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Budgeting Systems**

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Tightening the Results/Funding Link in Performance Budgeting Systems

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Abstract

Influential contemporary performance budgeting models have sought to tighten the link between results and budgets. This paper considers three approaches – budget-linked performance targets, budgeting based upon output or outcome costs, and budgetary performance incentives – and assesses their potential to enhance the results/funding link. It is possible to develop real links between performance targets and budgets, although generally not of a formularized nature. Criticisms of performance targets, based particularly on the imperfections nature of performance indicators, tend to be somewhat exaggerated. Considerably more use can be made of output cost information in budgeting – although there are important imitations arising from the nature of some outputs, and from the prevalence of qualitative rationing. Initiatives designed to ensure that agency performance is systematically considered when deciding agency budget allocations are highly desirable. The idea of additional funding as a reward for good performance needs, however, to be approached cautiously and selectively.

The Background to Recent Performance Budgeting Initiatives

Performance budgeting may be defined as the systematic use in the budget process of performance information generated by formal performance information systems¹ in order to make results a central determinant of budget funding decisions, and thereby make budgeting a

powerful instrument for maximizing the effectiveness and efficiency of government. This is a broad definition of performance budgeting, making it an overarching concept which includes within it systems such as program budgeting, zero based budgeting, output purchase budgeting and a number of other mechanisms and systems which strive to take budgeting beyond financial control into the realm of performance enhancement.

Essentially, performance budgeting seeks to build budgeting systems and institutions which can play a major role in addressing the allocative and productive efficiency problems which arise from the non-market nature of government service provision. Non-market provision implies reliance upon tax financing and, unlike revenue earned by selling products on the market, tax revenue is not a function of success in meeting consumer needs. The consequence of this is, of course, the absence of the most fundamentally important market performance discipline. Reliance upon tax revenue also makes it necessary that agency expenditure be subject to hard budget constraints which reflect aggregate fiscal policy parameters, and these hard budget constraints themselves create additional performance problems. In the short run, for example, they greatly limit the flexibility available to agencies to respond to unanticipated fluctuations in the need/demand for services.

In respect to allocative efficiency, the *bête noire* of performance budgeting has long been 'incremental' budgeting. As is well known, the initial wave of post-second world war performance budgeting systems sought to replace budgetary incrementalism with a system of comprehensive central expenditure planning. The hope was thereby to deliver some approximation of allocative optimization as conceptualized by welfare economics. Experience with Program Budgeting, in the form originally introduced in the US in the 1960s (PPBS), and with similar systems made it clear that this goal was too ambitious. As budget scholars like

Aaron Wildavsky pointed out, it is simply impossible for central budgetary decision-makers to gather enough information to fine-tune all expenditure in order to maximize social benefits. Today, the point seems an obvious one, given the systematic way in which information limits and costs have been built into theory in economics and other fields, and also the historical experience of the informational limits of central planning, as exemplified on a grand scale by the failure of centrally planned economies.

There were two other key problems with the initial version of program budgeting. One was that it tended to ignore *productive* efficiency. The other was that it adopted an essentially static approach to allocative efficiency, and lacked a forward-looking perspective.

Budgeters learnt from these experiences. In respect to allocative efficiency, it is now widely – although unfortunately not universally – understood that central budget decision-makers should focus their attention on broad sectoral expenditure allocations, and that it is both necessary and desirable that there should be substantial decentralized allocative decision making. A central element of a good performance budgeting system should be the creation of systems and institutions capable of ensuring that the sectoral budget allocations contained in the annual government budget are policy-driven, that they have the commitment of top political decision-makers, and that they are responsive to changing needs and priorities (World Bank 1998). Generally speaking, improving allocative efficiency in central budget allocations is best seen as a process of iterative review and modification of current expenditure policies – as a process which is neither incrementalist nor comprehensive-planning in nature, but which represents something in between².

Central budgetary decision-makers have also over recent year increasingly adopted a forward-looking perspective to the allocative task. One of the most useful tools for this purpose

has proven to be ‘current policy’ forward expenditure estimates and projections. These give advance warning of any inconsistency between current expenditure policies and fiscal rules/targets, and facilitate early policy adjustments to reconcile the two. Initially, the focus was on relatively short-term projections (e.g. three years), but in more recent years an increasing number of countries have moved to longer-term expenditure projections (20 years or more), which offer the capacity to highlight potential fiscal problems arising from demographic and other relevant longer-term trends. These developments are related to a broader set of multi-year budgeting initiatives.

