Working Paper 147

The Basic Budgeting Problem

Approaches to Resource Allocation in the Public Sector and their Implications for Pro-Poor Budgeting

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July 2001

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ISBN 0 85003 527 9

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1. Introduction

Sixty years ago V. O. Key laid down a challenge for economists to resolve the ‘basic budgeting problem’ namely, faced with limited resources, ‘On what basis shall it be decided to allocate x dollars to activity A instead of activity B?’ (Key, 1940: 1138). He went on to suggest that solutions to this problem might be found through the application of economic theory. He warned, however, that a budgeter’s holy grail – an all-embracing theory of resource allocation that could be applied in practice – would probably prove to be a chimera since the problem of reconciling competing demands between different policy goals and interests was essentially one of political philosophy (Key, 1940: 1143). If that line of inquiry failed, Key proposed that solutions might be found through an improved understanding of the institutional arrangements by which resource allocation decisions are made, which would entail a ‘careful and comprehensive analysis of budget process’ (Key, 1940: 1144).

Over the past sixty years, attempts to resolve the basic budgeting problem have been made from both these starting points. This has entailed a subtle reformulation of Key’s question. Initially, attention focused on the application of economics in the design of methods which could guide policy makers by defining the *basis* – the guiding principles and criteria – for allocation decisions (Chapter 2). Subsequently, attempts were made to arrive at a better understanding of budgeting behaviour and institutional dynamics, identifying *how* – the process by which – resource allocation decisions are and should be made (Chapter 3).

At the same time, the analytical framework for analysis of the basic budgeting problem has broadened. It is now recognised, following Musgrave (1959), that solutions to resource allocation cannot be abstracted from other functions of the public expenditure management system, namely the pursuit of macro-economic stability and efficiency in the use of public funds. From the 1970s the problem of macro-economic stabilisation dominates the literature and resource allocation is, for the most part, treated as a secondary issue. Similarly, it is no longer assumed that budgetary allocation decisions are automatically transformed into budgetary outcomes. Resource allocation in the public sector is determined by both the criteria and process of decision making and the process of budget execution. Inevitably, this has widened the institutional scope of the basic budgeting problem. Whereas attention once focused exclusively on core policy institutions – the legislature, Ministries of Finance and spending agencies – it is now clear that departments within spending agencies, right down to the field level service delivery units, also have a role to play.

Changing approaches to an old problem are not merely of academic interest. All of the approaches to the basic budgeting problem – whether normative or positivist in intent – have influenced the design of budget institutions, procedures and analytical methods. Changes in budget practice have, moreover, tended to proceed incrementally and cumulatively, so that many of the innovations introduced in early reforms are still in place today. Thus, today’s budget governance structures are essentially the same as t0hose introduced in the late 19th and early 20th centuries when modern budgeting systems were first established. Similarly, the analytical methods and process proposed by rationalists in the 1960s continue to be used today. Indeed, the rationalist approach is still the prevailing paradigm for policy makers. Consequently, an understanding of the various approaches to the budget problem continues to be relevant today, even where the validity of these approaches has subsequently been questioned, and research on these approaches is still ongoing.

2. The Basis of Resource Allocation

This chapter provides an overview of the guiding principles that have been proposed as the basis for resource allocation decision making in the public sector and techniques developed to facilitate their application. None of these principles can provide an all-embracing theory of budgeting since the basic budgeting problem is multi-dimensional and has to be tackled simultaneously from various perspectives. One approach focuses on the comparative advantage of the state in the economy, identifying the underlying rationale for public interventions through an analysis of the conditions of supply and demand for public and private goods (see Section 2.1). Another seeks to prioritise alternative applications of public funds by applying the principle of marginal utility using measures of cost-effectiveness (Section 2.2). This principle can be extended to embrace the maximisation of utility through an assessment of the net social benefits of public spending using cost benefit analysis (see Section 2.3). An alternative approach recognises the primacy of citizens' expenditure preferences and seeks to develop mechanisms of collective decision making so that these can be communicated to decision-makers (see Section 2.4). Lastly, the basic budgeting problem can be seen as a problem of resource redistribution in order to address social equity and poverty concerns (see Section 2.5). These principles and the analytical techniques which they have generated are complementary and a technically sound process of resource allocation decision-making would apply them all. Nonetheless these techniques can only provide imperfect technical solutions. Ultimately, resource allocation entails a political process in which economic principles and technical methods may play a small part in determining the outcome. This decision making process is the subject of Chapter 3.

2.1 Public goods and the rationale for public intervention

In a perfect market, an efficient allocation of resources will be achieved by the forces of supply and demand, through the price mechanism, without the need for public intervention. However, public intervention may be justified in cases of market failure, where the price mechanism results in an allocation of resources that diverges from the social optimum. This may occur for a number of reasons: in the case of public goods, externalities, natural monopolies or asymmetrical information. The appropriate public sector response – distinguishing public provision, financing or regulation – and level of public spending will depend on the type and degree of market failure that the public sector seeks to correct.

Public goods, club goods and mixed goods

For Samuleson (1954; 1969), the distinction between private and public goods provides the underlying rationale for public expenditure. Public goods are non-rival (consumption by one person does not reduce the supply available for others) and non-excludable (users cannot be prevented from consuming the good). These characteristics prevent the provider of public goods from charging consumers for their consumption and so, if they are to be provided at all, they must be provided by the public sector. Defence and rural roads are often cited as examples of pure public goods.

Most goods and services do not fully satisfy Samuelson's criteria of non-rivalry and non-excludability. Club goods, for instance, are non-rival up to a point of congestion and excludable. For such goods, the socially efficient level of provision may not correspond to the efficient level of provision for users beyond the point of congestion. This provides an opportunity and incentive for market provision through consumption sharing agreements, so that club members can maximise their benefits by excluding non-members. As a result, the level of provision is likely to be lower than would be socially desirable (Buchanan, 1965). Schools and other public services in which access can be restricted share these characteristics (Khumalo and Wright, 1997). This can give rise to a situation where public schools levy supplementary charges or use non-market methods to restrict access. Obviously, this has implications not only for the social efficiency of public provision but also for the social distribution of benefits, since wealthier individuals are likely to benefit disportionately from the more exclusive services.

Mixed goods share the characteristics of both private and public goods, as is the case where private goods generate positive externalities. Positive externalities arise where the benefits of a particular good or service are enjoyed by both the purchaser and other individuals who do not contribute to the cost of purchase. Education generates both private and public benefits, the former through enhanced earning potential, the latter by creating a literate population which will benefit employers and promote social development. Since individuals will be prepared to pay for the benefits that accrue to them directly, but not for the benefits that accrue to other individuals, they will consume less of these goods than would be socially desirable. In these circumstances there is a rationale for public expenditure to subsidise consumption or for direct public provision so that a socially optimum level of provision and consumption is achieved.

Determining how much the public sector should pay

As a rule, the level of public spending on a particular intervention should correspond to the cost of the public goods it generates: since users will only pay up to the value of the private benefits they receive, the additional costs of public benefits will have to be met by the state (Musgrave, 1969). However, private benefits are likely to vary amongst individuals owing, for instance, to the ability of different social groups to transform the benefits of public services into meaningful improvements in their quality of life, such as higher income. In principle, willingness to pay provides a measure of these private benefits. In practice, perfectly discriminating price structures are impossible to design and administer and so it is usually easier to set user charges for a given level of services at a flat rate on the basis of marginal costs. In this way at least part of the cost of providing private benefits can be recuperated by the public sector. Some selectivity is needed to address equity concerns, through targeted subsidies (see Section 2.5) and to address differences in the quality of services arising from the rationing of access. Khumalo and Wright (1999) have suggested, for example, that transfers to South African schools should be provided as grants per pupil so that parents bear a larger proportion of costs in the 'more exclusive clubs' where pupil teacher ratios are lower.

Selecting appropriate interventions and mechanisms for intervention

For Pradhan – mimicking Keynes – the implications for public sector resource allocation derived from this analysis are clear: 'public expenditures should be concentrated first on goods and services that the private market will not provide or will provide too little, rather than merely substituting for or even marginally improving upon the private market outcome' (1996: 4). The role of the public sector in the finance and provision of goods and services is, therefore, residual. Goods and services should be provided by the private sector through market mechanisms where possible, since this will tend to be more efficient. Indeed, unless strictly necessary, public sector provision should be discouraged since it may crowd out more efficient private sector providers. On these grounds, the public finance approach will tend to favour market solutions and curtail the scope and scale of the public sector.

Following this rationale, assessments of the scope for public intervention should be based on an analysis of the prevailing demand and supply characteristics of goods and services. For Pradhan this market analysis is the ‘principal, initial criterion in screening public expenditure allocations’ (1996: 31). The approach is necessarily reductionist, since the market characteristics of goods and services can only be assessed on a case-by-case basis. Using market analysis, public sector involvement in production, for example, can often be demonstrated as lacking justification on the grounds that conditions exist for private sector investment and market failures, such as those arising from natural monopolies, can be overcome with adequate regulation. Market analysis also allows policy makers to identify opportunities for private sector provision of services that have traditionally been considered as the public sector domain, such as agricultural extension, tertiary health care and higher education. In the case of Kenya’s agricultural policy for instance, Suthiwart-Narueput (1998) demonstrates that a large proportion of public expenditures is allocated in the provision of private goods that could, and by implication should, be provided and financed by the private sector.

Such analysis is contextual, since the conditions of demand and supply will be unique to each economy and can be expected to change over time. The demand for education, for example, is likely to be lower in rural communities where child labour makes a significant contribution to household income and there are limited opportunities for salaried employment than would be the case in an urban environment with a growing market for an educated workforce. These differences in market conditions will have implications for the private provision of education.

Where market characteristics are not, at present, favourable to private sector provision and financing, the public sector can tailor its interventions so as to promote and facilitate market solutions. Pradhan, for instance, argues that regulation of the health insurance market so as to redress the problems of informational asymmetries may be more cost-effective than direct public provision and provide opportunities for private sector provision (1996: 52). The introduction of cost recovery mechanisms in the public sector can also be justified on these grounds since it creates an opportunity for alternative, more efficient private sector providers who are crowded out where the public sector provides services free of charge. However, in practice, transactions costs, the concern for equity and targeting difficulties (see Section 2.4), make it difficult to realise these efficiency gains for low-cost services, particularly in poor rural communities, where the imposition of user fees can lead to the exclusion of the poor.

Prioritising between interventions

While there is no doubt that analysis of market conditions helps decision makers identify appropriate and inappropriate public sector interventions, it does not inform policy makers how they should prioritise between interventions. Some guidance may be provided by the nature of the market failures that government identifies. If the goal of public policy is to ensure an efficient allocation of resources, the public sector should prioritise on the basis of its comparative advantage, obeying Pradhan’s exhortation to produce those goods that would not be produced by the market before those that would be produced too little. Following this logic, priority should be given to the provision of pure public goods before mixed goods and to mixed goods that generate substantial externalities – such as public health services – before those that generate substantial private benefits – such as tertiary health care.

Prioritisation should also take into account the public sector’s capability, in terms of both the financial and human resources at is disposal. On this basis the 1997 World Development Report outlines a hierarchy of State functions, distinguishing: minimal functions, covering the provision of pure public goods and a safety net for the poor; intermediate functions, which include addressing externalities and other market failures; and activist functions, aimed at co-ordinating private sector activities and redistributing assets. As State financial and managerial capability increases, it may progress up this hierarchy of functions, so that all governments would provide pure public goods – law and order, public health, rural roads – and would accumulate and expand other functions – education, agricultural research and extension – as their financial and managerial capacity improves (World Bank, 1997: 26-27). The hierarchy is more as a useful guide to prioritisation at the lower end of the spectrum of state capacity, where the state is debilitated by war or extremely low levels of resource mobilisation, than it is for the majority of states, which fall into the intermediate category or aspire to an activist role. Since the vast majority of state functions fall into the intermediate category, the hierarchy is too broad a category to usefully guide the prioritisation of public expenditures.

Where market failures are identified, political imperatives may compel Governments to intervene whether or not they have the means to do so effectively. This may lead the situation described by Tanzi (1995) where Governments adopt cheap but inefficient policies – in the sense of Tinbergen efficiency, where a modest change in policy leads to a significant change in outcome – rather than do nothing. Governments may, for instance, use regulatory controls rather than subsidies or direct provision, even though public spending on direct provision might lead to a more efficient allocation of resources. More often, Governments continue to 'provide' services even though it is patently obvious to service users that they lack the means to do so and, as a result, coverage is patchy and the quality of services poor. This over-extension of human and financial resources is one of the root causes of government failure in developing countries.

Conclusion

Ultimately, analysis of demand and supply conditions allows policy makers to distinguish appropriate and inappropriate public sector interventions on the basis of the comparative advantage of the State. It also provides some guidance regarding the relative priorities between interventions and the structure of cost sharing between the public private sectors. However, the approach is reductionist and, consequently, does not provide a basis for determining the appropriate allocation of public resources across the public sector. Nor does it indicate the appropriate level of public spending on individual interventions. Solutions to these problem are derived, in part, from the principles of marginal utility and an assessment of the net social benefits arising from public spending.

2.2 Marginal utility and cost effectiveness

It is one of the tenets of classical economics that individuals will seek to equalise the marginal utility that they gain from each unit of spending across the range of goods and services they consume. In principle, governments should allocate resources on the same basis: 'just as an individual will get more satisfaction out of his income by maintaining a certain balance between different sorts of expenditure, so will a community though its government. The principle of balance in both cases is provided by the postulate that resources should be so distributed among different uses that the marginal rates of satisfaction is the same for all of them … Expenditure should be distributed between battleships and poor relief in such wise that the last shilling devoted to each of them yields the same real return' (Pigou in Key, 1940: 1139).

Practical applications of this principle in the public sector presents a number of difficulties. Firstly, governments represent diverse interests, each with different utility functions, so that for some additional spending on battleships has a higher marginal utility than additional spending on poor relief, while for others the reverse may be true. Consequently, a perfect balance of marginal utility 'may be possible only when a community is literally a unitary being, with the government as its brain' (Premchand 1983: 44). Secondly, even if one accepts the notion of a unitary community, government is still left with the problem of constructing a utility function encompassing all the goods and services that it might be called upon to provide in order to derive the marginal utilities at various levels of expenditure. Informational constraints would render this global analysis impossible. Lastly – as Key (1940: 1137) pointed out – practical applications of the principle of marginal utility are hampered by the lack of a common measure of utility which would allow comparison of the utility derived from alternative applications of public funds.

