Practical Imagination: A Possible Future for Federal Budgeting

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To develop a federal budget process that delivers better fiscal outcomes for the nation consistently over an extended period would require new information and analysis, applying these to decisions through properly designed procedures, and strengthening the institutions that support wise fiscal choices. Changes in each of these process components intended to contribute to good fiscal outcomes are described, and obstacles to their adoption and use are noted. Such reforms could yield budgets that deploy public resources today to carry out strategies promising to increase the nation's ability to survive inevitable social and fiscal shocks and to take advantage of expected and unexpected opportunities for its citizens to thrive, grow, and fulfill their dreams.

INTRODUCTION

In the last few years, a breakdown of the federal government's budget process as it had functioned, more or less, for the past three decades, has provided us with an opportunity to imagine a better process. Budgeting as currently practiced by the U.S. federal government fails to help it adopt policies to cope effectively with challenges it will face over a long horizon. Reforms to that process could help leaders make choices that better direct the nation's resources to meet long-term policy objectives.

Building a budget for the nation means designing a plan to use limited resources in the near term to help achieve important public objectives over a long period, in the face of multiple large

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and unpredictable challenges. This is not the same as optimizing resource use for challenges now apparent or likely in the near term. Current practice is mainly focused on short-term fiscal effects, primarily on the year just ahead. In recent decades, some elements of the federal government's budget process required that the effects of current or proposed policies be estimated over a longer period—typically 10 years. Some analysts, including both the Congressional Budget Office (CBO) and the President's Office of Management and Budget (OMB), project the effects of current federal spending and revenue policies, or alternatives, over much longer periods. Such estimation starts with a baseline projection of the fiscal effects of current policies, adjusting for projected economic conditions, and then for possible legislative changes.

Both OMB and CBO now develop long-term projections of the fiscal effects of current or proposed policies, under an arguably modest range of economic and other technical assumptions. CBO's long-term budget outlook under baseline assumptions and for alternative scenarios that use different policy assumptions, incorporates macroeconomic effects with an enhanced version of a widely used economic model first developed by Robert Solow (CBO 2013, page 4 and Appendix A).

APPLICATIONS FOR PRACTICE

- Budgeting for long periods requires dealing with profound uncertainties arising from nonlinearities and volatility. In constructing a budget, this means estimating known risks and then reserving further for the unknown.
- Aims of budget process reform should be: to shift focus to longer-term, more systemic issues; to make decision space for deeper analysis of alternative futures; to expand future financial capacity to deal with unforeseen shocks and opportunities; and to provide political rewards or sanctions to those responsible for budget outcomes.
- Because of uncertainty, budgeters cannot predict returns for any specific investment or investment category. They need a budgetary strategy that maximizes average net returns from a broadly diversified investment portfolio – a classic strategy to cope with uncertainty.
- Budgeting should not be approached as merely a grim exercise in slicing a limited pie, but as a means by which the dreams of leaders and voters are translated first into specific plans to create a possible future and then into practical decisions about how to achieve that future by protecting our gains and fulfilling our greatest shared ambitions.

Budget estimating—long-term as well as short-term—has been largely an exercise in (more or less) sophisticated extrapolation, using models that assume continuity of underlying social and economic processes. Discontinuities, such as world financial crises or other exogenous shocks, are an obvious and recurring threat to such projections. Over long periods, unforeseeable changes in policies, economic performance, and the behavior of large-scale systems will cause large and growing forecast errors. Modest annual errors in projecting the rate of change for any large component, such as health care spending or revenues, may compound into very large errors within a few years. Long-term projections also have diminishing relevance as major policy changes are introduced, making the policy assumptions on which they are based obsolete.

Budgeting is not forecasting, nor is it intended to be. It is a different exercise, conducted to inform near-term policy choices. At its best, it is the development of one or more plans for using and creating public resources to realize an imagined future (or multiple plans for multiple futures)—taking into account a range of possibilities that could radically alter the path forward. Budgeting then becomes a primary means by which the visionary ideas of leaders and the hopes of voters are translated into concrete and specific decisions about how to realize them. This approach to budgeting allocates resources not only to achieve specific public objectives but also to prepare for contingencies and emergencies that inevitably arise to disrupt any such plans. Most would say that the result of the budget process, viewed this way, should be a plan for spending and revenues sustainable over the long horizon,[1] allocating resources toward higher policy priorities and more productive uses based on evidence available to inform these judgments, including public investments and tax policies selected for their contributions to future economic growth,[2] and including estimated costs for future emergencies.[3]