There is, thus, a quite significant degree of consensus as to what constitutes good practice in central budget allocative decision-making. However, this still leaves a great deal unresolved as to what constitutes a good performance budgeting system. A crucial issue, of course, concerns the manner in which the budgeting system can best contribute to improving *productive* efficiency. Improved productive efficiency has, of course, been a central theme of public management over recent decades. Many of the more recent models of performance budgeting have, by contrast to the overwhelmingly allocative preoccupation of program budgeting, placed at least as much emphasis upon productive as upon allocative efficiency. Another key issue concerns the role of the central budget process in promoting good agency-level allocative decisions. It may be impossible for the centre to ensure allocative efficiency by making all the expenditure decisions itself. But might it not be possible to re-design the central budget system in such a way as to place much stronger pressure upon agencies to prioritize their expenditures to the most effective areas? This is a matter to which performance budgeting innovators have devoted considerable attention.

In a 1990 multi-nation review of performance budgeting practice, Allen Schick noted that at that time “none of the governments have attempted to forge a tight relationship between resources or results” (1990, 32). Since that time, things have changed markedly. In a drive to use budgeting as an instrument to drive improved productive efficiency, and also to promote better agency-level allocative decisions, some key models of performance budgeting developed since the mid-1990s have strongly emphasized the creation of tighter linkage between results and budgets. This paper examines these models.

Building a Tighter Link between Budgets and Results

A key theme of these new models of performance budgeting has been the creation of tighter *ex ante* linkages between results and budgets: in other words, upon ensuring that agency funding is closely related to the results which the agency is expected to deliver with those funds. Considerable attention has, however, also been paid to the development of *ex post* links between results and budgets through formalized *budgetary* incentives for the agency performance.

Three particularly important strands of recent performance budgeting practice and theory may be identified:

Performance Targets and Performance Budgeting

One approach taken in a number of jurisdictions has been the setting of agency performance standards or targets which are intended to be *clearly linked with funding decisions*.

A leading example of this model is the Public Service Agreements (PSA) framework in Britain. The PSAs are documents which set out for each agency key objectives and a number of targets. These ‘headline’ targets are relatively small in number (130 in total for the 2002-06

PSAs), and the great majority are now outcome targets. For example, there are numerical targets for improving the literacy and numeracy outcomes of school children, and for reducing mortality rates from heart disease and cancer (UK Government 2002a). The headline targets contained in PSAs are translated into ‘operational’ targets, many of which relate to outputs, activities, processes and inputs, with the intention that these targets should be more controllable and therefore more closely ‘owned’ by the agencies. The aim is a creation of an interlinked ‘cascading’ structure of targets (NAO 2001).

Crucially, these targets are seen as having an important relationship with the budget. Upon coming to office in 1997, British Labor took the view that significant expenditure increases in some areas of inadequately-provided public services (e.g. health) were going to be unavoidable. It was concerned, however, about the danger of sinking extra funds in without achieving the necessary service improvements. A key part of the strategy has therefore been, in the words of Chancellor of the Exchequer (finance minister) Gordon Brown, ‘tying new resources to new reform and results’ (UK Government 2002a, i).

The notion of budget-linked performance targets is not, of course, unique to Britain. One other well-known example is the Florida system of ‘performance-based program budgeting’, in which the annual budget legislation includes a set of output and outcome targets for each agency.

Budgetary Performance Incentives

What motivates agencies and public employees to deliver on performance expectations and targets? This is a key question for any performance budgeting system. A widespread assumption is that public reporting of performance information will in itself have a significant motivational effect. Recent efforts in a number of countries to develop summary overall

performance measures and 'report cards' are designed to intensify that pressure – particularly through the 'name and shame' approach to poor performers. A good recent example of this is the 'comprehensive performance assessment' initiative introduced in Britain in 2002, under which a balanced scorecard report including an overall performance rating is prepared for each local government, and distributed to all rate-payers. The British also tend to emphasize the negative sanction of managerial 'intervention' (including, ultimately, sacking and replacement with new managers) for central agencies or local governments which are rated as performing badly.

Performance pay – although not in any sense a new development – has also assumed an increasingly important role in many countries. Thus, for example, the Bush administration's 'strategic management of human capital initiative' aims to substantially extend the role of performance pay in the US federal government. The influence of business remuneration practice and of certain versions of agency theory has been an important factor in this. A key unresolved issue here is the disjuncture between these efforts and the findings of the research literature which questions the efficacy of performance pay in the public sector (e.g. Ingraham 1993; Kellough and Lu 1993).

Of particular interest from a performance budgeting perspective is the increased interest in recent years in *budgetary* incentives for agency performance. The idea here is that stronger performance 'incentives' should be created by formalizing and strengthening the link between actual (as opposed to planned/expected) agency performance and subsequent funding. Again, the business analogy is obvious – high-performing businesses are rewarded by the market with strong earnings.