Relative effectiveness of public interventions

One of the first attempts to apply the principle of marginal utility in a 'theory of budgeting' was made by Verne Lewis. Lewis argues that analysts should focus on increments of public expenditure, at the margin, since 'this is the point of balance at which an additional expenditure or any purpose would yield the same return'. The relative value of these increments can then be assessed in terms of their 'relative effectiveness in achieving a common objective' (1952: 42). It is the task of politicians to determine this common objective and assess the relative effectiveness of alternative applications of public expenditure in achieving this goal. Budgeters can assist decision-makers by presenting alternative proposals at varying levels of expenditure for each programme. In this way the trade-offs between alternative applications of additional funding can be revealed.

Lewis argues that the concept of 'relative effectiveness' with regard to a 'common objective' effectively circumvents the problem presented by the lack of a common measure of utility. However, his solution has a number of shortcomings. Firstly, he fails to identify on what basis 'relative effectiveness' may be assessed, though, by seeking an explicit link between programme costs and outputs, he points the way to a solution. Secondly, it is unlikely that government policy can be reduced to a 'common objective', rather the public sector may address diverse policy goals. Although attempts have been made to develop broad inter-sectoral applications of the principle of 'relative effectiveness', applications have been more successful where they are restricted to the appraisal of alternative interventions in support of a single policy objective.

Measuring cost effectiveness

One of the most common applications of this principle is in measures of cost-effectiveness. These relate expenditures to the achievement of a particular policy outcome. The WDR 1993, for instance, uses Disability-Adjusted Life Years (DALYs), a measure of the number life years saved, adjusted to take into account of the suffering of disabilities such as blindness or chronic illness, to assess alternative interventions. Alternative interventions can then be compared and ranked on the basis of the cost per DALY saved. On this basis the WDR advocates that a larger proportion of public funds should be allocated to public health and a minimum package of essential clinic services than is currently the case in most developing countries and fewer resources should be allocated discretionary clinical services delivered at the tertiary level (WDR, 1993).

Measures of cost effectiveness can be constructed for most government interventions, expressed either as the unit cost of the output of a programme (number of primary school graduates) or the unit cost of achieving of a particular outcome (level of literacy in a particular age group). Generally, measures of cost-effectiveness per unit of output are to be preferred, since the relationship with expenditures is likely to be direct, timely and more easily quantifiable, whereas the intervention of exogenous factors and time lag effects are likely to obscure the impact of additional expenditure on measures of outcomes.

From a theoretical standpoint, the principal weakness of measures of cost effectiveness is that they do not reflect a 'social' utility function, reconciling the relative utility for different members of society. It is merely assumed that the outcome measured by the indicator is desirable and equally desirable to all. Furthermore, measures of cost-effectiveness focus on only one of the benefits arising from public interventions, ignoring other aspects of provision. DALYs, for instance, will only measure the health outcome of interventions and fail to take into account the extent to which the intervention treats clients with dignity. Nor will measures of cost effectiveness capture the externalities generated by the intervention – the secondary benefits accruing to other individuals. Consequently, measures of cost-effectiveness provide an incomplete basis for comparison between alternative interventions.

From a practical standpoint, the most significant limitation of measures of cost-effectiveness is that they can only be applied narrowly to interventions in support of a particular policy goal: interventions intended to reduce morbidity and mortality cannot be compared against interventions intended to improve literacy. The problem of how to weigh-up up the relative costs and benefits of interventions contributing to different policy goals – such as arise in making inter-sectoral allocation decisions – is left unresolved since there is no common basis for comparison of the relative worth of alternative goals.

Cross-sector applications

Attempts have been made to establish a common denominator for the comparison of the relative effectiveness of alternative sectoral resource allocations. Ferroni and Kanbur, for instance, have sought to construct a decision-making tool that 'permits the estimation of the opportunity cost in terms of poverty alleviation of allocating a marginal dollar to a particular sector or spending programme' (1990: 1). This entails three stages of analysis: firstly, quantification of the impact each dimension of the standard of living (such as health, literacy or income) on the social valuation of the standard of living; secondly, quantification of the link between public expenditures and dimension of standard of living, essentially a measure of the cost effectiveness for incremental changes in outcome, expressed as a single measure of the standard of living; and thirdly an assessment of the proportion of public expenditure that reaches the poor. Using this approach, they suggest, it would be possible to assess the relative cost-effectiveness of alternative allocations of public expenditure in improving the standard of living of the poor.

The fundamental problem of this approach lies in the construction of the common denominator: the social valuation of the standard of living. The weighting of the various dimensions of the standard of living is subjective, though some account can be taken of individuals' relative preferences through direct consultation (see Section 3.4). Moreover, the approach requires analysts to assume that a single weighting can be constructed, thereby ignoring the variations in the relative preferences of different social groups. As such, the approach is normative in intent. Problems also arise in modelling the relationship between expenditures and outcomes. As Ferroni and Kanbur point out, one component of public expenditure can have an impact on several dimensions of standard of living simultaneously, the various dimensions of the standard of living can affect each other, and – as noted above – the relationship between expenditures and outcomes is likely to be complicated by a wide range of exogenous factors and timelag effects.

Given the difficulties in constructing a common denominator of relative effectiveness across the public sector, practical applications are likely to be much easier where analysts recognise the diversity of policy objectives rather than seeking to consolidate all appraisal criteria within a single measure. Pradhan, for instance, proposes that analysts should assess the relationship between public expenditure and the outcomes of public interventions (such as the quality and quantity of education and levels of morbidity), so that the impact of an increment of additional spending on each intervention can be assessed, and then present the results in such a manner that decision-makers can 'evaluate the trade-offs between alternative combinations of expenditure-outcome combinations' (1996: 97). Although Pradhan suggests that attempts can be made to establish a common denominator using the principles of cost-benefit analysis (see Section 2.3) or by imposing valuations for specific outcomes, he argues that the presentation of simple, easily interpreted measures of the marginal cost per unit of outcome would, of itself, provide a useful input to resource allocation decision-making in government and the legislature and, ultimately, a guide for the individuals' voting behaviour.

Policy consistency and multiple objectives

In practice, analysts do not assess the relative cost-effectiveness of alternative inter-sectoral expenditure allocations in the manner proposed by Pradhan. Instead, they apply the concept of relative effectiveness in a much degraded form by assessing whether interventions are consistent with government policy objectives. Indeed, consistency with policy objectives is often seen as the principal appraisal criterion for projects and programmes (Schick, 1998: 2). Obviously, in the absence of quantitative measures of effectiveness it is impossible to assess the relative effectiveness of alternative interventions other than on purely subjective criteria. Furthermore, without clear exclusion criteria, appraisals of policy consistency can embrace virtually all initiatives. Nevertheless, the criterion is sufficiently flexible and undemanding to have gained broad acceptance.

Techniques have been developed to assist decision-makers assess the trade-offs between programmes where the government pursues multiple objectives. Multi-criteria appraisal, for instance, provides a framework for the assessment of trade-offs between programmes, accommodating the perspectives of different stakeholders. This creates opportunities for public decision making (Floc'hay and Plattu, 1998: 268). However, these techniques give no guidance regarding the basis of appraisal, assuming that 'the analysis will arrive at good estimates of the impact of each alternative on all outcomes by the most reasonable means' (Mohr, 1988: 199). Ultimately, therefore, the responsibility for determining allocation priorities is returned to the political arena with little guidance from technicians.

Conclusions

While the principle of marginal utility is a sound basis for resource allocation decision-making in the public sector, problems are encountered in the transformation of this principle into an operational tool. One approach is an assessment of the relative cost-effectiveness of alternative resource allocations in achieving a common objective. Measures of cost-effectiveness are widely applied, though these are restricted to the appraisal of alternative applications of funds intended to achieve a particular policy goal, usually within a single sector or programme. Although measures of relative cost-effectiveness can be constructed across sectors, their basis is normative and informational constraints have discouraged their use. Instead, decision-makers tend to use simple, subjective criteria in assessing the consistency of interventions with policy objectives, leaving it to the political process to determine the relative merits of alternative uses of public funds.

2.3 Allocative efficiency and cost benefit analysis

If the concept of social utility or welfare is to be used as a guide to resource allocations across government two key elements must be in place: firstly, criteria and mechanisms for the reconciliation of differences in individuals' relative utilities for different combinations of goods so that a comprehensive social utility function can be described; and secondly, a common denominator of utility as a basis for comparison of alternative uses of public funds. Measures of cost-effectiveness cannot provide the first of these elements, and offer only a partial – sector or programme specific – solution to the second. Comprehensive solutions have been found in the concept of allocative efficiency and the monetary valuation of costs and benefits, both of which are applied in cost-benefit analysis techniques.

Allocative efficiency and the valuation of costs and benefits

The problem of divergence in individuals' utility functions can be resolved by applying the normative principle of Pareto optimality. Following this principle, public interventions can be said to demonstrate optimality, or allocative efficiency, where at least one individual is made better off and no individual is made worse off: there are only winners. Rigorous application of this criterion is impractical since it would be impossible to identify all winners and losers, losers would have an incentive to overstate their losses and the scope for public intervention would be severely restricted. Consequently, a potential Pareto optimum – the Hicks-Kaldor criterion – is generally applied by which an intervention is considered acceptable if the amount by which some individuals gain is greater than the amount that others lose, leading to a net-benefit, so that, in principle, winners could compensate losers for their costs. No actual cash transfer is required. An intervention may therefore be considered efficient even if some individuals lose, as long it generates net benefits (Boardman et al, 1996: 29-34). In this way, the principle of allocative efficiency is underpinned by an assumption that social welfare may be enhanced by the redistribution of resources within society, even where this entails redistribution *from* the poor *to* the rich.

Monetary value can be used as a common denominator for the assessment of the relative merits of public interventions, taking into account their costs and benefits to society. The benefits of public interventions in the productive sectors, such as in agriculture and industry, can be determined with reference to increased production and valued on the basis of market prices, where an efficient market pricing mechanism is in place. Where government policy or local market conditions result in price distortions – such as those arising from monopolies, taxes or administered prices – equivalent border prices can be used. The problem lies with interventions, such as those in the education, health and defence sectors, that generate outputs and outcomes for which there is no corresponding market valuation. How does one, for instance, measure and then value the benefits arising from a reduction in mortality? or the cost of environmental damage? For economists, solutions to these problems can be found in the use of shadow prices: surrogate prices that represent the opportunity cost of a particular good. This may entail, for instance, the valuation of loss of human life on the basis of foregone income. Alternatively, value can be estimated based on measures of willingness to pay, using for instance the compensating wage differentials for employment with different levels of risk as the basis for an assessment of the value of life, or by using values revealed in questionnaire surveys (Cullis and Jones, 1998: 137-142). Obviously, all these methods have their shortcomings. Ultimately, the valuation of intangible costs and benefits – such as human life, human rights or environmental diversity – rests on subjective criteria.

Cost benefit analysis

Cost Benefit Analysis combines both potential-Pareto criteria of allocative efficiency and the monetary valuation of social benefits so as to generate a single measure of the net-social benefit (utility) generated by a particular intervention. In principle, the benefits and costs to all those affected by a particular intervention should be identified and valued, including those affected indirectly, as, for example, in the employment generated in producing materials for a road building programme (Boardman, 1996: 2-46). In practice, some limitation must be made on the scope of impact analysis, sometimes excluding indirect impacts such as externalities. The discounted net social benefits, or social rate of return, is then assessed, taking into account the benefits and costs generated and their distribution over time. The discount rate chosen is critical in determining the viability of the project: a high rate will reduce the stream of benefits, may penalise large projects with substantial start-up costs and will tend to penalise deferred benefits, such as those from environmental protection. Ideally, the discount rate should reflect the social-time preference, as a measure of deferred or inter-generational costs and benefits. More often the discount rate is based on the forecasted long-term rate of interest, adjusted to take account of risks and the opportunity cost of private investment. The discounted social rate of return is then compared with the status quo, alternatives and a threshold rate of return, in order to determine whether the intervention is viable and superior to alternatives.

In theory, the calculation of a social rate of return would allow decision makers to bypass allocation decisions, since the investor could proceed with all feasible expenditures that have a higher rate of return than the long-term rate of interest for borrowing. In practice, since the number of interventions underway at any one time is limited by absorptive capacity and the ability to mobilise financing, choices still have to be made. However, the method does provide the basis for these choices: priority should be given to those interventions that generate the highest net present value.

Assessing distributional impact

Difficulties arise in assessing the distributional impact of interventions. The returns computed through Cost Benefit Analysis are social returns, to the economy and society as a whole: the method does not distinguish between private and public costs and benefits, nor does it take into account the distribution of costs and benefits among social groups.

Thus cost benefit analysis may indicate the viability of a particular intervention on the basis of its social return, but fail to identify those benefits provided in the form of private goods (which should be financed by individuals) and public goods (which should be financed by the public sector). Private returns to education, for instance, particularly tertiary education, may be considerably greater than the social returns, suggesting a reduced role for public subsidies of this service (Appleton et al, 1996). If these distinctions are to be made, the technique is most usefully applied following an analysis of the underlying rationale for public intervention (see Section 2.1).

The net-social value may also hide an inequitable distribution of costs and benefits: a small number may enjoy substantial benefits while the direct costs are shared by a large number, not just in terms of the costs of financing the project through general taxation but also owing to costs imposed through, for instance, displacement to make way for a dam or irrigation scheme. Moreover, the method, as usually applied, is either neutral as regards the social distribution of benefits or, where shadow prices are based on income, will favour interventions that benefit higher income groups disproportionately. These problems can be corrected by the use of distributional weights in favour of poorer social groups, by for instance, weighting costs and benefits accruing to a particular groups in proportion to their share of national employment or income (McGuire and Garn, 1969). However, such weights are ultimately set arbitrarily and will undermine the validity of the results as an indicator of efficiency (Boardman et al, 1996).