Judged in these terms, the results of current practice have not been very good. Most analysts believe, in particular, that current policies of the U.S. government are not fiscally sustainable over the long term, leading to rising public debt (CBO 2014). The higher the debt and the longer it remains high, the greater the risk that a nasty fiscal surprise could throw the nation on the fiscal rocks—contributing to sudden economic disruption or prolonged economic stagnation.[4]

The U.S. ought to pursue a budget process that delivers better fiscal outcomes consistently over an extended period. To do this would require: (1) producing new information and analysis; (2) applying it to decisions through properly designed procedures; and (3) strengthening the institutions that support wise fiscal choices. The following sections outline changes in each of these three budget process components seen as likely to yield better fiscal outcomes over the far horizon. Such changes, many of which go well beyond current experience in the United States or other countries, cannot be made easily nor quickly.

It should be understood that reforming the way the federal government budgets is one aspect of a broader project to strengthen the U.S. government's capacities to deal with future challenges. The broader reform project of which this could be a part may need to simultaneously address the decaying performance of an array of U.S. institutions of governance, as described by Fukuyama (2013) and others. As Fuerth and Faber (2012, 3) describe the governance challenge, "the United States is confronted by a new class of complex, fast-moving challenges that are . . .

1. Many analysts would say that the projected size of the public debt relative to the size of the national economy is the best single measure of long-term fiscal sustainability (cf., NRC and NAPA Committee on the Fiscal Future of the United States, 2010, chapter 3). Because of business cycles and emergencies, "stability" does not require the ratio of debt to national economic product to be constant. Although there is no universal standard for the correct ratio of debt to national product, at higher levels of public debt risks multiply.

2. Policies choices that expand the nation's pool of economic resources provide more fiscal space and more and better budget options going forward. The trick always is to identify those investments and tax policies that will contribute most to this result.

3. A comprehensive set of "principles of good budgeting" might be used to judge how well the current federal budget process is working and to assess any alternative (cf., Redburn 2013). Meyers (1996) has noted the absence of consensus among scholars on any such "normative model for budgeting."

4. It should be noted that the standard of good budgeting suggested here is not intended to prejudge certain large and enduring policy questions addressed through the budget process, including distribution of benefits and burdens by income groups, distribution of benefits and burdens by age and generation, and the proper size of the public sector. Standards for judging how well the budget process is working can be separated to a large extent from sometimes polarizing substantive questions about what constitutes wise budgeting of the nation's resources.

crosscutting… [but] government has been increasingly confined to dealing with full-blown crises rather than focusing on shaping events."

The challenge to governance can only be met by developing a new set of foresight and planning capabilities. As GAO puts it (GAO 2014, 48):

> Exercising foresight and strategic planning in this environment will be essential and requires rethinking the role of government, governmental missions, and programs. New collaborations, networks, and partnerships across global and domestic boundaries will be vital to achieving national policy objectives . . .The federal government will need to improve its capacity to anticipate crises and mitigate risk. To do so, policymakers and program administrators must work across the government enterprise and hone and adapt management tools–such as foresight, strategic planning, risk management, and performance measurement systems– in order to better manage uncertainty, tailor policies, prioritize responses, and allocate scarce resources in the coming years.

Developing a budget process capable of translating foresight and plans into short-term resource allocations to realize a desired future requires a methodology for anticipating a broad array of challenges amidst almost paralyzing uncertainty. This part of the broader task of enhancing the federal government's capacity depends on developing new analytical capabilities as described below.

INFORMATION AND ANALYSIS

The need to support budgeting with new kinds of information and analysis is suggested by the nature of governance challenges the U.S. will face going forward. These analytical requirements include: (1) using strategic objectives as units of analysis for budgeting and management; (2) using systemic analysis and scenario building to develop alternatives for policy and resource use; (3) dealing with the problem of uncertainty; and (4) assessing preparedness and resilience.

Using Strategic Objectives as Units of Analysis for Budgeting and Management

Projected changes in budgeting can be seen as part of a larger reorientation of governance now under way from traditional hierarchies and rigid organizational structures to more fluid, nimble networks of governmental and non-governmental partners, organized around a changing array of strategic missions and objectives (cf. Kettl 2009; Redburn 2014). For budgeting, these policy goals may become a primary basis for organizing reviews of spending and related tax expenditures. As part of this change, the language of budget authority and budget execution would then shift the emphasis of accountability from compliance with administrative requirements to achievement of quantified performance targets. The framework of strategic planning and reviews established by the Government Performance and Results Act Modernization Act (GPRAMA) of 2010, if fully exploited, can connect budgeting and regulatory policy for each objective with coordinated management across the network of actors responsible for its achievement.[5]

