady, and increasing and then decreasing (or *vice versa*). Between countries there was also variation. The average American department scored 14.1, compared to 5.7 in Canada. Over time, though, both countries grew steadily. American scores grew from 74 in FY 1999 to 93 in FY 2001, and Canadian scores grew from 22 in FY 1999 to 59 in FY 2001. To assign a score to policy areas in general, we summed the American and Canadian scores by department. The summed scores ranged from 0 to 32, with an average of 9.9 and a median of 7.5. Policy area change over time was again variable. The summed scores did however also grow steadily over time, from 96 in FY 1999 to 152 in FY 2001. The Canadian scores grew more quickly than did the American as its proportion of the summed scores grew from 23% in FY 1999 to 39% in FY 2001. It should be noted that growth may reflect not a change in actual horizontality, but simply a greater cognizance and so measurement of extant (and stable) horizontality.

The subcommittee subfunction overlap measure applies only to American departments. Between departments, there was much variation. Horizontality ranged from a low of 0.002 to a high of 0.13. Most departments were not very horizontal: the average score was 0.05, and the median score was 0.04. Scores were very steady over

time. The average score was 0.05 in all three fiscal years, and scores for individual departments varied to a larger degree, but not in any discernible trend.

The other subcommittees in subfunctions measure also applies only to American departments. Between departments, there was some variation. Horizontality ranged from a low of 1 to a high of 6. The average score was 3.3, and the median score was 3.0. Scores were extremely steady over time. The average score was 3.2 in FY 1999 and 3.3 in fiscal years 2000 and 2001. Scores over time for individual departments were identical in all departments, with one exception.²⁹

The other subcommittees in plans measure also applies only to American departments. Between departments, there was some variation. Horizontality ranged from a low of 0 to a high of 10, out of a possible 12. Most departments were fairly horizontal: the average score was 6.5 and the median score was 8, and five of the six departments averaged over 6. Over time, the average rose from 4.7 in FY 1999 to 7.7 in FY 2000 and then fell to 7.2 in FY 2001. Scores for individual departments rose, fell, and remained steady.

The only salient characteristic that the measures have in common is that there is great variation between policy areas.

²⁹ VA's score increased from 1 in FY 1999 to 2 in FYs 2000 and 2001 when the full Appropriations committee began funding the Social Security Administration to spend in subfunction 701 (Income Security for Veterans), a subfunction in which the Veterans Affairs subcommittee also spends.

Analysis

In this section we analyze the relationships between the dependent and independent variables. In the case of the variable policy area, analysis of variance (ANOVA) was used and multiple classification analysis (MCA) results are reported.³⁰

For each dependent variable, we present bivariate relationships with each of the independent variables, and then test a multivariate model. Each model contains as independent variables year³¹ and the most strongly correlated measure of horizontality that was correlated in the hypothesized direction. Regime type is not included as an independent variable in the first four models when departmental subfunction overlap or other departments in subfunction is also included, as in these cases all Canadian values of executive horizontality are missing and so regime type is not applicable, and is not included in the last four models as the ratio dependent variables are constructed with data from both regime types. Policy area is not included as an independent variable in any model since it is multicollinear with the measures of horizontality (see appendix 3). Multiple measures of horizontality are not included as independent variables in any

³⁰ When assessing statistical significance in ANOVA, the significance of *f* is reported in place of significance of *t*.

³¹ Time-series analyses are sometimes prone to problems associated with autocorrelation. In this study, however, the threat of autocorrelation to the validity of the findings is small because we analyze observations over a very small number of years (three), and because, according to Berry and Feldman, autocorrelation threatens tests of statistical significance—which are of little importance to us, since we did not select the sample randomly from the population—but not the partial slope coefficients. Thus, we did not need to compensate for this threat by using techniques such as Generalized Least Squares (GLS) or Ordinary Least Squares (OLS). William D. Berry and Stanley Feldman, *Multiple Regression in Practice* (Beverly Hills: Sage, 1985), pp. 73-78.

model as they are often highly correlated with each other (as demonstrated in table 20) and regardless were intended to measure much the same thing.

Targets per dollar

In tables 24 and 25 we present the bivariate relationships between both measures of targets per dollar and the independent variables.

Table 24. Targets per billion discretionary dollars by all independent variables

Independent variable	Cases	Intercept	Slope	Significance of t	Adjusted r^2
Regime type	all	67.98	-27.46	.36	-.004
Year	Canada	n/a	14.36	.64	-.05
	U.S.	n/a	-7.41	.74	-.06
	all	n/a	3.47	.85	-.03
Policy area	all	n/a	n/a	.000	.88
Departmental subfunction overlap	U.S.	5.03	150.09	.02	.24
Other departments in subfunctions	US	90.57	-4.87	.03	.23
Other departments in plans	Canada	108.47	-7.15	.12	.09
	U.S.	71.72	-2.22	.23	.03
	all	86.99	-3.32	.04	.09
Subcommittee subfunction overlap	U.S.	23.70	325.76	.42	-.02
Other subcommittees in subfunctions	U.S.	118.17	-23.69	.01	.30
Other subcommittees in plans	U.S.	53.52	-2.00	.71	-.05

n=36

The strongest relationship observed was between targets per dollar and policy area.

Policy area explains most of the variation in targets per dollar ($r^2 = .88$ and .93). This influence may be explained by the varying degrees of measurability, political

Table 25. Targets per billion total dollars by all independent variables

Independent variable	Cases	Intercept	Slope	Significance of t	Adjusted r ²
Regime type	all	58.84	-20.32	.47	-.01
Year	Canada	n/a	12.48	.65	-.05
	U.S.	n/a	-7.46	.74	-.06
	all	n/a	2.51	.89	-.03
Policy area	all	n/a	n/a	.000	.93
Departmental subfunction overlap	U.S.	2.44	152.56	.02	.24
Other departments in subfunctions	U.S.	89.56	-4.97	.02	.24
Other departments in plans	Canada	98.40	-6.98	.09	.12
	U.S.	71.19	-2.33	.21	.04
	all	79.86	-3.16	.04	.09
Subcommittee subfunction overlap	U.S.	21.39	331.55	.42	-.02
Other subcommittees in subfunctions	U.S.	118.32	-24.35	.01	.31
Other subcommittees in plans	U.S.	52.19	-2.10	.70	-.05

n=36

scrutiny, or horizontality of policy areas since each of these characteristics may be linked to the capacity and/or motivation of budget-makers to use results-based budgeting and so receive performance information from departments.

The evidence that the influence of policy area may in turn be explained by horizontality is mixed. In the U.S., there was a moderate relationship between targets per dollar and two of the three measures of executive horizontality (departmental subfunction overlap and other departments in subfunctions). However, the second such relationship was an inverse one, where as horizontality rises, targets per dollar tends to fall. This runs counter to the hypothesized direction (positive) of the relationship. The weak

relationship between targets per dollar and the remaining measure of executive horizontality (other departments in plans) was also inverse, in both countries.

Again in the U.S., there was a moderate relationship between targets per dollar and one measure of legislative horizontality (other subcommittees in plans). However, this relationship was also an inverse one, again running counter to the hypothesized direction of the relationship. There was no relationship between targets per dollar and the other two measures of legislative horizontality (subcommittee subfunction overlap and other subcommittees in plans).

We next tested a model to explain targets per dollar that included year and departmental subfunction overlap as independent variables. The results are presented below in table 26.

Table 26. Targets per billion dollars by year and departmental subfunction overlap

Dependent Variable	Independent Variables			
	Constant	Year	Departmental Subfunction Overlap	Adjusted R ²
Targets per discretionary dollar	18750.42 (.63)	-9.37 (.63) -.11	151.34 (.03) .54	.20
Targets per total dollar	18925.41 (.63)	-9.46 (.63) -.11	153.82 (.02) .54	.21

Regression Coefficient
(significance of t)
Standardized Regression Coefficient

n=18 (U.S.)

Adding year to the model actually lowered the r^2 , suggesting that learning and/or changes in the tightness of money and political scrutiny were not key factors. The best

model that is consistent with the hypotheses includes only departmental subfunction overlap and explains 24% of the variation in targets per dollar.

These regressions and graphs did not, however, control for measurability and to the extent that measurability is related to targets per dollar, may not have fully isolated the influence of horizontality on targets per dollar. Furthermore, it was difficult at this stage to assess the influence of regime type due to the inapplicability of five of the six measures of horizontality to Canada. A more generally useful examination of the data may include regime type and policy area as independent variables. ANOVA results are presented below in tables 27 and 28.

Consistent with tables 12, 13, 24 and 25, the nuclear regulation policy area tended to score considerably higher than the other policy areas, and the Westminster departments tended to score higher than the congressional departments. Adding regime type to policy area as an independent variable slightly increased (using discretionary dollars, from .88 to .91) and decreased (using total dollars, from .93 to .92) the r^2 , reinforcing our observation that policy area matters and that regime type does not.

Cost centre size

In tables 29 and 30 we present the bivariate relationships between both measures of cost centre size and the independent variables.