Scope of application

Cost Benefit Analysis is widely applied in the analysis of individual public expenditure decisions, particularly in the appraisal of investment projects, and especially where those projects will generate a stream of income. However, even at the level of the project, the validity of results may be compromised by the incomplete coverage of project impacts and the subjective nature of valuations: it is not uncommon for different analysts to arrive at different valuations of the same project. Given the wide margins of uncertainty regarding valuations, the method is most useful in distinguishing between those interventions that are clearly viable and those that are not, or in ranking alternative projects with similar characteristics – such as alternative power plants, irrigation schemes or dams – within the same sector.

The method is impractical as a tool for inter-sectoral and inter-programme resource allocation decision-making. For Pradhan (1996: 96) the principal problem encountered in macro-level applications is one of valuation, particularly for those costs and benefits that do not have market prices or where market prices do not accurately reflect the social cost, since differences in the valuation of distinct outcomes – such as reductions in mortality and increases in literacy – will have a significant impact on the relative returns on these interventions. Problems also arise in scaling-up the method to address broad policy issues, such as the comparison of alternative crime reduction strategies or educational policies, or comparisons between sectors, where the wide range of options with complex impacts precludes systematic and comprehensive analysis. This restricts the effective application of the technique to ‘lower-level problems’, such as the viability of a particular investment project, where the impact is more easily identified, rather than ‘higher-level’ policy issues (Lindblom, 1959: 80).

Owing to these analytical and information constraints, application of cost-benefit analysis in resource allocation decision tends to be reductionist and bottom-up. Resource allocations are determined through the appraisal of individual measures in isolation, rather than based on a comprehensive assessment of the opportunity costs of all alternative solutions.

Conclusion

Cost benefit analysis continues to be applied in the appraisal of large-scale investment projects, particularly those in the productive sectors in which costs can be assessed against a stream of income. Notwithstanding the sensitivity of the results to the scope of impact analysis, cost and benefit valuations, discount rates and the distributional weightings applied, the technique does provide a rigorous basis for decision-making at this level. Unfortunately application of the technique to higher-level, inter-sectoral and inter-programme allocation decisions is impractical owing to information constraints. Although the general principle of benefit valuation can be applied, this can only be considered an ‘approximate cost-benefit measurement’ based on the valuation of a narrow range of direct impacts (Pradhan, 1996: 96).

2.4 Citizens’ preferences and collective decision making

Cost-benefit analysis relies on a technically constructed measure of utility as a guide to the optimum allocation of resources. An alternative approach would be to allocate resources according to citizens’ revealed preferences. In principle, the preferences of economically rational citizens will coincide with their utility functions. All that is needed is a mechanism by which these preferences can be revealed and aggregated. In the market, this achieved through the price mechanism, as determined by the forces of supply and demand. This solution is not generally applicable in the public sector (see Box 1), where citizens’ preferences are revealed through direct consultations and voting arrangements.

Direct consultion

Decision makers may solicit individuals’ preferences regarding resource allocations through surveys. From a theoretical standpoint, this kind of direct consultation is likely to provide a more accurate reflection of citizens’ preferences where the number of beneficiaries of public goods is small, since the cost-share borne by the citizen will be relatively large and failure to reveal demand is likely to reduce supply. In contrast, where the number of beneficiaries is large – as is the case for many public goods – the individuals cost share is minimal and failure to reveal will have little impact on supply; consequently the individual will try to free ride so as to benefit from the good without contributing to its cost (Cullis and Jones, 1998: 66). From a practical point of view, direct consultations can, at best, provide a partial view of individuals' preferences for a limited range of alternatives. This suggests that direct consultation is unlikely to be an effective means of revealing citizens' true preferences regarding broad expenditure allocations. More importantly, direct consultation does not provide a mechanism for aggregating individuals' preferences across the range of spending options.

Box 1: Revenue earmarking and choice

For Buchanan, the earmarking of specific revenues to a particular service allows the taxpayer to 'sense or be conscious of a more direct relationship between his own tax payment and the benefits he expects to receive' (1967: 22). This provides for more efficient choice since the beneficiaries of services can assess their relative worth and determine the level of financing accordingly. In this way earmarking reveals taxpayers' preferences for public services and sends a demand signal to the public sector about how much of the public service to supply in much the same way as the market would.

However, the validity of earmarked revenues as a demand signal only holds where the goods are excludable, so that no one receives a service without paying or pays without receiving, and so raises questions as to why the service is provided by the public sector at all. Furthermore, earmarking has serious limitations as a general principle for allocational decision making. Services which generate externalities are likely to be undervalued, since individuals will vote for expenditures or choose to pay for services up to the point of their direct benefits but not beyond. Earmarking can also lead to inflexibility in resource allocation causing inefficiencies where, for instance, earmarked funds have to be applied in road construction and maintenance even though this has a lower marginal rate of return than alternative applications of public funds (Gwillian and Shalizi, 1999).

Notwithstanding these limitations, Musgrave (1986) has argued that the earmarking of revenues to broad areas of expenditure – so as to ensure adequate fungibility – would make the relationship between tax and public benefits more explicit and thereby facilitate an analysis of trade-offs between them. On the one hand this would make increases in taxation to fund popular expenditures more palatable to politicians and taxpayers, on the other hand it would help cap less popular expenditures. In practice, earmarking may not actually work in this way since increases in earmarked revenues to a particular activity may be largely offset by reductions in expenditures financed from direct taxation (Dye and McGuire, 1992).

Nevertheless, evidence from the USA suggests that citizens do have internally consistent policy preferences which could, in principle, provide some guidance to policy makers (Hansen, 1998; Jacoby, 1994). Survey information can also provide disaggregated information regarding preferences which can be related to income groups, providing the basis of a demand curve for public services which would suggest the appropriate level of expenditure (Preston and Ridge, 1995). Politicians in the United States – and increasingly in the United Kingdom too – do in fact make widespread use of polls, attitudinal surveys and focus groups as a means of gathering information on citizens' preferences regarding public expenditures (Lee and Johnson, 1989: 97). Participatory Poverty Assessments can serve a similar function in developing countries, providing insights regarding citizens' priorities for public expenditure. In Uganda, for instance, evidence that lack of water was a high priority for rural women gathered through PPAs led to the government increasing resource allocations for rural water supply (Robb, 1999; Norton et al, 2001).

Collective decision-making

For Musgrave, the problem of preference revelation and aggregation is best resolved by constitutional, voting arrangements. Where allocation decisions are subject to voting, taxpayers ‘are induced to reveal their true preferences … [because] knowing that the outcome of the vote will be mandatory, taxpayers will find it in their interest so as to have the outcome conform to their desires’ (1986: 77). Moreover, in contrast to direct consultation, voting provides a mechanism for aggregating preferences.

The difficulty lies in the design of appropriate voting mechanism. Following Arrow’s ‘Impossibility Theorem’, it is accepted that all voting mechanisms – including majority voting – are imperfect in the sense that they are unable to satisfy all reasonable conditions, including rationality and equality (see Cullis and Jones, 1998: 76-77). Majority voting has the advantage that it is broadly accepted as the model in Western democracies. Unfortunately, as Mueller (1979) demonstrates, the majority voting procedure may not generate the Pareto optimum or potential Pareto optimum outcomes because the majority has an incentive to approve policies that redistribute resources from the minority regardless of the impact on allocational efficiency. This ‘tyranny of the majority’ may lead not only to inequitable and inefficient resource allocations, but also to higher than desirable levels of expenditure on public services, since the costs of excess provision benefiting the majority can be passed on to the minority. The only way that this can be avoided is to operate within ‘a constitutional framework that protects individual rights’ (Tideman, 1997). One means by which this could be achieved would be to allow all citizens a veto over policy decisions. However, this would require multiple voting to arrive at an agreed outcomes and so renders the method impractical as decision making tool. Again, the role of politicians in protecting the interests of the minority is crucial to the achievement of desirable outcomes.

From a more practical perspective, it is unclear to what extent majority voting systems in representative democracies actually permit citizens to express their preferences. Voters must choose between candidates presenting manifestos which cover a wide ranging policy package that is unlikely to match their preferences on each allocational decision. This may lead to a situation whereby individuals are forced to vote for a policy which they dislike in order to secure an outcome for which they have a particular preference. In these circumstances, the ranked order of policy options may not correspond to individuals’ intensity of preference, so that the outcome of the vote may differ from the welfare optimum.

The role of decision-makers and merit goods

Efficient collective decision-making mechanisms would reduce politicians and bureaucrats to the role of passive executors of the collective will. However, even if politicians and bureaucrats accept the principle that they should comply with citizens’ revealed preferences, their intervention may be justified on the grounds that individuals are not always aware of and will not necessarily act in their best interests. In these circumstances, the public sector must intervene so that some goods and services are provided if even citizens do not considerable them necessary or desirable.

The need for such merit goods – goods that are mandated regardless of individual and collective preferences – has been variously explained. Individuals might undervalue certain goods, such as primary education, because they are unaware of or are unable to assess its long-term benefits. Compulsory education may, therefore, be necessary to ensure that all children attend school. Citizens might also be considered as voluntarily delegating certain decisions to government on the grounds that they lack the competence to make these decisions for themselves. Alternatively, Musgrave and Musgrave (1989: 57) suggest that society ‘may give rise to common wants … [and]

these obligations may be accepted as falling outside the freedom of individual choice that ordinarily applies'. Whatever the underlying rationale, the notion that the public sector should intervene contrary to individual and collective preferences smacks of paternalism and runs counter to the principles of citizen sovereignty and rationality that underlie economics. Nevertheless, it does seem consistent with many citizens' experience of the public sector.

Conclusion

While few would question the principle that expenditure allocations should reflect the citizens' preferences, the transformation of this principle into a practical tool for decision-making presents numerous problems. Most democracies have settled for representative systems in which decisions are made by majority voting. These systems will not necessarily generate socially efficient outcomes. Consequently, while direct consultation and collective decision-making may provide a guide to decision makers, some political and bureaucratic intervention, acting the broad public interest, is generally considered necessary to achieve the desired allocational outcomes.

2.5 Equity, incidence and targeting

While there is a tendency for economists to regard the existence of market failure as the fundamental rationale for public expenditure, it is now accepted that the reduction of social inequalities and poverty is also a legitimate concern of Government and goal of economic policy (Tanzi et al, 1999). Analytical methods have focused on the redistribution of income, as measured by the net-impact of taxation and expenditure on household income and consumption amongst different social groups. This approach is consistent with a conceptual framework in which equality and poverty are defined in terms of income alone. Although this unidimensional characterisation of equity and poverty is now regarded as inadequate – since equity and poverty are regarded as multi-dimensional phenomena in which income is but one, and not necessarily the most important, facet (see Box 2) – the distributional impact of public spending remains an important criteria in the assessment and design of expenditure policy.

Assessing the distributional impact of public spending

The extent to which public interventions redistribute resources can be assessed by analysing the social distribution of the costs (taxation) and benefits (expenditures) of public interventions using benefit incidence analysis. Studies have tended to focus on the distributional impact of public spending.

In the case of direct transfers, the impact can be assessed by comparing household income or consumption levels and the amount of transfer received by each household. On this basis it is possible to identify the proportion of the transfer received by different income groups and the contribution of the transfer to the household income of these groups (Jarvis and Micklewright, 1995). Spending on public services can be analysed in a similar manner (Selowsky, 1979; Castro-Leal et al, 1999). The public service, such as education or health care, is treated as a subsidy, valued at either the average or marginal unit cost of service provision, ideally taking into account capital and recurrent costs. The distribution of this subsidy is then assessed on the basis of the usage of the service by income group, usually based on survey results. This subsidy can be considered as a transfer to household income, allowing an assessment of the extent to which the subsidy contributes to lifting households above a threshold level of poverty. More often, analysts focus on the distribution of aggregate public spending on a particular service by income group.

Box 2: Multi-dimensional poverty

Analysis of the impact of public spending on poverty and equity has usually rested on an assumption that poverty can be characterised and measured as a function of household income, or consumption as a surrogate of income. Amartya Sen – supported by the experience of the poor themselves (World Bank, 2000) – argues that this characterisation is inadequate. For Sen (1985, 1999) equity and poverty are better understood in terms of the substantive freedom and capabilities of individuals to achieve the things that they value. This leads to a recognition that equity and poverty are multi-dimensional phenomena, which embrace basic requirements such as being well nourished, sheltered and clothed and 'such complex achievements as taking part in the life of the community, having a joyful and stimulating life or attaining self-respect and the respect of others' (Sen, 1999a: 31). These dimensions are intrinsically important in themselves, not simply as means of increasing income. Furthermore, individuals may experience different dimensions of poverty, so that it becomes impossible to identify the poor as a single category or summarise their experience in a single, all-embracing measure of poverty such as household income.

Sen's analysis has important implications for the basis of resource allocation in the public sector. Although he recognises the importance of income and human development in improving the standard of living of the poor, he suggests that other dimensions of poverty reduction such as security, social inclusion and empowerment may be equally important. This obscures the basis for prioritising between resource allocations, since it is no longer appropriate to assess services as an income transfer. If all dimensions of poverty are intrinsically important, how should technicians choose between interventions aimed at improving household security (such as spending on law enforcement) and education? Where poverty is defined as a function of income, the answer is clear: priority should be given to those interventions that generate the greatest increase in income for the poor. Where there is no common-denominator for the various dimensions of poverty, direct comparison between their rival merits becomes impossible (see Section 2.2 and 2.3). The importance attached to empowerment and good governance also bring into question such technocratic approaches to decision-making: consultative and participatory approaches are more consistent with Sen's poverty reduction agenda.

All of these considerations point to the key role of the budget process, and its links to the political process, as the key determinants of whether or not resource allocations will actually address the poverty reduction concerns identified by the poor.

Where information on service costs is incomplete or poor quality, data on service usage by income group allows an assessment of the extent to which the poor benefit in proportion to other income groups. However, cost information is needed if it is intended to compare and aggregate the impact of spending on different types of services (such as primary, secondary and tertiary education) by income group.

Studies using benefit-incidence techniques have often revealed that the distribution of public spending on key services such as health and education is regressive. This is because a large proportion of public spending is allocated to secondary and tertiary level services which are used disproportionately by higher income groups (Castro Leal et al, 1998: Lloyd-Sherlock, 2000). The policy implications of this analysis are clear: spending on primary services should be increased relative to secondary and tertiary services if the intention is to benefit the poor.