In the future, to inform subsequent budget choices, a small number of strategic objectives could be selected for deeper analysis each year. For a given objective, analysis would identify the current government strategy for advancing that objective, including spending programs, tax expenditures, regulations, and the rest (Redburn and Posner 2015). The strategy is equivalent to the causal model implicit in that set of government activities, including their interactions with each other and with activities of other governments and private actors. As implemented, these are policy engines created by government (consciously or otherwise) within the larger social system in an attempt to push the society to particular outcomes or to sustain those outcomes—better health, more personal or national security, more education, increased economic productivity or competitiveness, and so on.

To properly evaluate how well the current strategy/system is achieving a strategic objective, it is important to focus not primarily on individual programs or activities but on their relationships and interactions. Analysts can assess system performance on multiple dimensions, including its overall productivity/efficiency in achieving policy goal(s), the system's sustainability and resilience over time, and whether it is organized/integrated, especially from the perspective of those most affected, such as program recipients or major non-federal partners.

So, if analysis of system dynamics and performance is the right starting point, then is there a relevant body of theory and empirical work? How do we measure the complementarity/integration and other characteristics of these relationships individually and collectively at a systems level? What do we know about how to assess system performance for governments? The complexity of measuring and assessing the dynamics of these policy engines under varied conditions and over time should not be underestimated. The specification of an implied strategy or policy engine can employ "strategy mapping" (Bryson, Crosby, and Bryson 2009; Kaplan and Norton 2004) or similar techniques to locate major policy levers.

Using Systemic Analysis

Reorganizing budget choices around strategic policy objectives would demand a greater role for systemic analysis in shaping policy and budgets. The uncertainty that surrounds all budgeting arises in part from the behavior of complex systems, which is nonlinear and characterized by emergent phenomena that transform their character over time in ways that cannot be predicted with any accuracy. As noted by Fuerth (2012, 4) modern governments must deal with numerous "complex" or "wicked" problems that do not have easy or stable policy solutions. Chapman (2004) argues that systems analysis provides an approach to policy development (and by implication budgeting) that can help with complexity, problem interconnectedness, and a lack of boundaries between problems.

5. The first full array of over 90 priority goals, and over 100 strategic goals and over 300 associated strategic objectives was presented with the President's budget in March 2014, and the first set of annual strategic reviews under the mandate of GPRAMA was conducted in 2014.

Although policy proposals are typically modest and incremental, larger policy and budget options also can be developed and presented as proposed system transformations. A contemporary example of such an approach is the U.S. effort to reorganize the financing and delivery of health care, a central element of which was the highly complex and controversial 2009 health care reform legislation (cf. Plsek 2003). What is striking about the process that led to enactment of this legislation is not only its sweep but also the many reform elements that could be traced to prior academic studies of the organization of U.S. health care and of contrasting models of health financing and delivery. This systemic approach, imperfectly executed, reflected a view that incremental changes would not suffice to achieve the goals of policy makers, including changing the trajectory of health care cost growth.

Other examples of the need for systemic analyses can be identified for any major mission of the federal government. Yet, the typical pattern—easier both analytically and politically—is to seek incremental adjustments rather than wholesale changes. A pattern of crisis followed by incremental policy response predominates.

Analyses of whole systems are more likely to yield strategies to achieve large gains in system performance. As in the case of health care reform, such strategies carry high risks for political leaders because they threaten established political economies and because systemic changes are inherently complex and their results uncertain. But, they also promise great gains, including breakthrough improvements in public productivity and future economic performance.

Building Scenarios

The information most relevant to strategic choices affecting long-term outcomes would project the behavior of complex policy/social systems and their potential evolution under multiple policy/conditions scenarios over periods measured in decades rather than years. An important analytical component of budgeting for complex systems to address major public policy goals is the construction of detailed policy scenarios consistent with a projected set of fiscal constraints. These are not the same as but may inform long-term budget projections. A major study of ways to address long-term fiscal imbalance conducted in 2008–2009 constructed 75-year budget projections under alternative policy assumptions, designed to illustrate a wide range of possible ways to stabilize the federal debt at a target level over this period at alternative levels of spending and revenues (NRC and NAPA 2010). More sophisticated problem-focused scenarios can be built to shed light on possible futures and how policy choices help shape them.

