



The Confusing Case of Budgetary Incrementalism: Too Many Meanings for a Single Concept

Author(s): William D. Berry

Source: *The Journal of Politics*, Vol. 52, No. 1 (Feb., 1990), pp. 167-196

Published by: Cambridge University Press on behalf of the Southern Political Science Association

Stable URL: <http://www.jstor.org/stable/2131424>

Accessed: 25/08/2008 16:27

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at <http://www.jstor.org/action/showPublisher?publisherCode=cup>.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit organization founded in 1995 to build trusted digital archives for scholarship. We work with the scholarly community to preserve their work and the materials they rely upon, and to build a common research platform that promotes the discovery and use of these resources. For more information about JSTOR, please contact support@jstor.org.

The Confusing Case of Budgetary Incrementalism: Too Many Meanings for a Single Concept

William D. Berry
University of Kentucky

The first part of this paper reviews the meaning of the concept *incrementalism* to determine whether the enormous number of studies confirming or challenging the presence of budgetary incrementalism are analyzing the same phenomenon. I identify 12 distinct meanings of incrementalism in the literature. A pairwise analysis of these definitions shows that they have very little logical relation; a process incremental by one definition is not necessarily incremental by another. After reviewing the implications of this conclusion for future research about public budgeting, I argue that the most productive course would be to banish the term *incrementalism* from new scholarly literature, and instead, focus research on more *specific* characteristics of the budgetary process. The various distinct meanings of incrementalism suggest a preliminary set of such characteristics.

The second part of the paper begins with an examination of the diverse methodologies used to assess empirically whether budgeting is incremental. This serves as a basis for an analysis of the methodologies best suited for investigating the various specific characteristics of budgeting discussed in the first part of the paper. Some characteristics are clearly “researchable” with traditional methodologies and data for studying incrementalism; others require alternative approaches.

No single concept has been more central to the study of public budgeting over the last three decades than *incrementalism*. Throughout the 1950s and early 1960s, Charles Lindblom, Aaron Wildavsky, and others defined the term and developed theories explaining why government decision making generally—and budgeting specifically—tends to be incremental (Dahl and Lindblom 1953; Lindblom 1959; Braybrooke and Lindblom 1963; Wildavsky 1964). In the late 1960s and the decades following, attention shifted to *testing* the hypothesis that public budgeting is incremental (e.g., Davis, Dempster, and Wildavsky 1966, 1974; Fenno 1966; Sharkansky 1968; Kanter 1972; Natchez and Bupp 1973; Wanat 1974; Gist 1977, 1982; LeLoup and Moreland

An earlier version of this paper was presented at the annual meeting of the Southern Political Science Association, Atlanta, November 1988. I appreciate the helpful comments of Frances Berry, Mark Kamlet, Ronald King, and David Lowery.

1978; Caldiera and Cowart 1980; Fischer and Kamlet 1984). Most studies done since the beginning of the Reagan era have concluded that the United States federal budgetary process is no longer incremental, and that instead, “top-down” [a term introduced by Kamlet and Mowery (1980)] budgeting is now dominant (Kamlet and Mowery 1983, 1987; Auten, Bozeman, and Cline 1984; LeLoup 1988; Straussman 1988, 118).¹

There is little doubt that changes occurring during the Reagan presidency are a partial explanation for the tendency of recent studies to reject the once widely accepted hypothesis of incrementalism. But Kamlet and Mowery (1987) argue that “top-down” executive budgeting has been a fact of life for fully three decades (see also Auten, Bozeman, and Cline 1984; Kiewiet and McCubbins 1985, 75). Moreover, even studies prior to the 1980s have come to varied conclusions about the extent of incrementalism in budgeting. Some of this variation is undoubtedly due to the fact that the studies focus on different organizations or budget categories. The variation in findings has also been attributed to differences in methodology (Gist 1982), and level of aggregation (Natchez and Bupp 1973). But I would argue that much of the variation in empirical results is a consequence of different authors conceptualizing incrementalism in much different ways.

The principal purpose of this paper is to review the large number of studies of budgetary incrementalism to determine whether they are in fact analyzing the same phenomenon. I find that the meaning of incrementalism is far from uniform across the studies; there are numerous different definitions. After identifying the range of meanings, I maintain that they have very little logical relation. That is, a process incremental by one definition is not necessarily incremental by another. This leads to a conclusion that incrementalism has come to mean so many things that it is no longer analytically useful. The discipline would be well served if, in the future, scholars resist the temptation to label budgetary processes as either incremental or nonincremental. Indeed, analysts should avoid reference to incrementalism in favor of concepts describing specific characteristics of the budgetary process. Furthermore, as scholars increasingly present “top-down” characterizations of budgeting, the field needs to avoid the trap it fell into with incrementalism, by making certain that the term “top-down” (along with other terms that may yet be developed) does not blur to the point where it means nothing more than “*not* incremental.”² Another purpose of this paper—and the subject of its second part—is to assess the methodologies appropriate for empirical analysis of the

¹There have been fewer explicit challenges of the applicability of the incremental model to budgetary processes in the American states; but for one such challenge, see Lowery, Bookheimer, and Malachowski (1985).

²Kamlet and Mowery (1980) themselves have not fallen into this trap; they have given a specific meaning to “top-down” (to be discussed below); I simply urge that the meaning remain specific as the term diffuses to a larger number of scholars.

specific budgetary characteristics identified in the first part. As background, the second part of the paper begins with a review of the variety of methodologies used to study incrementalism in the extant literature.

THE VARIED MEANINGS OF INCREMENTALISM

In this section, I review 12 major conceptions of incrementalism in the literature. The first six can be traced to early works by Lindblom and his colleagues (or related literature), and apply to decision-making processes in general—which may or may not involve budgetary choices. The remaining six conceptions define incrementalism in the specific context of budgeting and are found in the huge empirical literature following Lindblom that attempts to assess the extent of incrementalism in public budgeting.

The Early Definitions of Incremental Decision Making

The intellectual origin of empirical research on incrementalism is the theoretical work of Charles Lindblom and various colleagues (Dahl and Lindblom 1953; Lindblom 1959; Braybrooke and Lindblom 1963). Lindblom presents a strategy of decision making referred to as *disjointed incrementalism* (Braybrooke and Lindblom 1963), or *successive limited comparisons* (Lindblom 1959). The various characteristics of disjointed incrementalism give rise to five common meanings of incrementalism that I review briefly below. Each conception reflects a way of simplifying decision making by reducing the information and cognitive abilities required of a decision maker by the rational-comprehensive model (Lindblom 1959).

The Restriction to Noninnovative Alternatives. Rational-comprehensive analysis requires that a decision maker consider all alternatives for dealing with a problem—including highly innovative ones. But at the heart of the initial conceptualization of incrementalism by Lindblom is the requirement that the decision maker limit “policy comparisons to those policies that differ in relatively small degree from policies presently in effect” (Lindblom 1959, 84; see also Anton 1967, 36; Danziger 1976, 335–36).

Restricting the Number of Alternatives. Again in contrast to the comprehensive search required in rational decision making, another characteristic of incrementalism as conceived by Lindblom is the decision maker’s restriction of attention to a relatively small number of alternatives as a method of simplifying decision making (Braybrooke and Lindblom 1963; Lindblom 1959).

Sequential Consideration of Alternatives. Lindblom (1959, 81) argues that incremental decision making involves a series of “successive limited com-

parisons.” Decision makers do not consider a set of alternatives and then choose the one most likely to achieve goals; instead, they “satisfice,” evaluating alternatives sequentially, and selecting the first alternative that seems minimally acceptable (Simon 1945; see also Braybrooke and Lindblom 1963, 102–104; Wildavsky, 1964, 12–13).

Limited Assessment of Policy Consequences. Whereas rational-comprehensive analysis requires exhaustive analysis of the consequences of alternatives, Braybrooke and Lindblom (1963, 83–86, 90–93) maintain that incremental decision makers ignore the full range of consequences, and limit attention to evaluations at the “margin,” i.e., assessments of how the consequences of alternatives differ from the effects of current policy.

Dependency of Ends on Means. In contrast to rational-comprehensive decision making, in which goals are fixed prior to a decision, disjointed incrementalism requires that the choices of “ends” and “means” be mutually dependent, in the sense that goals are subject to revision until an acceptable alternative is chosen (Lindblom 1959; Braybrooke and Lindblom 1963, 94).