Such linkages have over recent years been reasonably well established at the sectoral level. One example is university funding systems in which it is now quite common in many countries for some portion of funding is based upon performance measures – and particularly upon outcome measures such as graduate job placements and graduations (Wellman 2001). What is newer is the idea of creating a similar linkage at the whole-of-government level. The “budget and performance integration” initiative launched by the Bush administration as part of the President’s Management Agenda aims to create precisely such a linkage. Concerned that there has in the past been “little reward, in budgets or in compensation, for running programs efficiently”, the administration set out to create a budgeting system in which “high performing programs will be reinforced and non-performing activities reformed or terminated” (Executive Office of the President/OMB 2002: 27-8). For this purpose, the performance of programs is rated by OMB budget examiners using a Performance Assessment Rating Tool (PART) (OMB, 2003)³.

Systems of budgetary funding ‘incentives’ may vary in a number of ways including:

- The degree to which nexus between performance measure/rating and funding is automatic and formularized,
- Whether *all* funding is linked to actual performance, or alternatively there is an distinct performance-based funding component of overall funding,
- Whether the performance measures upon which the performance-linked funding is based are wholly ‘objective’ measures or, alternatively, upon measures which are partly judgmental.

Not all advocates tighter results/budgets linkages support the idea of integrating formal budgetary performance rewards and penalties into the whole-of-government budgeting system.

The British, for example, have explicitly rejected the idea of budgetary penalties for failure to meet PSA targets⁴.

Budgeting Based on the Costs of Delivering Results

Another key theme in contemporary performance budgeting systems is the formularized linking of funding and results using cost information. This is in no sense a new idea. There is a long tradition of the advocacy of the application of management accounting tools to public budgeting. In the last decade or so, however, there have been some quite bold and far-reaching attempts to put these ideas into practice. In most cases, these have focused upon outputs rather than outcomes. If, the reasoning goes, one can determine what it costs – or what it should cost – to produce an output, one has thereby established a functional relationship between budgets and the expected/planned levels of services which can then be used for budgeting purposes. Specifically, output cost information might be used in any of the following ways:

- As the basis for the formulation of output targets in a target-based system of performance budgeting,
- Equivalently, as the basis for determining the ‘price’ to be paid for outputs in an output-purchase system (see below),
- As the basis for contingency supplementary funding arrangements for certain services where, if there is an unanticipated surge in demand/need, it is essential that extra services be delivered⁵,
- As a tool to project the implications of future demand patterns for public expenditure, for the purposes of medium-term or longer-term budget planning⁶. (Output-based projection is commonly regarded as superior to simpler workload-based projection.)

These and related budgeting techniques will be referred to (albeit with certain reservations⁷) as *output budgeting*. The most radical versions of output budgeting have been the systems of output-purchase budgeting introduced at a whole-of-government level in Australia and New Zealand in the middle and late 1990s (Schick 1996; Department of Finance and Administration, 1998; Robinson 2002). These systems seek to put the whole government budget on a purchaser-provider basis which mimics a simple competitive market. Whereas the other techniques of output budgeting seek only to build an *ex ante* linkage between budgets and outputs, output-purchase budgeting seeks also to create an *ex post* linkage: at least in theory, agencies are paid revenue by the government for the outputs which they actually produce, based upon a price which reflects the costs of efficient production. In such a system, failure to deliver expected outputs, or delivery at excessive cost, will result in an agency recording an operating loss, just like a business. This is intended to put strong pressure on the agency to achieve productive efficiency. Output-purchase budgeting systems also operate at the sectoral (e.g. output-based hospital funding systems) and agency-level (e.g. Harr and Godfrey 1992) in a number of countries.

Although the idea of using results cost information in budgeting is usually applied to outputs, occasionally there have been calls for its application to outcomes (e.g. Osborne and Gaebler 1993, 139)⁸. It is, however, important not to make the mistake of regarding the type of sectoral outcome-linked supplementary performance payments (e.g. in university funding systems) referred to above as an attempt to budget using information on the cost of producing outcomes. In these systems, the quantum of the outcome-linked performance payments in these systems tends to be essentially arbitrary, beyond being set at a level which is considered to provide an incentive for improved outcomes.

Having outlined these key contemporary themes in performance budgeting, we turn now to analysis and discussion of some of the issues raised by these themes.