Sophisticated and varied policy scenarios can be developed and combined statistically to estimate their long-term fiscal effects relative to a baseline projection of current policies. Techniques of what is sometimes called “strategic analytics” can serve as a bridge from long-range visioning and foresight exercises to practical questions of program design, management, and budgeting (cf. Davenport and Jarvenpaa 2008). Keenan et al. describe the use of structured scenario building by experts and stakeholders as a way to first explore alternative futures and their uncertainties and then, as a next step, to develop one or more visionary “success scenarios” as a basis for planning. For budgeting, the exercise would require first identifying key drivers of change in each policy area, as well as major “megatrends” that will shape all future outcomes—demography and health, national security threats, environmental and energy limits and opportunities, and technological change, among others. Experts and stakeholders would then systematically build plausible future states by combining drivers and policies based on understanding of each policy problem's causal dynamics and possibilities, assigning probabilities to various combinations. Such constructions are neither fiction nor prediction, but are acts of structured imagination.[6]

The planning exercise that starts with scenario building is completed by "backcasting" from the future state envisioned some years from the present in order to specify practical steps and milestones that must be achieved to realize the vision (Keenan et al. 2012, 173–174). This step builds an analytical bridge to policy and budgeting. For each "success scenario," the intermediate targets and the requirements to achieve them can be translated into policy and resources choices required in the near term to help realize the desired distant outcomes. For budgeting, the scenarios and their intermediate-term implications could be combined to take account of their interactions, their combined economic effects, and their "fit" within a projected fiscal constraint. Obviously, such wide-scope, long horizon strategic thinking is well beyond the experience and capacities of today's policy officials and budgeters, either in the U.S. or elsewhere. Therefore, its conduct on a recurring basis should itself be seen as a visionary scenario, to be realized in stages and over many years.

Dealing With Uncertainty

In 2008, CBO projected the federal budget deficit as a percentage of the gross domestic product (GDP) for the following five years, using a "fan chart" to show a rapidly widening probability distribution of possible paths for the deficit over that period, reflecting the observed variance of previous baseline forecasts (CBO 2008). It is noteworthy that the *actual* 2009 deficit (over ten percent of GDP) fell well outside the most extreme, low probability estimate shown in the figure (around four percent of GDP), as did deficits for the following three years. In other words, previous experience did not incorporate a shock of the magnitude that occurred with the financial crisis, starting in the very year the projection was made. But, the main limitation on the accuracy of fiscal projections is the inherent unpredictability of economic events and policy changes over an extended period. Because the fiscal effects of large positive and negative projection errors are asymmetric, standard projection techniques that exclude negative shocks such as economic downturns are inherently overoptimistic over long periods.

Budgeting for long periods requires dealing with profound uncertainties arising from nonlinearities and volatility. Some unpredictable changes will have large negative social and fiscal effects, and should therefore be categorized as budgetary and policy risks. Over time, the probability of catastrophic disruption arising from any number of known sources multiplies; disruption can arise not only from destructive phenomena but also from favorable developments

6. Illustrative examples can be found on the site of the Institute for Alternative Futures project on alternative futures of vulnerability and vulnerable populations in the U.S. in 2030 (http://www.altfutures.org/vulnerability2030).

such as scientific discovery and new technologies. Budgeting based on linear projection seems like a foolish exercise, even more so as the pace of social change accelerates.

Assessing Preparedness and Resilience

The ability of nations to prepare for and mitigate the effects of massive shocks and disruptive change is a major determinant of their ability to survive and thrive over long periods. After the 9/11 attack, the United States began to develop a policy and planning framework for resiliency and mitigation that specifies needed capabilities, including fiscal sustainability (DHS 2013). Over the far horizon, all other strategic objectives are subordinate to this one. Some have attempted to identify specific structural features that differentiate robust societies capable of sustaining and bouncing back from sudden adversity from brittle societies vulnerable to sudden collapse (Taleb 2012). More resilient societies are not merely stable in their response to disruptions, but thrive on it—they surf the waves of chaos and learn from experience, ending up better for it in the long run.

Until recently, the capacity of governments to consciously organize their societies to increase robustness and resiliency has been quite limited, but that may be changing.

If so, then to guide their efforts to foster preparedness and resiliency, policy makers will need to measure the likely contribution of policy and resource allocation choices to the nation's ability to survive catastrophic events, including many that cannot be identified far in advance. Such analyses can be the basis for budgets that account for potential disruptive shocks both in baseline cost estimates and when considering policy and budget options to promote preparedness and resilience.