Simple Decision Rules. In addition to the above specific definitions of incrementalism emerging from Lindblom’s scholarship, a more general conception can be found in the literature. One of these equates incrementalism with any decision process in which participants are guided by simple rules (Cyert and March 1963; Kamlet and Mowery 1983). For example, Cowart, Hansen, and Brofoss (1975, 543), in developing tests of incremental models, introduce “the proposition that under rather apparently complex decisional settings, budgetary behavior tends to become quite simple. As problems become more elusive and required information more difficult to obtain, decision makers typically choose simplified decision rules in the face of such complexity.” Bromley and Crecine (1980) identify a variety of phrases that have been used to describe the simplified decision rules associated with incrementalism; these include “aids to calculation” (Wildavsky 1964), “standard operating procedures” (Kiewiet and McCubbins 1985), “rules of thumb” (Cyert and March 1963), and “heuristics” (Newell and Simon 1972).

Budgeting-Specific Definitions of Incrementalism

Lack of Attention to the Base. While Lindblom’s writing serves to define incrementalism as a general decision-making process, Wildavsky’s (1964) *Politics of the Budgetary Process* is commonly recognized as initially defining incrementalism in the specific context of public budgeting. According to Wildavsky (1964, 13–16; see also Davis, Dempster, and Wildavsky 1966,

529–30), incrementalism is a process in which budgetary bases (i.e., previous expenditures) are accepted, and decision making is focused on the change from the base.³ It is possible to view this “inattentiveness to the base” definition of incrementalism as a modification of the “restricted number of alternatives” and “inattention to innovative alternatives” definitions to make the latter two applicable to the budgeting arena. Certainly, if the base is not reviewed, (1) attention is restricted to far fewer alternatives than the full range that could be imagined, and (2) most programs adopted will be the *non*innovative programs that constitute the base. But ignoring the base and focusing all attention on the “increment” does not simplify the budgetary process only by limiting the information needs and analytical requirements of the decision maker; it also reduces conflict by shielding existing programs (and their funding) from potential dispute (Kamlet and Mowery 1980, 805; Rubin 1988a, 3).

Smallness of the Ultimate Change. Another common conception of incrementalism focuses on the result of the process. For instance, Wanat (1978, 117) uses the term “descriptive incrementalism” to characterize a situation in which “changes in appropriations from one year to the next have been small relative to the previous appropriations level” (see also Kemp 1982, 643; Bunce and Echols 1978, 911, 923).⁴ One dispute among the various definitions of incrementalism based on “smallness of the ultimate change” is whether the “small change” can be a decrease as well as an increase. Wildavsky (1964), Sharkansky (1968), Hoole, Job, and Tucker (1976), and Kemp (1982) allow for a negative change, but Gist (1977), Wanat (1978), and Kamlet and Mowery (1980) restrict incrementalism to situations in which appropriations are increased.

Negotiation among Participants with Narrow Roles. This definition is based on the assumption that different participants in the budgetary process have quite different roles, and that the result of bargaining among these participants is incrementalism. Wildavsky (1964) argues that the narrow role orientations of budgetary actors—along with the mutual expectations about roles that develop—dramatically reduce the information, time, and analytical abilities required for public budgeting (see also Davis, Dempster, and Wildavsky 1974). Bozeman and Straussman (1982, 510; see also Sharkansky 1968) express this conception well when they write:

³Others relying on a “lack of attention to the base” definition of incrementalism include Sharkansky (1968, 49–50), Gist (1977), Kamlet and Mowery (1980, 804), Browning (1985), and Berry (1986).

⁴For discussions of criteria for judging how large an increase can be and still be labeled small, see LeLoup (1978b) and Davis, Dempster, and Wildavsky (1979, 373, 383).

One assumption [of incrementalism] is the compartmentalization of budgetary roles which means that most participants in the process adopt a narrow view of the budget—a view guided by the perspective provided from their own budgetary turf. Agencies are expected to try to increase their budgets. The OMB role, by contrast, is to cut agency requests. Legislative participants, while proclaiming the need for fiscal constraint, are expected to stimulate increased spending that benefits their constituents and their prospects for reelection.

The incrementalist approach assigns central importance to the role of negotiation strategies. Participants in the process are expected to adopt strategies that further their respective budgetary objectives.

Absence of Competition. Whereas the “negotiation” conception of incrementalism focuses on “vertical” decentralization of budgeting, others have defined incrementalism as a process characterized by “horizontal” decentralization. In this view, the essence of incrementalism is that decisions about the components of an overall budget are made independently. According to Gist’s (1982, 859; see also Natchez and Bupp 1973; Kamlet and Mowery 1987, 158) definition, in an incremental process, “budgeting is a stable process in which individual allocative decisions are sufficiently independent of one another so that tradeoffs are only implicit, and conflict is thereby minimized.”

There is increasing skepticism of the incremental claim that there is no competition in the budgetary process, with most challenges citing budgeting practices in the Reagan era as evidence (e.g., Hecla 1984, 265–70). Kamlet and Mowery’s (1980) notion of “top-down” budgeting refers to a process characterized by interdependence among decisions about the components of a budget, with competition both (1) between fiscal and budgetary priorities in the first stage of the process, and (2) among various agencies in later stages. But Kamlet and Mowery (1987, 169) argue that the federal budgetary process has been top-down not just during the Reagan administration, but throughout most of the postwar era.

Regularity of Relationships. A definition of incrementalism much more general than the previous budgeting-specific conceptions was developed by Dempster and Wildavsky (1979) in a paper intended to clear up confusion about the meaning of the term. They write,

“. . . an *incremental process* is one in which the *relationships between actors are regular* over a period of years, and a *nonincremental process* is one in which this *relationship is irregular* . . . The *size* (or lack thereof) of the increment or the *method* of calculation used do not matter, so long as the relationships between bureaux and Congress remain regular (Dempster and Wildavsky 1979, 375).”⁵

⁵Bozeman and Straussman (1982, 510) also incorporate regularity (or stability) in relationships among budgetary participants as one component of their definition of incrementalism.

Of course, by stating explicitly in their definition what incrementalism does *not* mean, Dempster and Wildavsky show clearly the logical independence of their definition from other conceptions of incrementalism.

Lack of Effect of External Variables. A final very general definition of budgetary incrementalism is less conceptual in nature than the rest, and closer to an operational definition. Several authors have defined incrementalism as a process in which one year's budget outcomes are completely determined by the previous year's outcomes (Coward, Hansen, and Brofoss 1975; Brouthers and Stimson 1980; Auten, Bozeman, and Cline 1984; Kamlet and Mowery 1987, 158). This implies that "external" variables have no impact on budget decisions. As Sharkansky (1967, 174–75) suggests, with incrementalism there is an "intimate relationship between current and previous expenditures The close relationship between previous and current expenditures . . . indicates the relatively narrow range open to the influence of economic or political factors after previous expenditures are taken into account." Some theorists have focused attention specifically on parties and ideology as political factors that have no impact on budgetary choices in an incremental world (Fenno 1966; Lowery, Bookheimer, and Malachowski 1985); in this view, an incremental appropriations process is both nonpartisan and nonideological.

THE RELATIONSHIPS AMONG MEANINGS

Since there are so many different conceptions of incrementalism, it is important to assess the logical connections—if any—among the various meanings. If there are clear logical relationships among several of the meanings, it may be fruitful to view each of these meanings as one of a set of characteristics of a decision-making process that together constitute "incrementalism." On the other hand, if there are few logical connections among the various meanings of incrementalism, a strong case might be made that the clarity of the literature would be enhanced if the term incrementalism were purged from future research on public budgeting in favor of concepts describing specific characteristics of a budgetary process.

To analyze the relationships among conceptions of incrementalism systematically, I examine the logical connections among meanings on a pairwise basis. My conclusions are summarized in figure 1. Each cell in the matrix presents the answer to the question, "If a budgetary process is incremental according to the meaning of incrementalism in the left margin (A), logically, must it be incremental based on the top-margin definition (B)?" (To save space, this question will be abbreviated, "Does A imply B?") For example, the cell in row 6/column 7 answers the question, "Does lack of attention to the base in decision making necessarily imply that the change in spending

from the previous year will be small?" If the answer to the question "Does A imply B?" seems clear and unambiguous, "yes" or "no" is in the cell. A "no" answer for both "Does A imply B?" and "Does B imply A?" means that the two definitions are logically independent, i.e., a process incremental according to one meaning *may or may not* be incremental according to the other.⁶ While most of the cells contain "yes" or "no," two are labeled "inconsistent"; this means that knowledge that a process is incremental based on the left-margin definition actually implies that the process is *not* incremental according to the top-margin definition. The remaining label in the matrix is "depends," which indicates that there is enough ambiguity in the meaning of at least one of the two definitions that the answer to the question, "Does A imply B?" depends upon the precise meaning(s).