The advantage of benefit incidence analysis is that it is easily understood and has modest informational requirements. However, the method does have limitations (see van der Walle, 1998). The technique cannot be applied where there is no data on service use by social groups, as is usually the case of roads or police services. Reliance on aggregate cost information fails to take into account possible variations in unit costs or the quality of services – as reflected in class size, for instance – between service delivery units. This will tend to obscure differences in benefit incidence where public services are effectively club goods (see Section 2.1) or where the poor are not given the same treatment as higher-income groups. The cost of services is an inadequate proxy for the benefits received anyway since it fails to take into account the ability of different social groups to transform access to services into improvements in the quality of life as measured, for instance, by increased income. Furthermore, government expenditure only represents the gross transfer to households, since use of the services may imply costs such service charges – official and unofficial – travel and the opportunity cost of time lost to productive activities, all of which may impact differentially on the net transfer actually received. A similar criticism may be advanced regarding the scope of analysis. There is a tendency for studies to focus on the distributional impact of spending on particular services or transfers. This fails to capture the true impact of increased spending, since this will have to be financed either through increased taxation or an increase in the deficit. Both these financing options will have differential impact on social groups, so that the net benefits for some may be reduced.

Despite these limitations, the method does provide a good indication of who benefits from spending. Additional information is needed to assess the distribution of these beneficiaries: to determine whether they are concentrated in urban areas or particular regions of the country. Additional information is also needed to understand why particular social groups get more or less than their fair share of benefits.

The behavioural response to public expenditure

This is perhaps the fundamental weakness of benefit-incidence analysis: the method describes but does not explain the social distribution of benefits. To do so requires an understanding of the behavioural response to public expenditures and service delivery.

Insights on the behavioural response can be gained by using modelling techniques. A model of the determinants of labour supply in Sri Lanka, for instance, suggests that households receiving food subsidies will reduce the amount of contracted work they undertake, so that the net-gain in income is less than the value of the subsidy (Sahn and Alderman, 1995). Similarly, a study of inter-household transfers in Peru suggests that state pensions reduce the amount of transfers from the young to the old, again reducing the net gain to income from a transfer mechanism (Cox and Jimenez, 1992). A similar approach can be used to assess the behavioural responses to changes in service provision, such as the impact of user fees on health seeking behaviour (Gertler et al, 1987). Although behavioural studies can provide a useful insight into the impact of public spending, including predictive models, they are much more complex and demanding in terms of data, and, consequently, are still not widely used.

For practitioners, the information gathered through service delivery surveys and other methods of client consultation will generally suffice. Such consultations are cheap to implement and provide some insight into the motivations behind the service users and the factors influencing demand, such as the quality of service. Although the survey results may not be technically robust, providing an inadequate basis for prediction of behaviour in response to policy changes, they can provide useful guidance to policy makers regarding spending priorities and delivery mechanisms (see Section 3.4).

Mechanisms of redistribution and targeting

There is some evidence to suggest that redistributive policies tend to have the greatest impact on poverty where they have entailed the redistribution of assets (WDR 2000). This may include radical measures, such as land reform, or, more often, policies intended to generate marketable assets amongst the poor, such as investments in education, health care and appropriate agricultural technologies. There may also be strong political motives for the preference for public investments in assets rather than transfers of income as a means of reducing poverty and inequality. Direct cash transfers are likely to be unpopular amongst the higher income groups, who are required to finance redistribution through taxation. Higher income groups may also have strong views regarding the valuation of alternative applications of redistributed income, so that certain expenditures – such as education and health care – may be seen as merit goods and as such may be preferred to expenditure choices made by the poor themselves (see Section 3.4). Cash transfers are also likely to be difficult to administer, particularly where poor individuals are difficult to identify.

One of the key considerations in the design of redistributive policies is the targeting mechanism to be employed. Public interventions can be either broadly or narrowly targeted. Access to broadly targeted interventions is universal: individuals may benefit irrespective of the income group to which they belong. Examples include food price subsidies or free public schooling. Narrowly targeted interventions, on the other hand, seek to exclude the non-poor. This may be achieved by, for instance, means testing potential beneficiaries or providing benefits and participation requirements that are unattractive to higher income groups and so effectively self targeting, such as subsidies on low status foodstuffs or a work requirement for transfers (van der Walle and Nead, 1995).

The choice between these strategies is usually determined on the basis of their cost-effectiveness in reaching the intended beneficiaries, reflecting a trade-off between the unit cost of administration and errors of targeting. Universal programmes commonly suffer from errors of inclusion, whereby resources intended for the poor are delivered to higher income groups. In principle, the replacement of universal interventions with those that are narrowly targeted will reduce leakage to the non-poor and so improve cost-effectiveness. However, these efficiency gains must be set against the increased cost of some narrowly targeted programmes and participation costs for the poor – as in a food or cash for work scheme, or infrastructure programmes requiring labour participation – which will reduce the net transfer to the intended beneficiaries (Ravallion and Datt, 1995). Narrowly targeted programmes, on the other hand, suffer from errors of exclusion, whereby the intended beneficiaries are unable to benefit, owing to difficulties in substantiating claims or participation costs. Costs of exclusion are rarely considered in the design of targeted interventions, which generally seek to reduce leakage and, thereby, reduce the total cost to public sector regardless, of broader, social efficiency concerns (Cornia and Stewart, 1993).

In the case of public services, distributional concerns will influence the share of public expenditure in meeting the costs of service provision and the way in which these subsidies are administered. Where higher income groups benefit disproportionately from a particular service there is a strong case for public subsidies to be reduced and a substantial proportion of the costs recovered from user fees. There is, of course, a risk that the application of such charges would be regressive and discourage the poor from using services, as suggested by the significant increase in school enrolment when primary school fees were abolished in Uganda. One solution lies in moving from supply-side subsidies (which cover the cost of service provision irrespective of the beneficiary) to demand-side subsidies (which can be targeted to specific service users), such as the graduated remission of user fees. Where the poor cannot be identified administratively, such schemes are best administered locally, by, for example, allowing communities or the mangers of public services to identify the families which would benefit from the fee remission or study grants. Unfortunately, these targetted subsidies have high transactions costs and are difficult to monitor. As a result they are open to abuse: often the higher-incomes groups end up benefiting anyway (Gilson, 1998).

Conclusion

Ultimately, policy makers have to determine how much public spending should be allocated for the purposes of redistribution and how these resources should be distributed within society. Unfortunately, economic theory provides little guidance on these questions since there is no consensus regarding the optimum or just distribution of income or assets (Cullis and Jones, 1998: 217-223). These issues have to be resolved in the political sphere. This requires politicians to judge the extent to which taxpayers are prepared to pay the costs of redistribution. While voters may endorse redistributive policies, particularly those that seek to reduce glaring inequalities and poverty, they will also seek to benefit from the services and transfers financed through general taxation. In satisfying these contradictory goals, there is a tendency for politicians to broaden the range of beneficiaries – for example, preferring supply-side over demand-side subsidies – so that programmes drift from narrow to broad targeting, reducing their redistributive impact (see Section 2.9). Clearly, the political process plays a crucial role in determining not just the extent of redistribution, but also the means by which this redistribution can be achieved.

3. The Process of Resource Allocation

Although the principles and techniques outlined in Chapter 2 can provide a useful guide to decision-making, they do not provide a definitive solution to the basic budgeting problem. Resources are allocated through a decision making process involving diverse institutions, each holding and representing discrete interests. The interactions between these institutions are crucial in determining resource allocation outcomes. From the very start of modern budgeting, attempts were made to structure the institutional framework of the budget process so that the desired resource allocations would be achieved (see Section 3.1). Subsequently, attention focused on the decision-making process, seeking to impose technical rigour through the application of analytical methods (see Section 3.2). Both these approaches were normative in intent and have had considerable influence in shaping budget institutions and standards of good practice. However, practice often diverges from the ideal. Alternative approaches have sought to understand how the budget process actually works. One of the most influential of these is that of the incrementalists for whom institutional role-playing was seen as determining the behaviour of decision-makers (see Section 3.3). More recently, economic theory has been applied to the budget process, focusing on the way in which the interaction of self-interested politicians and bureaucrats will influence budgetary outcomes (see Sections 3.4 and 3.5). These positivist approaches have also influenced the design of budget systems, particularly those institutional reforms associated with New Public Management. Again, none of these approaches is fully satisfactory in explaining how resources are allocated in the public sector, though cumulatively, they do provide important insights for decision-makers and those seeking to influence resource allocation outcomes.

2.6 Administrative budgeting

Modern budgeting systems were developed in the late 19th and early 20th centuries as a means of exerting legislative control over resource allocation decisions by the executive. This was achieved by dividing responsibility for and authority over the resource allocation process between institutions whose competencies and relations were defined in law, supplemented by exhaustive rules and procedures (see Box 3). A clear distinction was maintained between policy and administrative functions: the former was regarded as the exclusive preserve of politicians in Cabinet and the legislature, and the latter the responsibility of bureaucrats within the Ministry of Finance and spending agencies. While bureaucrats might advise their respective Ministers concerning appropriate resource allocations, decisions should ultimately be taken by politicians. Ministers were also held accountable to the legislature for the proper use of funds that they received, particularly as regards compliance with budget allocations and administrative procedures, though the day-to-day administration of these funds was the responsibility of the bureaucracy. It was assumed that appropriate procedures would generate the desired outcomes and so compliance and due process were regarded as the test of good practice (Sundelsen, 1938).

The budget process

The task of budget preparation was decentralised to spending agencies, which prepared open-ended bids based on their assessment of the need for resources to meet specified service delivery levels. Agency bids were then negotiated with the Ministry of Finance, who could alter the agency’s proposal, unilaterally if necessary. Alterations were usually intended to eliminate waste rather than ensure consistency with government policy, since policy was the prerogative of the line Minister. For the most part, continuity in the functions of the public sector implied stability in the allocation of public expenditure. It was, therefore, unnecessary to assess all institutional expenditures each year. Instead, allocations were determined on an historic basis, taking into account prior allocations and budget execution, with attention focusing on justifications for new programmes and increased spending on existing programmes. The temporal perspective of expenditure planning was, for the most part, limited to the budget year and annual budgets, which ensured regular and timely legislative scrutiny of spending decisions, were the norm.

Box 3: The administrative framework

Ministry of Finance	Responsible for the management of public expenditure, including the formulation of a consolidated state budget and accounts, and the management of government's cash resources.
Spending Agencies	Responsible for the planning, management and delivery of public services, and the preparation and management of agency budgets. Spending agencies are usually headed Ministers, occasionally by public officials.
Cabinet	Collectively formulates government policy. Implementation of government policy is the responsibility of individual Ministers. Cabinet approves the Government's budget.
Legislature	Analyses the Government's budget proposal and accounts, through the work of specialist committees, and enacts the budget in law. In Congressional systems, the legislature may amend the Government's budget proposal. In Parliamentary systems, it usually may not.
Auditor	Verifies compliance with the budget law and procedures regarding the use of public funds. The Auditor usually reports directly to the legislature, though in some cases may be considered part of the Ministry of Finance and report to Government through the Minister.

Consolidated line budget proposals, prepared by the Ministry of Finance, were submitted to Cabinet for review, revision and approval and, subsequently, approved and enacted by the legislature in the form of appropriations accounts. Once expenditures had been defined and approved, the financing requirement was assessed. This might entail proposals to Parliament for changes in taxation and, in some cases, proposals for public borrowing, in order to mobilise resources needed to support the previously agreed expenditure programme. Although Wicksell demonstrated in the 1890s that a simultaneous approval of expenditure and revenue requirements would allow decision makers to assess the trade-offs between spending and taxation, this was not common practice until recently. In the United Kingdom, for instance, the expenditure and financing sides of the budget were only synchronised in 1994. In many Commonwealth countries expenditure and revenue budgets continue to be prepared and approved separately.

Compliance with approved resource allocations was ensured through detailed expenditure line-item accounts approved for each institution, backed up by centralised fund release mechanisms, regular verification of accounts in-year and independent auditing of end of year accounts. While the Ministry of Finance could impose cuts and authorise the reallocation of resources during the budget year within the limits set by the legislature – usually to accommodate lower than anticipated revenue yields or adjust for poor budget execution – significant changes in resource allocations required legislative approval through supplementary budgets. However, such alterations were considered a sign of poor administration and so discouraged or, in many countries, restricted by legislation.

Budgetary decision-making

While the traditional approach was rigorous regarding the process of resource allocation, it provided little or no guidance regarding the basis for resource allocations decisions. Such decisions belonged to the political realm, where citizens' broad preferences were expressed – and compliance with these preferences was ensured – through the electoral process. Accountability to the public was achieved after the fact, both at a political level and on more operational matters, through the presentation and audit of accounts, rather than through public involvement in decision making (Rubin, 1994: 248). There was a strong belief that decisions would be taken in the public interest, though budget-makers had few tools to support them in this task 'acting rather, on the basis of their impressionistic judgement, or a rudimentary cost-accounting or, perhaps, of the findings of administrative surveys' (Key, 1940: 1139). Where decisions ran counter to this principle, it was assumed that successive levels of approval – Ministries of Finance, Cabinet and finally the legislature – would collaborate to identify and correct the most egregious mistakes.

The technical limitations of the traditional approach to public sector resource allocation are readily apparent. Owing to the institutional basis of resource allocations and controls based on inputs, it is often difficult to ascertain the purpose of public expenditures or link resources to activities, outputs and measures of performance. Since allocations were determined historically only the increment is subject to effective review and approval, providing little opportunity to assess the continued relevance of the services that the institution provides and the bulk of expenditures in the budget base. The annual perspective of resource allocations was inadequate for an assessment of the financial implications of policies or for planning and tracking the reallocation of expenditures between programmes, again reinforcing the incremental nature of the budget process. Lastly, in the absence of clear criteria, information and methods for the appraisal of rival spending options, there was a danger that resource allocation decisions would be taken arbitrarily or overtly political ends. It was indeed this very problem that spurred Key to present his challenge to the conventional practice.

Conclusion

Notwithstanding the limitations of administrative budgeting, the approach has proved remarkably resilient. The institutional architecture of the administrative approach is still regarded as the ideal (IMF, 1999). Similarly, in many public expenditure management systems, resources continue to be allocated following the bidding process favoured under the administrative approach. This resilience is, in part, a reflection of the ease with which administrative procedures could accommodate new analytical perspectives and tools – such as those proposed under rationalist reforms. Equally important, however, the administrative approach provides at least the pretence of centralised control over resources, which may be particularly desirable in conditions of fiscal stress – during structural adjustment for instance – or for political reasons.