APPLYING ANALYSIS TO DECISIONS

It is important to keep in mind that improved thinking is not the ultimate aim. As William James, said: "My thinking is first, last, and always for the sake of my doing." The test of improvement is a government that budgets and executes in ways that allow its people to survive, thrive, and realize their dreams. Better information and analysis do not lead automatically to better budgeting. These must be used to inform important resource decisions. This section discusses how to connect analysis to decision making by: (1) organizing for strategic choices; (2) budgeting for contingencies and emergencies; (3) budgeting for strategic investment; and (4) providing flexible accountability.

The use of information about government performance and the organization of the budget process around quantified performance objectives have increased greatly in recent decades, in the U.S. and many other nations (OECD 2009). Among the good practices identified by OECD surveys of international practice are that budgets "should be aligned with the medium-term strategic priorities of government" and that "long-term sustainability and other fiscal risks should be identified, assessed, and managed prudently (OECD Senior Budget Officials 2014, 1–6). For example, to link long-term and medium-term policy planning to medium- and annual-budgeting, Finland has established a hierarchy of planning and decision-making built on a foresight process with a horizon of a decade or longer, then a development plan covering years three to eight, followed by a budget covering one–two years.

Joyce (2008) has noted that despite the enormous increase in volume of and access to information about federal program performance since GPRA was enacted in 1993, evidence of its use to inform budget choices is still scant. Use of analysis to inform budgets and policy depends on the receptivity of policy makers, who may find studies of cost-effectiveness less interesting than political surveys and the preferences of organized interests and campaign supporters. Applying analysis to decisions requires addressing not only its supply but also the demand for its use in policy making and budgeting. Obstacles to effective use of performance information to inform either budget choices or management decisions have been assessed elsewhere (cf. Hilton and Joyce 2013; NASBO 2014; Whitley 2014). Hawkesworth and Klepsvik (2003, 123) note that "tying resources to performance indicators (i.e., performance budgeting) is . . . difficult and rarely done in OECD countries."

Rather than simply pressing for increased use of performance information in budgeting, the aims of process reform should be: to shift the focus and energy of political leaders and the public to longer-term, more systemic issues; to make time and decision space for deeper analysis of alternative futures; to expand future financial capacity to deal expeditiously with unforeseen shocks and opportunities; and to provide political rewards or sanctions based on sound fiscal principles to those responsible for budget outcomes, including stronger economic growth and fiscal sustainability. What sort of budget process can begin to fulfill these aims?

Organizing for Strategic Choices

The way information and analysis is packaged and presented for decision can affect how decisions are approached and what decisions are made. Here we ask how information and analysis to support a focus on a sustainable long-term national fiscal strategy might be translated into near-term budget decisions consistent with long-term policy objectives.

If analysis were redirected toward achieving major policy objectives, then budget decision-making likewise could be reorganized to focus in greater measure on larger strategic alternatives. This would entail a "portfolio budgeting" approach, as outlined by Redburn and Posner (2015), in which spending programs, tax expenditures, regulations, and other actions directed to a particular strategic objective would be reviewed together in a systems framework, aiming to increase the productivity of the government's integrated efforts to advance that objective.

One key to improved decision making is separating bigger resource choices to be made by the President and Congress from smaller choices that can be left to administrators, both federal and non-federal. Another key is distinguishing between those spending and revenue authorizations that should be made annually from those that can be revisited less frequently. The current distinction between discretionary programs (annually appropriated) and mandatory programs (permanently authorized) could be replaced with one that makes further distinctions based on the need for frequent review but that requires authority for all spending and tax expenditures to be revisited on a regular basis.

Stimulated in part by the World Bank's promulgation of the "medium-term expenditure framework" (MTEF) since the late 1990s as good practice, many nations have budgeted by first making multi-year (typically three to five year) projections of current policies and then setting general spending targets consistent with strategies for each economic sector or for specified social objectives (cf., De Renzio and Smith 2005; OECD Environment Policy Committee 2009).[7] Extensive experience with the use of MTEFs shows that its utility for translating plans into resource priorities depends on willingness of political leaders to adopt and use fiscal rules, enforcement mechanisms, and strong accounting to ensure disciplined adherence (World Bank 2012, 57–80). The U.S. has adopted no analogous multi-year framework. Despite increased efforts to organize planning and budgeting around multi-year strategic objectives, information and analysis is still presented and used mainly to support decisions about discrete programs, annual funding, and incremental reforms, with no effective multi-year budget constraint.

In the U.S., legislation could be enacted to establish a medium-term target to stabilize the publicly held federal debt and to mandate that the President and Congress develop and enact each year a multi-year budget to meet that target (Peterson-Pew Commission 2010). The annual budget resolution would embody leadership's guidance, through the budget committees, to other committees, identifying multi-year budget savings to be achieved (and new investments made) as required to hit medium-term targets and to achieve performance goals identified in prior policy reviews. Detailed spending and revenue decisions would be made within this constraining four- or five-year planning envelope.