A moderate relationship was observed between targets per dollar and policy area. Policy area explains some of the variation in targets per dollar (adjusted $r^2 = .16$ and .20). This influence may be explained by the varying degrees of measurability, political

Table 27. Targets per billion discretionary dollars by policy area and regime type

Grand mean = 54.25

	N	Unadjusted deviation	eta	Deviation adjusted for independence	beta
<i>Policy area</i>					
Nuclear regulation	6	180.19		180.19	
Foreign aid	6	-43.51		-43.51	
Veterans' affairs	6	-47.34		-47.34	
Transportation	6	-36.42		-36.42	
Labour	6	-43.44		-43.44	
Environment	6	-9.49		-9.49	
			.94		.94
<i>Regime type</i>					
Westminster	18	13.73		13.73	
Congressional	18	-13.73		-13.73	
			.16		.16
R square for equation					.91
		F	Significance of F		
Policy area		69.39	.000		
Regime type		9.84	.004		
Total		33.56	.000		

Table 28. Targets per billion total dollars by policy area and regime type

Grand mean = 48.68

	N	Unadjusted deviation	eta	Deviation adjusted for independence	beta
<i>Policy area</i>					
Nuclear regulation	6	171.17		171.17	
Foreign aid	6	-39.36		-39.36	
Veterans' affairs	6	-43.16		-43.16	
Transportation	6	-34.57		-34.57	
Labour	6	-47.22		-47.22	
Environment	6	-6.86		-6.86	
			.95		.95
<i>Regime type</i>					
Westminster	18	10.16		10.16	
Congressional	18	-10.16		-10.16	
			.12		.12
R square for equation					.92
		F	Significance of F		
Policy area		72.11	.000		
Regime type		6.17	.020		
Total		34.09	.000		

Table 29. Cost centre size (in billions of discretionary dollars) by all independent variables

Independent variable	Cases	Intercept	Slope	Significance of t	Adjusted r^2
Regime type	all	0.20	2.92	.009	.16
Year	Canada	n/a	-0.02	.59	-.04
	U.S.	n/a	-1.01	.45	-.03
	all	n/a	-0.52	.47	-.01
Policy area	all	n/a	n/a	.37	.16
Departmental subfunction overlap	U.S.	3.53	-1.72	.69	-.05
Other departments in subfunctions	U.S.	1.96	0.11	.43	-.02
Other departments in plans	Canada	0.13	0.01	.07	.14
	U.S.	1.77	0.10	.40	-.01
	all	0.30	0.14	.03	.10
Subcommittee subfunction overlap	U.S.	3.29	-3.26	.90	-.06
Other subcommittees in subfunctions	U.S.	3.93	-0.25	.69	-.05
Other subcommittees in plans	U.S.	2.60	0.08	.81	-.06

n=36

scrutiny, or horizontality of policy areas.

The evidence that the influence of policy area may in turn be explained by horizontality is weak. In the U.S., using discretionary dollars, there are no relationships between cost centre size and executive horizontality. Using total dollars, however, there is a moderate relationship between cost centre size and other departments in plans ($r^2 = .17$) and a very weak relationship between cost centre size and departmental subfunction overlap ($r^2 = .03$), although the first relationship is positive (as horizontality increases, cost centre size tends to increase) when the hypothesized relationship was an inverse one (as horizontality increases, cost centre size will tend to decrease, reflecting greater provision—in this case, stemming from increased specificity—of performance

Table 30. Cost centre size (in billions of total dollars) by all independent variables

Independent variable	Cases	Intercept	Slope	Significance of t	Adjusted r^2
Regime type	all	0.76	6.70	.009	.16
Year	Canada	n/a	0.03	.95	-.06
	U.S.	n/a	-2.66	.38	-.01
	all	n/a	-1.32	.42	-.01
Policy area	all	n/a	n/a	.23	.20
Departmental subfunction overlap	U.S.	10.10	-11.22	.24	.03
Other departments in subfunctions	U.S.	4.92	0.25	.44	-.02
Other departments in plans	Canada	0.01	0.13	.02	.24
	U.S.	0.69	0.48	.05	.17
	all	-0.74 ³²	0.49	.000	.29 ³³
Subcommittee subfunction overlap	U.S.	9.22	-34.33	.54	-.04
Other subcommittees in subfunctions	U.S.	5.67	.54	.70	-.05
Other subcommittees in plans	U.S.	2.61	0.75	.30	.01

n=36

information). In Canada, there is a weak-to-moderate relationship between cost centre size and other departments in plans ($r^2 = .14$ and $.24$), although these relationships are positive when the hypothesized relationship was an inverse one.

Again in the U.S., there was no relationship between cost centre size and any of the measures of legislative horizontality, using either discretionary dollars or total dollars.

³² As this value is not only outside the observed range of data but also outside the possible range of data (it is impossible to have a negative score on the cost centre size variable), it should be interpreted in a hypothetical manner.

³³ It is unclear why the adjusted r^2 when all cases are included is larger than the r^2 for both the American cases and the Canadian cases when tested separately. There is no apparent explanation for this statistical anomaly, or for why it does not occur when discretionary rather than total dollars are used.

We next tested a model to explain targets per dollar that included year and departmental subfunction overlap as independent variables. The results are presented below in table 31.

Table 31. Cost centre size (in billions) by year and departmental subfunction overlap

Dependent Variable	Independent Variables			
	Constant	Year	Departmental Subfunction Overlap	Adjusted R ²
Cost centre size in discretionary dollars	1981.16 (.48)	-0.98 (.48) -.19	-1.58 (.72) -.09	-.08
Cost centre size in total dollars	5041.15 (.40)	-2.51 (.40) -.20	-10.87 (.26) -.28	.01

Regression Coefficient
(significance of t)
Standardized Regression Coefficient

n=18 (U.S.)

Adding year to the model actually lowered the r^2 , suggesting that learning and/or changes in the tightness of money were not key factors. The best model that is consistent with the hypotheses includes as independent variables only departmental subfunction overlap, and with an r^2 of .03, explains 3% of the variation in cost centre size in total dollars.

These regressions and figures did not, however, control for disaggregatability and to the extent that disaggregatability is related to cost centre size, may not have fully isolated the influence of horizontality on cost centre size. Furthermore, it was difficult at this stage to assess the influence of regime type due to the inapplicability of five of the six measures of horizontality to Canada. Again, a more generally useful examination of

the data may include regime type and policy area as independent variables. ANOVA results are presented in tables 32 and 33.

Table 32. Cost centre size (in billions of discretionary dollars) by policy area and regime type

Grand mean = 1.66

	N	Unadjusted deviation	eta	Deviation adjusted for independence	beta
<i>Policy area</i>					
Nuclear regulation	6	-1.63		-1.63	
Foreign aid	6	0.62		0.62	
Veterans' affairs	6	2.39		2.39	
Transportation	6	-0.35		-0.35	
Labour	6	0.39		0.39	
Environment	6	-1.42		-1.42	
			.40		.40
<i>Regime type</i>					
Westminster	18	-1.46		-1.46	
Congressional	18	1.46		1.46	
			.43		.43
R square for equation					.34
		F		Significance of F	
Policy area		1.44		.25	
Regime type		8.34		.008	
Total		1.97		.08	

Consistent with tables 7-11, 7-12, 7-24 and 7-25, the policy area scores tended not to follow an identifiable pattern, and the congressional departments tended to score higher than the Westminster departments. Combining regime type and policy area as independent variables produced r^2 of .34 and .38. These r^2 almost perfectly match the sum of the bivariate r^2 , indicating as we expected that they are not themselves correlated.

Table 33. Cost centre size (in billions of total dollars) by policy area and regime type

Grand mean = 4.10

	N	Unadjusted deviation	eta	Deviation adjusted for independence	beta
<i>Policy area</i>					
Nuclear regulation	6	-4.07		-4.07	
Foreign aid	6	-1.51		-1.51	
Veterans' affairs	6	4.70		4.70	
Transportation	6	1.01		1.01	
Labour	6	3.73		3.73	
Environment	6	-3.86		-3.86	
			.44		.44
<i>Regime type</i>					
Westminster	18	-3.35		-3.35	
Congressional	18	3.35		3.35	
			.43		.43
R square for equation					.38
			F	Significance of F	
Policy area			1.95	.12	
Regime type			9.28	.006	
Total			2.38	.04	

Targets per dollar ratio

In tables 34 and 35 we present the bivariate relationships between both measures of targets per dollar ratio and the independent variables. Regime type was not included as an independent variable because it had already been built into the dependent variable.

In interpreting these results, it is important to bear in mind how the dependent variables were created. We created these variables by dividing the American targets per dollar scores by the Canadian targets per dollar scores, for each pair of departments in the same policy area. This is important because, by so dividing, we control for aspects of the policy areas that affect departmental targets per dollar scores differently as one moves across policy areas. Measurability, for instance, is controlled for here by comparing

Table 34. Targets per discretionary dollar ratio by all independent variables

Independent variable	Intercept	Slope	Significance of t	Adjusted r^2
Year	n/a	-1.34	.21	.04
Policy area	n/a	n/a	.13	.47
Departmental subfunction overlap	0.14	6.07	.07	.14
Other departments in subfunctions	-0.06	0.16	.16	.07
Other departments in plans	3.67	-0.11	.17	.06
Subcommittee subfunction overlap	-0.31	36.64	.06	.16
Other subcommittees in subfunctions	2.32	-0.23	.66	-.05
Other subcommittees in plans	5.20	-0.56	.02	.25

n=18

Table 35. Targets per total dollar ratio by all independent variables

Independent variable	Intercept	Slope	Significance of t	Adjusted r^2
Year	n/a	-1.24	.25	.02
Policy area	n/a	n/a	.11	.49
Departmental subfunction overlap	-0.02	6.72	.04	.18
Other departments in subfunctions	-0.29	0.18	.11	.10
Other departments in plans	3.67	-0.11	.17	.06
Subcommittee subfunction overlap	-0.60	41.96	.03	.23
Other subcommittees in subfunctions	2.17	-0.18	.72	-.05
Other subcommittees in plans	5.21	-0.56	.02	.24

n=18

two departments in a single (and so equally-measurable) policy area, and then comparing this comparison across multiple (and so differently-measurable) policy areas.

