BEHAVIOR AND RATIONALITY IN BUDGETARY DECISION MAKING

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Abstract

The aim of this paper is to present the arguments of the major critics of the rational approach (such as Wildavsky and Lindblom) as well as the position on the issue which can be inferred from Cyert, March and Simon. It appears that applying rational budgeting such as PPBS and ZBB will either preclude the use of heuristics and incremental decision making to define budgetary problems in such a way as to avoid explicitly confronting value conflicts or will lead to return to use the incremental decision making.

Key Words: Incremental Budgeting, Decision Making, Rational Budgeting, Planning Programming Budgeting, Zero-based Budgeting, Conflict, Heuristics, Bargaining, Satisfaction.

Introduction

There has been a dichotomy which may be discerned in academic thinking over the last fifty years between the analysis and advocacy of incrementalism and rational comprehensive approaches to budgetary decision making. The conjectures in this paper are based mainly on the works of Simon (1955, 1957, 1979); Cyert and March (1963); March and Simon (1958); Lindblom (1959, 1961) and Wildavsky (1979).

Political Decision Making

The assumptions and propositions that underlie the political model are attributed to Simon (1955, 1957, 1979); Lindblom (1958, 1959, 1968); and Cyert and March (1963). One of the theory's most crucial premises is presented in the following excerpt from Simon's work (1979):

> "The capacity of the human mind for formulating and solving complex problems is very small compared to the size of the problems whose solution is required for objectively rational behavior in the real world."

In this statement Simon presents his fundamental thesis about human decision making by contrasting it with the more classical notion of decision making

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used in economics. In general, economists assume that decision makers are "rational" in all situations. In contrast Simon argues that the ability of humans to gather, comprehend and retrieve information from memory and make inference is limited for a number of reasons. First, their environments are exceedingly complex. Second, their mental capabilities are very limited in comparison to the demands of a complex environment. Third, they are constrained by finite resources, such as time and money, from attempting to fully understand environmental complexities. It follows that decision makers make decisions under conditions of extreme uncertainty most of the time and they make decisions only in an intendedly rational manner.

Lindblom (1959, 1975) believes that a comprehensive attempt at problem solving through planning is not possible in that clarification of objectives founders on social conflict, that required information is either not available or will entail prohibitive cost, or that the problem is too complex for the decision makers intellectual capabilities. For him, the rational approach of adjusting the means to the end is not feasible. Policy decisions affect different values so that there are conflicts at every stage, and as each decision is saturated with value choices, it would not be possible, or politically feasible, to maximize social welfare.

Cyert and March (1963) lay stress on the group of individuals that are responsible for setting goals in the firm and ways of resolving conflicts that may arise. They suggest a framework based on four concepts that can serve as a basis for resource allocation within firms and non-business organizations:

1. quasi-resolution of conflict through subdivision of goals and problems, with an emphasis on a limited number of problems through the use of acceptable decision rules rather than optimization;
2. avoidance of uncertainty through tackling problems as they arise by resorting to feedback of information and by negotiating decisions under standard procedures;
3. problematic search for solutions to problems as they are encountered, with the search itself being a simple model of causality; and
4. organizational learning, implying adaptation through experience and search rules.

Satisfaction

Herbert Simon (1957) in developing his concept of "satisficing" argues that administrative theory is the theory of the behavior of human beings who satisfies because they have not the wits to maximize. Simon elaborates:

> First, because he satisfies, rather than maximizes, administrative man makes choices without examining all alternatives. Second, because he treats the world as rather "empty", and ignores the "interrelatedness of all things", administrative man is able to make his decisions with relatively simple rules of thumb that do not make impossible demands upon his capacity for thought.

In fact satisficing differs from incrementalism in at least two respects. First, while Lindblom (1959) postulates modest attempts at "improvement" over successive decisions, Simon believes that decisions will be "programmed" and essentially not modified until they no longer satisfies. Second, Simon holds that when decision patterns no longer satisfies, search will be undertaken. Lindblom does not indicate what might happen should incrementally taken decisions not satisfies. Incrementalism, presumably, ensures decisions that are in some way satisfactory.

Moreover, Gortner et al (1989) state that satisficing assumes a pre-established standard rather than a group negotiation process. Also, the sequence in which alternatives are discovered is much more important in the satisficing model so that the search process, current environmental events and professional interests are likely to have more of an impact with satisficing than with incrementalism. However, they may be related. Satisficing appears to describe how individual decision makers act, while the incremental model describes group or interactive decision making in large, perhaps more political settings.