For budget decision making, costs would be recognized as they arise, not when obligations must be liquidated, i.e., bills paid; for insurance and social insurance commitments, even when these do not constitute formal legal contracts and obligations, costs would be recorded based on the year-to-year change in the government's long-term net position for those commitments. That way the envelope for near-term budgeting would include changes in the government's long-term fiscal position under current policies when there is lead time to alter course, either by reducing future costs or reserving for them. The use of accruals in these cases would give short-term credit for enacting more far-sighted policies.

Within a medium-term framework, budget choices should be organized in both the executive and congressional stages of the process around strategic goals and objectives established through GPRAMA's mandated procedures. Progress toward most important policy goals requires integrated administration of multiple programs and accounts spanning multiple federal agencies and including major non-federal partners. By using a reasonable method of allocating program and administrative costs, it would be possible to construct a budget by addressing policy and resource levels for each strategic objective on a multi-year basis. The strategic plans are now on a cycle synchronized with presidential elections, so a new Administration will be able to propose a broad resetting of policy goals and budget targets in its second year of an Administration through

7. These frameworks are revisited annually and extended on a rolling basis. The IMF (2014) included use of an MTEF in the set of institutional reforms it found contributing to progress by G-20 countries in stabilizing their fiscal conditions following the 2008 financial crisis; however, the IMF's analysis does not isolate the effects of the MTEF or other particular reforms.

revised plans coinciding with submission of the President's second full-year budget in February 2018. In consultation with congressional leaders, it might identify a handful of high priority national objectives to be the focus of strategic budget reviews. In each case, the aim would be to identify breakthrough gains in use of budgetary and other resources to achieve ambitious social outcomes—such as a more productive labor force, energy independence, or broad improvements in health—at the same time yielding multi-year budget savings and a stream of social benefits far exceeding near-term costs.

Presidents might be required to include in annual budgets a detailed analysis of the impact of fiscal policies over at least two decades and specific budget proposals to close any projected long-term fiscal gap (Posner et al. 2013). To focus budget choices on long-term economic performance and fiscal sustainability, OMB and CBO could be asked to present and compare the likely fiscal effects of alternative policy scenarios for selected major strategic goals. Based on the results of these analyses, the President would present and Congress would consider legislation, consistent with that year's budget resolution, authorizing the most promising major policy changes.

Budgeting for Contingencies and Emergencies

How can we deploy the nation's resources in world of Black Swans and non-linear systems, i.e., a world where it is impossible to project the effects of any chosen set of policies with any degree of confidence very far into the future? How, in such a world, does the federal government budget to increase its control over future contingencies and emergencies? As Taleb (2012) says, "you only get a measure of order and control when you embrace randomness." In constructing a budget, this means estimating known risks and then reserving further for the unknown.

Based on a long-term average of annual emergency spending—largely provided through ad hoc appropriations—annual budgets might include an amount estimated to be sufficient to address emergencies including unexpected military actions, terrorist attacks, economic shocks, and natural disasters.[8] If these amounts were appropriated in advance of when specific emergency needs are identified, to be released by the President or under expedited congressional procedures, budgets would not understate spending and deficits, the amounts would be available when needed, and the mischief and lack of fiscal discipline that accompanies urgent action to appropriate spending authority after the event would disappear. Many states have established "rainy day" funds that operate on similar principles and used them in recent years to help maintain services in the wake of the financial crisis.

Budgeting for Strategic Investment

One goal of budget reform should be to rectify the process bias against long-term public investment. On economic grounds, investments promising high long-run net social returns

8. One estimate is that proposed budgets and regular appropriations understated expenditure needs in the first decade of this century by close to $200 billion annually (Peterson-Pew Commission on Budget Reform 2011).

generally should be favored over other spending.[9] But, because of uncertainty, budgeters cannot predict returns for any specific investment or investment category. They need a budgetary strategy that maximizes average net returns from a broadly diversified investment portfolio—a classic strategy to cope with uncertainty. This implies purchasing a broad set of options that may be exercised in the future to either: (1) capture for the public the large returns on investments that pay off (opportunity options); or (2) hedge against disruptive, even catastrophic events that generate large losses (insurance options).[10]

Another strategy to maximize returns from federal investments is to delegate decisions to knowledgeable actors in particular sectors and regions, while monitoring from the center to avoid abuses.

