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# Flexible Budgeting

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(Translated from an address before the Munich Business Economist Association on July 4, 1961, in Munich. West-Germany.)

In our dynamic economy of today with its wide fluctuations and rapid structural changes, management's greatest problem is the attainment of the over-all business objective in such a way that the existence of the enterprise is justified. Efficiency and success of an enterprise's management are measured by its ability to reach the over-all objective in a satisfactory, profitable way. Today profits are the yardstick for evaluating management's productivity.

It is true that profits are not the sole objective of doing business but it is also true that the general public and the prospective investor judge the status of a company by its ability to operate profitably and to grow organically despite economical fluctuations and structural changes. In other words, the criterion for successful managerial activity lies in the ability not only to preserve the enterprise's substance, but also to produce sufficient funds for its organic growth and to provide a satisfactory return for the investors. Performance of such a problematic task in an economy like ours requires the application of modern remedies. The manager of today no longer can depend solely upon past experience in solving his complex day-to-day problems: he needs tools which provide him with effective and intelligent control of all activities. This necessity has led to the development of those managerial tools, techniques, and methods, which we call "Scientific Management."

The most important and most widely used tool of those developed during the past decades is the budget. More and more modern managers recognize the immense importance of advance planning or budgeting of all business activities, whether in regard to material, machines, men or money. They recognize budgeting as a method1 for co-ordinating the combined intelligence of an entire organization into a plan of action, based upon past performance and governed by a rational judgement of factors that will influence the course of the business in the future. They know that budgeting is neither just control, nor just forecasting. It is an exacting and rigorous analysis of past operations and a careful calculation of probable and desired future operations. The objective

of budgeting is to substitute deliberate, well-conceived, astute business judgement for accidental success in enterprise management. An over-all operation budget includes all phases of operation for a definite future period. It represents a formal expression of management's policies, plans, and goals for the enterprise as a whole, as well as for each individual department.

Budgets today are widely recognized as an indispensable compass by which a businessman may keep as closely as possible to a charted course. There were and there still are businessmen who say that any advance planning or budgeting in times like ours is senseless in view of the business uncertainties2 and the inability to predetermine sales and costs for any extended period. If this reference is to the conservative or fixed budget, then such statements are somewhat justified, especially when conditions change radically and cause wide fluctuations. Fixed budgets are based upon certain definite assumed conditions, and they are considered as something static, against which the actual costs are compared later, despite the fact that the actual costs were formed under quite different conditions than those used as basis in the budget construction.

To illustrate this statement, consider a practical example. I assume you all own a car. If I would ask you now, "How much does the operation of your car cost you per kilometer?", the majority of you would probably give me a definite amount and only a minority would answer, "It depends . . ." The first answer is only a half truth and the given amount is only then completely true if you would add, "My car costs me 15 pfennings per kilometer if I operate it 30,000 kilometers a year." In other words, you would have to give in addition to the basis, the kilometer or volume factor upon which you have rested your computations in order to make the cost per kilometer meaningful. If, however, the volume factor used as a base in budgeting the operation cost of your car was 30,000 kilometers and you operated the automobile actually only 15,000 kilometers, is the variance between actual and budgeted costs per kilometer permitting you any conclusions as to the rational or unrational use? We all know from experience that this is not the case. We

<sup>&</sup>lt;sup>1</sup>Matx, Curry, Frank—Cost Accounting, Chapter 19.

<sup>&</sup>lt;sup>2</sup>C. E. Knoeppel and Edgar G. Seybold—Managing for Profit.

know that we must adjust the result first for the difference in volume before we are able to reach any meaningful conclusions as to the rationality of use.

This illustration out of your every-day life shows clearly the problems, difficulties and limitations which adhere to every static or fixed budget. The fact that certain expenses are affected by fluctuations in volume limits the use of the fixed budgets which are constructed upon a predetermined static volume. Very rarely is agreement with the results actually obtained. Variances resulting from comparisons of actual and budgeted figures must first be adjusted for deviations from the estimated volume before they permit conclusions in regard to the rationality of operating results. Furthermore, final comparisons of budgeted and actual costs are possible only at the end of the budget period. For shortterm comparisons for managerial control, fixed budgets are only conditionally usable because of their previously discussed shortcomings and limitations.

Short-term comparisons, however, represent a vital, indispensable tool for management. In order to achieve a satisfactory final result, management has to keep steadily informed about deviations of actual costs from the ones budgeted, so that it is in a position to take immediate precautions to prevent jeopardizing the desired final operating result.

A device permitting such vital short-term comparisons is now at management's disposition in the form of the flexible or variable budget. Flexible or variable budgets are schedules of costs or expenses, indicating for the company as a whole and/or for each subdivision how high each cost or expense item should be at various levels of activity. They are not, as in the case of fixed budgets, limited to one specific or fixed volume level. Such budgets are said to be dynamic since they can be readily adjusted without special difficulties to any production volume or activity level. In view of their adaptability to short-term control tasks, these budgets are also variously referred to as sliding-scale budgets, stepbudgets, and control budgets.