Importantly, these aspects of policy areas are fully cancelled out by such two-step comparisons only when their influence on the provision of performance information is not affected by regime type. If, say, an equal increase in measurability from one policy area to another produces a proportionally equal increase in provision of performance information by the two (i.e. one American and one Canadian) departments in the latter policy area, then the quotient of American targets per dollar score over Canadian targets per dollar score in the latter policy area will be identical to that found in the former policy area. If, however, an equal increase in measurability from one policy area to another produced a proportionately *different* increase in the provision of performance information by the two departments in the latter policy area, the quotients would be different as well. In this example, if increases in measurability produced increases in provision of performance information at different rates, depending on regime type, the effect of measurability on provision would not be fully controlled for by the two-step comparative method.

It is precisely such aspects for which we are testing, as we have hypothesized that horizontality affects provision of performance information differently, depending on regime type. Recall that in figure 8, we hypothesized that the rate at which provision increases with horizontality will be greater in the U.S. than in Canada due to the presence and operation of congressional appropriations subcommittees. We can thus use the two-step comparative method to test for the presence of asymmetrical effects by correlating variation between ratios and independent variables, including the six measures of horizontality.

The strongest relationship observed was between targets per dollar ratio and policy area. Almost half of the variation in the ratios ($r^2 = .47$ and $.49$) can be explained by policy area, more specifically, aspects of policy area that affect departments asymmetrically, depending on their regime type. The strong relationship found here with policy area indicates the presence of an interactive relationship involving regime type. The aspects of policy area with which regime type interacts could be political scrutiny or some unknown variable, but it also could be horizontality, especially legislative horizontality.

In chapter 5 we hypothesized that the American government uses results-based budgeting more than the Canadian government, regardless of horizontality, due to the influence of congressional oversight. If this is so, the targets per dollar scores of American departments will typically exceed those of the Canadian departments with which they are paired, and thus when the independent variables are regressed against dependent variables, the intercept will be greater than one. This was true for only three of the six measures of horizontality. Only three (departmental subfunction overlap, subcommittee subfunction overlap and other subcommittees in plans) had r^2 high enough (.14 and .18, .16 and .23, and .25 and .24) for the intercept to be meaningfully interpreted, and only one of these three (other subcommittees in plans) was greater than one. This ambivalent finding echoes that of the previous section, which found that, although the average targets per dollar ratio was greater than one (1.58 and 1.57), the median score was below one (0.41 and 0.54) and scores of the majority of cases (13 of 18 and 14 of 18) were below one.

In chapter 5 we also hypothesized that central budget agencies in both countries have a common desire for more performance information as policies grow in executive horizontality. If this is true, the slopes for the executive horizontality measures will be zero (or close to zero). This was true for two of the measures (other departments in subfunctions and other departments in plans), but not for the other (departmental subfunction overlap). However, the two measures for which the slope was close to zero had fairly low r^2 (all were .10 or less) and therefore were not relevant.

In chapter 5 we finally hypothesized that American departments provide more performance information as policies grow in legislative horizontality, and that paired Canadian departments do not. If this is true, the ratios will increase with legislative horizontality, and thus the slopes for the legislative horizontality measures will be positive. This was true for only one of the measures (subcommittee subfunction overlap), which had a moderate r^2 (.16 and .23).

We next tested a model to explain targets per dollar ratio that included year and subcommittee subfunction overlap as independent variables. The results are presented below in table 36.

Adding year to the model increased the r^2 , suggesting that learning and/or changes in the tightness of money were factors whose importance varied between the two countries. The best model includes year and subcommittee subfunction overlap as independent variables and explains 27% of the variation in targets per total dollar ratio.

Table 36. Targets per dollar ratios by year and subcommittee subfunction overlap

Dependent Variable	Independent Variables			
	Constant	Year	Subcommittee Subfunction Overlap	Adjusted R ²
Targets per discretionary dollar ratio	2688.51 (.17)	-1.34 (.17) -.31	36.63 (.05) .46	.22
Targets per total dollar ratio	2475.57 (.19)	-1.23 (.19) -.29	41.96 (.02) .52	.27

Regression Coefficient
(significance of t)
Standardized Regression Coefficient

n=18

Cost centre size ratio

In tables 37 and 38 we present the bivariate relationships between both measures of cost centre size ratio and the independent variables. Regime type was again not included as an independent variable. To interpret these results, it is again important to bear in mind the interactive relationships being tested through the two-step comparative method.

The strongest relationship observed was between cost centre size ratio and policy area. Over half of the variation in the ratios ($r^2 = .56$ and $.57$) can be explained by policy area, more specifically, aspects of policy area that affect departments asymmetrically, depending on their regime type. The strong relationship found here with policy area indicates the presence of an interactive relationship involving regime type. The aspects of policy area with which regime type interacts could be political scrutiny or some unknown variable, but it also could be horizontality, especially legislative horizontality.

Table 37. Cost centre size in discretionary dollars ratio by all independent variables

Independent variable	Intercept	Slope	Significance of t	Adjusted r^2
Year	n/a	0.14	.59	-.04
Policy area	n/a	n/a	.05	.56
Departmental subfunction overlap	0.19	1.09	.18	.05
Other departments in subfunctions	0.99	-0.05	.04	.19
Other departments in plans	0.76	-0.02	.41	-.02
Subcommittee subfunction overlap	0.38	1.24	.80	-.06
Other subcommittees in subfunctions	1.17	-0.22	.05	.17
Other subcommittees in plans	0.005	0.07	.28	.02

n=18

Table 38. Cost centre size in total dollars ratio by all independent variables

Independent variable	Intercept	Slope	Significance of t	Adjusted r^2
Year	n/a	0.16	.59	-.04
Policy area	n/a	n/a	.05	.57
Departmental subfunction overlap	0.19	1.32	.15	.07
Other departments in subfunctions	1.04	-0.05	.08	.18
Other departments in plans	0.77	-0.01	.52	-.04
Subcommittee subfunction overlap	0.36	2.64	.63	-.05
Other subcommittees in subfunctions	1.26	-0.23	.07	.14
Other subcommittees in plans	-0.04	0.08	.23	.03

n=18

In chapter 5 we hypothesized that the American government uses results-based budgeting more than the Canadian government, regardless of horizontality, due to the

influence of congressional oversight. If this is true, the cost centre size scores of Canadian departments will typically exceed those of the American departments with which they are paired, and thus when the independent variables are regressed against dependent variables, the intercept will be greater than one. Only two measures (other departments in subfunctions and other subcommittees in subfunctions) had r^2 high enough (.19 and .18, and .17 and .14) for the intercepts to be meaningfully interpreted, but in both these cases, intercepts were very close to or greater than one (0.99 and 1.04, and 1.17 and 1.26). This finding echoes that of the previous section, which found that the average targets per dollar ratio was less than one (0.44 and 0.50), the median score was below one (0.12 and 0.14) and scores of the majority of cases (16 of 18) were below one.

In chapter 5 we also hypothesized that central budget agencies in both countries have a common desire for more performance information as policies grow in executive horizontality. If this is true, the slopes for the executive horizontality measures will be zero (or close to zero). This was true for two of the measures (other departments in subfunctions and other departments in plans), although only the former had an r^2 greater than .05.

In chapter 5 we finally hypothesized that American departments provide more performance information as policies grow in legislative horizontality, and that paired Canadian departments do not. If this is true, the ratios will increase with legislative horizontality, and thus the slopes for the legislative horizontality measures will be positive. This was true for two of the measures (subcommittee subfunction overlap and

other subcommittees in plans), but the r^2 of both of these measures was extremely small (all were .03 or less).

We next tested a model to explain cost centre size ratio that included year and other departments in subfunctions as independent variables. The results are presented below in table 39.

Table 39. Cost centre size ratios by year and other departments in subfunctions

Dependent Variable	Independent Variables			
	Constant	Year	Other departments in subfunctions	Adjusted R^2
Cost centre size in discretionary dollars ratio	-271.50 (.57)	0.14 (.57) .13	-0.05 (.05) -.48	.15
Cost centre size in total dollars ratio	-308.62 (.57)	0.16 (.57) .13	-0.05 (.09) -.42	.09

Regression Coefficient
(significance of t)
Standardized Regression Coefficient

n=18

Adding year to the model decreased the r^2 , suggesting that learning and/or changes in the tightness of money were factors whose importance did not vary between the two countries. The best model includes only subcommittee subfunction overlap as independent variable and explains 19% of the variation in cost centre size in discretionary dollars ratio.

Assessment

The results are very similar whether we measure the dependent variables using discretionary dollars or total dollars. While the type of dollar may make a difference for certain research questions, it does not seem to make a difference for the research questions posed here.