Public investments aimed at increasing societal resiliency include *risk reducers*, investments aimed mainly at identifiable sources of catastrophic societal disruption, and *risk mitigators*, which anticipate disruptive changes by developing ways to minimize their effects. Both represent ways of avoiding costs associated with more familiar policies aimed at accelerating rescue and recovery in the wake of a disaster. Taken together, by decreasing the consequences of potential disruptive events, they create a more stable economic platform to support other investments and increase the proportion yielding positive returns over long intervals. Present-value estimates of the long-term budget (and economic) savings accruing from such investments can be included in the decision calculus.

Providing Flexible Accountability

Given limits of personal time and institutional capacity, refocusing the budget on strategic decisions may require Congress to give up some degree of control over administrative and organizational matters that traditionally preoccupy appropriators. One way to achieve this shift would be to delegate broader discretion to executive agencies (and federal grantees) to combine funding streams and waive some procedures where evidence from previous evaluation research suggests this will improve performance without opening the door to abuses. Appropriators could contribute to better management by focusing more attention on executive-wide management improvements and less on detailed direction to individual agencies.

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9. Comparing alternative investments, as well as other government activities where cash flows to and from the Treasury occur over an extended period requires discounting those flows. Nordhaus (2008) offers a sophisticated discussion of discount rate choices, the reasoning behind them, and their potential effects on choices when weighing options for public investment. There is no scholarly agreement in either the descriptive or normative case for a single best discount rate to use for public budgeting. If a normative rather than empirical basis is used for discounting, then the choice depends on the relative weight given to the economic well-being of different generations or groups of people over time; a discount rate greater than zero means the welfare of future generations is being discounted relative to that of the present one (Nordhaus, pp. 170–171).

10. Examples of this strategy are present in the form of NSF and NIH grant conditions requiring that grantees' discoveries be shared through publication and ensuring that funds are not used in ways to foreclose further application and future inquiry. On the other hand, patents and research and development tax credits effectively award federal subsidies without preserving the public's option on future social payoffs.

Improved information about performance and cost, plus a new focus on reaching measurable targets, may in coming years enable overseers in both the executive and legislative branches to shift accountability away from compliance with detailed guidance to accountability for achieving results. Through the budget process, agencies can commit themselves to hitting performance targets as a condition for obtaining greater freedom to manage resources flexibly within the terms of underlying statutory authorities.

BUILDING NEW INSTITUTIONAL CAPACITIES

New institutional capacities will be needed to support a reimagined budget process, in both the legislative and executive branches. Building these capacities is likely to take years. In some cases, new institutions will be required. A critical analytical capacity needed to support a more forward-looking budget process, largely missing from the federal government, is the capacity for foresight. Other steps can be taken to increase congressional and executive capacities to support the budget process.

Building Foresight Capacity

To inform current policy and budget choices, the federal government would need to reorganize for foresight. The application of foresight methods to long-term planning for public purposes is well-developed in only a few places (Keenan and Miles 2008). Canada's Policy Horizons Canada process is exemplary and has been looked to by Australia and others as a model. Its foresight horizon of 10–15 years has helped Canada's departments and agencies inform budget choices over the medium-term (three–five years) by anticipating potential surprises. Supported by a steering committee of deputy ministers, the process identifies potential opportunities and ways to deal possible surprises across a range of possible scenarios, not just the most likely ones. In the EU, an organized foresight capacity related to science, technology, and society has risen, fallen, and risen again in the last three decades.[11]

Governments could do more to reward foresight, perhaps by creating new career paths and promotion opportunities for those who act in anticipation of crises and thus mitigate or avoid them. Governments must also translate foresight into policy by building links to budget and policy making processes through regular portfolio reviews, systematically assessing all government programs and initiatives related to a particular major policy objective and using these reviews to drive budget decisions. These might resemble the U.S. Quadrennial Defense Reviews, but in other policy domains. To do this would require new analytical staff and increased institutional support, especially at leadership levels.

11. In 2011, a European Forum for Forward Looking Activities (EFFLA) was established to make foresight an organic part of the EU's policy making process. EFFLA is contributing to an ongoing effort to use future studies more effectively in the design of the EU's research and innovation policy and strategy (Burgelman et al. 2014).

The government must continue to build over time a more reliable self-corrective or learning governing system to monitor and scan in order to detect policy errors early and to correct policies in mid-stream, before the costs of ineffective or even dangerously misconceived policies become too large. Much of this needs to be in-house so people with the necessary skills and knowledge are in the room when large policy choices are being discussed. For the biggest, most complex policy challenges, internal capacity could be augmented, perhaps by enlisting institutions chartered by Congress to provide expert advice on policy direction and ways to achieve major public objectives.

