

Background Paper 79-6

ZERO-BASE BUDGETING



## ZERO-BASE BUDGETING

### I

#### Introduction

ZBB can be a boon in some organizations where there is the desire to make the system work, a willingness to spend the necessary time and effort. It can be a complete boondoggle for managers who really don't want the process to work, who routinely claim that the world goes to hell if their programs are reduced or if they don't get their total funding request, and who don't have the will to take a hard look at their operations. It can certainly be a boondoggle for politicians who think it sounds like a nice term to fool the masses with, and then keep spending as usual.\*

Zero-base budgeting is a term which has caught the imagination of many politicians and government administrators who are interested in establishing effective budget analysis techniques to deal with the public mandate, expressed by recent tax and expenditure initiatives, that government be run in a more efficient, economical and accountable manner. There is tremendous pressure on state governments to reduce tax levels, or at least, to put a cap on future increases. As revenues become more limited, it will be necessary for legislatures to make difficult choices about the levels and kinds of government services which should be provided. Some believe that the zero-base budgeting technique can help to ensure that such choices are made in an informed and rational basis.

Governmental budgeting reform has evolved through several stages which have been sequentially concerned with: the control of spending to guard against administrative abuses; the efficient performance of work and prescribed activities; and planning, popularly known in one form as Planning-Programming-Budgeting System (PPBS). According to budget experts, the emphasis of budgeting is shifting from mere justification, through such techniques as line-item review, to more in-depth analysis of spending priorities based on the careful weighing of the costs and benefits of spending alternatives. Zero-base budgeting, many believe, is a variation of this planning type budgeting.

\*Pyhrr, Peter A. "ZBB." across the board, (November 1977), 39.

The Planning-Programming-Budgeting System has been used by the federal government and has also been adopted by many state and local governments. It is designed to provide a systematic process to identify trade-offs among programs aimed at similar objectives, to analyze the performance and impact of programs and to connect these objectives with current and future years' budgets. It is believed that PPBS is aimed primarily at macro-economic analysis of broad policy decisions and desired outputs rather than the "nuts and bolts" of detailed planning and implementation.

It is said that zero-base budgeting provides the "nuts and bolts" or microeconomic tools to transform objectives into efficient operating plans. The key difference between the two systems is that PPBS focuses on top-level decisionmaking while zero-base budgeting is supposed to focus on decisions at various operating and management levels within an organization. Thus, ZBB, like performance budgeting, is oriented toward efficiency and management. But, unlike performance budgeting, zero-base budgeting does not require that line item control be "given up." According to James Ramsey and Merlin M. Hackbart, with the Center for Public Affairs, College of Business and Economics, University of Kentucky, "Object-of-expenditure data, and hence control, can be maintained with ZBB." These gentlemen note, however, that zero-base budgeting, unlike other forms of planning type budgeting, does not give attention to the statement of long-range goals and plans, but rather to a planning process that is operationally defined. They say that zero-base budgeting as a budget innovation focuses upon evaluations to determine operational efficiency, rather than overall output effectiveness.\*

Peter A. Pyhrr, who has been involved in developing zero-base budgeting at both Texas Instruments and Georgia, says that the "Top-down effect of PPBS can be coordinated with the predominantly bottom-up efforts of zero-base budgeting." Pyhrr says that zero-base budgeting is a general system, originally used in private industry, which can be successfully adapted to fit the needs of dissimilar activities and organizations. He notes that "the zero-base budgeting process, as used by both Texas Instruments and the State of Georgia, is identical in philosophy and general procedures, although the specific mechanisms of implementation differ slightly to fit the particular needs of each organization."

According to Michael J. Scheiring, Program Analyst with the Program Policy and Evaluation Section of the New Jersey Bureau

\*Ramsey, James and Merlin M. Hackbart. Innovations in State Budgeting. Center for Public Affairs, College of Business and Economics, University of Kentucky. 32.

of the Budget:

Zero-base budgeting is attempting to force state decisionmakers to begin to combine planning, budgeting, and operational decision-making into a systematic management process. It seeks to require managers to quantify both the anticipated costs and to provide projected performance measures on the outputs, effectiveness, and efficiency of the program \* \* \*. The aim of ZBB is to provide decisionmakers with the ability to examine program objectives and programs that were based on statutes that were enacted to meet the problems or needs that were priorities of days long past. Both the statute and the objectives are brought up for reevaluation. Thus, whole programs that owe their continued existence to a legislative action taken long ago, which are continually refunded without question, now are to become questioned and focused upon in terms of need, benefits to be derived, costs to be incurred, and priority with other programs, both old and new, that are competing for scarce dollars. ZBB charges an agency to develop a defense of its budget request that does not rely on the perimeter of constructed trenches of previous appropriations.\*

