

Zero-base budgeting—an attempt to reevaluate all programs, activities, and expenditures in terms of cost-benefit.

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ZBB FITS DP TO A TEE

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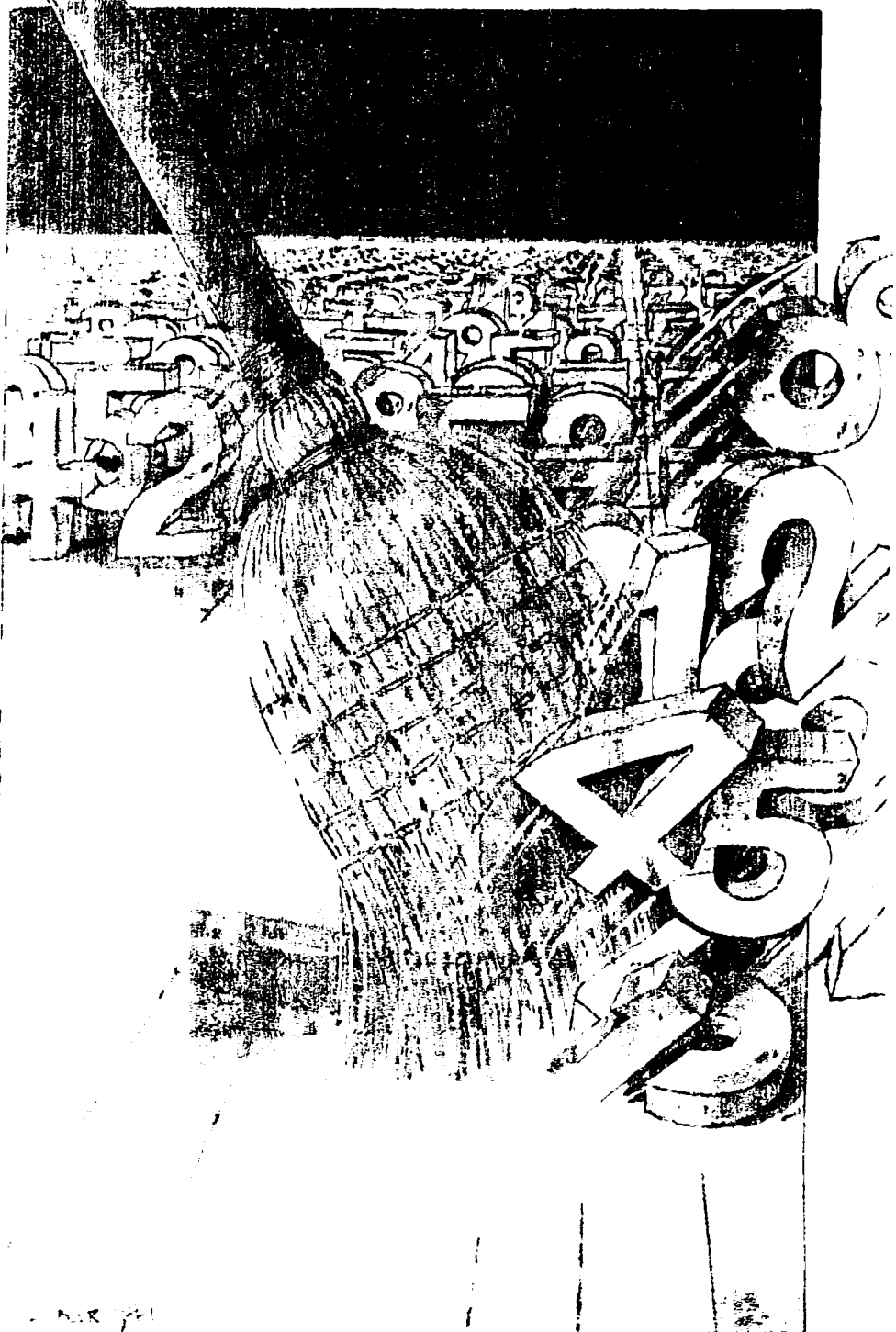
The development of zero-base budgeting, which began in 1961, when it was introduced to the U.S. Department of Agriculture. Then in 1969, while at Texas Instruments, Peter Bunker Carter developed the concept. Texas Instruments first used it in its staff and its subsidiaries, and then expanded it to the parent company in the following year. It is not new idea, but current interest is attributable

President Carter, who, as Governor of Connecticut, introduced the concept into the state's budget in 1970 and who introduced it to the federal budget for fiscal 1977 to apply it to the review and analyze the application of zero-base budgeting.