The first hypothesis received little support. There is little evidence from this analysis that American departments tend to use results-based budgeting more than Canadian departments due to the influence of congressional oversight. For both targets per dollar ratios and size of cost centres ratios, the data suggested that the presence of congressional oversight had little effect on the use of results-based budgeting and if anything lowered it.

The second hypothesis also received little support. The analysis of budget documents did not allow us to test if central budget agencies in Canada or the U.S. desire more and more precise performance information as policies increase in executive horizontality, but did allow us to test if the two countries differed in this regard. However, most of the data were inconclusive.

Finally, the third hypothesis received little support. There is little evidence from this analysis that Congress used additional performance information to build trust to coordinate legislatively horizontal policies. For both targets per dollar ratios and size of cost centres ratios, most of the data were inconclusive, and most of the data from which we can draw conclusions suggested that Congress demanded increasingly less

performance information from departments, compared to OMB, as legislative horizontality increased.

Discussion

There are a number of possible reasons why we failed to find the hypothesized relationships in the sample. These reasons may be related to either mis-measurement or faulty assumptions in the model. Following a discussion of mis-measurement, we consider the comments made in the interviews, particularly as concerns the model's assumptions. Finally, we remark on the generalizability of the findings to the population.

Mis-measurement

We may not have actually measured what we intended to measure. In measuring targets, we intended to measure the sheer amount of information on the anticipated results of programs that is provided by departments to the centre and/or subcommittees in annual plans. We operationalized performance information by conducting a content analysis of annual plans. However, we may have under-estimated provision of performance information if such information is provided by departments in places other than the annual plans. We may have over-estimated provision of performance information, because it is difficult for an outside observer to tell if information about the direction and distance of programs is easily applied by budget-makers to the policy vision, if a measure that on the surface seems reliable really is so, and if performance information is realistic and sound. We may also have over-estimated the provision of performance information

by counting targets at all stages of the outcomes line equally, by aggregating targets at different levels on a one-to-one basis, and by aggregating targets of different specificities on a one-to-one basis, when targets at different stages, levels and specificities are in fact of differing utility to budget-makers.

In measuring cost centres, we intended to measure the ability of results-based budgeters to make specific and precise interventions in departmental operations. We operationalized ability to make fine interventions by counting the number of cost centres at the lowest level (i.e. that were not further broken out) where the funds spent by that cost centre were clearly tied to one or more performance measures, and then divided that number into the total budget of the department to arrive at the average size. As with any averaging, the arithmetic mean will differ from the median and the mode if the sizes are not normally distributed. This can be problematic when a single, extraordinarily low or high value skews the mean downwards or upwards (in relation to the median and mode), respectively, and when the median and mode scores also are valid measures of central tendency or average value, as they are here.

The findings are similar regardless of which variable we use to measure provision of performance information. It is possible that each variable was flawed and that, while consistent with each other, each finding about the use of results-based budgeting is erroneous. However, it is more likely that each variable is fairly accurate and that each finding is broadly correct.

In measuring budget authority, we intended to measure the size of departments so that we could control for the greater amounts of performance information (targets or cost

centres) that some departments produce simply because they undertake more policy actions and therefore are more complex. We operationalized size-driven complexity by examining the annual plans and other budget documents to determine their amounts of budgetary authority. Having more budgetary authority and spending more does not, however, always mean having more complex organization structures, and *vice versa*. In some cases, when departments spend more, they undertake more policy actions. This extra activity may overload the managerial capacity of existing organizational structures, prompting departments to increase the complexity of their structures and thereby increase the number of performance measures they use. In other cases, though, as departments spend more, because of the nature of their business they do not undertake more policy actions and thus do not increase the complexity of their organization structures and the number of performance measures they use. For example, extra funds for USAID could be used to open new offices in new parts of the world, thereby increasing complexity and measures. However, extra funds for USAID could also be used to simply enrich programs that primarily transfer funds to local organizations, which does not increase complexity and measures. Such scenarios are akin to that of a growing muscle, where the number of cells remains constant, but the size of each cell increases.

Size as measured by budget may overestimate complexity and thus how many targets a department “should” have (compared to other departments), given its budget, and as such may under-estimate relative provision of performance information. The reverse may also be true: size as measured by budgets may underestimate complexity and thus how many targets a department “should” have (compared to other departments),

given its budget, and as such may over-estimate relative provision of performance information. This may be a problem because such mis-estimation would affect departments differently and so invalidate not only absolute scores but relative scores across departments within countries as well. Its effects could be negated by using the policy area ratios, but only if it affected each department in a given pair to the same extent. Such should be the case in this study, but as we will see below in the discussion on policy areas, this is not certainly so.

In measuring year, we intended to measure the passage of time so we could control for differences in Canadian and American rates of learning, changes in the tightness of funds, and changes in political scrutiny. Due to differences in the number of out-years planned for and in the start of the fiscal years in the two countries, we may have misunderstood the effects of time.

In measuring policy area, we intended to measure the measurability and disaggregatability of program throughputs, outputs, outcomes and effects and, as we saw above, the natural complexity of operations so we could control for these influences on the provision of performance information. It was too difficult to measure measurability and disaggregatability directly, so we used as cases departments that worked in the same policy areas. However, departments in both countries do not face identical policy challenges and respond with identical policy activities.

In measuring regime type, we intended to measure whether the networks of budget-makers were hierarchical or egalitarian in nature. This we operationalized by examining the *de jure* rules governing the formulation of budgets in the executive and

legislative branches of the two countries. However, what we are really concerned with is the *de facto* rules, which may be different. The formal organization structure of central budget agencies is hierarchical but their informal structure could be egalitarian, and the formal structure of appropriations committees is egalitarian but their informal structure could be hierarchical.

In measuring executive horizontality, we intended to measure overlap and interdependency which we operationalized using three measures. The first measure, departmental subfunction overlap, may not have properly measured overlap and interdependency since:

- the classification system may separate like policy areas or join unlike policy areas, either under- or over-estimating overlap
- OMB and departments may not properly specify the most appropriate subfunction in which to classify departmental spending
- subfunction specification may capture the first type of overlap but not the second because the contours of the classification are primary cleavages
- spending in a subfunction may under- or over-estimate its true effect in that policy area
- spending in a subfunction may under- or over-estimate how vulnerable it is to effects from other departments
- departmental subfunction overlap scores for FY 2001 may be faulty since obligations were simply requested, and requested obligations can vary significantly from the eventual actual obligations and thus artificially diverge from the scores for FY 1999 (which used actual obligations) and FY 2000 (which used estimated obligations).

Our third measure, other departments in plans, may also not have properly captured the construct of overlap and interdependency, because it is not departments' perception of their horizontality that prompts them to provide performance information to the centre, but rather the central budget agencies' perceptions of their horizontality that prompts them to do so. It is unlikely that departments generate and render to the centre

performance information because they realize that, as horizontal departments, the centre could use more performance information; rather, it is more likely that departments, regardless of how horizontal they are, provide little performance information to the centre until the centre asks for it (if then). The measure other departments in plans is likely to underestimate central budget agency perception of departmental horizontality because central budget agencies are better placed and have more incentives to identify horizontality than departments themselves are and have. Unfortunately, it is difficult to measure central budget agency perceptions directly, and so we must rely on departmental self-assessments.

All three measures could be internally invalid due to an error in selecting departments as the unit of analysis (although this was selectively relaxed when sub-units such as agencies prepared their own APPs or RPPs). While departments may have a fair degree of effective independence from other departments and the chief executive, departmental heads may yet be too distant from front-line operations to be able effectively control the details of programs, and so sub-units may have even more independence from other sub-units and departmental executives. According to the GAO, in the U.S., departments may review and co-ordinate the budget requests of their agencies, but since “there is a closer connection between performance and the day-to-day management of resources at the agency level,”³⁴ the influence of departmental budget activity could be less important than is that of agencies. Although there is no way to tell for sure, using departments rather than agencies as the units of analysis could either over-

or under-estimate horizontality relative to other organizations. All these concerns surrounding the measures of executive horizontality also apply, *ceteris paribus*, to the measure of legislative horizontality.

The measures of executive horizontality—but not the measures of legislative horizontality—could also be internally invalid when used to measure the horizontality of entire policy areas. For the measures departmental subfunction overlap and other departments in subfunction, such application relies on an assumption that Canadian departments are equally executively horizontal as their American counterparts (which is needed to assign departmental subfunction overlap and other departments in subfunction scores, derived solely from the American departments in pairs, to the policy area entry which represents both American and Canadian departments), an assumption that is difficult to test or even intuitively assess.³⁵ For the measure other departments in plans, scores are aggregated on the basis of parity (i.e. on a one-to-one basis) even though American scores tended to be larger, although the scores were based on populations of a similar size (i.e. departments had a similar number of potential partners). The findings are

³⁴ United States, General Accounting Office, “Results-Oriented Budget Practices in Federal Agencies,” GAO-01-1084SP (August 2001), 7.