Zero-base budgeting has been defined as a technique whereby each agency's budget must be justified from "scratch," or zero, for all existing and newly requested programs. Phyrr, identified earlier, says:

(This) \* \* \* shifts the burden of proof to each manager to justify why he should spend any money at all. The approach requires that all activities be analyzed in "decision packages" which are evaluated by systematic analysis and ranked in order of importance.\*\*

\* Sheiring, Michael J. "Zero-Base Budgeting in New Jersey." State Government, (Summer 1976), 1976.

\*\*Pyhrr, Op. Cit.

Zero-base budgeting, as envisioned in its proper form, is radically different from the "incremental" approach to budgeting which primarily considers adding or subtracting from an agency's existing budgetary allocation and staffing pattern. Many families use some form of zero-base budgeting: "We have \$1,000 to spend next month; how should we spend it based on our household needs and priorities?" In other words, they start from zero and build their budget on a plan for their monthly spending priorities. For most, this means starting with high priority items such as food, shelter, clothing and transportation and then adding on more discretionary items, like recreational purchases, until the family's budget limit is reached.

Several writers have described zero-base budgeting systems and the descriptions range from fairly simple to highly complex. According to Pyhrr, the two main steps in zero-base budgeting are:

1. Developing "decision packages." This step involves analyzing and describing programs, current as well as proposed, in decision packages. And,
2. Ranking "decision packages." This step involves evaluating and ranking these packages in order of importance through some sort of evaluation process.

Pyhrr says decision packages are documents that identify and describe specific activities in such manner that budget decision-makers can (1) evaluate them and rank them against other activities, and (2) decide whether to approve or disapprove them. Decision package subjects, according to Pyhrr, can include functions, activities, programs, capital expenditures or even personnel.

In zero-base budgeting, decision packages are usually prepared for different ways of performing a program at a given budget level and for different levels of effort of performing the program including (1) the minimum level below which it is not realistic to operate the program at all (which is usually expected to be below the current funding level), (2) the current level which is an estimate, usually adjusted for wage and price, of maintaining the program at its existing level, and (3) new or improved levels.

The first step in the implementation of zero-base budgeting is the determination of where decision packages should be established. This step involves the two-stage process of identifying persons who will be involved in the preparation of decision packages and determining the organization levels through which the rankings will proceed. An organization chart is, perhaps, the best indicator of the levels at which decision packages should be prepared. Pyhrr says, however, there are four basic considerations in

determining the meaningful organizational levels which decision packages should be developed. They are: (1) size of the operation, (2) available alternatives, (3) organizational levels at which meaningful decisions can be made, and (4) time constraints.

Pyhrr says that after decision packages have been developed and ranked:

Management can allocate resources accordingly--funding the most important activities (or decision packages), whether they are current or new. The final budget is produced by taking packages that are approved for funding, sorting them into their appropriate budget units, and adding up the costs identified on each package to produce the budget for each unit.\*

Pyhrr believes the three requirements for successful implementation of zero-base budgeting are: (1) support from top management, (2) effective design of the system to meet the needs of the user organizations, and (3) effective management of the system.

Moreover, according to Terrell Blodgett, a principal for Peat Marwick Mitchell and Company in Austin, Texas:

A government should follow a complete and carefully defined implementation plan.

The most significant requisites are:

- . A clearly stated set of goals and objectives for the organization as a whole and for each of the component units;
- . A well-structured set of criteria for work-load measurement;
- . An accounting system capable of generating financial and budgetary data for the \* \* \* organizational units and program efforts; and
- . A professional budget staff to guide the ZBB efforts and coordinate the entire changeover in the budget process, plus the ability to augment this staff with outside assistance if necessary.\*\*

\* Pyhrr, Peter A. Zero-Base Budgeting. New York: John Wiley and Sons, 1976.

\*\* Blodgett, Terrell. "Zero-Budgeting Systems: Seventeen Steps to Success." National Civic Review, (March 1978), 124.