The underlying principle of these budgets is the concept of cost variability, also referred to as the principle of flexibility. This principle rests on the understanding that cost and activity level are in a certain relationship to each other, and that cost is primarily the result of two factors, namely the passage of time and production activity. This principle is further based upon the perception that the different types of cost, when compared to various activity levels, show different modes of behavior.

There are types of cost which do not vary

with volume or production activity, but remain constant during a certain period of time and are therefore called fixed costs. They are occasioned3 by the possession of assets and the establishment of the factors of production in a state of "readiness to produce." Fixed costs can be divided principally into two types: those which are established by management decisions made in prior periods (depreciation, insurance, taxes) and those resulting from management decisions on a short-term basis (supervisory salaries, advertising, and research expenditures, etc.). Fixed costs may fluctuate by reason of changes in the basic structure of the business, methods of operation and discretionary changes in management policies, but they are not automatically influenced by changes in activity levels. It would, however, be wrong to assume that fixed costs are not at all influenced by activity changes. They remain fixed only for a certain range of activity and if this range is exceeded, fixed costs also might increase. Let us apply this statement to a practical situation. If a yearly production of 30,000-50,000 units of an article requires one superintendent and five foremen. a yearly production of 51,000-80,000 units may require two superintendents and seven foremen. This basic knowledge, that even fixed costs are static only for certain ranges of activity, is of great importance in connection with flexible budgeting. Another important perception is the fact that fixed costs are static within a certain range of activity, but variable per unit. Applied to a practical situation this would mean that if the fixed costs are DM 1,500,000 for a production volume of 30,000-50,000 units per year, the fixed costs per unit at a yearly volume of 30,000 units are DM 50.00 per unit; at a yearly volume of 50,000 units the per unit costs would be DM 30.00. This rather obvious effect is frequently the cause of much confusion. Also incorrect is the wide-spread opinion that fixed costs are not controllable. All fixed costs are controllable by managerial decisions, either on a short-term or long-term basis, and they represent one of the most lucrative areas for cost reduction.

In addition to the fixed costs, there are those which vary in proportion to volume or activity since they accrue as a result of effort, activity, or work done and not as a result of passage of time. Those costs are called activity or volume costs or variable costs. They are subject to short-term control and they increase or decrease directly with changes in activity. They are variable only in total, but

<sup>&</sup>lt;sup>3</sup>Glenn A. Welsch—Budgeting, Profit-Planning and Control.

are fixed per unit of production. This group includes all direct and indirect production costs, such as raw material, fuel, and wages. This type of cost is divided again in two groups according to their mode of behavior in regard to activity. One group increases always in proportion to production volume and is therefore always static in relation to a unit of output. The second group increases proportionally within a certain range of operations (i.e. within a range of 30,000-50,000 units), changes suddenly and then resumes its proportional increase pattern. This group, therefore, is fixed per unit of production only within certain ranges of production.

The third type of cost, most difficult to handle, is the semi-variable cost. These costs increase or decrease with the level of activity, but not in proportion thereto. They possess some of the characteristics of both the fixed and the variable costs. Their variability is the combined result of the passage of time, activity or volume and discretionary management policy decisions. For budget purpose they are either treated as fixed costs within certain ranges of activity, or they are, as more frequently happens, broken down in their fixed

and variable elements.

After this sketchy discussion of the peculiarities of cost behavior with regard to activity levels, permit me to apply the knowledge gained to flexible budgeting. One of the most difficult problems in preparing flexible budgets is the selection of a satisfactory base factor of activity to which the different types of cost can be related. In case of fixed costs which are time costs and hence related to a time unit, the choice is comparatively easy since a time unit such as a month or a year can be chosen. In case of variable costs, however, a satisfactory unit to which they can be related is frequently difficult to identify. If only one type of output is produced, variable costs can be related to a unit of output. On the other hand, if more than one type of output is produced, each having different size and requiring different processing or different components, some common expression of activity must be established as a base or factor of variability. Examples for such common expressions of activity or bases are i.e. the direct labor hours, the direct machine hours, or the direct material used. It is frequently the case that one is forced to select different appropriate bases of variability for each department within a company. In order to give meaningful results, the selected factor of variability must be the one most representative of the over-all activity and must bear a true relationship to expense and output. The unit chosen should be affected as little as possible by variable factors other than volume,

must be simple and easily understandable, and obtainable without undue additional clerical expense.