For a financial institution, zero-base budgeting is not only a new approach to the control of costs, but also a less than traditional management process of providing a more effective and efficient way of doing business. A zero-base budgeting is a management process that requires an organization to re-evaluate all programs, activities, and expenditures in terms of their cost-benefit ratio. It is not a budgeting method, but a management process. It is a method of budgeting that is based on a cost-benefit analysis of all activities.

There are three basic steps in the development of a zero-base budgeting process. The first step is the identification of all programs, activities, and expenditures in the organization. The second step is the evaluation of each program, activity, and expenditure in terms of its cost-benefit ratio. The third step is the selection of the most cost-effective programs, activities, and expenditures to fund.

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In preparing decision packages, a unit manager begins with the specification of the unit's objective and purpose. After a description of how the unit currently operates and the resources utilized, the manager then develops workload and performance measurement techniques, considers alternative methods of operating, and performs incremental analysis. The final decision package will be placed in one of the following three support level categories: (1) different methods or reduced levels of effort to do each activity; (2) "business as usual" levels of effort, where there are no other alternatives; (3) new activities and programs.

Once the manager has defined all the obligatory and discretionary activities into packages, a ranking process occurs. Usually the manager ranks all packages in order of decreasing benefit to the company on a cost-benefit basis. This ranking activity begins at the cost center level. A committee is formed by all managers in the cost center. The committee reviews all the packages presented to it and ranks them in importance by means of a voting mechanism. The packages considered most beneficial to the cost center as a whole receive the highest rankings, while the least important receive the lowest. A cutoff point is now established. Given the general level of funds available in the coming fiscal year, all packages above a given ranking are accepted by the group and all those below a certain point are rejected.

These decisions are then passed up to the next higher management level. Here the manager reviews the rankings to determine if they fit into the organization's goals and to decide whether the rejected packages offer enough benefits to expand the level of funding. Upper managers briefly examine only a preestablished percentage of the packages to control volume. This process is repeated until all the accepted activities are filtered through to the top of the organization, where the budget for the entire organization is then created.

ZBB does not supplant the corporate budget. It is not suited to all organizations nor all activities of an organization. It has little use in budgeting for production costs such as direct labor, direct materials, and direct overhead, which are largely determined by production and sales volume. It is mostly applicable to the service and support area of an organization which has discretionary costs.

The majority of recent applications of ZBB in the private sector have been modeled after the total venture in Texas Instruments in 1979. The method began in Texas Instruments' research and development efforts.³ Decision packages were designed to specify important activities, estimate and describe the resources, and estimate the cost and conse-

quences of not funding each R&D program. The programs were then ranked according to potential benefits, and limited funds were allocated to those with the highest priority.

In 1971, management at Texas Instruments decided to use the new technique in other nonproduction or staff activities in the company. Since then, ZBB has become standard operating procedure for all staff and research activities, which consist of over one-third of the company's annual budget.

The Chicago office of Peat, Marwick, Mitchell & Company made a survey of 391 business executives and government officials. Some 81% of the responses indicate that "certain aspects of zero-based budgeting would improve our present budgeting procedures" and 47% state that "we are likely to seriously consider implementation of a revised budgeting system using the ZBB approach or elements of it."⁴ Stonich mentioned the favorable results of a questionnaire in his book.⁵ In general, the responses show that ZBB is a good process to change the total budget level, to reallocate costs and manpower, to learn more about the organization, to improve efficiency and effectiveness within the organization, and to be used as a management planning and control system.

In summary, ZBB has been adopted in many U.S. companies with an overall measure of success.⁶ The budgeting tool offers a means of objectively allocating funds to obtain maximum benefit in nonproduction departments. However, the demands of additional time and paperwork are not acceptable in many firms. It would be beneficial to obtain additional feedback from those companies that have tried the technique and subsequently cast it aside as impractical. This information would give added insights into the usefulness of ZBB.