Increasing Congress's Capacity to Decide

It should be obvious to all that Congress's current organization stretches the time and intellectual capacities of its members beyond practical limits. A more parsimonious and focused approach to legislating, including the adoption of budgets and oversight of their execution, might produce better results.

One way to economize congressional attention and focus it on larger budget choices may be to combine the responsibilities and jurisdictions of authorizing and appropriations committees. Another option would be to leave major budget and policy choices to the subject matter committees, who would formulate legislation to authorize and fund major strategic changes of policy direction, leaving the appropriations committees with responsibility to provide more detailed administrative direction through annual appropriations.

Both GAO and CBO have substantial capacity to analyze policy alternatives for major strategic goals and objectives. As a model for a government-wide strategic plan, the GAO's 2014 strategic plan illustrates its capacity for such analysis. However, a shift in the budget process to a more strategic orientation would require enhancing these capacities and possibly giving GAO relief from other tasks.

Increasing Executive Capacity

A new approach to budgeting at the federal level would require new capacities and shifts of focus in the White House and executive agencies that would likely take years to implement. OMB has too little capacity and less time now than ever to plan ahead or to organize more than a handful of strategic policy reviews at any given time, but that is the institution within the executive by far the best equipped and positioned to initiate such reviews and exploit their results in planning and budgeting processes.

The executive could reorganize at the top and within each agency to more effectively manage complex issues—achievement of any major national goal inevitably requires cooperation across ministerial jurisdictions and building partnerships between public and private sectors and with citizens. The executive branch could take other steps to improve its capacity for foresight and strategic thinking and to translate that analysis into better resource decisions:

- Existing analytical staff and resources could be allocated to support the required new capacities. People could be shifted from routine analytic tasks—maybe transportation planning or revenue forecasting—to the more challenging tasks of scenario building and assessment of potential major threats and opportunities.

- Because not everyone is comfortable with or capable of this kind of analysis and because the necessary skills are usually in short supply, the federal government could recruit and train a next generation of managers and analysts in these skills and modes of analysis.
- Executive agencies, led by OMB and supported by the Performance Improvement Council, could continue to refine and publicize a set of national long-run goals and strategies to achieve measurable medium-term targets tied to the goals, refining an array of quantitative indicators that executives and managers could use to continuously track and assess progress in achieving society's highest priorities, publishing these so that leaders could be accountable for the results of their efforts at the next election.
- To support reviews of major policy portfolios, OMB could continue to identify and build additional accounting and institutional linkages between strategic analysis and primary decision processes—especially with budgeting (Redburn and Posner 2015). By requiring regular reviews of major policies and programs, including tax expenditures, prioritized based on their contributions to major national objectives, the executive could regularly identify ways to reallocate resources from less productive to more productive strategies, and/or to improve the way programs are managed, based on rigorous performance assessments and monitoring of progress.

These steps would over time improve the government's ability to learn from experience, to prioritize goals and resources, and to think and budget strategically.

CONCLUSION

The federal budget process ought to be reconceived as an exercise in practical imagination—with changes in analytical approaches, decision procedures, and supporting institutions all flowing from that reconception. Budgeting should not be approached as merely a grim exercise in slicing a limited pie, but as a means by which the dreams of leaders and voters are translated first into specific plans to create a possible future and then into practical decisions about how to achieve that future by protecting our gains and fulfilling our greatest shared ambitions.

Budgeting for the long term is not an effort to predict fiscal conditions far into the future, which is not possible. Instead, its purpose is to deploy today's public resources as required to carry out strategies and policies promising to increase the nation's ability to survive inevitable social and fiscal shocks and to take most advantage of expected and unexpected opportunities for its citizens to thrive, grow, and fulfill their dreams.

The practical and political obstacles to the reforms described above should not be underestimated. Developing greater government capacity to learn and to choose wisely will be a prolonged process—requiring new ways of thinking about the future; new decision structures capable of applying that analysis; and broader changes in institutions and political culture shaping how leaders, administrators, and the public approach the essential task of constructing and enacting the federal budget. Reforming the budget process is a critical part of a much bigger project to strengthen self-government and revive a floundering democratic process. Just as the politics of budgeting is endogenous to the rites and culture of the larger political system in which it is embedded, so the politics of reforming the way budgets are constructed and executed depends on whether reforms address deeper problems weakening democratic governance and thereby our ability to cope with the full range of challenges the nation faces. Ultimately, the two sets of political problems must be addressed as one.

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