Blodgett also believes successful implementation of zero-base budgeting includes the (1) fixing of responsibilities, (2) development of a budget calendar, (3) definition of policies and procedures, (4) definition of decision units (i.e. the program or organizational entity for which budgets are prepared and for which administrators make significant decisions on the amount of spending and the scope, quantity and quality of work to be performed), (5) conducting training workshops for personnel who will be preparing the budget, (6) preparation of decision packages, (7) ranking of decision packages in the departments, (8) review of decision packages by budget staff, (9) holding training sessions for the governing bodies (executive and legislative), and (10) review and adoption of the budget by the governing body(ies).\*

## II.

### Zero-Base Budgeting In Other Locations

Zero-base budgeting has been adopted or considered as a budget tool in many states and by the federal government. A 1977 survey of the members of the National Association of the State Budget Officers identified the following states as having developed budget systems which use zero-base budgeting techniques: Arkansas, Colorado, Delaware, Georgia, Iowa, Kentucky, Louisiana, Ohio and Texas. Other states, reported by The Council of State Governments, trying zero-base budgeting include California, Idaho, Illinois, Kansas, Missouri, Montana, New Jersey, Oregon, Rhode Island, South Dakota and Tennessee.

Zero-base budgeting systems are also coming into use among municipal governments. According to a recent survey reported in the National Civic Review, "of 109 municipalities surveyed, 34 had adopted ZBB or some of its aspects into their regular budget process, another 36 were actively considering use of ZBB."\*\*

Certain bills introduced in Congress over the last two sessions dealing with the so-called sunset principle (see Research Division Background Paper 79-4 "Sunset Legislation") have contained

\* A complete description of these steps and others is contained in Mr. Blodgett's previously referenced article.

\*\*"Zero-Base Budgeting Becoming More Popular." National Civic Review (November 1978), P. 475.



provisions for zero-base budgeting. One such measure, the Government Economy and Spending Act (S 2925 of the 94th Congress), would have, if enacted, provided for a zero-base budget review of specified agencies by Congressional committees.

Other measures, including Senator Percy's Government Accountability Act of 1978 (S 3366 of the 95th Congress) have contained certain aspects of zero-base budgeting. S 3366 would have required the president to submit a biennial "Management Report" to Congress designating executive department programs as "excellent," "adequate" or "unsatisfactory" and ranking the programs as to their effectiveness relative to all other programs within each category in that executive department or within that independent establishment. The bill also (1) specified criteria for the designation and ranking of programs, and (2) would have required the Director of the Office of Management and Budget to submit an evaluative report on federal programs to the president and Congress identifying which programs are contradictory to other federal programs and recommending corrective legislation. Senator Percy's S 3366 would have also required the budget director to recommend the termination or modification of programs whose relative ineffectiveness no longer justified continued federal expenditures or only justified a lower level of federal expenditures.

On October 11, 1978, the provisions of Senator Percy's S 3366 were amended into Senator Muskie's "Sunset Act of 1978," S 2 of the 95th Congress. Neither S 2 nor S 3366 became law. Zero-base budgeting in modified form was, however, put into effect in February 1977 by President Carter who asked each agency head in the executive branch of government whose budget is subject to presidential review (see OMB Circular No. A-11, Section 11.1) to develop a zero-base budget system to be used in the preparation of the 1979 federal budget.

The Urban Institute, in conjunction with the National Association of State Budget Officers, is currently undertaking a comparative study of zero-base budgeting in state and local governments. It is hoped that an initial report, providing a current listing of state governments which have implemented zero-base budgeting and detailing their experiences with it, will be available by mid-February 1979.

### III.

#### Recent Zero-Base Budgeting Legislation in Nevada

Two bills (A.B. 465 and S.B. 219) and one resolution (S.C.R. 5) were introduced during the Nevada Legislature's 1977 Session which

dealt with the sunset mechanism or performance auditing. None of these measures became law.

The Senate amended S.B. 219 by making it, in effect, a "test" sunset bill. Also, zero-base budgeting provisions, patterned after South Dakota's H.B. No. 501 of 1977, were added as requirements for the budgets of the departments of education and economic development. The zero-base budget provisions contained in the first reprint of S.B. 219 said, in part:

\* \* \* the chief of the budget division of the department of administration shall prepare an additional and separate budget for the department of economic development and for the department of education in accordance with section 532 of this act.

2. The chief of the budget division shall prepare the appropriate forms and shall submit the forms to the legislative commission for its review and approval. If the forms are not approved, the legislative commission shall prescribe the appropriate forms for use by the chief.