Using Results Cost Information in Budgeting

Output budgeting implicitly assumes that there is a determinate relationship between the quantity of services of a defined quality and the cost of delivering those services. This is what standard microeconomics assumes when it postulates output cost functions $c = f(q)$ such that, for any value of q (the quantity of output), there is a unique corresponding value of c (the costs of efficient production)⁹. The story of a determinate output/cost relationship is a pretty good characterization of mass-manufactured commodities, where standardized goods (i.e. good which are identical to one another) are produced in large runs.

Having been raised on a diet of cost accounting doctrine which, as Brown, Myring and Gard (1999, 4) note, is rooted in “the private sector and, even more narrowly, in manufacturing industries”, management accountants also tend all too often to assume that government services are characterized by determinate output/cost relationships. Once this assumption is made, the challenge appears to be purely one of quantifying the output/cost relationship. Increasingly sophisticated techniques – such as activity-based budgeting – may then be applied to the task of demonstrating “clearly the relationship of [agency] budgets to quantity and quality of service” (Williams and Melhuish 1999, 28)¹⁰.

There are many publicly-provided services for which there is indeed a reasonably determinate relationship between cost and outputs, and for which this approach therefore makes sense. This is particularly the case for services which are relatively standardized – where the

activities delivered to one client/case are more or less the same as those delivered to others. An example of a highly standardized service is motor license testing. Each motor license candidate will be tested in the same, or a highly similar, manner – through, say, the administration of a standard written test followed by a practical driving test in a prescribed format. There are many other publicly-provided services which, while not as standardized as this, are nevertheless relatively standardized. School education provides, in most jurisdictions, a good example.

There are, however, many other public services where the relationship between outputs and costs is characterized by significant indeterminacy. As discussed elsewhere (Robinson 2002), this is true for *contingent capacity services* and for some services affected by significant *output heterogeneity*. Military and emergency services are good examples of contingent capacity services – these services must be provided quickly when needed, but demand for them is unpredictably irregular. Budget funding is directed to providing a level of capacity to produce the service if and when needed, and may therefore bear little relationship to the actual services delivered. Output heterogeneity refers to differences in the quantity and/or mix of activities per unit of output as a result of the tailoring of services in response to variations in client/case characteristics – and should not to be confused with quality variation. Criminal investigation work by a police force offers a good practical illustration of output heterogeneity: the extent and type of investigative activity applied to, say, a murder case, varies considerably from case to case depending upon the circumstances of the case. Heterogeneity will obviously produce significant variation in cost from one unit of output to another. For there to be substantial indeterminacy in the output/cost relationship, however, it is necessary that output heterogeneity be severe enough to produce significant variability over time in *average* costs.

The phenomenon of *qualitative rationing* – affecting some services which are prone to significant short-run fluctuations in demand/need – is also highly relevant to the use of output budgeting techniques. If there is to be a determinate relationship between output quantity and cost, quality must be held constant. However, qualitative rationing – reductions in activity per client/case in order to permit more clients/cases to be handled with the same resources – is a strategy frequently used by government agencies to cope with unanticipated short-run increases in the need/demand in the presence of hard budget constraints. Thus, for example, the extent of investigative activity undertaken in a particular murder case will be determined not only of the complexity of the case, but also of how heavy the pressure of other cases happens to be at the time¹¹.

These considerations suggest that output budgeting will be potentially most useful in respect to services:

- which are more standardized (less heterogeneous),
- for which the quantity of outputs delivered is relatively stable and predictable (either because demand is relatively stable or, alternatively, because short-run demand surges are met not by qualitative rationing but by, say, longer waiting lists)¹²,

Heterogeneity and qualitative rationing tend to present a particularly serious constraint on the scope for the successful introduction of output-purchase budgeting systems because in such systems agencies are paid the same price per unit of output. The further serious constraint upon output-budgeting systems is the need for information on the efficient cost of production of outputs, upon which the ‘price’ paid to agencies is, in theory, based. However, it is considerably more difficult to obtain information about efficient costs than it is to obtain information about an agency’s actual costs of production. Market reference prices are available for only a small

minority of government-provided services. Cost benchmarking – a process in which the costs of lower-cost producers are taken as an approximation of efficient cost – is a very valuable technique where it is available. However, cost benchmarking can generally only be applied successfully and cost-effectively to services which are produced in large quantities through multiple production units – such as in the hospital system or the school system.

It can therefore be argued that the pre-conditions for the successful operation of an output-purchase budgeting system will be met only by a limited sub-set of publicly-provided services. Consequently, output-purchase systems are appropriate for *sectoral* performance budgeting systems applied to suitable categories of public services, but are not a suitable basis for the whole-of-government performance budgeting system (Robinson 2002).