³⁵ Three attempts to test this assumption by comparing the other departments in plans scores indicated that indeed it is problematic. The first test was a simple correlation between the two sets of scores (i.e. Canadian and American, by policy area and year) and found a very low r of .04. The second test was a simple correlation between the two sets of average departmental scores (i.e. Canadian and American, by policy area) and again found a very low r of -.08. The third test ranked these averages against averages from other departments in its own country and then compared the rankings. The r was again low at -0.14 and the average difference in ranking between two departments in the same policy area was 2.33, meaning that the average department placed 2.33 spots away from its counterpart in its country rankings, which is high given that there were only six policy areas and so the maximum possible value was 3.00. Also in this test, only two of the six policy areas fell into the same third in their respective country’s rankings, and only two of the six policy areas fell into the same half in their respective country’s rankings.

also similar regardless of which variable we use to measure executive horizontality and which variable we use to measure legislative horizontality. It is possible that each horizontality variable in both sets of variables was flawed and that, while consistent with each other, each finding is erroneous. However, it is more likely that each horizontality variable is fairly accurate and that each finding is broadly correct.

Overall, there may have been specification or measurement errors which distorted the findings either positively or negatively.

Interviews

As we saw in the previous chapter, there are many assumptions of the model which must hold for the hypothesized relationships to exist. The evident failure of the hypotheses could be due to flaws in any number of these assumptions. The interviews with budget-makers, departmental staff and academic observers in Canada and the U.S. suggest that the hypotheses likely failed due to flaws in many of these assumptions. We will discuss interviewees' comments in general and then on each assumption in turn.

Seven main themes emerged from interviews with respondents in both countries. First, there are few reasons for departments, central budget agencies and appropriations subcommittees to use results-based budgeting. All these stakeholders recognize that some policies and programs, e.g. those promoting veterans health, are worth pursuing for political reasons despite low cost-effectiveness.

Second, there are many reasons for these stakeholders not to use results-based budgeting: it is often very difficult to understand the causal theory behind programs;

results-based budgeting consumes many resources; results-based budgeting takes time to do properly; results-based budgeting can reduce policy and operational flexibility; and results-based budgeting can bring unwanted attention to programs with high costs, low benefits, or benefits that accrue only to particular constituencies.

Third, budget-makers do not effectively pressure departments to provide performance information. This is especially true in Canada, where it is more difficult for both the central budget agency and the legislature to influence the contents of budgets and so use carrots and sticks to pressure departments.

Fourth, departments often do not provide more performance information than necessary or use performance information for their own planning purposes. Departments often provide additional performance information only when it demonstrates effectiveness and they feel a special need to justify the status quo, and do not integrate the units that produce performance information with the units that review policy and make internal resource allocation decisions.

Fifth, using results-based budgeting to co-ordinate horizontal policies has additional limitations: it is even more difficult to understand the interaction of programs and how that interaction could be optimized; even more resources are required; and stakeholders will feel even more threatened that they will be shown to be the “weak link” in terms of government-wide performance and either lose existing resources or be passed over for additional resources.

Sixth, the results-based budgeting story is not completely negative. There is some use of it in departments, central budget agencies, and appropriations subcommittees, even

to co-ordinate. However, this use tends to be *ad hoc* and selective rather than systematic and comprehensive. Use tends to be greatest when political scrutiny is highest, when outputs and outcomes are easily measured, when departments can build on a history of measuring, and when results-based budgeting enthusiasts³⁶ are active in departments.

Seventh, it may still be too early to properly assess the use of results-based budgeting in Canada and the U.S. Producing good performance information and effectively applying it to resource allocation decision-making are complex activities that can be learned only through trial-and-error and can be undertaken only when organizational cultures are supportive. Learning and culture shifts in turn take time, more time than these governments have so far invested in their results-based budgeting experiments.

These themes confirm many of the limitations of results-based budgeting outlined in chapter 4, and call into question the assumptions of the results-based budgeting model.

The first assumption—that budget-makers are concerned about policy—may be valid only to the extent that budget-makers believe their policies will achieve the desired and stated results, that they can claim credit for those results, and that they will be rewarded for their efforts. A 1993 study conducted by the U.S. Congressional Budget Office concluded that

the budget process is unlikely to be changed substantially until and unless decisionmakers demand and use information on program performance when

³⁶ Such as Kingdon's "policy entrepreneurs" or Downs' "zealots." John W. Kingdon, *Agendas, Alternatives, and Public Policies*, 2nd edn. (New York: Harper Collins, 1995); Anthony Downs, *Inside Bureaucracy* (Boston: Little, Brown, 1967). See also M. D. Cohen, James G. March and Johan Olsen, "A Garbage Can Model of Organizational Choice," *Administrative Science Quarterly* 17 (March 1972), 1-25.

making decisions about allocating resources. Having this information . . . is a necessary, but not sufficient, prerequisite to changing the policy process.³⁷

When budget-makers do not believe their policies will work, do not wish to reveal the true objectives of the policy, or sense that few rewards for success are forthcoming, demand for and use of performance information in budget formulation will be low. This may be particularly true in the U.S., where legislators on Appropriations Committees often practice “pork-barrel politics” and could fear the scrutiny of effectiveness measures. As one interviewee questioned, “why would they rock the boat?”

The second assumption—that budget-makers who are concerned about policy in general attempt to co-ordinate the horizontal elements of policies—may be valid only to the extent that they believe co-ordination is possible, that they can claim credit for co-ordination, that they will be rewarded for their efforts, and that greater rewards cannot be gained by devoting their time, energy and “political capital” to other pursuits. When budget-makers do not believe that co-ordination is possible, or would consume resources that could be better directed elsewhere, use of results-based budgeting will be low. This is particularly true when co-ordination involves policy areas between which performance information is difficult to compare and combine, when the overlap is technically or politically difficult to resolve, and due to the culture of “turf protection.” Such a culture may be particularly evident in the American legislature, where communication between Appropriations subcommittees tends to be low, and where trust between subcommittees may in fact be a prerequisite of using results-based budgeting to co-ordinate, not a

³⁷ United States, Congressional Budget Office, *Using Performance Measures in the Federal Budget Process* (Washington: CBO, 1993), 17.

corollary. As one Senator recently quipped in the context of discussion to establish a new federal agency to more effectively co-ordinate domestic security efforts, “the most important parlor game in Washington is the game of ‘turf war.’”³⁸

The third assumption—that budget-makers who attempt to co-ordinate the horizontal elements of policies would want to do so using results-based budgeting—may be valid only to the extent that they believe results-based budgeting is more effective in this regard than all other methods. When the outcomes and interactions of programs are difficult to identify, and when time and other resources are in short supply, use of results-based budgeting to co-ordinate will be low.

The fourth assumption—that budget-makers who wish to co-ordinate using results-based budgeting need and pressure departments for more performance information as policies grow in horizontality—may be valid only to the extent that they suffer from “information impoverishment.” When budget-makers have as much performance information as they need or can adequately analyze and apply, more information would be counter-productive or at best useless, and so greater use of results-based budgeting would be low. This is especially likely to be the case in complex policy areas where information is collected at multiple stages of the logic model, as well as horizontal policy areas since horizontal elements must be considered in addition to

³⁸ William New, “Bipartisan group pushes for homeland security department,” *GovExec.com*, May 2, 2002 (web site: <http://www.govexec.com/dailyfed/0502/050202td1.htm>, accessed May 2, 2002). In this case, the relationship between trust and co-ordination may be similar to the paradoxical relationship between experience and jobs: just as one often cannot get a job without experience but cannot gain experience except through having a job, it may be the case that one cannot use results-based budgeting to co-ordinate without trust, but cannot build trust except through using results-based budgeting.

vertical elements. Some interviewees noted that this point has been reached in both Canada and the U.S., and that departments in both countries are being encouraged to streamline their reports by eliminating the most detailed information.

The fifth assumption—that budget-makers who pressure departments for more performance information would get it—may be valid only to the extent that they can offer departments incentives by increasing or decreasing their funding. When the costs of changing funding outweigh the benefits, use of results-based budgeting will be low. This is especially likely to be the case when departments cannot easily or usefully spend more money or get by with less money, or when the “attentive public”³⁹ resists either upwards or downwards changes. It can also be difficult for budget-makers to determine exactly how much performance information it is reasonable to expect departments to provide.

The sixth assumption—that budget-makers who receive more performance information would actually be able to use it to co-ordinate horizontal policies—may be valid only to the extent that departments are able to generate good information on their programs, that budget-makers can assess the interactive effects of programs, that budget-makers can compare and rationally select from a multitude of funding options, and that budget-makers have enough decision-making opportunities within the budget process to influence appropriations legislation to the extent required. When performance information is of low quality, when budget-makers have difficulty understanding how programs work or do not work together, when there are too many funding options for budget-makers to adequately assess and compare each, and when budget-makers have

few opportunities to record their decisions in budget legislation, use of results-based budgeting will be low. According to interviewees, this final issue is particularly applicable to the Canadian government, where TBS has been increasingly overshadowed in the budget-making process by the Department of Finance.