3. The director of the department of economic development and the superintendent of public instruction shall furnish all necessary information and shall assist in the preparation of the separate budgets.

4. The chief of the budget division shall submit the separate budgets to the 60th session of the legislature.

SEC. 532. The budget for the department of economic development and for the department of education shall contain:

1. A statement of the objectives and programs of the department.

2. An evaluation of the effectiveness of these objectives and programs and whether or not the stated goals are being realized.

3. A ranking of the objectives and programs in order of priority.

4. The minimum amount of money required to accomplish the stated objectives and programs.

5. The minimum amount of money required for each objective and program.

6. The minimum level, the current level and the requested level of spending which the department has determined is necessary for each objective and program.

7. A statement of the methods used to determine the priority of, and the amount of money needed for, each objective and program.

8. A description of the resources and liabilities of the department.

9. A list of the sources from which the department receives its revenues, and the relative amounts from each source.

SEC. 533. 1. If the chief of the budget division fails to submit the required budget, the department of economic development and the department of education shall have their budgets prepared by the appropriate committee of the legislature.

2. A budget prepared by the legislature shall not be more than 85 percent of the budget established for the fiscal year beginning July 1, 1978, and ending June 30, 1979.

In more recent action relating to zero-base budgeting in Nevada, the legislative commission, meeting on December 13, 1978, adopted a resolution calling for a pilot project in zero-base budgeting. This resolution requests that the 1979 session of the legislature adopt legislation, to be effective on passage and approval, requiring that three executive branch agencies submit their budget requests to the Assembly Ways and Means and Senate Finance Committees in a zero-base format. The three state executive branch agencies suggested by the legislative commission for the pilot project are: the personnel division of the department of administration, the bureau of community health services of the health division, and those budgets (chancellor's office, press, and computing center) under the direct control of the chancellor of the University of Nevada system.

At its December 13, 1978, meeting, the legislative commission also directed that the budgets of the legislative counsel bureau be prepared and justified in a zero-base format.

As envisioned by the legislative commission, the fiscal analysis division of the legislative counsel bureau should be responsible for establishing zero-base budgeting procedures and for periodically reviewing the status of the pilot projects.

#### IV.

##### Pros and Cons of Zero-Base Budgeting Legislation

There are differences of opinion concerning the usefulness of zero-base budgeting as a budget review tool for government agencies. Some have expressed concern that this budgeting procedure may be too difficult to achieve, partly because it will add heavily to the burdens of budgetmaking and partly because it will be resisted by those who feel that their pet programs will be jeopardized by a system that subjects every activity to periodic scrutiny of its costs and results.

According to Michael J. Scheiring, noted earlier, states or other levels of government which may be considering implementation of zero-base budgeting should review the possible hazards that might occur. Mr. Scheiring says:

1. ZBB cannot be implemented overnight. Time is needed to develop budget forms properly and to train budget and agency personnel in their use. Therefore, budget preparation time should be lengthened during the new system's implementation.
2. Top management may be viewed as ignoring and displaying only lip-service to ZBB. It is important that upper-level budget officials actively demonstrate to budget staff and appropriate agency officials their support and utilization of zero-base budgeting in reviewing agency budget requests, in analyzing budget staff recommendations, and in making final budget decisions.
3. Agencies may have considerable problems in interpreting forms and in understanding zero-base concepts. Close coordination and followup should be conducted by the budget office to insure proper understanding and completion of budget request forms by the agencies.
4. Performance measures should be reviewed beforehand to assure that data (on the need for the program, the efficiency and effectiveness of the program, along with the program outputs produced) that the agency submits for budgetary purposes will be provided by the agency in the proper manner. The types of performance measures requested are often confused by the agencies.
5. An educational seminar for legislators, especially for those on the finance committees, should be held in order that they will be better able to understand the concepts of the new system.
6. A new budgeting system is not instituted by fiat. Budget system reforms and improvements usually take years of slow and painful development. Do not herald any new system or major change in a present budgeting system as a new messiah that will bring about solutions overnight. The experiences of PPBS (discussed earlier in this paper) has served to provide many lessons in this area.\*

\*Scheiring, Op. Cit. 179.