Space considerations preclude a separate discussion of the logic supporting each answer in the matrix. Fortunately, the justifications for many answers (especially the "yes"s and "no"s) seem fairly obvious; and for these answers, I offer no elaboration in the text. But some answers clearly require a defense. I begin by considering the logical connections involving the three general definitions of incrementalism: simple decision rules, regularity of relationships, and lack of effect of external variables (see columns and rows 10, 11, and 12). Then, I examine the relationships among the nine more specific conceptions (see the upper-left nine-row by nine-column submatrix).

The Three General Definitions

"Regularity of relationships" among participants is unique among the conceptions of incrementalism in the sense that it is based on a characteristic of budgeting that *must* be present over an extended period of time. Logically, regularity cannot be present in a single choice. In contrast, the rest of the general (and specific) definitions of incrementalism are based on characteristics that can be conceived as describing a single budgeting decision or a general trait of decision making over an extended period. For example, defining incrementalism as a process resulting in a small change from previous policy might imply (1) that a single budgetary decision can be termed incremental if it produces a marginal change, or (2) that we can judge budgeting incremental only if there is a pattern of consistently small changes over numerous decisions.

⁶(i) Note, however, that it is possible for the answer to "Does A imply B?" to be "yes," even when the answer to "Does B imply A?" is "no." For example, a sequential consideration of alternatives logically implies a restriction in the number considered, but a restriction in the number considered does not necessarily require that the alternatives be considered in sequence. Thus, row 3/column 2 contains "yes," but row 2/column 3 contains "no." (ii) If the answers to "Does A imply B?" and "Does B imply A?" were both "yes," this would imply that A and B are equivalent definitions of incrementalism.

The logical relationship of “regularity of relationships” to other definitions of incrementalism depends dramatically on whether the other definitions are viewed as characteristics of a single budgetary choice, or stable characteristics that apply to all budgetary decisions over a period of time. Clearly, if the other definitions are conceived as describing a single choice, then *none* of the other definitions imply regularity. But if we view the other definitions of incrementalism as describing stable characteristics of the budgetary process, then nearly all these definitions imply *regularity* of relationships between actors in the process in some sense of the term.⁷ In turn, the “regularity of relationships” definition is so general that it logically implies *almost none* of the other definitions. The only exception is “simple decision rules”; presumably, regularity in the relationships between actors over time is itself a method of simplifying budgetary choices.

The “simple decision rules” definition is sufficiently general that it, too, implies no other definition of incrementalism, with the possible exception of “regularity in relationships” (as discussed in note 7). This generality also is evidenced in the fact that nearly all other definitions of incrementalism imply simplified decision rules. Indeed, eight of the nine specific definitions of incrementalism can be viewed as reflecting alternative ways of simplifying budgetary decision making: (1) considering only noninnovative proposals, (2) restricting the number of alternatives, (3) considering alternatives sequentially, (4) limiting analysis of the consequences of alternatives, (5) changing goals to accommodate acceptable means, (6) ignoring the base, (7) negotiating with narrow roles, and (8) not allowing competition among budgeting categories.⁸

The third general conception of incrementalism is “lack of effect of external variables.” Of the 11 other definitions of incrementalism, only a few are logically implied by a knowledge that external variables have no effect on budgetary choices. Certainly, the lack of effect of external variables implies a form of “simplified decision rules.” Another possibility is “absence of competition.” If in studying decision making concerning one category of a budget, choices about other budget categories are conceived as external variables,

⁷The one exception may be “a reliance on simple decision rules,” depending on its precise meaning. If the claim that simple decision rules are used in all public budgeting choices allows for the possibility that the method of simplification varies from one situation to the next, then the uniform presence of simplifying aids in budgeting would not necessarily imply “regularity in relationships.”

⁸The ninth specific definition, “smallness of the ultimate change,” being a characteristic of the result (and not the process) of decision making, cannot be conceived as a simplifying method. On the other hand, if smallness of change is a stable characteristic of budgeting over a period of time, it is quite likely (but not logically guaranteed) that some simplified decision rule is being used, as it is unlikely that a highly complex rule would *always* lead to a small change from the base.

then lack of effect of external variables would seem to guarantee a lack of competition among budgetary categories. But if internal variables are defined to include choices about other budget categories, the lack of effect of external variables on a budget choice would not rule out affects of one category on another, one form of competition. Without a better delineation of the meaning of external variables, it is difficult to determine the logical relationships between the “lack of effect” definition of incrementalism and the rest.

In turn, a lack of effect of external variables on budgetary choices is not, in general, implied by knowledge that budgeting is incremental according to the other definitions. The one possible exception to this claim may be “negotiation among participants with narrow roles.” And this depends on the specific meaning of the “negotiation” definition. For example, if the “negotiation” definition is satisfied *only* if agencies uniformly request a large increase over their previous appropriations (so that requests are determined strictly by previous appropriations), departments uniformly cut some out of agency requests (so that department recommendations are determined strictly by the size of requests), the central budget office invariably trims department recommendations (so that budget office requests are determined exclusively by department requests), and the legislature consistently cuts the executive’s recommendations for agencies (so that legislative appropriations are a strict function of budget office requests), then “negotiation with narrow roles” would imply “a lack of effect of external variables.” But, if the negotiation definition is more broadly conceived to allow for variation in the assertiveness of agencies, and variation in the extent to which departments, the central budget office, and the legislature cut agency requests, then external factors may affect budgets even if the process is characterized by negotiation with narrow roles.⁹

The Nine Specific Definitions

The upper-left 9×9 submatrix in figure 1 shows the pairwise logical relationships among the nine specific definitions of incrementalism. The most obvious generalization from this submatrix is the dominance of “no” among the cells; of the 72 nondiagonal cells, fully 63 contain “no.” The logic supporting these claims that one definition fails to imply another should be readily apparent.¹⁰ Furthermore, two of the definitions seem logically inconsistent: “negotiation with narrow roles” and “restriction to noninnovative

⁹Indeed, Lowery, Bookheimer, and Malachowski (1985) offer evidence that the amount by which Congress cuts Office of Management and the Budget requests does vary—depending on the parties controlling the presidency and Congress (see also LeLoup and Moreland 1978).

¹⁰A few of the “no” answers have already been defended in the literature (see, e.g., Bailey and O’Connor 1975; Dempster and Wildavsky 1979, 373; Rubin 1988a, 3).

alternatives.” Explicit in the “negotiation” conception is that agencies adopt a “programmatic” orientation encouraging them to request large increases in appropriations (Wanat 1978; LeLoup and Moreland 1978); put differently, agencies push for nonincremental increases, only to be adjusted later by other actors. This implies that agencies not only consider but actually request “innovative” alternatives.¹¹ In any event, the central conclusion from figure 1 must be that these nine specific conceptions of budgetary incrementalism have few logical relationships.

Indeed, there are only three “yes” cells in the upper-left 9×9 submatrix. If only noninnovative alternatives are considered, then logically, the ultimate change from the base must be small, since the ultimate change must be one of the alternatives considered. Also, a process involving “negotiation with narrow roles” must yield a small ultimate change from the base, since the negotiation conception implies a budget-cutting orientation by non-agency actors (the central budget office and the legislature) that should inevitably lead to a relatively small change in agencies’ appropriations. Finally, a sequential consideration of alternatives ending with the first one judged to “satisfice” necessarily implies that only a restricted number of alternatives is examined.

But an assessment of logical connections is more ambiguous for several pairs of definitions. Two depend on the interpretation of the implications of a small *decrease* in the budget from one year to the next. If a small cut in an agency’s appropriation is treated as a noninnovative alternative, then a restriction to noninnovative alternatives does not imply a lack of attention to the base, as the consideration of a small cut certainly implies attention to the base. But if *any* cut to the base (small or large) is conceived as innovative, then a process restricted to noninnovative alternatives must also satisfy the “inattention to the base” definition.

Similarly, if a small *decrease* in appropriations is allowed under the definition of “small change,” then a small ultimate change in funding does not imply lack of attention to the base. But if the “small change” conception presumes that changes must be increases, then “smallness” may result from either (1) inattention to the base, or (2) attention to the base along with the ultimate decision not to cut into it. Of course, if “smallness of the ultimate change” is not just a characteristic of a single budgetary choice, and instead, small increases are a regular trait of the budgetary process, it is extremely *likely* (but not logically guaranteed) that there has been no attention to the base.