Generalizability

As the six policy areas and twelve departments in the sample were not selected randomly from the population, we may not generalize the findings we drew from observing the sample to the population as a whole. At the same time, though, it is not certain that the relationships (or lack thereof) we found in the sample were different than those that existed (or did not exist) in the population. The basis of our selection of the sample—comparability of policy space with the other country—seems to have little to do with the operation of results-based budgeting in general or with the provision of performance information in particular, and the departments we did select do not appear to be exceptional or asymmetrical in any respect that could affect their use of results-based budgeting (except for the tested differences of regime type and horizontality). We have no reason to believe that we would have obtained different results if we had studied other pairs of departments with similarly-matched jurisdictions, and so suggest that the conclusions we drew from our observation of the sample can be tentatively applied to the two governments as wholes, although not to individual departments within those

³⁹ A. Paul Pross, *Group Politics and Public Policy*, 2nd edn. (Toronto: Oxford University Press, 1992), 159-164.

governments. The findings are also broadly consistent with those of recent empirical studies of results-based budgeting in the U.K. and in the U.S. states.⁴⁰

Summary

Our examination of budgetary documents in Canada and the U.S. failed to uncover evidence in support of the hypotheses. Neither legislative oversight, executive horizontality nor legislative horizontality appear to increase the use of results-based budgeting in the two federal governments. While use of results-based budgeting did vary considerably across policy areas, variation in other characteristics such as the measurability and disaggregatability of activities, outputs and outcomes may be responsible.

It is possible that we mis-measured key aspects of results-based budgeting and failed to find evidence that supported what were in fact true hypotheses. However, interviews with budget-makers, departmental staff and academics in both countries suggested that the hypotheses failed due to flawed assumptions in the results-based budgeting model. In particular, the interviews suggested that using results-based budgeting, particularly to co-ordinate horizontal policies, is simply too difficult

⁴⁰ Tony Boland and David Silbergh, "Managing for quality: the impact of quality management initiatives on administrative structure and resource management processes in public-sector organizations," *International Review of Administrative Sciences* 62 (1996), 351-367; Meagan M. Jordan and Merl M. Hackbart, "Performance Budgeting and Performance Funding in the States: A Status Assessment," *Public Budgeting and Finance* 19(1) (Spring 1999), 68-88; Julia Melkers, "Changing Communication Patterns in the Budget Process," Paper presented at the Annual Conference of the Association of Budgeting and Financial Management, January 16-19, 2002, Washington, D.C.; Katherine G. Willoughby, "Performance Measurement Importance to State Budget Process and Deliberation," Paper presented at the Annual Conference of the Association of Budgeting and Financial Management, January 16-19, 2002, Washington, D.C. More direct comparisons cannot be drawn as, to our knowledge, there have been no other quantitative studies of budget-making at the meso level as concerns its use in co-ordinating horizontal policies.

methodologically and consumes more resources than it is worth to budget-makers. The interviews also suggested that the political incentives to use results-based budgeting, again particularly to co-ordinate horizontal policies, often do not outweigh political disincentives—and as Rubin has stressed, “budgeting is intrinsically and irreducibly political.”⁴¹ To the extent, then, that the pursuit of political rewards is hampered by specifying and publicizing one’s policy objectives and accomplishments, by voluntarily limiting one’s budget-making discretion in favour of more automatic decision-making mechanisms, and by extending the planning horizons to which one is locked-in, rational budget-making systems such as results-based budgeting are unlikely to receive the support they need from key political and bureaucratic actors in government.

The small size of the sample, and the fact that it was purposively selected, limit the generalizability of the findings. Nevertheless, the findings do shed light on the applicability and utility of performance information for use in results-based budgeting.

⁴¹ Irene S. Rubin, *The Politics of Public Budgeting*, 2nd edn. (Chatham, N.J.: Chatham House Publishers, 1993), 1.

Chapter 8: Conclusions

In this chapter we summarize the study and its findings, discuss the implications of the findings, and comment on the significance of the research. In short, the hypotheses were not supported by the data, most likely because the model over-estimated both the ability and the desire of budget-makers to use results-based budgeting to co-ordinate horizontal policies.

Summary of the study and findings

Chapter one provided the background to the study, discussing the theoretical framework of rational choice institutionalism and the administrative context of the new public management.

Chapter two explored the nature of horizontality, conceiving it as the overlapping of departmental and subcommittee jurisdictions which follows from the unavoidable overlapping of policy areas. Overlap makes programs interdependent in the sense that the effects of programs can be felt in other jurisdictions, and thus that the operation of one department's or subcommittee's programs may affect the success or failure of another department's or subcommittee's programs. If these interdependencies are not adequately co-ordinated, the cost-effectiveness of programs can suffer.

Chapter three examined the role and objectives of a budget, introducing the idea of allocative efficiency and matching spending to priorities. We described the three major ways of making a budget (line-item, performance and results-based budgeting),

and suggested that results-based budgeting can theoretically provide better economy, efficiency and effectiveness than the alternative methods can, thereby providing more allocative efficiency as well.

Chapter four focussed on the theory and practice of results-based budgeting. We suggested that results-based budgeting's theoretical foundations of systems analysis and causal theory, and the rational decision-making practices that results-based budget-makers undertake, are fraught with methodological, practical, and political limitations. We also found that past experiments in both Canada and the U.S. were largely unsuccessful and that the current systems (the Expenditure Management System and the Government Performance and Results Act) are not fully succeeding either, but are persisting.

Chapter five considered horizontal budgeting, or using results-based budgeting to co-ordinate horizontal policies. We suggested that results-based budgeting does have the potential to help budget-makers co-ordinate the effects of programs, and that budget-makers in both central budget agencies and appropriations subcommittees will have incentives to do so, although to varying extents. We then presented the hypothesized relationships between results-based budgeting, horizontality and regime type: 1) the American government will use results-based budgeting to a greater extent than the Canadian government; 2) both governments will use results-based budgeting more as the policy objects of budgeting increase in horizontality; and 3) the rate of increase in use as horizontality increases will be greater in the American government than it is in the Canadian government.

Chapter six outlined the methodology. First, we used the theory of results-based budgeting to create a logic model, and selected the stage where departments provide performance information to budget-makers as a proxy for use of results-based budgeting. Then, we operationalized the variables, using primary budget documents as the data source. Next, we presented the criteria for selecting observations and identified the 36 cases in the sample. Finally, we discussed the statistical method of testing the model and confirmation through interviews.

Chapter seven described and analyzed the results. The first hypothesis was clearly not substantiated by the data. If anything, it seems that the presence of congressional oversight tended to lower the use of results-based budgeting. The second and third hypotheses were supported by some of the data but not by others, leaving the ultimate assessment inconclusive. These findings may be the result of poor operationalization of the concepts, but may also reflect model mis-specification, especially having over-estimated the potential of results-based budgeting to help budget-makers co-ordinate and the motivation of budget-makers to actually do so. We also warned of the low generalizability of these findings.

Implications

Although the sample's small size and non-random method of selection discourage widespread generalization, we suggest that the findings of this study may have implications for budgeting, horizontal government, Canadian public administration, and American public administration.

Budgeting

Results-based budgeting is not a “silver bullet” for the challenges faced by today’s governments. Departments cannot always predict the costs and results of their programs; central agencies cannot always compare these costs and results to each other and to overarching policy visions; and policy visions themselves are difficult to create and maintain. However, the rational basis of results-based budgeting has strong intuitive appeal; as Ian Clark has noted, “[p]erformance management is apparently so logical, it will not go away.”¹ Furthermore, as Irene Rubin has suggested, results-based budgeting has ideological appeal to some politicians, and others may see political gains in publicly supporting it.² These appeals may engender high expectations concerning its potential to aid decision-making and its attractiveness to decision-makers, and prompt repeated experiments despite discouraging evidence. Nevertheless, as we have seen there are limits to its potential and attractiveness and thus successful use.

This is not to say, however, that results-based budgeting is completely useless. Results-based budgeting has potential when the costs and results of programs are easily measured, when this performance information is expressed in sufficiently comparable terms that trade-offs may be considered, and when the values underlying the programs and their administration are not especially contentious. We noted in our review of the

¹ As reported in John English and Evert A. Lindquist, *Performance Management: Linking Results to Public Debate* (Toronto: IPAC, 1998), p. 4.

² Remarks made at the Annual Conference of the Association of Budgeting and Financial Management, January 18, 2002, Washington, D.C.

annual plans many instances where these conditions held, and expect that even more such instances could be found at the level of provincial and state governments, which occupy qualitatively different policy spaces. Furthermore, we need not conceive of results-based budgeting as a tool to be used to the exclusion of others. While it rarely can fully address a government's challenge by itself, in many cases it can be a useful adjunct to other tools of governance. At the very least, by prompting stakeholders to think in terms of costs, results and priorities, results-based budgeting can help them ask better questions about policy issues and policy options, and hopefully make better decisions concerning the same.

Results-based budgeting is limited by the ability of guardians to keep spenders in check. Uncertainty surrounding the costs and results of programs and governmental priorities can be exploited by spenders, e.g. by "dressing up" questionable data or by drawing questionable conclusions, to retain as much autonomy as possible. Asymmetry of information will never be fully redressed. While this uncertainty may be exacerbated by guardians simply not having enough capacity (i.e. program analysts who review departmental performance information and make funding recommendations), guardians cannot always increase their ability to use results-based budgeting against spenders by simply increasing capacity. At some point, diseconomies of scale negate increases in the raw capacity to collect and analyze performance information with size-driven decreases in the ability of the organizations to communicate and co-ordinate activity within and between themselves. Again, though, results-based budgeting can help guardians ask

perceptive questions about spenders' policies and programs, and so have some additional influence over their spending.