Conflict

In their discussion on intra-organizational conflict as a dependent variable, March and Simon (1958) identify an array of factors which tend to produce or encourage conflict. The fact that these factors closely resemble the elements of the "political" model of budgetary decision-making suggests both that analysis in terms of theories of conflict may be a useful approach to the problem, and that the theorizing of March and Simon may be a good point starting point.

March and Simon identify two necessary conditions for the occurrence of intergroup conflict. The first of these is a "felt need for joint decision-making. Crucial to producing this felt need are two factors: mutual dependence on a limited resources and interdependence of limiting of activities. In the budgetary situation the presence of both of these is evident. The recurrent, time-constrained character of budgeting places demands upon departments to coordinate the timing of their budgetary decisions, as well as to interact with one another and with common supervisors in the making of them. Moreover, there is no better example of mutual dependence upon a limited resource than the process whereby administrative units carve up the budgetary "pie". In fact, March and Simon single out budgeting as the central locus of conflict in most organizations.

> Conflict among subunits in an organization will be particularly acute with respect to budgeting and the allocation of money and less acute (in general) in the other aspects of organizational decision-making.

The second necessary condition for intergroup conflict within an organization is described by March and Simon as either a difference in goals or a difference in perceptions of reality. Here again, both of these conditions exit in the typical budgetary environment. Administrative agencies tend to manifest differences in goals, at least at the operational level. Agency socialization and reward systems, low subjective operationality of overall organization goals and, competition for scare resources seem to be relevant.

Since goal differentiation and independence of sources of information seem to be operative in most budgetary decision-making environments, it might be plausible to infer the likelihood of such a condition (March and Simon, 1958). In any event, this variable, which appears to be somewhat dependent upon the previous one (goal differentiation) will not be crucial to the analysis which follows. It is sufficient at this point to have established the fact (or at least the strong probability) that the typical budgetary decision –making system contains the preconditions for political conflict. March and Simon (1958) however, have advanced a set of hypotheses which could enable one to predict the general form of conflict resolution procedures and strategies on the bases of the particular nature of the preconditions. According to March and Simon, "an organization reacts to conflict by for major processes: (1) problem solving, (2) persuasion, (3) bargaining, and (4) politics. The first of these processes, problem-solving, is of interest because it is just the kind of approached advocated by the proponents of PPBS-ZBB. As March and Simon state:

> "In problem-solving, it is assumed that objectives are shared and that the decision problem is to identify a solution that satisfies the shared criteria. Thus, in the problem solving process the importance of assembling information is stressed, search behavior is increased, and considerable emphasis is placed on evoking new alternatives."

PPBS and ZBB as rational models of administrative decision-making thus fall into the "problem-solving" category of responses to organizational conflict. This is a significant modification of the usual PPBS-ZBB analysis if only because it explicitly recognizes the potentially conflictual nature of the decision-making process. However, more important is the identification that this mode of decision-making is appropriate only under certain conditions, where operational goals are shared and the major problems are one of information and search.

March and Simon (1958) make one further elaboration of this analysis which is of interest. Grouping problem-solving with persuasion (where disputes are reconciled by appealing to higher-order, operational, shared vales) under the heading of "analytic" processes, they state:

> "The extent of use of analytical processes to resolve conflict is a function of the type of organizational conflict involved. The more organizational conflict represents individual rather than intergroup conflict, the greater the use of analytical procedures."

In other words, analytic process will be most likely to be used when disputes are grounded in differences among individuals which do not reflect conflicts between organizational units or intra-organizational interest groupings.

Bargaining

Rubin and Brown (1975) define bargaining as the process whereby two or more parties attempt to settle what each shall give and take, or perform and receive, in a transaction between them. Bargaining in the most general sense is an interaction process whereby jointly acceptable decisions are arrived at without the use of force, under conditions of goal-conflict among the participants. However, the circumstances which surround any bargaining situation may vary considerably, and there is much literature on the subject of bargaining which suggests that different kinds of circumstances tend to produce both different strategies and different behaviors on the part of the bargainers, as well as different outcomes.

There are, or at least often may be, compelling strategic reasons for organizational units to coordinate their effort and avoid both the substance and appearance of intramural conflict. The appearance of unity and the presentation of an integrated, united front, budgetary appeal may well enhance the chances for a favorable legislative action. The coordination of the claims of diverse programs may be necessary to avoid legislative reprisals or to breed confidence in an administrative organization on the part of legislators. Cooperation, in other words, can promote overall departmental gains to the benefit of the component agencies. Similarly, such cooperative behavior may minimize the individual and joint risk of budget cutting. Thus shared values may be pursued through cooperation.