¹¹Of course, the validity of this claim depends on the seriousness of consideration required to infer that innovative alternatives are “considered.” If budget bureaus and legislatures *invariably* trim large agency requests to marginal increases, it is unlikely that *serious* consideration is being given to the requests.

In a similar fashion, if “smallness of the ultimate change” is a regular characteristic of a budgetary process, then “smallness of change” makes it very likely (but again not logically required) that (1) only noninnovative alternatives are considered, and (2) there has been a limited assessment of the consequences of alternatives. For example, it is hard to conceive that a broad consideration of the consequences of alternatives would *never* result in a large increase in appropriations. However, if “smallness” is only assumed to characterize a single budgetary choice, then “smallness” in no way implies that only noninnovative alternatives were considered or that the assessment of alternatives was limited.

Finally, there is some ambiguity in the question—“Does inattentiveness to the base imply that only a restricted number of alternatives are considered?”—pertaining to the meaning of a “restricted” set. Certainly, if there is no attention to the base in budgetary decision making, then many potential alternatives (that involve cutting the base) are not being considered. On the other hand, the mere decision not to consider cutting the base still leaves open a large set of potential alternatives. In essence, whether “inattention to the base” implies “a restricted number of alternatives” depends on whether the proverbial half-glass of water is deemed “half full” or “half empty.”

Conclusion

The three general definitions of incrementalism—simple decision rules, regularity of relationships, and lack of effect of external variables—are so excessively general that they seem incapable of guiding fruitful empirical research about the nature of public budgeting. There are innumerable ways that the requirements for rational-comprehensive decision making could be relaxed to achieve decision making that is relatively simplified, and it is almost a truism that budgetary officials will resort to one or more of these simplifying procedures to help them make choices. So defining an incremental process as one characterized by simple decision rules renders the proposition that public budgeting is incremental as trivial and uninteresting.

The problem with defining an incremental process as one in which relationships between actors are regular over a long period is that “regularity” can take a huge number of forms. Even if we confine ourselves to models in which the relationships among actors can be specified by one or more mathematical equations, relationships that appear *irregular* when looking for one type of relationship (e.g., linear), can be deemed regular if another type of relationship (e.g., polynomial) is expected. Unless greater specificity is given to the notion of “regularity,” this definition of incrementalism has little utility in research. Finally, the “lack of effect of external variables” conception is plagued by ambiguity with respect to what variables are internal and what are external. Thus, the more specific definitions of incrementalism hold out the only realistic possibility for guiding research.

But we have seen that with only a few exceptions, there is little logical relationship among the various specific definitions. Therefore, at a minimum, scholars must be careful to specify precisely what they mean when they claim that some budgetary process is (or is not) incremental. Moreover, several more specific observations are in order. First, even among the five definitions that can be traced to Lindblom's original conception of "dis-jointed incrementalism" (definitions 1 through 5 in figure 1), there are few logical relationships (see the submatrix bordered by asterisks). Consequently, researchers must establish a specific meaning even if a claim of budgetary incrementalism is intended to refer to only the Lindblomian conception.

Second, little can be learned about whether a *budgetary* process is incremental according to Lindblom's conception by studying the extent to which the process conforms to the four (nongeneral) budgeting-specific definitions of incrementalism (6 through 9 in figure 1). This is evident in the absence of "yes" cells in the submatrix bordered by plus signs. Knowledge, for example, that there is inattention to the base, smallness of change, negotiation among participants with narrow roles, and absence of competition between categories, does not confirm that only a restricted set of noninnovative alternatives are considered, with a limited assessment of policy consequences, and a dependency of ends on means. To the extent that empirical research on budgetary incrementalism is an attempt to analyze the "Lindblomian" conception of incrementalism, that research has clearly failed. Of course, this does not mean that the four budgeting-specific conceptions of incrementalism are not valuable in their own right. Indeed, based on the view that the budgetary process has "distinctive features" that separate it from other decision-making processes, Schick (1988, 61) calls for efforts to build an "elemental" theory which explains budgeting per se.

Also, the fact that there are few logical relationships among the nine specific definitions of incrementalism does not eliminate the possibility that two (or more) logically independent characteristics could both be deemed requirements for an incremental process. For instance, Kamlet and Mowery (1980, 804) define a "bottom-up" budgetary process as one characterized by a lack of competition among agencies *and* inattentiveness to the base [and a "top-down" process as one exhibiting both competition and scrutiny of the base] (see also, Kamlet and Mowery 1987, 157; Auten, Bozeman, and Cline 1984, 504). But requiring two or more characteristics for "incrementalism" would probably only advance the research program in budgeting if some agreement could be achieved about just what characteristics together constitute incrementalism, so that different researchers could begin studying the same phenomenon.¹² Furthermore, a choice that multiple characteristics must be satisfied for a process to be termed incremental—when combined

¹²Indeed, if "bottom-up" and "top-down" retain their specificity in meaning, they might fulfill such a role.

Lack of attention to the base (6)	No	Depends	No	No	No	No	Yes	Depends	No
Smallness of the ultimate change (7)	Depends	No	Depends	No	Depends	—	Depends	Depends	No
Negotiation among participants with narrow roles (8)	Inconsistent	No	No	No	Yes	—	Yes	Depends	Depends
Absence of competition between components of budget (9)	No	No	No	No	No	No	Yes	Depends	No
Simple decision rules (10)	No	No	No	No	No	No	—	Depends	No
Regularity of relationships among actors (11)	No	No	No	No	No	No	Yes	—	No
Lack of effect of external variables (12)	No	No	No	No	No	No	Yes	Depends	—

* Cell entries answer the question, "If a budgetary process is incremental according to the meaning of incrementalism in the left margin (A), does this imply that it must be incremental based on the top-margin definition (B)?"

with the insight that these characteristics are for the most part logically independent—means that studies seeking to confirm the presence of incrementalism would have to demonstrate separately that *each* of the characteristics are present. Finally, a multiple-characteristic definition of incrementalism might make it too easy to conclude that a budgetary process is *not* incremental, as finding that *any* of the characteristics is not present would be sufficient evidence.

It is also important to recognize that there is a large class of government expenditure choices to which the budgeting-specific conceptions of incrementalism are either irrelevant or inapplicable (Kamlet and Mowery 1987, 169; LeLoup 1988, 28), including a variety of multiyear spending decisions that remove programs from the traditional appropriations process (LeLoup 1978a, 1988, 23).¹³ For example, with entitlement programs, annual changes in expenditures can be calculated, but—assuming no modifications in the authorization legislation for the programs—the magnitudes of the expenditure changes are a result of either demographic changes in society or automatic increases in benefit levels adopted in previous years. Therefore, the sizes of the changes in expenditures yield no insight into the nature of decision making in the year the changes occur. Also, assuming no changes in legislation, by definition, there can be no competition between expenditures for different entitlement programs, since larger spending increases for one program than another could not possibly result from an explicit choice to favor one over the other, and must be an artifact of demographic changes and automatic benefit-level adjustments. On the other hand, the Lindblomian conceptions of incrementalism are applicable to entitlement programs (and other multiyear spending decisions) as the process of considering changes in legislation that would affect spending can be analyzed, for example, with respect to the types and numbers of alternatives considered. Thus, the Lindblomian definitions of incrementalism remain meaningful when attention moves from annual discretionary spending to multiyear spending choices, but the budgeting-specific conceptions do not.

In any event, I believe the most fruitful approach to budgeting research would be to virtually banish the term incrementalism from new literature. The term has become too many things to too many people to be useful in research. Instead, we should direct research at determining the character of budgeting on *specific* dimensions. The nine specific definitions of incrementalism discerned in this paper may provide a useful preliminary set of dimensions. Research should investigate the degree to which budgeting conforms to the “Lindblomian” decision-making characteristics, by examining (1) the extent to which alternatives are restricted in number, (2) the degree to which attention is restricted to noninnovative alternatives, (3) whether alternatives

¹³Indeed, LeLoup (1988, 28) estimates that discretionary (or controllable) domestic programs now represent less than 16% of federal government outlays.

are considered simultaneously or sequentially, (4) the extensiveness of the assessment of policy consequences, and (5) the degree to which “ends” are dependent on “means.” Research should also assess the nature of discretionary program budgetary decision making with respect to the budgeting-specific characteristics: (1) the magnitude of changes in expenditures, (2) how much attention is given to the base, (3) the degree to which participants engage in narrow-role negotiation, and (4) the amount of competition in the process.

This recommended research program raises the question: “Are the methodologies that have been used to study incrementalism appropriate for studying these specific budgetary characteristics?” The second part of this paper addresses this question by describing the various approaches employed in the study of incrementalism, and analyzing which are suitable for studying each of the specific characteristics identified above.