Output-purchase budgeting represents, however, only one type of output budgeting. There is considerably wider scope for the use of other output budgeting techniques as part of a well-designed performance budgeting system. For example, heterogeneity and qualitative rationing represent somewhat less of a problem for a target-based performance budgeting system. In such a system, it is both possible for output targets to be set in the knowledge that unanticipated variation in client/case complexity or of unanticipated demand surges might cause a divergence between actual output delivery and the target. Indeed, in a target-based regime, it is desirable as far as possible to identify possible sources of this type of risk in advance in the strategic planning process. Similarly, for the purposes of forward projections of public expenditure in multi-year expenditure planning, qualitative rationing responses due to *short-run* demand fluctuations are of no great significance if there is a reasonably clear underlying medium-term demand trend.

Similarly, output budgeting techniques other than output-purchase budgeting do not presume or require information about the ‘efficient’ cost of production. They can be usefully applied using information on actual agency costs. This is clearly true for output-based medium and long-term expenditure projections, as well as for formularized supplementary funding arrangements based upon output cost. It is also, as discussed below, true for target-based performance budgeting systems.

There is, thus, considerable scope for extending the use of output budgeting techniques. It is, however, widely recognized that a well-designed performance budgeting system has to be explicitly focused upon outcomes as well as outputs. Output budgeting can promote the efficient production of defined outputs, but does nothing to ensure that the right types of services are being delivered. This is, indeed, precisely the reason why the focus under the US and British performance budgeting systems has in recent years moved increasingly towards a focus upon outcomes.

Given the importance of outcomes, why not apply to broad principle of output budgeting to outcomes? Why not, in other words, work out the cost of achieving outcomes and budget on that basis? The idea is enormously appealing. Unfortunately, however, a little serious thought will indicate that it generally not practicable. Outcomes are only partially controllable by agencies: they are, as is well known, determined not only by the quality of the services delivered by agencies, but also by so-called ‘contextual factors’ – characteristics of clients or cases, or of the context in which services are delivered. Where, as is frequently the case, these contextual factors are quite variable, the level of indeterminacy affecting the outcome/funding relationship will tend to be quite high, making it impossible to estimate in advance the likely cost of achieving any specific level of outcome. Thus, for example, an *outcome*-purchase budgeting system (in

which agencies were funded solely upon the basis of a ‘price’ paid for outcomes delivered) would mean enormous, and unsustainable, volatility in agency funding. It is precisely for this reason that the sectoral outcome-linked performance payments discussed above for the most part operate as sources of supplementary funding, over and above relatively stable ‘base’ funding.

Target-Setting

It is not enough merely to set performance targets, or even to publish those targets in the budget paper, for it to be said that a target-based system of performance budgeting exists. It is necessary that there be a close link between targets and budgets. The issue then is the precise nature of the link.

In the British system, it is the nexus between funding increments and targeted performance improvements which is seen as the key link. The strong outcomes focus of the British PSA targets is a strong point insofar as it keeps the focus upon the dimension of performance which ultimately matters most. At the same time, the considerable indeterminacy which commonly affects the relationship between outcomes and costs suggests that the linkage between outcome targets and budgets must for most services be thought of as a loose one. It is perhaps partly for this reason that some in Britain question the paramount role of the Treasury in managing the PSA target process (e.g. Talbot 2001). This relates to a broader and quite familiar question, concerning the extent to which target-setting should focus upon performance variables which are relatively controllable. There is a widely-held view that targets should not be set for the *least* controllable variables. The concern is that setting targets for highly uncontrollable variables is more likely to de-motivate than to motivate agencies and their staff. One British public health

administrator recently raised this point graphically in relation to a PSA target of reducing unwanted teenage pregnancies:

“A recent systematic view concluded that we simply do not know how to do this: none of the current strategies work. there can be few things more demoralizing to a committed workforce than setting objective that depend on knowledge that we do not yet have” (Goodman 2002, 567)

In a target-based performance budgeting system, it is common for targets to be set for outputs as well as outcomes. Clearly, output target-setting tends to be less problematic than outcomes target-setting, because indeterminacy is a less severe problem. In addition, the target-setting approach to outputs has advantages over performance budgeting models which, like output-purchase budgeting, presuppose knowledge of the efficient costs of producing outputs. Targets for outputs to be produced with a given budget do not require knowledge of efficient output costs. They simply require an informed belief (based, say, on efficiency reviews) in the feasibility of a certain target improvement on actual costs¹³.