For most organizations, conflictual bargaining is apt to be dysfunctional. March and Simon (1958) note two important dysfunctions of bargaining: (1) it places strains upon organizational status and powers systems by forcing those in a formal position of power to attempt to exert that power, thus emphasizing the salience of that power when its holder wins, or weakening the formal and informal positions of the holders of power when they lose; and (2) bargaining acknowledges and legitimizes heterogeneity of goals in the organization. While the latter conditions may in fact be the case, it is generally not to the advantage of organizational leaders to openly admit it.

Budget Heuristics

The values in the budgetary process over which there is contention can be defined in such a way as to permit cooperation. The process whereby this takes place is the development of heuristics. Heuristics are rules of thumb, or routine procedures, which are adopted to deal with regularly recurring decisional problems of some difficulty (Wildavsky 1979). They are a shortcut to, or substitute for; the kind of analysis which rational budgeting advocates contend is necessary or beneficial. Heuristics enable one to solve, or at least cope with, problems which are too difficult to handle.

The development of heuristics flows from the central facts with which budget-makers are confronted: the existence of value differences which are both analytically unmanageable because of incomparability and politically unmanageable because of individuals and group attachments to different preference orderings. A heuristic is thus a device which both enables a group to agree upon a solution to a potentially divisive problem and to maintain cohesion in the process. It is the introduction of heuristic values and norms which in a routine and agreeable fashion relieves the budget-makers of the necessity of confronting their problems in all their complexity. Given the uncertainties and dangers of their situation, decision-makers develop legitimizing norms for reaching agreements which will be at least minimally satisfactory to all concerned. Such norms tend to encourage and justify the compromises which agreement implies. Thus, heuristics must appeal to shared values.

Two heuristics, it seems, are most prominent in satisfying these criteria. Both have been empirically identified in the literature on the budgetary process. The first of these is the heuristics of "fair share." Wildavsky (1964, 1979) has noted its occurrence in the budgetary process. If one is to reconcile competing claims and yet satisfy everyone minimally, at least most of the time, then one must see to it that everyone gets a "fair share." This notion incorporates a norm (fairness, justice) which is culturally shared and which is apt to have considerable persuasive force, especially in a situation where other guidelines are absent or confusing, and where decisions are necessary and unavoidable.

However, "fairness" can not be defined purely in the abstract – it must have some operational content. It is given this, by the use of the second heuristic, which Lindblom (1959) has stressed so heavily, the heuristics of "precedent." What is a "fair share?" It may be argued, if I have been getting about the same slice of pie all the while, then I certainly believe I will be entitled to at least that much this time, and if I am willing to recognize that my colleagues have a legitimate claim of the same sort, then a "fair" slice this time would be pretty much what I got last time, percentage-wise. So precedent is followed. In so doing, as Wildavsky (1988) emphasizes, we make this year's budget basically by look at least year's budget and making a few modest adjustments in a few categories. We proceed, in other words, by "successive limited comparisons" and avoid conflict. In this field Notz et al (1983) state that:

> "Budgeting is political in the sense that it deals with conflict over whose preference will prevail in the determination of organizational policy. Conflict over the allocation of resources is often a manifestation of unresolved goal conflict. Those areas in the organization that have historically received less than what they consider to be their fair share of resources will use the budgeting process to press for a more equitable allocation, while those areas that wish to retain their historical share will use the previously established goal hierarchy to justify their claims."

It is important to re-emphasis that the application of heuristics to the budgetary problem not only enables the problem of value comparisons to be resolved, but effectively buries the conflict potential of the budgetary decision-making situation beneath a structure of shared norms and routines. It is this function which primarily accounts for the persistence of incrementalism. In this field Wildavsky (1988) states:

> "When the budgetary base (last year's appropriation) is widely accepted, conflict is limited both because there is an agreed starting point and the increments are small. When the budgetary base is unacceptable, calculation becomes more complex and conflict rises."

For an incremental system to work, heuristics, such as those of fairness, precedent and base should be used. These depend upon compromise: specifically, they depend upon the ability of decision-makers to cut the pie into small slices (i.e. pounds or thousands of pounds) in order to give a little here, take a little there, make minor adjustments, split differences etc. On the other hand, rational budgeting requires something more. It attempts to force such unwanted considerations upon the budget-makers. It explicitly singles out the heuristic of precedent as illegitimate. It demands, through exhortations and through the structure of the program budget, that the value questions which heuristics had buried be exhumed and extensively worried about. It seeks to strip away the basis for routine and conflict-avoidance in budgetary decision-making.