Horizontal government

From our survey of annual plans and other budget documents, it seems that departments are doing a fair job of identifying the departments with which they share horizontal relationships. For example, both Human Resources Development Canada and the Department of Labor identified on average more than ten other departments that influence or are influenced by their programs. Identification is likely a necessary step in managing horizontality, but it is not sufficient. Departments must still identify horizontal issues, common objectives, and co-ordinating options and their effects, activities in which departments in both countries have been found wanting.³

Co-ordinating the effects of horizontal programs is not easy. Horizontal budgeting requires that departments and central budget agencies recognize both the active and the interactive effects of programs, determine an appropriate combination of programs and funding levels, and actually achieve that combination in the budget. However, the methodological, practical and political limitations of results-based budgeting and thus horizontal budgeting often keep budget-makers from performing these activities to the extent necessary to achieve allocative efficiency. In fact, the

³ United States, General Accounting Office, "Managing for Results: Opportunities for Continued Improvements in Agencies' Performance Plans," GAO/GGD/AIMD-99-215, July 1999; Canada, Auditor General of Canada, *2000 Report of the Auditor General of Canada to Parliament* (Ottawa: Office of the Auditor General of Canada, 2000), chapter 20 ("Managing Departments for Results and Managing Horizontal Issues for Results").

limitations of horizontal budgeting may be even more inhibiting than are those of results-based budgeting, since the horizontal elements of programs may not be as clearly identified by departments as the vertical elements, and since attempts to co-ordinate the horizontal elements may not receive as much support from departments as attempts to address vertical elements would, given that horizontal elements may be seen by departments as being more peripheral and thus less critical to their organizations. Horizontal budgeting also requires a significant amount of central budget agency resources, resources that they so far have been reluctant to make available.

A more promising approach to horizontal co-ordination may be found in less formal methods, as advocated by Chisholm and Sproule-Jones.⁴ Informal co-ordination can be successful, certainly more successful than horizontal budgeting in areas where there is little horizontality, where co-ordination must be timely, where measurability is low, and where transparency is unwanted.

Horizontal budgeting is not completely without value. Its emphasis on effects can prompt governments to identify horizontal relationships between programs, as well as better understand how changes in one or more programs would affect the achievement of departmental and/or government-wide objectives. Horizontal budgeting may have the most promise in addressing issues stemming from secondary cleavages, such as that defining the seniors demographic, which have no departmental home and are affected by

⁴ Donald Chisholm, *Coordination Without Hierarchy: Informal structures in multiorganizational systems* (Berkeley: University of California Press, 1989), *passim*; Mark Sproule-Jones, "Horizontal Management: implementing programs across interdependent organizations," *Canadian Public Administration* 43(1) (Spring 2000), *passim*; Mark Sproule-Jones, "The Theory of Horizontal Management Revisited," Unpublished mss., McMaster University, Hamilton, Ontario, April 2001, *passim*.

the programs of multiple departments. It is in cases such as this that central agency co-ordination, e.g. through horizontal budgeting, is the most needed and may do the most good.

Canadian public administration

There are limits to how much the EMS as a results-based budgeting system can do. The EMS was originally designed to help departments and central agencies determine which programs to cut in order to meet Program Review targets.⁵ Some EMS practices such as business planning fell to the side after a few years as fiscal pressure eased. Upside adjustments may be easier to manage than downside adjustments. In the next few years, though, it is expected that the growth in revenues will fall and the delayed effects of today's spending decisions will be fully felt, and so departments may once again be forced to re-allocate from within if they wish to fund new initiatives.⁶ TBS may wish to revitalize the EMS and renew its emphasis on cost-effectiveness so as to aid this departmental re-allocation. If so, it should dampen its expectations of the EMS and consider how other measures may also help departments cope. From a guardian-spender standpoint, we should also note that the EMS can help guardians control only so much.

⁵ Program Review was a major X-budgeting exercise undertaken in 1994 which was designed to help departments and the centre identify program and program elements that could be restructured or eliminated in the 1995 and subsequent budgets so as to reduce the federal deficit to the Finance Minister's target of 3% of GDP. For more on the Program Review exercise, see the contributions to *Hard Choices or No Choices: Assessing Program Review*, eds. Amelita Armit and Jacques Bourgault (Toronto: IPAC, 1996) and to *Managing Strategic Change: Learning from Program Review*, eds. Peter Aucoin and Donald J. Savoie (Ottawa: CCMD, 1998).

⁶ Canada, Minister of Finance, *The Budget Plan 2001* (Ottawa: Department of Finance, 2001).

The same caution applies to using the EMS to manage horizontal policies. TBS has recently been paying more attention to the horizontal elements of programs. At the moment, these elements concern more administration than policy but this latter aspect may be becoming more salient.⁷ The EMS can help TBS co-ordinate both of these aspects of horizontal policies, but given the limits of the EMS, TBS should again complement it with other methods.

The ramifications of results-based budgeting and horizontal budgeting on Canadian public policy are probably low. In chapter 1 we suggested that institutions can channel the behaviour of public servants, affecting their role in the policy process and so the contents of policies. Using the EMS could increase the likelihood that effective programs with measurable results and popular objectives will receive funding, and decrease the likelihood that ineffective programs, programs with immeasurable results and programs with unpopular objectives will receive funding. However, budgeting tends to be incremental due to the simple facts that policy challenges and appropriate policy responses are fairly stable and that political constituencies resist cuts to program funding. Furthermore, within the range of incremental change, even a renewed EMS would not always be able to identify what changes should be made, and certainly would not always be able to convince senior civil servants and politicians to actually make those changes. Systems analysis does not always work, and when it does, can usually be evaded by hiding or disguising the true objectives or results of programs. The EMS could also be

⁷ See e.g. the emphasis on government-wide “societal indicators” in Canada, President of the Treasury Board, *Canada’s Performance 2001* (Ottawa: Treasury Board, 2001).

used to simply justify decisions that had already been taken.⁸ Finally, we should add that our focus on budgeting is typically not shared by the general public, and given that performance information that has been made public only rarely captures widespread attention, even the transparent use of the EMS is not enough to guarantee that its logic will actually affect policy. In general, it does not seem that the EMS has made much of a difference on the actual contents of policies, or that even a renewed EMS would.

American public administration

There are also limits to how much GPRA as a results-based budgeting system can do. The U.S., like Canada, is facing a future shortage of new money, and has already started to increase its use of results-based budgeting, making alternative funding levels a more explicit part of agency APPs.⁹ As in Canada, increased use of results-based budgeting is not necessarily better. Expectations surrounding GPRA's ability to control vertical aspects and co-ordinate horizontal aspects of programs should be kept low and complementary strategies developed.

It would seem that Congress is not especially interested in results-based budgeting or horizontal budgeting. Departments seeking resources from Congress would be well advised to bear this in mind, and base their appeals on other grounds. This does however

⁸ As was argued in connection with the Program Review exercise (Armit and Bourgault, *op. cit.*; Aucoin and Savoie, *op. cit.*).

⁹ See for example United States, General Accounting Office, "Performance Budgeting: Initial Agency Experiences Provide a Foundation to Assess Future Directions," GAO/T-AIMD/GGD-99-216, July 1999; and United States, OMB, *The President's Management Agenda: Fiscal Year 2002*, August 2001, pp. 27-30; and United States, General Accounting Office, "Managing for Results: Agency Progress in Linking Performance Plans with Budgets and Financial Statements," GAO-02-236, January 2002.

raise concerns about Congress' performance of the oversight function. The less information it has on the costs and results of proposed programs, the less well it can ensure that its policies are being faithfully translated into action by the executive branch. This can be particularly problematic when legislative horizontality is high, since parochial appropriations subcommittees may undo the efforts of OMB to co-ordinate programs across departmental (and subcommittee) jurisdictions. The ramifications of results-based budgeting and horizontal budgeting on American public policy are also probably low, for the same reasons expressed above.

Significance of the research

This research is significant for three reasons. First, it highlighted multiple commonalties between EMS, GPRA and results-based (i.e. program) budgeting experiments of 1960s and 1970s. To be sure, the current experiments are not identical to the past experiments, but their core features of an emphasis on results and rational decision-making are shared. These commonalties are important because it was problems with these features that were largely responsible for the demise of the past experiments and could contribute to the failure of the current experiments as well. This research is significant because these commonalties have not, given the potential consequences of these commonalties going unaddressed, been given as much attention as they are

probably due.¹⁰ This research also indicated that the current experiments are already showing signs of failure.

Second, this research more fully explored the potential of applying results-based budgeting techniques to co-ordinate horizontal policies. This exploration is important because the co-ordination of horizontal policies is an enduring challenge in public administration, and because effective co-ordination could generate significant benefits to governments and publics. This research is significant because horizontal budgeting techniques have received only passing mention in the literature, and given their tremendous theoretical potential, warrant more systematic assessment. This research also introduced the concept of legislative horizontality, and indicated that horizontal budgeting techniques have significant limitations and that expectations should be moderated.