Insofar as agencies and individuals within them are motivated to achieve targets, the issue arises of the potential for behavioral distortion arising from the use of targets based upon imperfect performance measures. This problem should, of course, be minimized by careful design of, and the use of the right combination of, target measures. However, all performance measures are imperfect to a greater or lesser degree, so that even the most careful design of the set of targets cannot eliminate the potential for behavioral distortion. Indeed, the information-based weakness of indicators and targets is a key reason for the failure of central economic planning (Nove 1984) and the superiority, in most markets, of consumer choice and other decentralized market mechanisms. It is another reason why, where appropriate, it is better to deal with performance problems by transferring services from the tax-funded public sectors to market-based production and provision.

Given the continuing existence of a substantial public sector, the question is whether the potential behavioral distortions which can be the result of even well-designed performance targets constitute a conclusive case against target-based performance management and budgeting. Many critics of the British PSA model appear to think so. Some of these critics go so far as to tar the PSA system with the Soviet central planning brush, labeling it as ‘neo-Stalinism’ (Keaney 2001)! This criticism surely goes much too far. The impact of formal performance targets has to be considered in the light of the adequacy or otherwise of the set of other informal and formal performance motivators upon which, in the absence of targets, exclusive reliance would need to be placed. These other performance motivators include intrinsic motivators (the commitment of public employees to achieving results for the community), and also the (highly uneven) pressure upon agencies for results from their political masters. The case for targets rests upon the proposition that these other motivators are inadequate, and that targets can help to compensate for their inadequacy and can also make a useful contribution to counterbalancing the more dysfunctional behavioral tendencies arising from the imperfect nature of the political system. To support target-setting does not imply that one dismisses the importance of intrinsic motivators, which both research (e.g. Houston 2000) and common sense suggest are particularly important in the public sector. Nor does it necessarily involve denying that democratic political institutions, even if imperfect, do create some important positive performance motivators.

From this perspective, the real question is whether well-designed targets can operate so as to have the net effect of improving overall performance-orientation. If so, then there is a good case for their use. One aspect of this question is the extent to which ‘crowd out’ intrinsic motivators, and this in turn will depend significantly upon the nature and magnitude of the

incentives to which targets are linked. This issue is discussed further below. Certainly, however, there are strong theoretical and commonsense reasons to believe that the more imperfect are the performance measures upon which targets are based, the more mistaken it is to link achievement of those targets to incentives so powerful as to override other performance motivators. In a private sector context, Deckop, Mangel and Cirka (1999) produce results which suggest that in organizations with high value-alignment, a well-designed performance pay system can complement ‘organizational citizenship’ behavior rather than weaken it. In the public sector, it is precisely this type of effect which we should be seeking to achieve when setting performance targets and linking them to incentives. The issues here are complex ones, and require further empirical research, including careful study of the evolving experience of the PSA system¹⁴.

Budgetary Incentives

So far, the principle focus has been upon the ex ante link between budgets and expected/planned results. The idea of budgetary performance incentives raises the issue of the appropriate ex post link between results and budgets: in other words, how far, and in what way, should the actual results delivered by agencies impact upon their subsequent budgets?

Clearly, allocative efficiency considerations call for a strong feedback from actual performance to future budgets. If a major program is delivering poor outcomes – and there are no good grounds to believe that redesign, a management change, or better resourcing will fix the problem – then funding should be cut. Good practice in performance budgeting therefore demands that mechanisms be built to make good performance information a crucial input into the budget process, not only at the finance ministry level, but at the highest political level of budget

decision-making. A requirement that agencies integrate performance information into their budget submissions is one important part of this. The Bush administration's initiative to formally integrate performance review with budget decisions should be valuable in infusing performance information more systematically into the budget process in the US. Other approaches have successfully been used by other nations.

Agency budget allocations cannot, of course, be determined by past performance alone. There will be some services which should have their budgets cut over time notwithstanding excellent performance, because the service is one for which there is declining community need. Conversely, as many have pointed out in response to the Bush initiative (e.g. GAO 2002a, 14), some poorly performing programs need more rather than less funding. It is therefore not surprising that some programs rated "ineffective" under the first round of PART were, appropriately, allocated more rather than less money in the President's budget (GAO 2003, 6).

Feeding information on agencies' performance track records more systematically into central budget decisions is an important challenge. However, the idea of budgetary 'incentives' surely implies something more than this. Whether in the agency theory literature or in general usage, an 'incentive' refers to a reward or sanction which constitutes an extrinsic motivator, as distinct from value-driven intrinsic motivators. Incentives particularly refer to remuneration (whether cash or 'perks'), and include sanctions such as termination of employment. Performance incentives operate through their impact upon the motivation of individual employee. If, therefore, agency budget funding is to operate as a performance incentive, there must be a significant connection between performance-linked agency funding and incentives for individual employees. Individual employees must, moreover, have prior knowledge of that connection if the agency budgetary 'incentive' to motivate them to perform better.