2.7 Rationalism

From the 1950s, the State began to assume a more activist role in social and economic development, government programmes proliferated and the level of expenditure expanded rapidly. Advocates of reform argued that a technically rigorous approach to decision-making was needed if these resources were to be applied efficiently and effectively. Technical rigour was found in the application of a rationalist approach. This entailed fundamental changes in budget structure and the policy formulation and resource allocation processes.

The rationalist approach seeks to relate policy to clearly specified goals for public intervention. In contrast to the administrative approach, where policy is the exclusive realm of politicians, technicians are involved in the definition of policy goals through a process of problem analysis. Once the goals have been defined, technicians seek the appropriate means to achieve them by appraising alternative strategies. This entails an identification of the full range of possible solutions, an assessment of their feasibility and impact, and selection of the preferred option using transparent – ideally quantitative – criteria. Public sector interventions are then designed so as to achieve policy goals using resources as efficiently as possible. Implementation is monitored and evaluated with the results feeding back to subsequent policy analysis and formulation (Patton and Sawicki, 1980).

A framework for rational budgeting

Application of the rationalist approach to budgeting required an explicit link between the means and ends of public policy, between resource allocations and policy objectives. This link could not be identified using traditional, administrative and line item budget classifications, and so from the 1950s many countries introduced classifications based on programmes, comprising a set of activities intended to achieve a specific objective. In its most sophisticated form, the Planning, Programming and Budgeting System (PPBS) introduced in the USA in the mid 1960s, resources would be allocated between programmes on the basis of their contribution to stated policy objectives. These allocations would be projected over a multi-year period so as to reflect the financial implications of policy decisions. Allocations would then be revised annually, taking into account the results of programme monitoring and evaluation (Premchand, 1983: 323-327). The UN proposed a similar model for developing countries, in which the budget process would establish ‘the purposes and objectives for which funds are requested, the costs of the programmes proposed for achieving these objectives and quantitative data measuring accomplishments and work achieved under each programme’ (UN 1965: 3). In this way decision-makers could appraise alternative applications of scarce resources and ensure that resource allocations reflected policy priorities and the effectiveness of public programmes.

The PPBS relied heavily on the use of quantitative techniques in the analysis of spending decisions. Foremost amongst these techniques was cost-benefit analysis (see Section 2.3), though analysts were also encouraged to use methods derived from operations research, such as linear programming, systems analysis, and decision theory (Nagel, 1990). Quantitative techniques were essential if analysts were to process and apply the huge amounts of information generated in budget preparation, appraisal, monitoring and evaluation (Schick, 1966: 255). The analytical techniques were also seen as providing a scientific basis for decision making, in contrast to the seemingly arbitrary or overtly political nature of decision making that prevailed under administrative budgeting. Although ultimate responsibility for and authority over decisions belonged to the political realm, advocates argued that the rationalist approach would allow technicians to ‘clarify and articulate the objectives of the public sector, and suggest the social implications of alternative policies … [and thereby] move public sector decision making closer to some theoretical socially conceived, optimum position’ (Cutt, 1974: 108-109).

Practical difficulties in applying the PPB system

Attempts to implement PPB systems encountered numerous problems in both OECD and developing countries. Programmes were difficult to define, particularly where objectives crossed traditional administrative boundaries. So were appropriate objectives and indicators of performance. Since administrative structures continued to manage resources, there was a tendency for programmes to be defined so as to reflect what the institutions were currently doing rather than with reference to policy goals. It proved difficult for decision makers to assimilate the vast amount of information required to assess the relative priority of programmes and their performance. Often such information was not collected on a routine basis, a problem compounded by the fact that some agencies refused to cooperate; certainly, institutions had little incentive to provide information that might be unfavourable to their arguments for increased funding. Some institutions, notably parliaments, were not interested in this information anyway (Caidan and Wildavsky, 1980: 159-165; Dean, 1989: 125-138; Sekwat, 1992).

The limited use made of policy analysis in support of decision-making struck at the rationale of the PPB. As Schick pointed out when PPB was in its hey-day, 'the case for PPB rests on the assumption that the form in which information is classified and used governs the actions of budget makers, and, conversely, that alterations in form will produce desired changes in behaviour'. Without changes in behaviour, PPB is reduced to a 'trivial manipulation of techniques' (1966: 257). Experience proved Schick right: PPB failed to deliver the improvements in the policy relevance of public expenditures and links to performance that were originally expected and by the early 1980s it had largely been abandoned (Schiavo-Campo and Tomasi, 1999). From the perspective of incrementalists, the PPB had sought – and failed – to substitute a political decision making process, embracing a wide range of considerations, accommodating both the public interest and the private interests of decision makers, with a technocratic process, based on narrow analytical methods supported by inadequate information (Wildavsky 1975).

Budgeting and planning in developing countries

In developing countries, the rationalist approach is associated with development planning and, by extension, public investment programming. In the 1960s and 70s most governments in developing countries prepared medium and long-term development plans. These outlined the government's development goals, strategies and objectives, both at the national and sectoral level. Plans were usually aimed at promoting economic growth and the expansion of social services, and identified a prioritised list of development projects for this purpose. In order to finance these projects, governments established development budgets (sometimes referred to as investment or capital budgets) as distinct from the recurrent budget used to finance government's day-to-day operations. Planning and the management of the development budget was usually the responsibility of a specialist planning agency and planning departments in sectoral ministries. Planning agencies appraised project proposals prior to their inclusion in the plan and budget. For large investment projects at least, this entailed technical studies using cost benefit analysis or assessments of economic viability using discounted cash flow techniques. Monitoring and evaluation systems were established to verify progress and provide feed-back to subsequent planning exercises.

Development planning, like the PPBS, had gone out of fashion by the late 1980s. Plans were often unrealistic, reflecting political aspirations rather than an assessment of what could actually be achieved given available financial resources and implementation capacity. By focusing on the development budget alone, they failed to take into account the recurrent budget financing needed to operationalise projects, compromising their long-term sustainability. Planning departments were dependent on the Ministries of Finance for financing, which often failed to materialise in full. Furthermore the approval of projects was subject to political pressures rather than on purely technical considerations (Caidan and Wildavsky, 1980: 239-61; Premchand, 1983: 190-98). In many countries, long-term planning seemed increasingly idealistic and irrelevant as attention turned to the needs of short-term stabilisation.

In the late 1980s and early 90s, attempts were made to strengthen the links between financial planning and implementation by the introduction of rolling public investment programmes, comprising a prioritised list of public development projects. Investment programmes feature in many countries' budget systems today. They divorce the resource allocation process from formal development planning, which is relegated to the function of providing policy guidance. Projects are identified ‘bottom-up’ by spending agencies. Consistency with government policy is then ensured through a process of project appraisal and approval, usually managed by the planning agency (OECD, 1992). Although large-projects may undergo technical analysis, most are appraised solely on the basis of their policy relevance (see Section 2.2).

More recently, many developing countries have merged the planning agencies with the Ministries of Finance. Although the distinction between the development and recurrent budget is maintained, resources are programmed together through a Medium Term Expenditure Framework (see Box 4). Particular attention is now given to the links between resource allocation and performance (World Bank, 1998; 1999). This has led to renewed interest in formulation of programme budgets so as to make explicit the means-end link in resource allocation. However, these linkages and their policy implications are not always clear, particularly where poor performance is a consequence of inadequate financing as well as management failure (Pollitt, 1999).

Box 4: Medium term expenditure frameworks

In essence, the Medium Term Expenditure Framework (MTEF) consists of: a ‘top-down’ resource envelope consistent with macro-economic stability and both internal and external resource availability, prepared by core financial management and planning agencies; a ‘bottom-up’ estimate of the current and medium term cost of existing national priorities prepared by line agencies; and a negotiation process which matches the demand for resources with availability through iterative decision making. The first year of the MTEF establishes the budget limits for the coming year; the outer years are indicative, rolled forward by one year and revised during the next budget cycle. Ideally, MTEF expenditure projections are broken down to programme level and linked to output indicators.

The MTEF supports decisions regarding the level and allocation of resources, both government-wide and within spending agencies. It focuses attention on policy rather than the minute detail of budget submissions, by presenting aggregate expenditure projections by sector and programmes. Using alternative scenarios, decision makers can match aggregate expenditure with resource availability and assess the costs and benefits of policy options. The MTEF also helps to communicate policy, by setting out clear priorities, and provides a basis for negotiations with external financing partners. At a tactical level, forward projections of expenditure allocations help to guide and track the reallocation of resources in line with government’s development priorities. Forward projections also facilitate sector planning by indicating the likely flow of resources over a three to five year period, thereby allowing spending agencies to take into account the operations and maintenance requirements of investments and target levels of service delivery. Efficiency and effectiveness can be improved by requiring line agencies to define their mission, objectives and activities and linking expenditure to measures of performance in terms of outputs and outcomes.

MTEFs have been implemented with various degrees of success in South Africa, Ethiopia, Ghana, Malawi, Mozambique, Tanzania and Uganda, though similar exercises are currently being introduced in a far wider range of countries. In some respects the South African and Uganda MTEFs are the most advanced of these. In both countries the MTEF is now routinely used as the basis for agency budget submissions and forward projections are submitted to parliament.

Source: Fozzard and Foster (2001).

Conclusion

The rationalist approach still constitutes the prevailing paradigm for policy formulation and, by extension, for resource allocation decision making. Indeed, these practices are now entrenched in governments' and development agencies' procedures through the use of logical frameworks to support financing decisions and monitoring and evaluation schedules. Although policy analysis is still prominent, the use of appraisal techniques – such as cost-benefit analysis – is now largely restricted to the appraisal of large-scale infrastructure projects such as dams, irrigation and transport infrastructure. This partly a consequence of the gradual withdrawal of the public sector from directly productive projects, but it also reflects a growing recognition that resource allocation decisions are fundamentally political and so cannot be based on technical considerations alone.

2.8 Incrementalism

The rationalist approach assumes that the decision-makers will seek optimal solutions in the broad public interest. In contrast, Lindblom (1959; 1979) suggested that decision-makers 'muddle through' using a process of 'disjointed incrementalism' which contradicts the fundamental assumptions of rationalist decision making. Decision makers start from the status quo and seek to solve problems as they arise rather than identify opportunities; they identify the appropriate goals and policies iteratively, rather than working systematically from clearly defined ends to identify the means; they assess a small number of similar policies rather than all conceivable options; they identify solutions that can be achieved by small steps rather than radical leaps in policy; they make decisions with reference to experience and the comparison of alternatives rather than theory; and they will test the validity of policy decisions with regard to the availability of superior solutions rather than an ideal. In this way, decision making is subject to bounded rationality in which actors are satisfisers rather than optimisers. Within these constraints, decision-makers are expected to behave self-interestedly, or at best, take a 'partial view of the public interest' in which self-interest will have a preponderant influence. This self-interest will reflect the institutional role of each of the actors in the policy-making process and interactions between these actors will respect both formal, procedural rules and informal, social norms. The final outcome of the decision making process can, therefore, be seen as 'the product of a set of games involving strategy and skill, played by self interested actors performing stylised roles and as a consequence of the rules of the game' (Jones, 1996: 233).

Institutional roles and budgetary strategies

Applying this incrementalist approach to the USA's Congressional budget system Wildavsky's *Politics of the Budgetary Process* (1964) distinguishes the roles of 'advocates' of public spending who seek an increasing share of expenditure and 'guardians of the public purse'. In the US system, where congress enjoys considerable authority in the budgeting process, relationships between 'advocates' and 'guardians' are mediated by 'decision makers of first resort' and an 'appeal court'. In parliamentary systems, where the legislature has a less prominent role in budgeting, the key relationship between the spending agencies as 'advocates' and the Treasury or Ministry of Finance as 'guardian' (Wildavsky, 1992: Caidan and Wildavsky, 1990: 102-103).

In pursuing their institutional interests, decision-makers are expected to act strategically (Wildavsky, 1974: 63-126). Long-term 'ubiquitous' strategies include the cultivation of clienteles and lobbies to support their interests and relationships of confidence with other decision-makers. 'Contingent' strategies involve decisions about how best to present and bargain the institution's case. These will differ between individuals depending on their personality, skill and reading of the circumstances. Ambitious advocates may act as 'innovators', trying to win a substantial increase at the risk of having their proposal turned down and actually coming off worse. Most advocates are, however, risk averse 'adjusters' who proceed through a series of small, incremental increases (Crain and Crain, 1998: 434). Certainly, Wildavksy suggests that most advocates are more concerned with protecting their budget 'base' – the current level of expenditure – than maximising their allocations and will pursue other policy goals as long as they do not entail a reduction in the agencies' allocations (1974: 20). As a consequence of these risk averse bargaining strategies, agencies' proposals reflect not just their institutional goals, but also the anticipated response, so that final allocations are determined through a process of mutual adjustment.

Budgetary decision-making

Decision-makers apply a number of 'aids to calculation' to help them resolve these complex problems and reduce the uncertainties of budgeting. They will rely on their experience, take their cue from other participants, seek to satisfice rather than optimise, and prefer cautious, incremental change to risky, radical shifts in policy or budget allocations. Their options will, moreover, be limited by 'the roles that they must play and the kinds of moves that are more or less permissible' (Wildavsky, 1992: 77). This lends a certain predictability to the budget process, with stable roles leading to stylised behaviour. Spending agencies, for instance, expect Ministries of Finance to cut their proposals, whatever their merits, and so will 'pad' them with unnecessary expenditures, so that the 'guardian' can painlessly cut back on expenditures. Similarly, 'guardians' can be expected to underestimate revenues and overestimate commitments so as to strengthen their hand in curtailing expenditure growth and cutting agency proposals, allowing legislatures to take their pessimism into account when reviewing proposals (Larkey and Smith, 1989: 160-163).