APPROACHES TO TESTING FOR INCREMENTALISM

Internalized Change Models

The most common approach for testing whether public budgeting is incremental can be labeled an *internalized change model*. The model is “internalized” because it assesses the extent to which budgetary choices in one year are predictable relying exclusively on budget choices in the previous year. It is termed a “change” model because it examines the amount of change in budgetary choices from one year to the next and/or the stability of the size of this change. The approach is reflected in three methodologies: (1) regression models using budgetary choices for a given year as the dependent variable, and choices for the previous year as independent variables, (2) regression models in which budgetary choices are regressed on time, and (3) univariate analysis of the distribution of the difference between a budgetary outcome in one year and an outcome in the previous year.

Regressing a Budgetary Outcome on Time. This approach is illustrated by Bunce and Echols (1978) who regressed both total government spending and several components of total spending (i.e., health, education, and welfare) against “time” (i.e., a year “counter” variable).¹⁴ The assessment of the extent of incrementalism is based on the “degree of linearity of budget change over time . . . as reflected in [the] coefficient of determination” [i.e., R^2 value for the regression] (923). Such a criterion means that incrementalism is operationally defined as a process yielding annual changes in expenditures that are similar in size over time, regardless of the magnitude of the average change.

¹⁴In another example, Fenno (1966, 390–92) regresses appropriations levels against time for 36 federal agencies.

Univariate Analysis of Difference Scores. This approach involves calculating the difference (usually in *percentage* terms) between a budgetary choice in one year and a budget choice in the previous year for each year in a period, and then examining characteristics of the frequency distribution of the difference scores. Studies have analyzed the distribution of annual percentage changes in expenditure levels for both agencies (Wildavsky 1964, 14; Wildavsky 1975, 242; Kemp 1982, 651) and service categories (Danziger 1976, 342–43). A distribution *tightly concentrated* around a *low* central tendency (so that there are very few large change scores) is held to be evidence of incrementalism.¹⁵

Other studies have conducted analysis using choices made in the budgetary process prior to final appropriations or actual expenditures. For example, LeLoup and Moreland (1978, 235; see also Kanter 1972, 131) examine the frequency distribution (for 36 Department of Agriculture agencies from 1946 to 1971) of the percentage change an agency's request to its department represents from the agency's previous year's appropriation. The authors imply that their findings that (1) a substantial proportion of cases in this distribution have change scores greater than 25%, and (2) the distribution has a "sizable" variance, are evidence of *nonincrementalism*.

Regressing an Outcome in One Year on an Outcome in the Previous Year. This approach is almost identical in purpose to the univariate analysis of difference scores. Paralleling the studies that examine the distribution of annual percentage changes in expenditure levels are those that regress expenditure levels in one year on levels in the previous year [e.g., Danziger's (1976, 343–44) "incremental trend" model]. The slope estimate for the regression gives information similar to the central tendency of the distribution of percentage changes in expenditure levels. Measures of the regression's quality of fit give information comparable to the degree of dispersion of the distribution of percentage changes around its central tendency.

There, too, have been regression tests which include budgetary choice variables prior to actual expenditures or appropriations. Davis, Dempster, and Wildavsky (1966, 532, 534), for instance, investigate several regression models reflecting both executive branch and congressional decision rules, and contend that the best fitting models are ones in which an agency's request is regressed on its appropriation in the previous year, and its appropri-

¹⁵ But the specific definition of "low" varies from study to study. Wildavsky (1964), in claiming evidence of incrementalism, points to the large percentage of agencies having percentage increases in the 0–5%, 0–10%, and 0–30% ranges, and the small percentage in the 50–100% range. Danziger (1976), in contrast, implies that expenditure increases that are either extremely large or extremely *small* are evidence of *nonincrementalism*, by calling changes in the 5% to 15% range "incremental," changes in the –10% to 4% and 16% to 30% ranges "relatively incremental," and changes of less than –10% or greater than 30% "non-incremental."

ation is regressed on its request for the same year (see also Kemp, 1982, 547). Cowart, Hansen, and Brofoss (1975) investigate similar models in the context of Norwegian urban government budgeting. One is a four-equation model:

$$\text{AGENCY}_t = a \text{ APPROP}_{t-1} + e_{t1} \quad (1)$$

$$\text{DEPT}_t = b \text{ AGENCY}_t + e_{t2} \quad (2)$$

$$\text{CHIEF}_t = c \text{ DEPT}_t + e_{t3} \quad (3)$$

$$\text{APPROP}_t = d \text{ CHIEF}_t + e_{t4}, \quad (4)$$

where AGENCY = agency request, DEPT = departmental recommendation, CHIEF = chief municipal administrator's recommendation, and APPROP = legislative appropriation. The presumption is that high R^2 s for the equations is empirical support for incrementalism.¹⁶

Internal-External Change Models

Several studies have modified an internalized change model to accommodate "external" variables. The result is an equation in which a budgetary choice in one year is regressed on a budget choice in the previous year, *plus* one or more exogenous variables. For instance, Brouters and Stimson (1980) regress both per capita state expenditures and expenditures for education on the same variable in the previous year and a set of socioeconomic variables (log of population, per capita income, population density, and manufacturing employment). They suggest that the hypothesis of incrementalism involves four predictions: (1) a coefficient for the lagged endogenous variable—previous year's spending—equal to 1.0, (2) a high R^2 value for the model, in conjunction with (3) insignificant coefficients for the exogenous (i.e., socioeconomic) variables, and (4) only a slight reduction in the R^2 when the exogenous variables are deleted.¹⁷

Internal-External Trade-off Models

The internal-external change models themselves have been modified to reflect the possibility that budgetary choices for one category of spending may affect choices for another category. Fischer and Kamlet (1984, 364) introduce models in which the budget request (by OMB to Congress) for defense spending (DEFREQ) is a function of the previous year's spending for defense (DEFEXP), a set of exogenous variables (Z_i) reflecting eco-

¹⁶Cowart, Hansen, and Brofoss (1975) also introduce hypotheses about slope coefficients that would be consistent with incrementalism; in particular, $a > 1$, $0 < b < 1$, $0 < c < 1$, and $0 < d < 1$.

¹⁷Davis, Dempster, and Wildavsky (1974) present internal-external change models of a somewhat different form (see also Caldiera and Cowart 1980; Fischer and Kamlet 1984; Kiewiet and McCubbins 1985).

conomic and political conditions, *plus* the previous year's nondefense spending (NONEXP). Similarly, the request for nondefense spending (NONREQ) is a function of the same set of variables:

$$\text{DEFREQ}_t = d_1(\text{DEFEXP}_{t-1}) + d_2(\text{NONEXP}_{t-1}) + \sum c_i Z_i \quad (5)$$

$$\text{NONREQ}_t = n_1(\text{DEFEXP}_{t-1}) + n_2(\text{NONEXP}_{t-1}) + \sum m_i Z_i \quad (6)$$

Fischer and Kamlet claim that incrementalism requires that in the equations, $d_2 = n_1 = 0$, and d_1 and n_2 are "slightly" greater than 1. Thus, the request for one category, A, is independent of previous spending for the other category, B, but represents a slight increase over previous spending for A.¹⁸

Share of the Budget Models

Some tests for incrementalism have focused on the shares of some total expenditure (or appropriation) going toward component categories. For example, Natchez and Bupp (1973; see also Gist 1982; Danziger 1976) introduced the concept of a *prosperity score*, which for some component (e.g., an agency) of a total budget (e.g., for a department) in a given year, is the percentage of the total budget allocated to the component in that year divided by the component's average percentage of the total budget over a period of years. Thus, a prosperity score tells how successful a component is in attracting a large share of a total budget *relative to how successful it is in a typical year*. Natchez and Bupp claim that the variation in prosperity scores over time for a component gives information about the stability of its political support. And indeed, it is clear that low variation (with a score of about 1 in each year) implies stability in the sense that a component is receiving a relatively constant share of the total budget over time, while high variation means that the share of the total budget going to a component is changing substantially.