The question then is by what channels such a connection between agency funding and individual incentives might be created. It is true that taking an agency's performance track record into account in determining its budget creates one limited channel connecting agency funding and individual incentives, because individuals will generally have a personal interest in avoiding the closure of their program arising from a central perception of poor program performance and a consequent agency budget cut. However, a system of incentives requires positive rewards as well as sanctions¹⁵. How, then, might agency budgetary rewards feed through to rewards for individuals?

It would undesirable to rely for positive incentives upon the indirect link between individual remuneration and budget size which arises from the tendency for managers with larger program responsibilities and bigger budgets to be paid more. Such an approach would not only be inconsistent with allocative efficiency considerations, but it would also push government more in the direction of a public choice model in which the incentive structures faced by public officials create an unproductive drive to empire-build.

This suggests that if budgetary performance 'incentives' are to be created, it must be in a manner which keeps allocative decisions and performance incentives separate. The obvious option therefore is the payment to agencies of explicit budgetary performance bonuses as supplementary funding (over and above core program funding), with the agency bonus earmarked for the payment of performance bonuses to agency employees. The Ontario provincial government in Canada is one – possibly the only – government to have introduced such a system (GAO 2002b:,20).

One difficulty here is the significant constraint upon the scope for performance pay in the public sector due to the lack of a strong link at the aggregate level between public sector performance and public sector tax revenue. In order to comply with the hard budget constraint which dependence upon tax revenue makes necessary, an essentially arbitrary ceiling must be set for the pool of money available across the whole budget sector for performance pay. This makes public sector performance pay ultimately more or less zero-sum in nature. In most public sector performance pay systems, performance pay is zero-sum at the individual agency level as well as at the government-wide level, because the pool of money available for performance pay in each agency is unrelated to *agency* performance¹⁶. Introducing agency-level budgetary performance incentives – agency-level performance pay – could change this, by making the size of agency performance pay pools to some degree variable with agency performance. The scope for recognition of agency performance through agency-level performance pay will, however, always remain constrained by the government-wide performance pay ceiling. This contrasts markedly with the position of firms selling their products in markets, for which strong performance translates directly into strong earnings and a capacity to pay excellent performance bonuses to staff.

Agency-level performance pay raises a number of other issues, many of which have been widely discussed in relation to individual performance rating and pay. Prominent amongst these is, once again, the implications of imperfect performance measurement. If they are to be used to determine agency-level performance pay, agency performance ratings must be of an excellent quality and highly credible to the agencies affected. Legitimate doubts can be raised about how far this is possible given the very considerable performance measurement difficulties which characterize much of the public sector.

In the US, the PART ratings have been widely criticized as superficial. Insofar as an instrument like PART is used purely as a tool to improved allocative decision-making – rather than as an instrument in an incentive structure – this criticism perhaps misses the point. It is essential to good central budget formulation that the center forms a view of agency program performance. Given informational constraints, this view will be unavoidably superficial. Whatever its weaknesses, a formal assessment approach like PART can represent a major improvement in the way in which agency performance is assessed by the center – particularly because, in the words of one former senior OMB official, “it creates consistency across the board, so each [budget] examiner is looking at the same thing”(quoted in Weinstock, 2003, 38) .

A snapshot assessment like PART is, therefore, valuable tool in allocative decision-making. If, however, agency performance ratings are to be used to determine agency-level performance pay which is in turn articulated with individual performance pay, the problem of ‘superficial’ performance ratings is a much more serious one. Performance pay which is based upon highly imperfect performance measures may well damage, rather than improve, employee motivation.

This analysis suggests that one should be generally cautious about the idea of budgetary performance ‘incentives’. Certainly, the idea requires extensive further research and evaluation.

Conclusion

Performance budgeting models developed over the last decade have sought to create tighter links between results and budgets. This paper has focused upon target-based models, the

use of cost information about results (in particular, output budgeting techniques) and budgetary ‘incentives’ for performance.

One factor influencing the scope for linking results and funding is the *determinacy* of the underlying results/cost relationship. In the case of outcomes, this relationship is generally a loose one. For outputs, on the other hand, many public sector services are characterized by output/cost relationships which are at least moderately determinate, and this creates considerable scope for the increased use of output budgeting techniques. These include output-based forward expenditure projections in the context of multi-year expenditure planning, budget-linked output targets, and formularized output-based contingency funding for selected high-priority services. On the other hand, the preconditions for the effective use of the other key form of output budgeting – output-purchase budgeting – are quite restrictive. Output-purchase budgeting is therefore only appropriate for a carefully selected sub-set of government services. It must also be recognized in relation to output budgeting generally that there are many public sector services for which output budgeting techniques are not, for reasons such as severe heterogeneity and the ‘contingent capacity’ nature of the services concerned, applicable.