The impact of rational-comprehensive procedures upon the budgetary process is captured by Dunbar (1981). Dunbar assumes that that basic principle of the PPBS-ZBB is that budgets should be organized in terms of desired goals, and that resources should be allocated to subunits according to the contributions the subunits are expected to make to these goals. However, these comprehensive routines have probably never been successfully applied. New goal categories inevitably create new conflicts and uncertainties for subunits, all of which then attempt to show that they contribute to all organizational goals and, therefore, have legitimate claims on all resource pools. Most importantly, these routines ask controllers to reconsider what effect existing allocation routines and rules may be having, but they do not generate any meaningful alternative routines and rules. Most people within organizations are not prepared to work through the uncertainties, adjustments, and reorganizations which new, comprehensive routines and rules would acquire.

Wildavsky and Hammond (1965) found that officials in the department of agriculture were indecisive towards the use of zero-base budget. Instead, they suggest to use it "at intervals, every few years" or "every five years or so".

Conclusion

What has been discussed in this paper, is something of a synthesis of Lindblom's notion of incrementalism, March and Simon's concern with conflict and bargaining, and Wildavsky's notion of heuristic, resulting in the construction of rather a simple framework which renders up more specific and relevant explanations. The argument was that incrementalism operates through the development of heuristics which effectively substitute for both analysis and the more conflictual forms of bargaining in the reaching of joint decisions. On the other hand, the introduction of rational budgeting will destroy, at least temporarily, the usefulness of the heuristics which produce incremental patterns of choice, by explicitly challenging them. Moreover, the conflict which incrementalism has suppressed will surface and become evident under rational budgeting.

References

1. Cyert, Richard N. and James, G. March (1963), A behavioral Theory of the Firm, Englewood Cliffs, N J Prentice-Hall.
2. Dunbar, Roger. L.M. (1981), Designs for Organizational Control, in Handbook of Organizational Design Vol 2 edited by Paul C. Nystrom and William H. Starbuck, Oxford: Oxford University Press.
3. Gortner, H. F.; Mahler, J. and J. B. Nicholson (1989), Organization Theory: A Public Perspective, California: Brooks-Cole Publishing Company.
4. Lindblom, Charles E. (1958), Policy Analysis, The American Economic Review, Vol 48, June, pp 298 – 301.
5. Lindblom, Charles E. (1959), The Science of Muddling Through. Public Administration Review, Vol 19, spring, pp 77 – 88.
6. Lindblom, Charles E. and D. Braybrooke (1968), A Strategy of Decision, New York: Free Press.
7. Lindblom, Charles E. (1975), Incremental Decision Making, in Public Budgeting and Finance, edited by R.T. Golembiewski and Jack Rabin, F.E. Peacock Publishers, Inc.
8. March, James G. and Herbert A. Simon (1958), Organizations, New York: John Wiley and sons.
9. Notz, W. W.; Strake, F. A. and J. Atwell (1983), The Manager as Arbitrator, in Negotiating in Organization, edited by Max H. Bazerman and Roy J.
10. Lewicki, California: Beverly Hills, Sage Publication Inc.
11. Rubin, J. Z. and B. R. (1975), The Social Psychology of Bargaining and Negotiation, New York: Academic Press.
13. Simon, Herbert. A. (1957, 1976), Administrative Behavior, New York: The Free Press.
14. Simon, Herbert A. (1955), A Behavioral Model of Rational Choice, Quarterly Journal of Economics, Vol 69, pp 99 -118.
15. Simon, Herbert A. (1957), Models of Man, New York: John Wiley and Sons.
16. Simon Herbert A. (1979), Models of Thought, New Haven: Yale University Press.
17. Wildavsky, Aaron (1964), The Politics of Budgetary Process, Boston: Little-Brown and Company.
18. Wildavsky, Aaron and A. Hammond (1965), Comprehensive versus Incremental Budgeting in the Department of Agriculture, Administrative Science Quarterly, Vol 10, issue 3 December, pp 321 – 346.
19. Wildavsky, Aaron (1979), The Politics of Budgetary Process, Boston: Little-Brown and Company.
20. Wildavsky, Aaron (1988), A Cultural Theory of Budgeting, International Journal of Public Administration, Vol 11, No 6, pp 651 – 677.