Natchez and Bupp (1973, 961) also calculate the mean prosperity change score over a period of 15 years for each component; this number is the arithmetic average of the differences between the prosperity score in year t and that in year $t-1$ over all years during the period. Natchez and Bupp view this mean change score for a component as a measure of the extent to which the component has prospered in its competition with other components. And they imply that (1) most of a set of components having high (positive or negative) mean change scores, or (2) wide variation in the mean

¹⁸ Domke, Eichenberg, and Kelleher (1983) develop a similar model in which the annual percentage change in defense spending is a function of percentage changes in total spending and welfare spending, plus a set of "external" political variables. However, their model is cast as a method to test for trade-offs between defense and welfare spending, and not a direct test for incrementalism.

change scores across the components, would be evidence that budgeting is not incremental. Perhaps a less strong conclusion is more accurate: a high positive (or negative) value for the mean change score implies that a component has been increasing (or decreasing) its share of a total budget over time. But a score of near zero implies that either the component's share of the budget has been stable over time, or the component has faced periods of relative prosperity and relative failure at different times, so that high positive and high negative change scores "cancel out" to a near-zero average.

Evidence that Budgeting Focuses on the Base

Some have attempted to demonstrate that U.S. federal government budgeting is not incremental with evidence that decision makers must be directing substantial attention to the base when making decisions. Gist (1977) does so by arguing that in many fiscal years between 1965 and 1977, the increment for "uncontrollable" programs exceeded the total increment for the federal budget. Logically, this must mean that decision makers are not only reviewing the base for "controllable" programs; they are actually cutting expenditures. Kamlet and Mowery (1980) note that there are several alternative conceptions of the base, and that especially in times of fiscal stress, agencies and OMB devote much time to negotiating which conception to use, i.e., what is to be included in the base. Of course, negotiation over the content of the base logically implies that attention is being given to the base in decision making.

Analysis of the Impact of Agency Assertiveness on Budgetary Success

Sharkansky (1968) argues that "incremental budget reviewers should cut budgets that threaten to grow [substantially]." This leads him to try to measure (1) the "acquisitiveness" of state agencies, and (2) the success of agencies in the budgetary process so that the relationship between the two can be observed; incrementalism requires that the relationship be negative. Sharkansky measures both acquisitiveness and success with changes in budgetary outcomes from one year to the next. The indicator for acquisitiveness is the ratio of an agency's request for the coming budget period to its appropriation for the current period. Two measures of agency success are used: the ratio of a governor's recommendation for an agency to the agency's request (short-term support), and the ratio of the agency's appropriation for the coming budget period to its appropriation for the current year.¹⁹

¹⁹ For similar empirical analysis, see LeLoup and Moreland (1978) and Hedge (1983). But note Berry's (1986) criticism that the choice of indicators for the concepts "agency acquisitiveness" and "agency success" results in serious methodological problems with the Sharkansky approach.

APPROPRIATE METHODOLOGIES FOR EMPIRICAL RESEARCH ABOUT
BUDGETING

Studying the Budgeting-Specific Characteristics

Studying Attention to the Base and Amount of Change. Of the various specific budgetary characteristics identified in this paper, the easiest to investigate empirically would seem to be “size of the ultimate change.” Internalized change models seem to be ideal for assessing “amount of change,” as they can provide information about the magnitude of change from one year to the next, and the stability of that change over different categories and periods of analysis. Of course, even completely accurate description of the sizes of changes in appropriations provides no explanation of the decision-making process that leads to the observed changes (Wanat 1974). Indeed, it may be best to view the amount of change in appropriations (and the variation in that amount) as a characteristic of a budget process which is itself in need of explanation. In any event, several critical conceptual issues must be resolved prior to even mere descriptive analysis of the magnitudes of changes in appropriations.

First, there is the appropriate level of aggregation. One can determine annual increments for numerous organizations and categories of expenditures: overall government budgets, broad service categories, departments, agencies, or individual programs. Which is the appropriate level for determining if a budgeting process is characterized by “smallness of change”? The most common argument seems to be that a low level of aggregation is best. This is because small budgetary increments at a low level of aggregation logically imply small increments at higher levels, but a small change at a high level of aggregation can mask widely varying amounts of change across components of the aggregate. While the previous sentence is true, it does not necessarily justify a low level of aggregation in research about “smallness of change.”

The appropriate level of aggregation depends on the level at which increments are established by decision makers in the budgetary process. If, for example, decision makers start by establishing small increments at the department level, but then allow for small or large changes within departments at the agency level, then studying “amount of change” at the agency level will not uncover the simplifying procedure adopted by budgetary officials. It is also possible that the establishment of an increment is first made at the most highly aggregated level by determining an overall government spending increment that becomes a pool of money which is divided among departments and agencies in a competitive process (Berry and Lowery 1990).²⁰ Thus, determining the most appropriate level(s) of aggregation for studying

²⁰ For a similar “sequential model,” see Auten, Bozeman, and Cline (1984).

“amount of change” requires explicit assumptions about how participants sequence decisions in the budgetary process, and what step(s) of the process involve simplification by establishing increments.

Second, an assessment of “amount of change” requires an explicit choice about the frame of reference for measuring change. If one assumes that decision makers are inattentive to some “base,” change seems best measured from the base. The normal practice is to treat the previous year’s expenditure (in nominal dollars) as the base, but this is not entirely satisfactory. Kamlet and Mowery (1980) discern three different conceptions of the base among participants in the federal budgetary process—(1) the current estimate (i.e., the budgetary level for the current fiscal year), (2) the cost of ongoing activity levels (taking into account inflation), and (3) the “mandatory” budget level (which accounts for the impact of expected changes in exogenous factors that influence appropriations)—and argue that, often, a debate about which of these conceptions to employ is a critical part of the budgetary process.²¹

Once one rejects the assumption that the previous year’s expenditure is always the base, it becomes extremely difficult to study “degree of attention to the base.” If one shows with an internalized change model that expenditures for appropriate categories consistently represent an increase from their bases, it is reasonable to infer that cutting into the base was not given serious consideration. But if the meaning of the base is variable, and its size is subject to negotiation among budgetary participants, the clear “previous-year” frame of reference required by internalized change models does not exist.

Another important conceptual issue when studying degree of attention to the base is the meaning of a decrease from the base. While most cuts from the base seem to imply that attention must have been given to the base, it is easy to imagine cases in which cuts are made without careful analysis of what is being trimmed, and thus, the base is still free from explicit scrutiny. One example would be “across-the-board” cuts in all components of a budget in response to a reduction in revenues. For example, if all agencies in a government are cut a flat 5%, it is unlikely that the cuts emerge from a careful consideration of the content of the base.

Studying Negotiation among Participants. Given clear assumptions about (1) the key participants in the budgetary process, and (2) what roles each of these participants take on, the extent to which budgeting conforms to the

²¹If decision makers do not establish a “base” free from review, and instead, subject all programs to scrutiny, the most appropriate frame of reference for measuring “amount of change” is not obvious, and indeed, the very meaningfulness of the concept, “amount of change,” is called into question.

“narrow negotiation” conception might be assessed using an internalized change model, an assertiveness-success model, or an internal-external change model. There seems to be some consensus that there are four major actors in the process: agencies, departments, budget bureau/executives, and legislatures.²² Also, the “narrow negotiation” conception generally assumes that the role of an agency is to seek a large increase in appropriations, while the goal of the other three participants is to restrain agencies by cutting agency requests (Wanat 1978; Cowart, Hansen, and Brofoss 1975).²³ But the specific assumptions made about the nature of negotiation among these participants determines which model is appropriate for empirical analysis.

An internalized change model in the form of equations 1 through 4 is one candidate. Cowart, Hansen, and Brofoss maintain that high R^2 values for these equations are evidence of incrementalism. This implies that their “narrow negotiation” conception assumes (i) in equation 1, that there is very little variation (over time, or over space) among agencies in degree of assertiveness, and (ii) in the other equations, that each agency is able to protect a very similar percentage of its request from cuts.²⁴ In contrast, an “assertiveness-success” approach in the Sharkansky tradition implies considerable variation in the assertiveness of requests across agencies, and the aggressiveness of cutting by legislatures, budget bureaus, and departments. Indeed, if there is substantial variation, an internal-external change model might also be appropriate. The “external” variables would, in effect, be contextual variables predicting which types of agencies should be most assertive, and in what situations legislatures, budget bureaus, and departments should be most aggressive in cutting agency requests.

Studying Degree of Competition. It is extremely difficult to determine from budgetary data whether decisions about components of an aggregate are independent or reflect competition (or trade-offs) between the components. In a few extreme situations, it can be obvious that there is no competition in budgeting. For example, if over a long period, appropriations for all components of some aggregate increase by virtually the same percentage, it

²²But Rubin (1988a, 1988b) discusses the important roles of other participants in the budgetary process (e.g., interest groups), and the need to look “within” the four major participants at more specific actors (e.g., the chief executive’s staff, and individual legislative authorizing committees).