The idea of budgetary performance ‘incentives’ is problematic, and further experience with some of the new budgetary incentive systems will be valuable in making their efficacy clearer. What is clear at this stage, however, is that performance information should be systematically infused into the central budget-making process, so as to make sectoral budget allocations performance-sensitive as well as policy-based. This requires, amongst other things, that agencies integrate performance information into budget submissions, and that finance ministries adopt systematic approaches to budget-related performance assessment.

Endnotes

1. 'Performance information systems' in this context means, at a minimum, a developed system of quantitative performance measures/indicators. Commonly, however, performance information systems will include other elements, such as program evaluation systems, formal benchmarking processes, output and activity costing models, and overall agency performance ratings.
2. One example of an effective model here is the cabinet-level Expenditure Review Committee (ERC) in Australia. The ERC, which comprises the finance minister and a number of ministers with major spending portfolios, oversees sectoral expenditure allocations in the light of politically-determined priorities, while making no attempt at comprehensive expenditure planning. Although detailed expenditure reviews are undertaken as part of the ERC process, these are selective, and tend to focus on one or more broad policies areas each year (often of a cross-portfolio nature). Other countries, of course, achieve the same broad result by other mechanisms. The British biennial Spending Review mechanism (UK Government 2002b) is, for example, is a particularly good example.
3. In its initial iteration, the program performance assessment generated by PART was heavily influenced by process issues as well as by results achieved. At time of writing, it looks as if results assessments will be separated from process assessments in the next iteration of PART, following advice from (amongst others) the Performance Measurement Advisory Council.
4. In the words of one Treasury minister, "there was never any question that: 'oh if we don't meet this target, our money's going to be cut'" (Crooks and Blitz 2002).
5. Such arrangements are a positive ancillary feature of the Australian accrual output budgeting system. By way of example, if there is an unexpected surge in illegal immigrants subject to mandatory detention, the relevant department is automatically provided with additional funding on a formularized per-capita basis.
6. For example, information upon cost-per-student-year can be used, together with demographic projections, to estimate the costs in future years of existing (or modified) educational policies.
7. The problem which must be noted here is that the term 'output budgeting' has historically been used in a wide variety of ways, and therefore arguably lacks precision. For example, at the time of the first wave of program budgeting in the 1960s and 1970s, program budgeting was often referred to as a system of output budgeting. It was, however, commonplace at the time for the term 'output' to be used to refer to what we today define as outcomes (Robinson 2003), so that the use at that time of the phrase 'output budgeting' label did not imply an attempt to use output cost functions to link the expected/planned quantity of services to the level of budget funding.
8. Perhaps not choosing its words very carefully, an OMB presentation to the Performance Measurement Advisory Council in 2002 appeared to come close to the idea of budgeting in terms of outcome costs. It described the "full cost budgeting" initiative in the following terms: "Agency capacity to describe the full cost, at the margin, of getting results. The agency must be able to articulate the costs of increments of change and the unit costs of achieving *outcomes*" (italics added) (OMB 2002).
9. There are, to be more precise, two textbook cost functions – short-run and long run – both of which are fully determinate. In each of these, there are *known* stable parameters – such as input costs and the state of technology – which are assumed to be constant.
10. Although all too often, it is simplistically presumed that unit output cost data will do the job.

11. For a more detailed discussion of these issues, see Robinson (2003).
12. Another important consideration is how well-defined are the desired outputs to be produced by the agency. In principle, an administrative arrangement which separates 'steering' and 'rowing' – such as the separation of policy-oriented departments and service-delivery executive agencies under the British Next Steps system – is well-suited to a sectoral output budgeting system. These pre-conditions are closely related to the general criteria for the success of results-based control mechanisms, as well discussed in Merchant's (1985) and Tankersley and Grizzle (1994, 8-9).
13. It is interesting in this context to note that the British PSA superseded a somewhat more output-focused approach, under which agencies were required to produce Output and Performance Analysis (OPA) statements (Talbot 1998).
14. Consideration of the issue is not assisted by the relative neglect in the literature of public sector performance motivation issues (Wright 2001).
15. And also more finely-tuned sanctions.
16. For example, the government might provide each agency with a performance pay pool set as a fixed percentage of the base remuneration of staff

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