George Bell, Past Director of the National Association of State Budget Officers, also has certain caveats for new budgetary techniques, including zero-base budgeting. In the 1976-77 Book of the States he says:

In the development of program budget systems by whatever title used, it is now widely recognized that such systems cannot quickly be made effective in decisionmaking. Expertise must be developed; more important, the presumed beneficiaries--governors, legislators, and administrators--must become familiar with this approach. This takes years, and most efforts are now spread over time.

Pyhrr has described some potential problems with the implementation of zero-base budgeting but disagrees that it is unworkable in a governmental setting. He says:

As experience in Texas Instruments, Inc., and the State of Georgia has indicated, this type of budgeting need not add heavily to the burdens of budgetmaking. In fact, effectively planned and properly managed, zero-base budgeting can actually reduce the burdens of budgetmaking while significantly improving management decisionmaking and the allocation of resources.\*

Initial surveys appear to indicate that states using zero-base budgeting have had mixed results. California tried zero-base budgeting on a pilot project basis and, according to Barry Donnelly, Chief of Program Evaluation in the Department of Finance, found that the budget technique "did not add any unique benefits not available in \* \* \* (California's) \* \* \* other program budget tools." Oregon's legislature mandated in 1977 that zero-base budgeting be phased in over a six-year period for use by all state agencies. According to Lynn Frank, with Oregon's Executive Budget Management Unit, 31 state agencies are using zero-base budgeting for the 1979-81 biennial budget. Frank says, "So far zero-base budgeting worked well with some of the 31 initially selected agencies and has been a flop in others." It should be noted that Oregon's zero-base budget approach only involves two funding levels for each program (1) a proposed or requested level, and (2) a level which is 85 percent of the proposed level. Frank observes that 85 percent of the proposed level could be a funding level which is higher than an agency's current expenditure level.

\*Pyhrr. Op. Cit.

Gary L. Ellwanger, with the South Dakota Department of Executive Management, advises that South Dakota's initial attempts at zero-base budgeting mandated in 1977, revealed some problems. Three departments (public safety, environmental protection and the attorney general's office) were selected to use the zero-base budgeting system and, according to Ellwanger, "a lot of time, effort and paperwork went into producing the budgets of these agencies." Apparently, however, during the "crush of the short 30 day budget session" the legislature decided to use its more traditional budget setting techniques, instead of zero-base budgeting, to establish the state's budget. South Dakota has passed another zero-base budgeting measure (S.B. 47 of 1978) and hopes to try an improved ZBB approach on its elementary and secondary education systems for the coming budget cycle.

Idaho has been using zero-base budgeting on a modified basis for three years. Initially the system was put into effect by the budget division and since that time both the legislature and the governor have mandated its use. According to Carl Tuellar, Chief of the Economic Resources Unit in Idaho's Division of Budget, Policy Planning and Coordination, zero-base budgeting has seen its "ups and downs" in Idaho. Tuellar cites several pros and cons for zero-base budgeting as used in Idaho. He notes that zero-base budgeting is politically expedient, allows for more in-depth analysis of programs, involves more people in the decisionmaking (which, he believes, should improve the overall understanding of programs), and provides for justification of budgets by other criteria than just previous years appropriations. The negative aspects of zero base-budgeting mentioned by Tuellar are that ZBB may: (1) Create the assumption that benefits are related to costs; (2) Increase time and effort required in the budget process; (3) Permit high priority items to be placed in low ranking decision units; (4) Make it difficult for comparisons of current appropriations with historical data; (5) Generate false expectations about the results of the process; and (6) Not lend itself adequately to dealing with dedicated funds (i.e. marina boat tax revenues).

Tuellar could not identify any direct budget savings associated with the use of zero-base budgeting in Idaho. He did say, however, that zero-base budgeting was a good management device even if no direct savings could be tied to its use.

Finally, reporting on the use of ZBB at the federal level, Congressional Quarterly says:

\* \* \* a detailed assessment of the first year of zero base budgeting, the Office of Management and Budget (OMB) was unable to pinpoint how much money was saved by using the process, under which budget items are examined at different funding levels, theoretically from the ground up.

\* \* \* Under the process, OMB said:

- . Agency budget priorities were explicitly identified and stated.
- . Agencies were better able to restrain the size of their budget requests.
- . Management participation in the budget process increased at all levels, leading to a better understanding of separate program plans and policy initiatives.