²³Of course, unrealistically high requests by agencies followed by deep cuts by other actors, even if observed, do not guarantee that *serious negotiation* is occurring. Instead, they may signify a “game” in which agencies submit “padded” requests that allow room for departments, the central budget office, and the legislature to cut, so that the latter organizations appear to be protecting the public purse from greedy agencies (Anton 1967).

²⁴Indeed, if the R^2 s for equations 1 through 4 were precisely 1.00, all agencies would request the *same* percentage increase, and each of the other three actors would cut all requests by an *identical* percentage. Therefore, R^2 s close to 1.00 might suggest the presence of routinized “padding” and cutting instead of serious negotiation.

is very unlikely that there is serious competition among components. While it is *possible* that each component may grow by the same percentage even with competition, competition seems much more likely to be associated with varying success by different components. In any event, properly designed “internalized change” or “share of the budget” models can both provide empirical evidence of similarity in percentage increases across components of some aggregate. But if such models demonstrate that components increase by substantially different percentages, no definite conclusion is possible. The substantial variation could be the result of either (1) differential success by components in direct competition over a pool of money, or (2) a set of totally independent judgments about each component.

“Internal-external tradeoff” models try to study competition by including the expenditure (or change in expenditure) for one category as an independent variable in an equation determining the expenditure (or change) for another category. But Berry (1986) shows the weakness of this methodology by demonstrating that an internal-external trade-off model can indicate competition between two categories of spending even when appropriations for the two categories are known to be generated independently. Case studies of the budgetary process certainly can play a role in resolving the conflicting interpretations of the implications of observed variance in the growth rates of programs. But the best hope for success is better theory. In particular, we need better theory about precisely where competition is expected to be found. Unless one assumes that budgeting occurs in an environment of almost infinite resources, some competition seems inevitable (Schick 1988, 64). The only real question is where the competition occurs. Is there competition among programs within agencies, among agencies within departments, among departments, and/or between broad categories of expenditure (e.g., defense vs. domestic spending)? The answer to this question must guide the categories used in empirical research.

Furthermore, greater theoretical clarity is needed concerning the precise meaning of “competition” or “tradeoff” among the components of a budget. Berry and Lowery (1990) distinguish several different types of trade-offs. In one, a fixed pool is split between two components by making a simultaneous choice about how much each receives. In a second, a decision is made about the amount one component receives, and the other’s allocation is whatever is left in the preestablished pool. Berry and Lowery (1990) argue that these two types of trade-offs require fundamentally different kinds of empirical analysis, but that an internal-external tradeoff model is inappropriate with either.

Studying the “Lindblomian” Conception of Incrementalism

Studying the Limitation to Noninnovative Alternatives. Obviously, the ideal data set for studying whether innovative alternatives are considered in

the budgetary process is an enumeration of all alternatives considered. But data just on the ultimate alternative selected can be very useful. Clearly, finding that innovative alternatives (e.g., large increases from the base) are *sometimes* selected is sufficient to prove that innovative alternatives have been considered. Furthermore, if over a long period, the ultimate policy selected is *always* noninnovative, the probability that innovative alternatives are *seriously* considered is quite low.

Studying the Restriction in Number of Alternatives. Here too, the ideal data set is a list of the full set of alternatives. But when studying the degree of restriction in number of alternatives, this list is not only ideal; it is essential, as data about just the alternative selected—even if available over a number of different decisions—tell us nothing about the number of alternatives considered. Moreover, even if a researcher gains access to a list of the alternatives considered, distinguishing between proposals that are given serious consideration and those that are not is likely to be difficult.

I would also question whether the concept—number of alternatives considered—is always meaningful in the context of budgeting, where the alternatives considered are more likely to be a continuous range of choices (e.g., appropriations increases in the range of 5% to 10%) than a set of discrete alternatives. It may be that an appropriate analog to “number of alternatives” in some budgeting contexts is “range of alternatives.” But greater theoretical attention to the relationship between task simplification and “range of alternatives” is needed. When two of four discrete alternatives are eliminated, the information needs of the decision maker are clearly reduced. But if the range of appropriation increases considered is reduced from 0–10% to 0–5%, it is unclear whether this appreciably simplifies life.

Studying Limited Assessment of Policy Consequences, Means-Ends Dependency and Sequential Consideration of Alternatives. Again data about just the alternative chosen are not sufficient. Moreover, a list of the alternatives considered is not enough. Determining whether there is sequential consideration also requires evidence that any alternative rejected was considered and explicitly eliminated prior to the consideration of the alternative ultimately chosen. Determining how limited is the assessment of policy consequences requires information on what factors were taken into account in evaluating the alternatives. Assessing whether goals of decision makers change as different alternatives are reviewed requires explicit information about the objectives of decision makers at multiple points in time. There seems to be no substitute for longitudinal case studies of decision-making processes, including detailed interviews with the parties involved, to study these three characteristics of budgeting.

CONCLUSION

I argued in the first part of this paper that there are numerous conceptions of incrementalism. Some of these (i.e., numbers 1 through 5 in figure 1) can be traced to early theoretical analysis of decision making by Lindblom and several colleagues. Other definitions of incrementalism (numbers 6 through 9, 11 and 12 in the figure) are budgeting-specific. An analysis of the pairwise logical relationships among the various definitions led to several conclusions. First, demonstrating that a budgetary process is incremental according to the budget-specific conceptions generally tells very little about whether the process is incremental according to the Lindblomian conceptions. If we are concerned about whether budget decision making is incremental in Lindblom's sense of the term, we cannot rely on the budget-specific conceptions; we will have to study the Lindblomian conceptions directly.

Second, whether we consider the early conceptions of incremental decision making, the budget-specific definitions, or both sets together, there are very few logical relationships among the definitions. Knowledge that a budgetary process is incremental according to one definition generally implies nothing about whether it is incremental according to a second definition. This leads me to conclude that the term "incrementalism" now means so many different things that it has lost its utility for academic research. Moreover, three of the definitions of incrementalism (10, 11, and 12 in figure 1) are so general that they cannot serve as a basis for empirical analysis of the nature of budgeting. The most appropriate course is to abandon the debate about whether budgeting is or is not "incremental." Instead, we should conceptualize each of the characteristics of a budgetary process reflected in the various specific conceptions of incrementalism (1 through 9) as separate objects of study, and conduct research on the conditions under which, and the degree to which, each of these characteristics is present.

If scholars are compelled to rely on multiple-characteristic concepts to describe budgetary processes, the concepts should be ones that group together a small number of characteristics that (while perhaps logically independent) are theoretically and empirically related. "Top-down" and "bottom-up"—which simultaneously characterize "degree of competition" and "amount of attention given to the base" seem to hold considerable promise as useful multiple-characteristic concepts. While "extent of competition" and "degree of attention to the base" are logically independent, it is reasonable to hypothesize that they are related such that a high degree of competition and a willingness to examine the base tend to occur together (as do a low degree of competition and inattention to the base). As the context for budgeting changes from one of growing revenues to one of stable or declining revenues, both the necessity to make trade-offs among components, and a willingness to scrutinize expenditures that are part of the base seem to be likely responses. But more research is needed to confirm that this expected relationship actu-

ally exists. Indeed, when one begins with the presumption that there are numerous specific and logically independent dimensions on which budgetary decision-making processes can vary, a major question on the research agenda becomes, "What are the theoretical and empirical relationships among the various dimensions?" In effect, it would be useful to strive for the development of a matrix to accompany figure 1 which would indicate not the *logical* relationships among characteristics of budgeting, but instead observed relationships, along with theories explaining them.

The analysis of the methodologies used in empirical research suggests that it will be more difficult to study the Lindblomian characteristics than the budgeting-specific characteristics. While numerous conceptual problems still confront the analysis of the magnitude of increments in budgeting, the amount of attention given to the base, the extent to which participants negotiate with narrow roles, and the amount of competition in the process, these characteristics can be studied satisfactorily using univariate and multivariate analysis of data which for the most part are readily available. These include time-series data on final appropriations, and requests for appropriations by actors in the process. But studying whether budgetary processes conform to the Lindblomian decision-making characteristics magnifies the data requirements enormously. No longer are data about budgetary outcomes sufficient. Needed in addition are data about the goals of actors in the process (and how they change over time), the alternatives that are considered but not selected (and perhaps the order in which they are examined), and the criteria decision makers use to judge alternatives. Such data are not available in published documents. Obtaining them will require much more access to the budgetary process than researchers generally have. But longitudinal case studies of budgetary decision making, involving interviews or surveys of participants, appear to be the only realistic alternative.

