

# COMPARING BUDGETING TECHNIQUES

The budgeting process is an essential component of management control systems, as it provides a system of planning, coordination and control for management. It is often an arduous process, however, and often strikes dread in the hearts of those involved in budget preparation.

In the public sector, the budgeting process can be even more difficult, since the objectives of the organisation are more difficult to define in a quantifiable way than the objectives of a private company. For example, a private company's objectives may be to maximise profit. The meeting of this objective can then be set out in the budget by aiming for a percentage increase in sales and perhaps the cutting of various costs. If, on the other hand, you are budgeting for a public sector organisation such as a hospital, then the objectives may be largely qualitative, such as ensuring that all outpatients are given an appointment within eight weeks of being referred to the hospital. This is difficult to define in a quantifiable way, and how it is actually achieved is even more difficult to define.

This leads onto the next reason why budgeting is particularly difficult in the public sector. Just as objectives are difficult to define quantifiably, so too are the organisation's outputs. In a private company the output can be measured in terms of sales revenue, for example. There is a direct relationship between the expenditure that needs to be input in order to achieve the desired level of output. In a hospital, on the other hand, it is difficult to define a quantifiable relationship between inputs and outputs. What is easier to compare is the relationship between how much cash is available for a particular area and how much cash is actually needed. Therefore, budgeting naturally focuses on inputs alone, rather than the relationship between inputs and outputs.

The purpose of this article is to critically evaluate the two main methods for preparing budgets - the incremental approach and the zero-based approach. Both of these have been used in both public sector and private sector organisations, with varying degrees of success.

## **INCREMENTAL BUDGETING**

Incremental budgeting is the traditional budgeting method whereby the budget is prepared by taking the current period's budget or actual performance as a base, with incremental amounts then being added for the new budget period. These incremental amounts will include adjustments for things such as inflation, or planned increases in sales prices and costs. It is a common misapprehension of students that one of the biggest disadvantages of incremental budgeting is that it doesn't allow for inflation. Of

course it does; by definition, an 'increment' is an increase of some kind. The current year's budget or actual performance is a starting point only.

#### **Example**

A school will have a sizeable amount in its budget for staff salaries. Let's say that in one particular year, staff salaries were \$1.5m. When the budget is being prepared for the next year, the headteacher thinks that he will need to employ two new members of staff to teach languages, who will be paid a salary of \$30,000 each (before any pay rises) and also, that he will need to give all staff members a pay increase of 5%. Therefore, assuming that the two new staff will receive the increased pay levels, his budget for staff will be \$1.638m  $[(\$1.5m + \$30k + \$30k) \times 1.05]$

It immediately becomes apparent when using this method in an example like this that, while being quick and easy, no detailed examination of the salaries already included in the existing \$1.5m has been carried out. This \$1.5m has been taken as a given starting point without questioning it. This brings us onto the reasons why incremental budgeting is not always seen as a good thing and why, in the 1960s, alternative methods of budgeting developed. Since I thoroughly believe that Paper F5 students should always go into the exam with their metaphorical F5 toolbox in their hand, pulling tools out of the box as and when they need them in order to answer questions, I am going to list the benefits and drawbacks of both budgeting methods in a easy-to-learn format that should take up less room in the 'box'. The problem I often find with Paper F5 students is that they think they can go into the exam without any need for such a toolbox, and while they may be able to get through some of the numerical questions simply from remembering techniques that they have learnt in the past, when it comes to written questions, they simply do not have the depth of knowledge required to answer them properly.

#### **Benefits of incremental budgeting**

- As indicated above, it is easy to prepare and is therefore quick. Since it is easy to prepare, it is also easily allocated to more junior members of staff.
- As well as being easy to prepare, it is easy to understand.
- Less preparation time leads to lower preparation costs.
- Prevents conflict between departmental managers since a consistent approach is adopted throughout the organisation.
- The impact of change can be seen quickly. For example, the increase of \$138k in staff costs for the aforesaid school can quickly be traced back to the employment of two new staff members and a 5% pay increase because everything else in the staff salaries budget remained unchanged.

#### **Drawbacks of incremental budgeting**

- It assumes that all current activities and costs are still needed, without examining them in detail. In our school example above, we know that the headteacher has budgeted for two new language teachers. How carefully has he looked into whether both of these new teachers are actually needed? It may be that, with some timetable changes, the school could manage with only one new teacher, but there is no incentive for the headteacher to actually critically assess the current

costs of \$1.5m (provided, of course, that the funding is available for the two new teachers).