ZBB IN DP INDUSTRY

Most of the literature report ZBB applications in manufacturing companies. For example, Dudick illustrated a ZBB application for a typical small-to-medium manufacturing company or division.⁷ This section describes an actual implementation of ZBB for an information service industry in Southern California, where data processing had long been plagued with the problem of rising costs, particularly person-

nel costs. The pressure to reduce these items was so great that an analysis of the departments' activities was conducted by the individual technical services managers in early 1979. Although a slight reduction was agreed upon after some arm twisting, it was difficult to isolate any significant head count reductions. In a service industry, the relationship between inputs and outputs are lacking, and therefore the management decided that a second analysis of its activities utilizing ZBB techniques was necessary. The computer operations department was not included during this test run of ZBB.

The management team spent a total of five days developing a decision package for every activity they were responsible for whether or not they were actively working on them. Thus, all outstanding user requests, program enhancements, and pet projects were included. A total of 221 decision packages were developed, and one example is shown in the sample form on the opposite page. The most important sections of the form are those that document manpower requirements, expertise levels, advantages of retaining the activity, and consequences of eliminating the activity.

The second step was to rank them according to a priority scale. The rankings ranged from 1 to 6 (see Fig. 1).

The decision line between 3 and 4 separates the recommended activities, (4 and above) and those not recommended at this time (3 and below). If the budget is constrained, a rank four activity would be eligible for deletion, and, conversely, if the budget is increased, rank three activities could be added.

All of the recommended activities were summarized according to level of expertise and compared to the available staff. A special graphic analysis program was written to spread these activities across the next 12 months in order to visualize the workload peaks. In some departments, the peak for the immediate future required 20 individuals, when in fact only seven were available to do the work. The involvement of the senior management from all user departments was necessary to reevaluate work requests, to reschedule start and completion dates, and to suggest modifications to the rankings. After receiving their input, a presentation was made to top management that indicated a 20% decrease in personnel.

The author was requested by top management to further reduce head count in his department by five people. In order to meet this request, a list of activities with low rankings was prepared, and it was estimated that up to seven positions could be eliminated if several rank 4 and 5 activities were reprioritized. Top management elected to eliminate a sufficient number of these activities to allow the reduction of five positions.

3. *Zero-Based Budgeting: Budgeting Beyond the Current Budgeting Practices*, by Michael J. Hill, *Harvard Business Review*, p. 40.

4. P. J. Stancik, *Zero-Based Budgeting and Management*, D. C. Jones-Brown, Houston, TX, 1977.

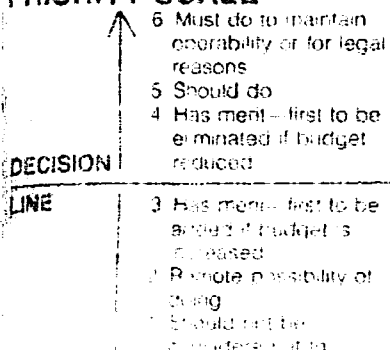
5. Other companies that used ZBB include: Texas Instruments, Eastman-Kodak, Southern California Edison, United Fruit, General Bank, Florida Power, and U.S. Bank. Cf. work by the author, "Combating Inflation: A New Approach to Budgeting," *IBM Corp.*, International Business Machines Corp., 1979. Cf. also *Zero-Based Budgeting*, by Michael J. Hill, *Harvard Business Review*, p. 40.

6. *Financial Management: A Practical Approach*, by Michael J. Hill, *Harvard Business Review*, p. 40.