Manuscript submitted 16 May 1988

Final manuscript received 13 May 1989

REFERENCES

- Anton, Thomas J. 1967. "Roles and Symbols in the Determination of State Expenditures." *Midwest Journal of Political Science* 11: 27-43.
- Auten, Gerald, Barry Bozeman, and Robert Cline. 1984. "A Sequential Model of Congressional Appropriations." *American Journal of Political Science* 28: 503-23.
- Bailey, John J., and Robert J. O'Connor. 1975. "Operationalizing Incrementalism: Measuring the Muddles." *Public Administration Review* 35: 60-66.
- Berry, William D. 1986. "Testing Budgetary Theories with Budgetary Data: Assessing the Risks." *American Journal of Political Science* 30: 597-627.
- Berry, William D., and David Lowery. 1990. "An Alternative Approach to Understanding Budgetary Tradeoffs." Forthcoming in *American Journal of Political Science*.
- Bozeman, Barry B., and Jeffrey Straussman. 1982. "Shrinking Budgets and the Shrinkage of Budget Theory." *Public Administration Review* 42: 509-16.

- Braybrooke, David, and Charles E. Lindblom. 1963. *A Strategy of Decisions: Policy Evaluation as a Social Process*. New York: Free Press of Glencoe.
- Bromley, Philip, and John P. Crecine. 1980. "Budget Development in OMB: Aggregate Influences of the Problem and Information Environment." *Journal of Politics* 42:1031–64.
- Brouthers, Lance E., and James A. Stimson. 1980. "The Incremental Theory of Budgeting." Presented at the annual meeting of the Midwest Political Science Association, Chicago.
- Browning, Robert X. 1985. "Presidents, Congress and Policy Outcomes: U.S. Social Welfare Expenditures, 1949–77." *American Journal of Political Science* 29:197–216.
- Bunce, Valerie, and John Echols. 1978. "Power and Policy in Communist Systems: The Problem of Incrementalism." *Journal of Politics* 40:911–32.
- Caldeira, Greg A., and Andrew T. Cowart. 1980. "Budgets, Institutions, and Change: Criminal Justice Policy in America." *American Journal of Political Science* 24:413–38.
- Cowart, Andrew T., Tore Hansen, and Karl-Erik Brofoss. 1975. "Budgetary Strategies and Success at Multiple Decision Levels in the Norwegian Urban Setting." *American Political Science Review* 69:543–58.
- Cyert, Richard M., and James G. March. 1963. *A Behavioral Theory of the Firm*. Englewood Cliffs, NJ: Prentice-Hall.
- Dahl, Robert A., and Charles Lindblom. 1953. *Politics, Economics and Welfare*. New York: Harper and Row.
- Danziger, James N. 1976. "Assessing Incrementalism in British Municipal Budgeting." *British Journal of Political Science* 6:335–50.
- Davis, Otto A., M. A. H. Dempster, and Aaron Wildavsky. 1966. "A Theory of the Budgetary Process." *American Political Science Review* 60:529–47.
- Davis, Otto A., M. A. H. Dempster, and Aaron Wildavsky. 1974. "Toward a Predictive Theory of the Federal Budgetary Process." *British Journal of Political Science* 4:419–52.
- Dempster, M. A. H., and Aaron Wildavsky. 1979. "On Change: Or, There is No Magic Size for an Increment." *Political Studies* 27:371–89.
- Domke, William K., Richard C. Eichenberg, and Catherine M. Kelleher. 1983. "The Illusion of Choice: Defense and Welfare in Advanced Industrial Democracies, 1948–78." *American Political Science Review* 77:19–35.
- Fenno, Richard F., Jr. 1966. *The Power of the Purse*. Boston: Little, Brown.
- Fischer, Gregory W., and Mark S. Kamlet. 1984. "Explaining Presidential Priorities." *American Political Science Review* 78:356–71.
- Gist, John R. 1977. "Increment and Base in the Congressional Appropriations Process." *American Journal of Political Science* 21:341–52.
- Gist, John R. 1982. "'Stability' and 'Competition' in Budgetary Theory." *American Political Science Review* 76:859–72.
- Heclo, Hugh. 1984. "Executive Budget Making." In *Federal Budget Policy in the 1980s*, ed. G. B. Mills and J. L. Palmer. Washington, DC: Urban Institute.
- Hedge, David M. 1983. "Fiscal Dependency and the State Budget Process." *Journal of Politics* 45:198–208.
- Hoole, Francis W., Brian L. Job, and Harvey J. Tucker. 1976. "Incremental Budgeting and International Organizations." *American Journal of Political Science* 20:273–302.
- Kamlet, Mark S., and David C. Mowery. 1980. "The Budgetary Base in Federal Resource Allocation." *American Journal of Political Science* 24:461–72.
- Kamlet, Mark S., and David C. Mowery. 1983. "Budgetary Side Payments and Government Growth, 1953–1968." *American Journal of Political Science* 27:636–64.
- Kamlet, Mark S., and David C. Mowery. 1987. "Influences on Executive and Congressional Budgetary Priorities, 1955–1981." *American Political Science Review* 81:155–78.
- Kanter, Arnold. 1972. "Congress and the Defense Budget: 1960–1970." *American Political Science Review* 66:129–43.
- Kemp, Kathleen A. 1982. "Instability in Budgeting for Federal Regulatory Agencies." *Social Science Quarterly* 63:643–60.

- Kiewiet, D. Roderick, and Matthew D. McCubbins. 1985. "Congressional Appropriations and the Electoral Connection." *Journal of Politics* 47:59–82.
- LeLoup, Lance T. 1978a. "Discretion in National Budgeting: Controlling the Controllables." *Policy Analysis* 4:455–75.
- LeLoup, Lance T. 1978b. "The Myth of Incrementalism." *Polity* 10:488–509.
- LeLoup, Lance T. 1988. "From Microbudgeting to Macrobudgeting: Evolution in Theory and Practice." In *New Directions in Budget Theory*, ed. I. S. Rubin. Albany: State University of New York.
- LeLoup, Lance T., and William B. Moreland. 1978. "Agency Strategies and Executive Review: The Hidden Politics of Budgeting." *Public Administration Review* 38:232–39.
- Lindblom, Charles E. 1959. "The Science of Muddling Through." *Public Administration Review* 19:79–88.
- Lowery, David, Samuel Bookheimer, and James Malachowski. 1985. "Partisanship in the Appropriations Process: Fenno Revisited." *American Politics Quarterly* 13:188–99.
- Mowery, David C., Mark S. Kamlet, and John P. Crecine. 1980. "Presidential Management of Budgetary and Fiscal Policy-Making." *Political Science Quarterly* 95:395–425.
- Natchez, Peter B., and Irwin C. Bupp. 1973. "Policy and Priority in the Budgetary Process." *American Political Science Review* 67:951–63.
- Newell, Allen, and Herbert A. Simon. 1972. *Human Problem Solving*. Englewood Cliffs, NJ: Prentice-Hall.
- Rubin, Irene S. 1988a. "Introduction." In *New Directions in Budget Theory*, ed. I. S. Rubin. Albany: State University of New York.
- Rubin, Irene S. 1988b. "The Authorization Process: Implications for Budget Theory." In *New Directions in Budget Theory*, ed. I. S. Rubin. Albany: State University of New York.
- Schick, Allen. 1988. "An Inquiry into the Possibility of a Budget Theory." In *New Directions in Budget Theory*, ed. I. S. Rubin. Albany: State University of New York.
- Sharkansky, Ira. 1967. "Economic and Political Correlates of State Government Expenditures." *Midwest Journal of Political Science* 11:173–92.
- Sharkansky, Ira. 1968. "Agency Requests, Gubernatorial Support and Budget Success in State Legislatures." *American Political Science Review* 62:1220–31.
- Simon, H. 1945. *Administrative Behavior*. New York: Macmillan.
- Straussman, Jeffrey D. 1988. "Rights-Based Budgeting." In *New Directions in Budget Theory*, ed. I. S. Rubin. Albany: State University of New York.
- Wanat, John. 1974. "Bases of Budgetary Incrementalism." *American Political Science Review* 68:1221–28.
- Wanat, John. 1978. *Introduction to Budgeting*. North Scituate, MA: Duxbury.
- Wildavsky, Aaron. 1964. *The Politics of the Budgetary Process*. Boston: Little, Brown.
- Wildavsky, Aaron. 1975. *Budgeting: A Comparative Theory of the Budgetary Process*. Boston: Little, Brown.

William D. Berry is associate professor of political science, University of Kentucky, Lexington, KY 40506-0027.