The nature of the budget process also promotes incremental decision-making. Allocation decisions tend to be made sequentially – between Ministries of Finance and individual spending agencies and then by reviews of agency proposals within collegiate bodies such as Cabinet and in legislative committees – rather than by assessing trade-offs between alternative claimants. Furthermore, budgeting is repetitive, with the same allocation issues being addressed in successive budgeting exercises. In this way, participants arrive at a tacit agreement regarding each claimants 'fair share', constituting a 'convergence of expectation on roughly how much an agency is to receive in comparison to others' (Wildavsky, 1992: 87). Once the fair share is established, bargaining about allocational decisions is restricted to the distribution of additional resources rather than redistribution the budget base. This reduces the risk of cutthroat competition between rival claimants for resources and means that allocations do not have to be revised every year. Instead, the process is 'premised on agreement on the size, scope and distribution of expenditure. Conflict was confined to the margins, a little more here, a little less there' (Wildavsky, 1992: 73). Without this stability, incrementalists argue, the budgeting process would descend into chaos.

Faced with constraints of bounded rationality, mutual adjustment, role play and tacit agreement on base allocations, the scope for rational analysis in budgetary decision making is much reduced (see Box 5). Evidence from State Governments in the USA indicates that policy analysis is used in budgetary decision making but it is by no means the only and often not the preponderant influence (Lee and Johnson, 1989: 131). For incrementalists, allocation decisions are ultimately a product of political bargaining (Wildavsky, 1974. 130-131). If this is true, it seems reasonable to argue that an institution's 'fair share' is related to the relative political mobilisation of rival claimants. The mechanisms by which rival claimants exert pressure on politicians are not explored in the incrementalist literature, though it is recognised that decision-makers are likely to be influenced by lobbies representing diverese interest groups.

Limitations of incrementalism

The emphasis on the political nature and basis of allocational decision making would tend to invalidate attempts to derive a theory that addresses Key's basic budgeting question, since, as Schick (1988: 60) points out, such a theory would have to 'allocate power and other political values as well'. Certainly, in contrast to the breadth of the empirical studies, attempts to develop an incremental theory have focused narrowly on the mechanics of budgeting, by attempting to demonstrate that allocations are largely determined by incremental adjustments of the budget base (for instance, Davis et al, 1966). No attempt is made to explain the basis on which initial allocations are agreed. Furthermore, although periodic adjustments in growth parameters are acknowledged in an 'extended incremental model', these inconsistencies are discounted as 'stochastic disturbances' arising exogenous political and economic factors (Davis et al, 1974).

Box 5: Information, policy and budgetary decision-making

Much of the literature on policy analysis and evaluation studies expresses frustration that this work is not consulted by decision-makers, let alone used as the basis for policy. A number of practical measures that can be expected to increase the impact of policy relevant information are identified (see for instance: Blank and Gross, 1999; Di Francesco, 1999). These include:

- Implementation of an evaluation strategy, by which major programmes are evaluated in detail on a regular cycle, every three to five years, rather than presenting repetitive annual reports.
- Locating policy analysis functions close to budget authorities, so that analysts can provide support during decision making and bureaucrats can solicit the analysis they require.
- Conducting analysis in house where possible, since it is then likely to be more readily accepted, particularly where the policy messages are unpalatable.
- Building breadth rather than depth of capacity, so that key decision-makers are able to interpret analysis.
- Responding to the requirements of decision-makers.

More fundamental questions regarding the institutional culture and the process of decision-making and their impact on the use of information are rarely asked: it is merely assumed that informing policy is an issue of product and packaging. Information is, of course, only one factor influencing and constraining policy; others include the diverse interests of decision makers and their constituents, ideologies and the institutional framework (Weiss, 1999). It could be argued that the relative importance of information is likely to increase where: there is a competitive political arena, where information can be used in support of policy debate; decision makers are educated and have analytical experience; there is a climate of rationality; the media and the public as a whole are well informed; the government is not constrained by commitment to specific ideologies or policy decisions based solely on an appeal to values and principles.

Consequently, while incrementalism may provide some insight in explaining a 'stable routine, that is fairly resistant to external shocks, and that adjusts itself only gradually to changes in environmental circumstances' it contributes little where these conditions do not hold (Kraan, 1996: 4). When circumstances did change during the fiscal crises of the 1970s, when governments were no longer able to distribute increments and often had to cut back on base allocations, and, in OECD countries, substantial increases in multi-year entitlements further curtailed discretionary allocations, mechanistic budget incrementalism was invalidated.

Critics have argued that incrementalism may not even apply in favourable circumstances: legislators do not take the base for granted budget; allocations do in fact change significantly between years; competition is rife between budgetary institutions; and such assertive behaviour may increase agency allocations (LeLoup, 1979; Meyers, 1994: 6-12). It is clear that, by focusing narrowly on inter-sectoral allocations, incrementalism underestimated the complexity of budgetary decisions, in particular the relation between micro (focusing on resource allocation) and macro-budgeting (focusing on stabilisation) (LeLoup, 1988: 23). Similarly, it failed to recognise the complexity of institutional interactions, notably evidence that institutions play a variety of roles with regard to different actors, such that central agencies may be 'advocates' with regard to the

Ministry of Finance but 'guardians' in relation to their internal departments (see Box 6). Not even the integrity and stability of the budget process is sacred: as the budget stalemates of 1990, 1995 and 1998 in the United States illustrate, politicians may prefer to stall the budget process – to the point of laying off public servants – rather than give in to their opponents (Pious, 1999).

Box 6: Budgeting within agencies

The incrementalist literature focuses on the relationship between core budgetary institutions – spending agencies, Ministries of Finance and the legislature – largely ignoring what goes on inside spending agencies during the budget process. Behavioural studies undertaken in the private sector can provide some insight into this aspect of budgeting. One of the key issues that they explore is the degree of centralisation of responsibility for budgeting and its implications for budgetary outcomes and performance. Chandra (1999) distinguishes four organisational approaches to budgeting: authoritative budgeting, which centralises responsibility for budgeting in the hands of a senior managers who imposes final departmental allocations; consultative budgeting in which budget allocations are discussed with department staff but decisions are made by senior managers; participatory budgeting in which organisational budgets are defined bottom-up, on the basis of departmental budgets; and negotiated budgets, in which the departmental budgets are prepared on the basis of limits agreed by both departmental and senior managers.

Chandra argues that the more participatory methods improve staff motivation, whereas authoritative approaches, although effective in cutting costs, tend to provoke conflict and may undermine performance. This is partly because less participatory forms of budgeting tend to underestimate the resources needed to fulfil the department's functions or meet its targets (Nouri and Parker, 1998). Senior managers and budget departments are poorly informed regarding the resources required to deliver a given level of services and, besides, will tend to underestimate budgetary requirements of subordinate institutions systematically as a means of achieving cost reduction goals. Inevitably, this reduces efficiency.

In the public sector, particularly in developing countries, authoritative approaches to budgeting have tended to predominate: departmental budgets are often prepared and managed by a centralised finance and administrative department covering the whole agency. In some cases, managers may not even know the resources that are available, they merely submit requisitions that are either approved or rejected. In recent years, many countries have sought to improve motivation and efficiency by decentralising responsibility for budgetary management with government agencies down to the field delivery units. Results have usually been positive, though in some cases, the scope for managers to realise these benefits have been limited by the persistence of centralised controls on recruitment and procurement of supplies (for example, Gross and Nirel, 1997).

Policy implications

Faced with these critiques, the normative value of incrementalist literature can be questioned. Certainly, the professed advantages of an incrementalist approach on the grounds that it reduces potential conflict, thereby facilitating the workings of government, and reduces transactions costs by stabilising expectations and curtailing negotiations of resource allocations, can only materialise under conditions of economic and political stability, if then (Schick, 1998: 61). Nevertheless, the incrementalist approach does provide some useful insights regarding the importance of the rules of the game, in particular formal procedures, in determining budgetary outcomes. This can have implications for the decision of budget institutions and procedures. Wildavsky, for instance, has advocated procedural changes to address budgetary problems, such as a self-denying ordinance limiting the USA's federal deficit and similar arrangements to assist EU States achieve fiscal convergence (Wildavsky, 1979 and 1993). However, he does not indicate how institutions can be prevailed upon to implement such institutional reforms against their interests. Indeed, in a refinement of Wildavsky's work, Meyers (1994) has argued that budgeters can be expected to work according to 'structural strategies' which seek to establish the institutional arrangements that best suit their interests. In this case, the outcome of institutional reforms is determined by the political process in much the same way as outcomes of the budget process itself.

Conclusions

Whatever its short-comings as a theoretical model, incrementalism has had a profound impact on our understanding of the budget process, particularly as regards the role of political behaviour and institutional arrangements in determining budgetary outcomes. While the rationalist approach elevates information and analysis as the basis for budgetary decision making, seeking to achieve an optimal allocation of resources, the incrementalists demonstrate that political considerations, institutional role play and bounded rationality provide a more accurate depiction of budgetary

behaviour. These observations have subsequently been developed, by the application of economic theory, in the public choice and transactions-cost approaches, in such a way that the outcomes of the budget process under differing institutional arrangements can be predicted with greater certainty.

2.9 Public choice

The underlying assumption of public choice economics is that decision makers are self-interestedly rational, in the sense of optimising their choices in function of their individual preferences. While decision makers may not be completely informed concerning the options available and the consequences of their actions, they will use the information available to their best advantage. However, decision makers are constrained by the formal competencies of the authorities to which they belong and by the rules and regulations that govern behaviour (Kraan, 1996: 5). Within this institutional framework, decision makers can be expected to pursue their personal agenda without regard to notions of fair play and moderation. On this basis, public choice economics develops positive theories which seek to explain the behaviour of the decision makers, the interactions between them and their implications for budgetary outcomes. From these theories, recommendations are drawn concerning the design of institutional arrangements that will result in more desirable public expenditure outcomes. The present section will analyse implications of public choice economics for allocational decision making, first in the political arena and then within the bureaucracy.

Resource allocation in the political arena

Downs (1957) assumed that politicians seek to maximise political power and retain office. If this is the case, politicians cannot be expected to act in the broad public interest, but will, instead, try to make themselves popular with constituents so as to strengthen their power base and improve their prospects for re-election. This may lead to politicians advocating short-term projects that can generate immediate pay-offs over longer-term projects with a higher return. Similarly, politicians will seek to advance their constituents' interests without regard to the consequences for the broader public. This can be achieved by securing funding for programmes that benefit constituents from the common pool of general taxation, so that the costs of programmes benefiting a few are borne by all (Poterba and von Hagen, 1996: 3).

Weingast, Shepsle and Johnsen demonstrate how politicians can exploit the common pool in order to win votes – in their terms, 'transform the economic basis of costs and benefits into political costs and benefits' – using the example of pork barrel projects (1981: 642). These are projects that benefit a particular geographical constituency exclusively or disportionately but are financed from general taxation so that the costs are spread nationally. Since self-interested voters are likely to vote for representatives that bring them benefits at low cost, representatives will promote pork-barrel projects. This leads constituents and their representatives to demand more, and more expensive, geographically targeted public goods than would be socially efficient. An example is provided by public spending on flood defences in the United States, which are financed by both central government grants and local contributions. As the level of compulsory local contributions increases, total spending on these projects tends to fall, owing to an increase in the ratio of costs to benefits for constituents or, as DelRossi and Inam (1999) put it, a change in the price of pork.

Political constituencies need not be defined exclusively in geographical terms. Ministers leading spending agencies may identify constituencies comprising the beneficiaries of public spending and the suppliers of goods and services. They will, therefore, tend to favour increased spending in their sector regardless of the implications for efficiency in the overall level and allocations of public expenditure. Politicians may also be aligned with particular interest groups and social classes, creating opportunities for coalition building, especially where interest groups actively lobby politicians. Higher income groups are likely to be more effective at lobbying than the poor since they have greater resources at their disposal (Clark, 1997). This may explain why, in many developing countries, 'the composition of expenditure tends to be skewed towards items that are actively valued and demanded by the non-poor' such as higher education and tertiary health care (Kelly, 1997: 332).

The political process limits the extent to which politicians operating in a democratic environment are able to pursue the interests of the few at the expense of the many. If politicians are to secure approval for their self interested strategies they must mobilise support from the representatives of other constituencies. One way of achieving this is to promote 'universal' programmes which spread the benefits over a sufficient number of constituencies to gain a majority vote (see Section 2.5). Universal programmes tend to be inefficient because, by spreading benefits thinly, they may leave inadequate resources for the areas of greatest need and, by increasing the size of programmes, increase aggregate spending (Shepsle and Weingast, 1984: 360). Reciprocal voting or logrolling offers an alternative strategy: a representative agrees to vote for expenditures benefiting another constituency in return for the representative of that constituency returning the favour by voting in favour of his expenditure proposal. This leads to a cumulative increase in the aggregate level of spending so that both the allocation and overall volume of public expenditures are likely to diverge significantly from notionally efficient outcomes.

Defending the average taxpayer

Chief Executives (Prime Ministers) and Ministers of Finance can be expected to impose constraints on the pursuit of self-interested political agendas by politicians. Unlike line Ministers and constituency representatives, Ministers of Finance are taken to represent the interests of 'the average taxpayer' (Alesina and Perotti, 1996: 15). They will, therefore, seek an optimum level and allocation of public expenditure financed from the common pool. Allocational decisions will be based on an assessment of the relative merits of alternative proposals for public expenditure, rather than particular constituency interests. Spending decisions will also take into account the costs of increased taxation or deficit financing.

In this context, the allocational outcomes of the budget process will be determined by the nature of the institutional arrangements, as regards the opportunities they provide for politicians to influence expenditure decisions and the relative authority of politicians representing particular interests and the Ministry of Finance representing the average taxpayer. In describing these arrangements, Alesina and Perotti (1996: 6) distinguish hierarchical and collegial institutions. Hierarchical institutions tend to centralise authority at the various stages of the budget process, reducing the opportunities for democratic decision making and overruling minority interests. They will enforce fiscal restraint and tend to generate budgets which benefit the majority, providing little scope for minority interests. Collegiate institutions have the opposite characteristics. They foster democratic decision making and strengthen the hand of minority interests, and so tend to undermine fiscal discipline and increase minorities' share of spending. The implication is that hierarchical arrangements will tend to be more efficient, both in terms of the ratio between the aggregate benefits from spending and costs from taxation and in terms of allocational efficiency, but less egalitarian than the alternative. These concepts can be usefully applied in understanding budgetary decision making within government and the legislature and the outcomes generated.