ZERO-BASE PLANNING DECISION PACKAGE			DEPARTMENT	ACTIVITY NO.	ACTIVITY LEVEL
Computer Billing System			Programming	134	5
TITLE		RANK	PRODUCT CLASS	<input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> CONTINUING ACTIVITY	
MANPOWER LOADING		SUPPORT LEVEL		New or Revised Standard Required	
GRADE LEVEL	MAN DAYS	HOURS	<input checked="" type="checkbox"/> AT <input type="checkbox"/> ABOVE <input type="checkbox"/> BELOW CURRENT LEVEL		
1. 34	230	= 1840			
2. 35	230	= 1840			
3.					
TOTAL COST	OTHER COST	ESTIMATED SAVINGS	EST. START DATE	EST. COMPLETION DATE	
\$88,575			6-1-79	2-1-80	
DESCRIPTION OF ACTIVITY			DESIRED RESULTS (OBJECTIVES)		
Design and install a new billing system that utilizes software physics theory, product pricing, and natural business unit pricing.			Be cost effective. Change to fit evolving technology. Provide for incentive pricing.		
RESPONSIBILITY			DEPENDENCIES		
DEPT.	Pgmg Finance		Adoption of new pricing policies.		
DEPT. CODE	01 14				
LDI CODES	P P I P		ACTIVITY NO. IF ANY		
ADVANTAGES OF PERFORMING ACTIVITY			DISADVANTAGES OF PERFORMING ACTIVITY		
Attain competitive pricing position. Incentive pricing will encourage users to adopt less expensive technologies.			Will require a product costing system.		
ALTERNATIVE APPROACHES			CONSEQUENCES IF ACTIVITY NOT PERFORMED		
Bill each computer run utilizing a single usage rate			Continued dependency upon occupancy time billing.		
DEPARTMENT MANAGER		DATE	TECH. SERV. DIRECTOR SIGNATURE		DATE
		5-1-79			

FIG. 1

PRIORITY SCALE



The request of additional reductions of manpower was greatly facilitated by the use of ZBB. The user departments, typically the loudest complainers of poor service and high cost, accepted further reductions in service levels because they participated in the prioritization of activities and benefited from lower charges. Management could, for the first time, properly evaluate the cost and necessity of any given activity. The activities with a ranking of 5 were eliminated mostly because of the desired reduction in positions but would probably be the first to be added should the need arise.

ZBB is typically used in the fall of each year in preparation for the annual budget. Because of the tremendous effort required to

develop decision packages, it is recommended that after the initial analysis of activities is completed an annual update of the decision packages be made, thus eliminating much of the clerical effort. Each package should be ranked again according to the current priorities of the company.

The result of identifying and classifying all activities within systems and programming has been so helpful that it was decided to maintain those packages and prepare additional ones for newly identified activities. This process would supplement a project initiation request procedure that controls system change requests. Managers and staff are encouraged to add new activities to the system even though they might be blue-sky (in this industry, wild ideas tend to become reality within a short period of time).

The evidence of past applications of ZBB indicates substantial value in the concept of reevaluating budget programs and activities to determine relevant costs, benefits, and alternatives. ZBB has been successfully implemented in a growing number of service industries. Obviously, many of these companies feel that the benefits of ZBB outweigh the cost of increased time and effort. The benefits include the greater understanding of how funds are being used, increased participation of lower management in budgeting, and elimination of inefficient programs. However, because the budgeting tool involves the costs of increased time, paperwork, and effort, the implementation decision must be carefully considered.

ZBB is not, and should not be considered, a panacea for management's budgeting problems. The technique should not be built up to promise more than it can realistically provide. In order to apply ZBB successfully, the following guidelines should be observed carefully:

1. Review the ZBB methodology and determine its appropriateness.
2. Analyze the need of your organization before implementing ZBB; that is, one should ask, "Is my organization ready for ZBB?"

3. Define resources required before implementation. This includes obtaining adequate staff for the budgeting department, setting up a top-management steering committee, and appointing local budget coordinator.

4. Sell high-level management on ZBB in advance of its implementation.

5. Long-range or strategic planning should always precede ZBB.

6. Develop a ZBB method, including a review procedure, tailored to your organization's environment.

7. Allow adequate time for training budget personnel and users.

8. Communicate to all levels of

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management the objectives and goals, and provide clearer assignment of responsibility for justifying expenditures and setting priorities.

9. Test ZBB in a single department before implementing it throughout the organization.

10. Link ZBB to existing financial control systems, providing effective and timely management reports.

11. Encourage all levels of management participation, especially top management's cooperation and commitment. *

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