Having selected a suitable factor of variability for each department, the next and the most critical step in the preparation of flexible budgets, is to determine the variability of each type of cost or expense by departments. This task of classification of costs as to variability is initiated by a study of all expense accounts in the department under consideration, with the final goal of identifying the accounts that are either fixed or variable. The remaining accounts are then considered to be semi-variable and must be further analyzed to identify the fixed and variable components of cost contained therein. To accomplish this task, "Scientific Management" has developed several forceful methods: the direct estimate method, the standby cost method, the correlation method, and the graphic correlation method, to name just some of them. It would exceed the scope of this address to go into the details of each method. Summarizing however, it can be said, that most of these methods necessarily involve an analysis of historical costs in order to form a basis for estimating the variability of future costs. Some of the methods applied are of a statistical nature; some are based upon industrial engineering studies; others involve the use of scatter graphs in order to show visually the fixed and variable components of a cost type.

After the modes of behavior for each type of expense or cost are established by the use of one of these methods, the actual preparation of the flexible budget can be started. Variable or flexible budgets may be constructed in a number of different ways, but all the various forms may be grouped under two principal classifications: the columnar form and the tabular form.

The budget in columnar form shows the budget allowances by expense types for several different volume levels of activity: i.e. for a volume of 300,000 units, 350,000 units or 400,000 units. If the actual production volume lies between two volume levels for which budget figures are provided (i.e. for 320,000 units), then two approaches are possible. Either the budget allowance nearest to the desired volume (in our case 300,000 units) is used, or the appropriate budget allowance is determined by straight-line interpolation, a method commonly applied in similar situations.

Budgets in tabular form are expressed in a formula for each expense account. The formula indicates the constant or fixed component and the variable component of cost

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### **REGIONAL MEETINGS**

### **DISCOVER COLUMBUS IN 1962**

Eastern Regional Conference

Columbus, Ohio

May 24-27 The Deshler Hilton Hotel

A tour of Lockbourne Air Force Base (largest SAC base in the world) on Thursday and a tour of Battelle Memorial Institute (largest nonprofit independent research institute in the world), as well as workshops on Friday are scheduled.

The Saturday technical sessions will include these subjects:

Preparation for the CPA Examination Corporate Mergers

Public Offerings of Corporate Securities

Dr. Paul E. Fertig, Chairman of the Accounting Department, Ohio State University, will discuss "Trends in Accounting Education" at the luncheon. The banquet speaker will be Richard Maurer, Vice President and Treasurer, Delta Air Lines, Inc.

Columbus discovered America in 1492, now you can discover Columbus in 1962.

Hazel Proffit, General Chairman 2886 High Street Columbus, Ohio

#### ASWA IN ROSELAND

Western Regional Conference

June 14-17

Portland, Oregon Sheraton Hotel

The unusual opportunity to attend a regional meeting and to participate in the famous Rose Festival is in store. Rose Festival events on Thursday and Friday evening as well as a view of the parade on Saturday morning have been scheduled.

Friday's speakers include Howard Brune, attorney, who will discuss how the accountant assists management in decision making, and Sister Mirian Theresa, SMJM, an expert on labor laws for women, will review the status of minimum wage legislation in the U. S. today.

The banquet speaker is Dr. W. Ballentine Henley, educator and civic leader, whose subject will be "The Challenge of Leadership." He is sponsored by General Motors Corp.

On Sunday a special poolside brunch is planned by the pool of the Sheraton, which is located in the famous Lloyd Center.

> Naomi Nelson, General Chairman 2934 S. E. 26th Ave. Portland 2, Oregon

In one specific case, the Internal Revenue Service ruled that where salaries were paid to the stockholder's wife and son when there was actually no service to the corporation performed by them, the amount was considered and taxed as dividends to the stockholder. In this case, where the excess is considered a dividend instead of a deduction for salaries the tax result would be the same, but the deduction the corporation might be allowed for contributions to pension or profit sharing funds, or the amount of the charitable contributions deductible by the corporation would be affected.

However, if these excessive earnings are not treated as a cash dividend then quite a different situation will arise.

The undistributed income would then ultimately be increased by this amount and all the stockholders would have to pay tax on the money that just one of them received. Furthermore, the employee who received the compensation would most likely be taxed on it also, so we would be right back to the double taxation we were trying to avoid in the first place.

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(i.e. Supervisory Salaries: fixed per month DM 180,000, variable per 100 units of production zero; Direct Material: fixed per month zero, variable per 100 units produced DM 150; Supplies Used: fixed per month DM 200 variable per 100 units of output DM 150.) Tabular budgets are more widely used in actual practice because of their broad applicability and ease of manipulation. The tabular form enables the construction of flexible budgets for any desired volume of activity within minutes, thereby giving management the vitally needed short-term comparison tool necessary for executive control over actual and budgeted costs. As the captain of a ship uses the compass to detect and adjust any deviation from the charted course, so management may use the flexible budget to recognize the variations between the budgeted and the actual. I am positive that this forceful tool of modern management will be widely utilized by business leaders throughout the world.

> $1 \$ = DM \ 3.98$   $1 \ DM = 100 \ Pfenning$  $1 \ Milc = 1.6093 \ km$ .