Box 7: Strengthening core institutions

Von Hagen (1993), Poterba and von Hagen (1996) and Campos and Pradhan (1997) argue that a relatively powerful Ministry of Finance is needed to enforce fiscal discipline and ensure that resources are prioritised following the broad public interest, rather than the narrow interests of particular constituencies. To this end they propose institutional arrangements that will increase the Ministry of Finance's authority in the budget process and curtail opportunities for coalition building and reciprocal voting by line agencies. These include:

- **Sequencing**. Where the budget process starts with the top-down definition of limits for agency proposals, Ministries of Finance are more likely to contain agency expenditure than where aggregate expenditures are determined bottom-up on the basis of open-ended agency proposals. Most OECD countries have now institutionalised this procedure by setting hard cash limits for agency proposals (Allen, 1996; Premchand, 1999).
- **Bilateral negotiation.** Where spending allocations are negotiated bilaterally between the Minister of Finance and the agency, the Minister of Finance will be in a stronger position to resist agency requests for additional resources than where proposals are negotiated collegially by Cabinet. Multilateral negotiations provide line Ministers with an opportunity strike reciprocal deals and gang up against Ministers of Finance.
- **Comprehensive analysis and decision making.** If decision makers are to assess the trade-offs between different levels of spending and allocations of public resources, they must have a comprehensive picture of the resources available. Budgets should, therefore, provide information on the totality of public spending and resources. Mechanisms intended that obscure resource availability (such as off-budget funds) or reduce flexibility (earmarking) should be discouraged.
- **Medium-term perspective.** Agreement should be reached over resource requirements covering a medium-term perspective, so that agencies receive a predictable flow of resources and assist the Ministry of Finance in curtailing the expansion of agency requests.
- **Binding agreements.** Once budget allocations have been agreed, these should be enforced, so that agencies are subject to a hard budget constraint. This may entail penalties for agencies, and their political heads, should they fail to comply with expenditure limits.

This should not be construed as a case for the centralisation of responsibility for budget formulation. It could be argued that Ministries of Finance should be involved in the preparation of detailed agency proposals, on the grounds that line agencies are unable or unwilling to adjust internal resource allocations in line with the broad public interest. However, as Schick (1998: 100-103) points out, the Ministry of Finance's competence is limited by informational constraints and so agency budgeting is best left to the agency itself, within the limits and guidelines set by government.

In hierarchical governments, the Prime Minister or Minister of Finance's authority over the budget process is formally recognised, allowing them to overrule the proposals of spending agencies. This is the case in France or the United Kingdom. In other countries, however, the Prime Minister and

Minister of Finance enjoy no special status with regard to budgetary decision making. Collegial arrangements prevail. Resource allocations must be negotiated and agreed collectively, providing opportunities for reciprocal agreements between Ministers and favouring universal programmes, both of which reduce central control over agency and aggregate spending. Box 7 suggests some of the institutional arrangements that strengthen the hand of Ministries of Finance relative to line agencies and so favour more efficient public expenditure outcomes.

The role of the legislature

The legislature's role in the budget process differs markedly between congressional and parliamentary systems. Congressional systems, such as those found in the United States and some Latin American and Asian countries, are collegiate. They allow representatives to vote amendments to the Government's budget proposal and propose expenditures of their own (Caidan and Wildavsky, 1980: 114-116). This provides an opportunity for the representatives to engage in reciprocal voting and the expansion of targeted programmes. It also strengthens the hand of the legislature relative to the executive, since the executive's budget proposals can be changed. In these conditions, it is difficult for governments to impose fiscal restraint or concentrate resources in a narrow range of priority programmes because they must respond to the aspirations minority interests.

In contrast, parliamentary systems, such as those found in most Commonwealth countries, tend to be strongly hierarchical. Usually parliaments can only approve or reject the Government's budget proposal. In some countries, amendments may be proposed during the committee stage, but this prerogative is rarely exercised. Representatives will tend to toe the party line because rejection of the budget constitutes a vote of no confidence in the Government and will entail new elections. This discourages legislators from scrutinising or rejecting the Government's budget proposals. Consequently, Parliamentary approval of the budget becomes a formality, legislators take little interest in budget issues and the parliamentary scrutiny is superficial, even at the committee stage (Caidan and Wildavsky, 1980: 114; Wildavsky, 1991; Flegman, 1986). On the other hand, the higher the risks associated with rejection of the budget 'the more it is in the government's interests to propose a budget that can be expected to find a solid majority in parliament' (von Hagen in Alesina and Perotti, 1996: 15). Parliamentary systems will, therefore, tend to favour the average taxpayer, restraining the growth of public expenditures and prioritising programmes which benefit the majority of citizens, with little scope for payoffs to minority interests.

Bureaucrats and bureaucratic profits

While politicians may play a crucial role in determining resource allocations, the transformation of these allocations into budgetary outcomes is the task of the bureaucracy. Bureaucrats will, however, pursue their own interests. For Niskanen the bureaucrats' goal is to maximise their budget allocation because salaries, perquisites of office, public reputation, and the potential for patronage are all closely related to the resources at the bureaucrat's disposal (1971: 38). A refinement of this proposition suggests that, within this overall allocation, bureaucrats will seek to maximise the difference between the budget allocation for a given output of services – the price at which services are provided by the agency – and the lowest cost at which these services can actually be produced. This margin constitutes a 'managerial discretionary profit' that can be appropriated by the bureaucrat to pursue his particular goals or to increase perquisites such as travel, allowances or reduced workload (Migué and Bélanger, 1974).

Bureaucratic profits arise because the bureaucracy is a monopoly supplier of goods and services to the government and information asymmetries prevent the purchaser from accurately assessing the minimum cost of providing the services it acquires. In this context, the budget maximising bureaucrat will tend to oversupply goods and services, so as to increase their budget allocation, and will allocate these resources so best to serve institutional and personal interests. Resources may, for example, be retained by central agencies rather than distributed to field departments. Similarly, allocations for staff and running costs are likely absorb a substantial part of the budget ,since these directly benefit bureaucrats, to the detriment of service delivery.

Following a review of the literature and case studies, Blais and Dion (1991) conclude that bureaucrats will defend themselves against budget cuts and seek increased allocations rather than strictly maximise their budgets, but they support the basic thesis that bureaucrats are rent seekers. Evidence from developing countries provides additional support. The substantial numbers of ghost workers identified during civil service reform programmes suggest that rent-seeking takes place on a large scale (Nunberg, 1994: 128-129). Similarly, a recent study of primary school financing in Uganda which demonstrated that nearly 70% of funds were withheld from the beneficiary schools, indicates that bureaucracies are able to capture resources intended for service delivery (Ablo and Reinika, 1998).

Curtailing bureaucratic profits

If politicians and Ministries of Finance are to eliminate these ‘discretionary profits’ they must address the monopoly power of the bureaucracy. One approach is to improve their understanding of the agencies’ cost structures so that they can identify bureaucratic ‘profits’ and inefficiencies. These can then be eliminated by setting budgeting allocations at the actual cost of provision. This is the underlying logic behind the UK Treasury’s on-going battle with agencies to reduce running costs, the area of expenditure where ‘discretionary profits’ are most likely to be found (HM Treasury, 1996). Owing to information asymmetries, the effectiveness of such detailed analysis can be questioned (see Section 3.5).

An alternative strategy is to eliminate the monopoly altogether, by ensuring competition in the provision of public services. Competition can be introduced within the public sector through league tables which allow comparisons of efficiency and cost-effectiveness between providers (Cowper and Samuels, 1997). A more radical solution along the same lines, would be to open-up service provision to market competition by compulsory tendering. This requires financial management practices in the public sector to be put on a commercial footing so that private and public sector providers can compete on a ‘level playing field’. Necessary reforms include the introduction of: accrual accounting (such as applied by commercial enterprises) which captures the full cost of services, including overheads such as physical assets used in the production of services; capital charges for public assets, to reflect the opportunity cost of capital; internal markets to ensure that public sector providers are not subsidised by internal support services; and the relaxation of administrative constraints on procurement and recruitment to allow public sector providers greater flexibility in selecting the input mix they require to deliver services (Blondal, 1999).

These measures have been a central component of the New Public Management Reforms introduced in New Zealand, the United Kingdom and many other OECD countries. Experience so far has been mixed, with some studies pointing to significant efficiency savings whilst others suggest that the savings have been insignificant or have been achieved only through a deterioration in the quality of the services provided (Mackintosh, 1995; Dunleavy and Hood, 1994). What is clear, however, is that market provision has been more successful where services can be clearly specified and quality measured than in those cases where the nature of services and their impact is complex. This limits the scope for competitive tendering as a means of delivering core public services.

Conclusion

As one might expect, the budget maximising bureaucrat thesis is attractive to politicians, since it justifies their intervention in agency management, and to conservative politicians in particular, because it justifies a greater role for the market and the private sector in service provision. However, the model is rather simplistic. Niskanen's claim that politicians ignore or are powerless to prevent bureaucratic rent seeking does not hold, since there are numerous cases where politicians have intervened cut agency budgets. Moreover, there are institutions, such as audit bodies, which exist specifically to assesses and contain agency costs. He argues that a more sophisticated model of bureaucratic behaviour is needed to accommodate interactions between politicians and bureaucrats, along the lines of principal agent models. This focuses attention on incentives that can be used to discourage gross inefficiency or oversupply of public services (Lynn 1991: 75-80).

2.10 Principals and agents

Budgets can be seen as a transaction governed by a contract in which a principal mandates an agent to provide goods and services for a stated price (Patashnik, 1996). A chain of these principal-agent agreements can be traced through the budget process: voters-legislature; legislature-government; Ministry of Finance-spending agencies; Ministers-bureaucrats; and senior bureaucrats down to service providers (Moe, 1984: 765). These agreements are framed within institutional structures at various levels, including: embedded institutions, such as socially accepted norms of behaviour and concepts of contract; the institutional environment, which determines the formal rules of the game, such as legislation which sets out institutional responsibilities and competencies and defines budgetary procedures; and governance structures by which the game is played, such as the budget process itself, in which the transaction is negotiated, monitored and enforced (Williamson, 1998: 26).

The limitations of budgetary contracts

In common with public choice economics, both agents and principals are assumed to be self-interested optimisers. It may be inferred, therefore, that their interests will occasionally diverge. Where this occurs, agents will pursue their own interests aggressively and opportunistically, they 'will deceive other players, renege on their commitments, and manipulate the rules of the game if they can get away with it' (Williamson in Patashnik, 1996: 192). Agents are able to do this because they are better informed than principals regarding the supply and demand conditions for the services that they provide and principals are unable to observe agents activities directly (Rees, 1985). Thus, in stark contrast to the administrative, rationalist and incrementalist approaches which assume that the budget contract will be enforced – that allocations will be translated into outcomes once decisions have been taken – the transactions costs approach assumes that the contract will be broken unless adequate measures for enforcement are in place.

There is ample evidence to support the contention that agents will purse their personal interests at the expense of principals. The incrementalist literature, based on interviews with public sector officials, substantiates the view that wheeling, dealing agents use a range of tricks to achieve their goals during budget formulation, often acting against the declared interests of their principals (see for instance, Caidan and Wildavsky, 1980: 137-155). Much the same occurs during budget execution. Ablo and Reinikka's study of financial management in the health and education sectors in Uganda, for instance, demonstrates that agencies do not apply resources as intended and concludes that 'budget allocations may not matter when institutions or their popular control are weak' (1998: 30).

Since the assumption that allocational decisions will be translated into budget outcomes does not always hold, solutions to the basic budgeting problem must demonstrate not only the basis on which resources are allocated between competing priorities but also how this allocation can effectively implemented. From the perspective of transactions costs economics, three solutions to this problem can be identified: firstly, the design of effective institutional arrangements that enable the principal to enforce its interests; secondly, the design of incentives that align agents' and principals' interests; and lastly, reduction of the informational asymetries that prevent principals from designing, monitoring and enforcing effective contracts. These issues are addressed in turn.

Improving the credibility of the budget process

If the budget is to guide agents' behaviour it must be credible. From the principal's perspective, budget credibility entails consistency between intended and actual budgetary outcomes – the ability of the system to deliver goods and services as planned for the price indicated. Budget credibility can be improved by detailed specification of the inputs and outputs, establishing mechanisms for monitoring performance, such as accounting systems and performance evaluations, and mechanisms for enforcing the budget, both administratively and by appeal to independent authorities such as the judiciary and an auditor. However, there are limits to what can be achieved through specification and enforcement. As Williams (1998: 25) points out, owing to bounded rationality 'all complex contracts are necessarily incomplete'. It will never be possible to specify contractually how the agent should behave in all eventualities. Those seeking to tighten administrative controls will, therefore, continually have to 'think about what could possibly go wrong and who has an incentive to make it go wrong' so as to plug leaks in the system (Patashnik, 1996: 207). Furthermore, the more detailed the budget specification and the closer execution is monitored, the more expensive it will be to administer, so that the principal faces a trade-off between credibility and efficiency with diminishing returns as more rigorous mechanisms of control are imposed.

For agents, the credibility of the budget rests in the predictability of the flow of resources, the payments for the services to be delivered. Where there is pervasive uncertainty regarding resource availability both agents and principals will 'favour short-term commitment, a generalised conservatism over exactly programmed outlays, political bargaining over economic analysis, and figures that can be moved over hard-and-fast allocations' (Caidan and Wildavsky, 1980: 165). Short-term, in-year, reductions in resource availability will undermine budget allocations and strengthen the hand of agents relative to principals, leading to administrative changes in budget allocations that prioritise on the basis of commitments rather than policy, so that debt servicing and salaries are paid before programme implementation expenditures. Where these arrangements are institutionalised, through cash-budgeting mechanisms which limit expenditures to revenue take, the very rationale of planning and budgeting is undermined (Stasavage and Moyo, 1999).

Introduction of multi-year budgets and medium-term financial programming instruments that reduce uncertainty concerning resource availability and so provide a foundation for forward planning, can improve credibility of the budget process (see Box 6). Where Ministries of Finance are held accountable for deviations between projected and actual resource availability, this will encourage more conservative resource projections, thereby reducing the risk of in-year adjustments. Ultimately, however, the credibility of the budget system rests on its ability to allocate cash in an orderly fashion in both the medium and short-term.