Third, this research advanced the research methodology of budgeting studies. In chapter 6, we developed original measures for the use of results-based budgeting, executive horizontality and legislative horizontality, and developed the two-step comparative method of controlling for measurability and disaggregatability. These advancements are important because they may help future researchers be more empirical and more quantitative, and so improve the validity and generalizability of their studies. This research is significant because empirical meso-level studies of budget-making in

¹⁰ Some commonalities have been previously identified and discussed in United States, General Accounting Office, "Performance Budgeting: Past Initiatives Offer Insights for GPRA Implementation," GAO/AIMD-97-46 (March 1997), Phillip G. Joyce, "The Reiterative Nature of Budget Reform: Is There Anything New in Federal Budgeting?," *Public Budgeting and Finance* 13(3) (Fall 1993), 36-49, and by Barbara Wake Carroll and Ian Clark (English and Lindquist, *op. cit.*).

departments, central budget agencies and legislatures are often of the case study variety, which can be useful in developing hypotheses but of limited use in testing hypotheses.¹¹ This research also noted the limitations of quantitative meso-level studies in general and the measures in particular, highlighting areas where multiple methods may be needed. While the model we developed and tested was not substantiated by the data, the methodology used may inform future studies of budgeting, horizontal government and public administration in general.

¹¹ See e.g. Aman Khan and W. Bartley Hildreth, eds., *Case Studies in Public Budgeting and Financial Management* (Dubuque, Iowa: Kendall/Hunt, 1994).

Appendix 1: Calculation of Departmental Subfunction Overlap

To build a measure of executive horizontality using subfunctions, it is perhaps easiest to begin by identifying the characteristics of a vertical department. A vertical department may be one that spends all of its funds on a subfunction on which no other departments spend. A measure of verticality for this department might be:

Figure A1. Executive verticality score

$$\frac{\text{Dep't A's budget for subfunction one}}{\text{Dep't A's total budget}} \times \frac{\text{Dep't A's budget for subfunction one}}{\text{Total (all dep'ts') budget for subfunction one}}$$

If department A spends \$100 in subfunction one, and its total budget is \$100, the left side of this expression would be $\$100 / \$100 = 1$. If Department A is the only department spending in this subfunction, the right side of this expression would be $\$100 / \$100 = 1$. The final value of this expression would be 1, representing a perfectly vertical department. The U.S. Department of Defense (DOD) is one such department, as it spends all of its funds in Subfunction 051, and all of the funds spent across the government in Subfunction 051 comes from DOD.

But such departments are rare. Normally, several departments will be spending money in the same subfunctions.¹ This represents overlap and so should lower the verticality score of each organization. For example, both USDA and FEMA spend on

¹ See e.g. United States, General Accounting Office, "Managing for Results: Using the Results Act to Address Mission Fragmentation and Program Overlap," GAO/AIMD-97-146, August 1997, 4-5.

Subfunction 605 (Food and Nutrition Assistance). In calculating verticality for either of these departments, on the right side of the expression, the denominator would include the subfunction 605 spending of both departments and so would be larger than the numerator (the subfunction 605 spending of only one department), decreasing the value of the right side of the expression and thus lowering the final verticality score of each.

As well, most departments spend money in multiple subfunctions.² For example, the Department of State spends in six subfunctions.³ For these departments, on the left side of figure A1, their budget in any given subfunction will be lower than their total budget, lowering the numerator and thus the final verticality score. This is calculated for each of the subfunctions the department spends in. Then, the verticality scores from each subfunction are summed. Finally, to arrive at the horizontality score, we subtract this sum from one.

The first measure of executive horizontality, which we call “departmental subfunction overlap”, could be expressed as such: the executive horizontality of a department is equal to one minus the sum of its verticality scores in each of the subfunctions in which it spends, where verticality is equal to the square of the department’s budget in that subfunction, divided by the product of its total budget and the total departmental (i.e. government-wide) spending in that subfunction. This measure of executive horizontality is also shown below as equation A1.

² See again United States, General Accounting Office, “Managing for Results,” 4-5.

³ Namely, 151, 153, 154, 301, 302 and 602.

Equation A1. Executive horizontality score

$$EH_d = 1 - \sum_{s=051}^{959} \frac{DB_s}{DB_t} \times \frac{DB_s}{TB_s}$$

In this equation, D represents the department in question, s represents subfunction (which range from 051 to 959), B represents budget, and T represents total. The minimum possible value of subfunction overlap is 0, and the maximum possible value approaches 1.⁴ The more a department spreads its funds across subfunctions that also receive funds from other departments, and the more those other departments spend in those subfunctions, the more executively horizontal it is.⁵

⁴ Subfunction code 999, representing funding in multiple subfunctions spanning multiple functions, was omitted from the analysis due to the difficulty of determining if the subfunctions funded by one department under code 999 were the same as those funded by another department under the same code.

⁵ Our data source was United States, General Accounting Office, "Compendium of Budget Accounts: Fiscal Year 2001," GAO/AIMD-00-143, 2000. These tables present gross obligations for fiscal years 1999 (actual), 2000 (estimated), and 2001 (requested) for all on-budget spending, arranged by department and subfunction.

Appendix 2: Calculation of Subcommittee Subfunction Overlap

To build a measure of legislative horizontality using subfunctions, it is again perhaps easiest to begin by identifying the characteristics of a legislatively vertical department. A legislatively vertical department could be one that spends all of its funds on a subfunction that receives all of its funding from a single subcommittee. An initial measure of verticality for this department might be:

Figure A2. Legislative verticality score (1)

$$\frac{\text{Dep't A's budget for subfunction one}}{\text{Dep't A's total budget}} \times \frac{\text{Subcommittee A's budget for subfunction one}}{\text{Total (all subcommittees') budget for subf. one}}$$

If department A spends \$100 in Subfunction 1, and its total budget is \$100, the left side of this expression would be $\$100 / \$100 = 1$. If Subcommittee A is the only subcommittee funding program activity classified under this subfunction, the right side of this expression would be $\$100 / \$100 = 1$. The final value of this expression would be 1, representing a perfectly vertical department. For example, the National Archives and Records Administration spends all of its funds in Subfunction 804 (General Property and Records Management), and the Treasury subcommittee is the only subcommittee spending in that subfunction.

But such departments are rare. Most departments spend on multiple subfunctions. For these departments, on the left side of the expression, their budget in a given subfunction will be lower than their total budget, and thus the numerator will be lower

than the denominator, making the value of the left side less than one, which lowers the final verticality score. At this point we must repeat the equation for each of the subfunctions the department spends in. Then, we must sum the verticality scores from each subfunction.

The legislative verticality of a department could thus be said to equal the sum of its verticality scores in each of the subfunctions in which it spends, where verticality is equal to its budget in that subfunction divided by its total budget, multiplied by the percentage of spending in that subfunction that comes from the subcommittee in question. This measure of legislative verticality is also shown below as equation A2.

Equation A2. Legislative verticality score (2)

$$LV_d = \sum_{s=051}^{959} \frac{DB_s}{DB_t} \times \frac{CB_s}{TB_s}$$

In this equation, D represents the department in question, s represents subfunction (which range from 051 to 959), B represents budget, C represents the funding subcommittee and T represents total.

However, many departments receive funds from multiple appropriations subcommittees. Thus we must recalculate this equation for each subcommittee that funds the department in question. Summing the scores from each subcommittee and subtracting from one produces the final legislative horizontality score. The first measure

of legislative horizontality, which we will call “subcommittee subfunction overlap,” is shown below in equation A3.

Equation A3. Legislative horizontality score

$$LH_d = 1 - \sum_{c=1}^{13} \left[\sum_{s=051}^{959} \frac{DB_s}{DB_t} \times \frac{CB_s}{TB_s} \right]$$

The minimum possible value of overlap is 0, and the maximum possible value approaches 1.¹ The more a department spends in subfunctions that also receive funds from other subcommittees, the more legislatively horizontal that department is.

¹ Subfunction code 999 was once again omitted, as was funding received from authorization committees, for two reasons: 1) our source (United States, General Accounting Office, “Compendium”) specifies which appropriations subcommittee is providing funds but does not specify exactly which authorization committee is providing funds; and 2) since the funds which come from authorizations committees are statutory in nature, they are not part of appropriations bills and so cannot be used to pressure departments to provide performance information as hypothesized in chapter 5.

Appendix 3: Excluding Policy Area as an Independent Variable from Multivariate Models

The variable policy area and the majority of the measures of horizontality were highly correlated. Policy area is a nominal level variable and the horizontality measures are interval. ANOVA is a good test of correlation when the independent variable is nominal and the dependent variable is interval. ANOVA is appropriate in this case given that the direction of causality cannot possibly run from horizontality to policy area, but rather can run only from policy area to horizontality. The correlations between policy area and the six measures of horizontality are:

- policy area and departmental subfunction overlap: $r = .99$ ($n=18$)
- policy area and other departments in subfunctions: $r = 1.00$ ($n=18$)
- policy area and other departments in plans: $r = .51$ ($n=36$)
- policy area and subcommittee subfunction overlap: $r = .99$ ($n=18$)
- policy area and other subcommittees in subfunctions: $r = .99$ ($n=18$)
- policy area and other subcommittees in plans: $r = .68$ ($n=18$)

Policy area was very highly correlated with both types of horizontality,¹ suggesting that policy area very heavily influences horizontality. It is thus reasonable to assume that the amount of variation in the dependent variables that may be explained by horizontality—and possibly more—would also be explained by policy area. Given that this study examines horizontality and that we wish to exclude from our model other forces acting on the dependent variables, and that we wish to avoid multicollinearity (double-counting the influence of multiple independent variables), we excluded policy area as an independent variable from our multivariate models and focussed on horizontality.

¹ With the exception of other departments in plans and other subcommittees in plans. It is not clear why these two measures of horizontality were not as highly correlated with policy area as were the others.

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