Problems included some confusion in developing procedures and substantial increases in paperwork. "A number of agencies had trouble defining program objectives, making it difficult in some cases for the agencies and for OMB to arrive at budget recommendations.\*"

As with other modern budgeting techniques, the specific aspects of zero-base budgeting are technical and too detailed to describe sufficiently in a background paper. Anyone interested in an in-depth review of zero-base budgeting should communicate with the fiscal analysis division or the research division which have comprehensive materials on this subject.

\*"OMB Says Zero-Base Budget System Had a 'Good Start'." Congressional Quarterly Weekly Report, (May 6, 1978), 1139.

### SUGGESTED READING\*

Anthony, Robert N. "Zero-Base Budgeting Is a Fraud." The Wall Street Journal, (April 27, 1977).

Bell, George A. "State Administrative Organization Activities." The Book of the States 1976-77, The Council of State Governments, 1976.

Blodgett, Terrell. "Zero-Base Budgeting Systems: Seventeen Steps to Success." National Civic Review, (March 1978), 123-129.

Carter, Jimmy. "Planning a Budget From Zero." Innovations in State Government, (National Governor's Conference), (June 1974).

Compendium of Materials on Zero-Base Budgeting in the States. Washington: Committee on Government Operations, United States Senate. Document No. 95-52, January 1977.

Cowen, Scott S., Burton V. Dean and Ordeshir Lohrasbi. "Zero-Base Budgeting as a Management Tool." MSU Business Topics, The Graduate School of Business Administration, Michigan State University, (Spring 1978), 29-39.

General Budget Preparation Procedures--Fiscal Year 1978 Budget Development, State of Georgia, Office of Planning and Budget.

Havemann, Joel. "The Tale of How One Agency Used ZBB - and Lived to Tell About It." National Journal, (February 18, 1978) 265-269.

Hogan, Ray Lee. "Zero-Base Budgeting: A Rationalistic Attempt to Improve the Texas Budget System." Master's Thesis, The University of Texas at Austin, 1975.

Nicholson, Judith. "Administrative Organization." The Book of the States 1978-79. The Council of State Governments, 1978. 112-115.

"OMB Says Zero-Base Budget System Had a 'Good Start'." Congressional Quarterly Weekly Report, (May 6, 1978), 1139.

Pyhrr, Peter A. "ZBB." across the board, (November 1977), 34-41.

Pyhrr, Peter A. "Zero-base Budgeting," Harvard Business Review, (November, December 1970), 111-121.

Pyhrr, Peter A. Zero Base Budgeting. New York: John Wiley & Sons, 1973.

\*A comprehensive bibliography of publications pertaining to the zero-based budgeting is available for review in the research division's library. Also available are copies of relevant state and federal legislation.



Ramsey, James and Merlin M. Hackbart. Innovations in State Budgeting, Center for Public Affairs, College of Business Economics, University of Kentucky. 1978.

Reinhart, George W. "Zero-Base Budgeting: How To Do It." Management Information Service Report, International City Management Association, (September 1978).

Schick, Allen, "The Road to PPBS: The Stages of Budget Reform," Public Administration Review, (December 1966), 243-258.

Senator Percy's Explanation and Introduction of S 3366, "The Government Accountability Act of 1978." Congressional Record, (August 2, 1978).

Silberman, Laurence H. "If Not The Best, At Least Not The Worst." Commonsense, (Summer 1978), 18-26.

"Sunset Legislation and Zero Based Budgeting." Advisory Commission on Intergovernmental Relations. Information Bulletin 76-5, (December 1976).

Suver, James D. and Ray L. Brown. "Where does zero-base budgeting work?" Harvard Business Review, (November-December 1977), 76-84.

Wholey, Joseph S. Zero-Base Budgeting and Program Evaluation. Lexington: Lexington Books, 1978.

Wildavsky, Aaron. "Some Butterflies Were Caught, No Elephants Stopped: The Zero-Base Budget, A Precursor of PPBS." Budgeting, A Comparative Theory of Budgetary Process. Boston: Little, Brown and Company, 1975.

Dworak, Robert J. "Zero-Base Budgeting and Sunset Laws. Do They Go Together?" National Civic Review, (March 1978), 118-129.

"Zero-Base Budgeting Becoming More Popular." National Civic Review, (November 1978), 475.

Zero-Base Budgeting. OMB Bulletin No. 77-9, (April 19, 1977).

"Zero-Base Budgeting Undergoes Limited Test." Congressional Quarterly Weekly Report. (March 12, 1977), 441-443.