Aligning principals' and agents' interests

While it is possible to improve the credibility of the budget process by improving the design of budget procedures and institutions, this fails to resolve the underlying problem: agents act against the principals' interests because their interests diverge. An alternative approach seeks to address the problem of divergent interests by providing incentives for the agent to pursue the principal's goals from self-interested motives.

One means of achieving this is through performance management systems. Targets are set for public agencies and staff, linked to Government's policy goals, and mechanisms are established to monitor performance against these measures. Target setting alone may be sufficient to improve performance and compliance since it communicates and clarifies the purpose of public agencies and thereby helps to overcome asymmetries of information between principal and agent. Target setting tends to be even more effective where an element of competition is introduced by publishing performance information through league tables pressure. In this way peer and client pressure can encourage laggards to improve performance (Cowper and Samuels, 1999). Where performance is taken into consideration in determining promotion, this provides significant incentives for personnel, even if the pecuniary rewards are not significant. Reward systems, such as performance related pay and team bonuses, can reinforce these incentives. Financial incentives may also be used to promote desirable institutional behaviour. For example, where agencies are allowed to carry-over efficiency savings at the end of the financial year they have a clear incentive to cut-costs since they will be the beneficiaries of these savings (Allen, 1997). This is not the case where, as in most countries, savings have to be surrendered to the common fund.

The logical conclusion of this approach is that government can relax restrictive controls on the use of inputs once appropriate targets and incentives have been put in place. Since managers have a better understanding of the needs of their agencies than central agencies and politicians, the relaxation of external controls should allow managers to improve the efficiency of their operations. This has been the approach favoured under New Public Management reforms. In New Zealand, for instance, agency outputs are specified in contracts, inputs are linked to outputs using a output based budget structure and managers are given discretion in the application of these resources (Bale and Dale, 1998). In the United Kingdom too, the introduction of Public Service Agreements in which outputs are specified has been accompanied by less onerous and less detailed financial reporting requirements (McConaghy, 1999). As Schick (1998) points out, however, the fiduciary systems and culture required to ensure effective management and accountability may not exist in many developing countries: contracts may not be enforced; patron-client relationships may prevail, making it difficult to associate performance or non-performance with credible rewards or sanctions; and management may apply 'informal' practices that, whilst generating results, are inimical to accountable government. From the perspective of transactions cost economics, it is important to place the contract with the framework of governance structures: if higher level structures such as embedded norms and institutions are weak, lower level structures, such as the budget contract, must be more complete and tightly specified if budgets are to be credible.

Overcoming information asymmetries

Outcomes are more like to conform to principals' goals where principals can overcome the information asymmetries that prevent them from monitoring agents' performance. These information asymmetries assume particular importance at two levels: firstly, between government and the legislature, as the public's representative; and secondly, between spending agencies and the Ministry of Finance.

Alesina and Perotti argue that 'politicians have little incentive to produce simple, clear and transparent budgets … [because] the less the electorate knows and understands about the budget process, the more the politicians can act strategically and use fiscal deficits and overspending to achieve opportunistic goals' (1996: 16). They cite the unnecessary complexity and poor coverage of budgetary documentation made available to legislatures and the public as evidence for their assertion. Off-budget funds, public enterprises, supplementary budgets and a variety of other creative accounting techniques are also employed to ensure that resources escape parliamentary and hence public scrutiny, creating what has been termed 'underground government' (Merrifield, 1994). In the worst cases, governments simply do not publish budgets or accounts, or provide information in such a manner as to prevent meaningful analysis.

Politicians will also tend to avoid explicit policy goals, since these may later be used to hold them to account. Instead, they will tend to make ambiguous, rhetorical policy statements and eschew quantitative targets. If performance information is made available, it is likely to be provided selectively, so as to present the government in the most favourable light. Consequently, the legislature and the wider public may have little notion of the resources available to government, how and why these resources have been deployed and what results have been achieved. They are, therefore, poorly equipped to assess and vote on the relative costs and benefits of alternative policies or political parties.

These information asymmetries can only be overcome where standards of disclosure are set and enforced. The IMF's 'Code of Good Practice on Fiscal Transparency' (1997) lays out clear standards with regard to the timeliness, coverage and accuracy of information to made available to the public. It also emphasises the need for clear institutional arrangements and procedures and the disclosure of information regarding the basis on which budgetary decisions are made. The existence of an independent audit institution, with authority to enforce standards of disclosure and compliance with due process, is seen as crucial, as foreseen in the earliest reforms of the budget systems (Section 2.6).

Unfortunately, independent auditing is an incomplete solution. While auditors may enjoy operational independence, they are ultimately responsible to the legislature. Even where they may initiate sanctions against individuals, they have no authority to mandate actions by the legislature or the executive. Consequently, independent audit institutions are dependent on the good will of the legislature and executive in implementing its recommendations. All too often these institutions simply ignore audit reports (Zody, 1996: Cromwell, 1995: 192).

Within Government, information asymmetries will also undermine attempts to formulate and monitor policy. This is largely because Ministries of Finance and Cabinet rely on information provided by agencies to assess agency needs and performance. This information will, inevitably, be partial and self-serving. In the UK, New Public Management reforms have been criticised on the grounds that, by focusing on strategic control, on the 'bottom-line' of outputs, they distracted the Treasury's attention from the details of agency management and performance, and thereby exacerbated these underlying information asymmetries (Parry et al, 1997). As a result, Government ends up 'steering public expenditure with defective maps' (Heald, 1995: 213).

Unfortunately, owing to capacity constraints and the underlying disincentive for agency co-operation, detailed scrutiny of departmental budgets will not provide an adequate solution. What is needed is independent triangulation of data. Various sources of independent information can be envisaged: independent evaluations of government agencies; surveys conducted by independent statistical agencies; and direct consultations with the public and the clients of public services. Consultative mechanisms are particularly effective in securing information concerning the quality and adequacy of service provision (McConaghy, 1999).

Driving reform

Transactions-cost economics reveals the importance of institutional arrangements in determining resource allocations and the outcome of the budget process. The implication is that resource allocation outcomes can be improved through institutional reform, particularly those that improve the transparency and credibility of the budget process. The question is, who will champion these reforms? There are grounds for believing that politicians share a mutual interest in maintaining a discretionary, opaque budgetary system, even in competitive multi-party electoral systems, since they may expect to benefit from these characteristics of the system when they come to power. Healey (1995: 252) suggests that, in Jamaica, 'opposition MPs did not attack the discretionary political control commonly exercised by those elected to power' for precisely this reason. If this is the case, external pressure will be needed before governments will implement effective reforms.

Box 8: The Role of civil society

Two contrasting relationships between civil society organisations and the budget process can be distinguished: participant and advocate. The role of participant is by far the most common. Many non-governmental organisations benefit from public resources, either through core funding to support their activities or as contractors for government agencies. Obviously there is a risk that these agencies will be captured by the funding agency, so that their interests are aligned and they become implementing agencies of government, rather than institutions with a distinct policy (Greer and Hoggett, 1999).

Independence is critical when it comes to advocacy work. Civil society organisations are unlikely to force change on reluctant politicians and bureaucrats where they are closely associated with or direct beneficiaries of existing institutional arrangements. Jenkins and Goetz (1999: 47-48) argue that the accommodation of civil society within government-led participatory approaches tends to inhibit confrontation with vested, bureaucratic and political interests on key issues, reducing their effectiveness as a means of tackling corruption or poor performance. They suggest that advocacy is likely to be more effective where institutions are subject to 'public auditing' through full disclosure of information and the confrontation of failure and corrupt practices in local-level, public meetings, following the example of a national NGO in Rajasthan, India. NGOs can provide a useful role at this level, educating citizens about the budget process, its implications and their rights, and supporting them in confrontations with authorities – school directors, politicians and bureaucrats – where their views might otherwise be ignored. Experiences in Brazil suggest that the budget process can provide a focus for debate on key resource allocation, performance and accountability issues even where Municipal Councils oppose public participation and disclosure (Scanlon, 1999).

NGOs can fulfil a similar function at national level, where they have adequate access to information, strong analytical capacity and an independent press and funding to disseminate their findings. One of the best examples of budget advocacy work in developing countries is that of Institute for Democratic Alternatives in South Africa. IDASA has pressed the Government to reform both the budget process and its budget policies through a range of analytical publication – notably its Women's and Children's Budgets – media briefings, advisory work with parliament and work with other civil society organisations. While it is difficult to determine to what extent IDASA has influenced the progress of reform, it has demonstrably raised the profile of budgeting issues in South Africa.

Experience has shown that pressure from international financial institutions has not always had the desired results. Where governments have come under pressure to curtail spending, as under structural adjustment programmes, revenues and expenditures are often transferred to 'underground government' so as to avoid cutting back on programmes and hide the severity of the fiscal crisis (Harrigan 1998; Healey, 1995). Ultimately, the onus of responsibility lies with the principal: citizens and taxpayers. This points to the central importance of civil society and the democratic process in realising improvements in public expenditure outcomes.

Public access to information is critical in this context: without an understanding of budget issues and awareness of the failures of governance, citizens are unlikely to exert pressure for change. The media has a crucial role to play in both the creation and dissemination of this information. Where the media are independent and take an active, critical interest in public expenditure issues, there is likely to be greater pressure on government to improve its performance and transparency. Where the media ignore these issues, or passively toe the government line, the pace of reform is likely to depend on the somewhat limited goodwill of politicians. NGOs can also play an important role, both in support of the media and as advocates of reform. Here too though the independence of the civil society organisations, and their willingness to confront vested and corrupt interests in government and the bureaucracy, are likely to be critical in determining the effectiveness of their interventions (see Box 8).

4. Conclusion

After a search of sixty years for a comprehensive theory of budgeting that would resolve the basic budgeting problem, it is somewhat disappointing to arrive at a conclusion that no such theory exists and it is unlikely that such a theory can ever be formulated. It is even more disappointing to conclude that this search has been thwarted by a problem that V. O. Key identified when he formulated the problem back in 1940, namely the impossibility of defining a comprehensive utility function or decision-making mechanism that can satisfactorily reconcile the competing claims of different interests for resources across the whole public sector.

Nevertheless, considerable progress has been made in the development of analytical techniques that support the appraisal of public expenditure decisions. Individually these techniques do not provide a satisfactory basis for resource allocation decisions, though they are more powerful when combined so that spending decisions are subject to an analysis of the underlying rationale for public intervention, the relative costs and benefits of alternative interventions and the distributional impact of spending. This is the approach that Pradhan (1996) advocates for World Bank sponsored Public Expenditure Reviews.

Unfortunately, there are limitations on the scope for application of these techniques. They are more easily applied in the analysis of individual spending decisions or in the comparison of alternative interventions within a particular sector. Even at this level they are more useful as a guide to the relative share of public spending than as a means of determining the level of spending that should be allocated to a particular activity. Although some of these techniques – notably measures of relative effectiveness, cost benefit analysis and analysis of distributional impact – can be scaled-up to address inter-programme or inter-sectoral resource allocation decisions, they are confronted with informational constraints which render their application impractical and the results of questionable worth. Consequently, appraisal of resource allocation decisions tends to be atomistic and bottom-up, providing support to sectoral agencies in the choice between individual interventions intended to achieve narrowly defined policy goals. Ministries of Finance, responsible for resource allocation across the public sector as a whole, must proceed in a similar manner in determining the relative shares of education, health, law and order, agricultural services and other sectors. Ultimately, owing to these limitations, analytical techniques can at best provide a guide to the preferred allocation of resources to achieve policy goals.

Perhaps the most important conclusion to be drawn from the present review is that resource allocation decisions in the public sector may be guided by technical analysis but are made through a political process in which technical analysis is but one, and not always the most important, consideration. While development practitioners proceed as though the rationalist paradigm – which provides a structure for decision-making based on technical analysis – prevails, they are acutely aware that budgetary outcomes often diverge markedly from the notional ideal or the public interest. The implication is that solutions to the basic budgeting problem must address the resource allocation and application process as well as tackling the basis of resource allocation decisions.

While incrementalist studies have revealed the importance of institutional role play and institutional politics in determining resource allocations, they provide few solutions for the problems identified. Approaches based on institutional economics are more helpful. They demonstrate the importance of transparency in the budget process as a means of overcoming the informational asymmetries that allow vested interests in the legislature, in government and in the bureaucracy to divert public resources for private ends. They also stress the importance of independent oversight bodies – such as audit institutions and independent statistical authorities – as guarantors of transparency and a means of ensuring compliance in the executive.

Transparency can also be improved by providing opportunities for citizens and the beneficiaries of public service to voice their priorities and concerns, thereby triangulating information received through administrative channels, which may be manipulated to serve the interest of bureaucrats and politicians. The divergence between public and private interests can be mitigated by institutional reforms. There is good reason for believing that budgetary systems dominated by a relatively powerful Ministry of Finance are more likely to favour the interests of the average taxpayer than systems in which it is weaker relative to sectoral agencies. Competition between service providers within government or between public and private providers may provide a spur to improved performance and cost reduction. Target setting may have the same effect, particularly where there are personal and institutional incentives for improved performance.

This has important implications for development practitioners. While donors have tended to focus on the analysis of expenditure policy and the resulting resource allocations, closer attention should also be paid to the budgeting process. These issues are addressed in the new-generation Public Expenditure Reforms and a range of other diagnostic instruments being developed by the World Bank and the IMF, such as Fiscal Transparency Reviews and Country Financial Accountability Assessments.

There is a danger that such instruments will focus exclusively on public expenditure management systems. While this may help identify and plug leaks, the fundamental problems of public sector financial management cannot be resolved without addressing broader institutional and governance concerns. A broader framework for public expenditure analysis is needed, focusing on the relationships between and within public institutions, the incentives generated by institutional structures and their implications for budgetary behaviour. Similarly, public expenditure management reforms are more likely to be successful when undertaken within the framework of broader institutional reforms in which the underlying incentives for perverse behaviour can be addressed.

Donors can play an important part in fostering these kinds of reforms. Their experience in compelling institutional reform is less successful. Certainly, attempts to tighten fiscal control during structural adjustment often led to the diversion of resources to underground government which reduced fiscal transparency. Ultimately, citizens have to be the driving force for reform. This requires considerable investments in public information, through an independent media, and the strengthening of advocacy groups and oversight bodies such as parliament and auditors which can exert pressure on governments to improve public expenditure management practice and deliver the desired resource allocation outcomes.

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