- With incremental budgeting, the headmaster does not have to justify the existing costs at all. If he can simply prove that there is an increase in the number of language lessons equivalent to two new staff's teaching hours, he can justify the cost of two new teachers. By its very nature, incremental budgeting looks backwards rather than forwards. While this is not such a problem in fairly stable businesses, it will cause problems in rapidly changing business environments.
- There is no incentive for departmental managers to try and reduce costs and in fact, they may end up spending money just for the sake of it, knowing that if they don't spend it this year; they won't be allocated the cash next year, since they will be deemed not to need it.
- Performance targets are often unchallenging, since they are largely based on past performance with some kind of token increase. Therefore, managers are not encouraged to challenge themselves and inefficiencies from previous periods are carried forward into future periods. In our school example above, the headteacher may have hired an extra cook for the school kitchen when he thought that there was going to be greater demand for school dinners than there actually turned out to be. One of the cooks may be sitting idle in the kitchen most of the time but, with no-one looking at the existing costs, it is unlikely to change.

## **TIME FOR CHANGE**

After World War II, when money was tighter than ever, the problems with incremental budgeting began to give rise to a feeling that change was needed. By the 1960s, something called 'programme budgeting' began to develop in the US, introduced by the then US Secretary of Defence. This budgeting system requires objectives, outputs, expected results and then detailed costs to be given for every activity or program. Only when all of the budgets are then put together for all of the activities is the 'programme budget' then complete. This budgeting system requires a degree of transparency never before seen under incremental budgeting systems and, as you can imagine, it was not welcomed by the public sector at whom it was largely aimed. Therefore, it was closely followed by the development of zero-based budgeting. Zero-based budgeting emerged first in the public sector in the 1960s, but it also gained popularity in the private sector and was adopted by Texas Instruments in 1969. It gained notoriety in the 1970s when US President Jimmy Carter introduced it in the state of Georgia. While I could talk at more length about the history of zero-based budgeting, it's not particularly relevant for the Paper F5 exam, so I won't. Let's face it, you have already got enough to learn, and I don't need to add to it! Zero-based budgeting (ZBB) With zero-based budgeting, the budgeting process starts from a base of zero, with no reference being made to the prior period's budget or actual performance. All of the budget headings, therefore, literally start with a balance of zero, rather than under incremental budgeting, when they all start with a balance at least equal to last year's budget or spend. Every department function is then reviewed

comprehensively, with all expenditure requiring approval, rather than just the incremental expenditure requiring approval.

Zero-based budgeting tries to achieve an optimal allocation of resources to the parts of the business where they are most needed. It does this by forcing managers to justify every activity in their department as they know that, until they do this, the budget for their department is zero. If they are unable to do this, they aren't allocated any resources and their work therefore stops (as does their employment within the organisation, at this point, presumably). In this way, all unjustifiable expenditure theoretically ceases. A questioning attitude is developed by management, who are constantly forced to ask themselves questions such as:

- Is the activity really necessary at all?
- What happens if the activity ceases?
- Is the current level of provision adequate?
- What other ways are there of carrying out the activity?
- How much should the activity cost?
- Do the benefits to be gained from the activity at least match the costs?

All of these questions are largely answered by breaking the budgeting process down into three distinct stages, as detailed below.

## **STAGES IN ZERO-BASED BUDGETING**

1. Activities are identified by managers. Managers are then forced to consider different ways of performing the activities. These activities are then described in what is called a 'decision package', which:

- analyses the cost of the activity
- states its purpose
- identifies alternative methods of achieving the same purpose
- establishes performance measures for the activity
- assesses the consequence of not performing the activity at all or of performing it at different levels.

As regards this last point, the decision package may be prepared at the base level, representing the minimum level of service or support needed to achieve the organisation's objectives. Further incremental packages may then be prepared to reflect a higher level of service or support.

For example, if ZBB was used by our headteacher in our example above, one of the activities that would have to be performed would be the provision or facilitation of school lunches. The school catering manager may consider three options. Option 1: providing an area where students can bring their own cold food to, with some sandwiches and other cold food and drinks being prepared and sold by catering staff. Option 2: providing a self-service cafeteria with hot and cold food and drinks available. Option 3: providing a full, hot food, catered service for pupils. The base level of

service would be option 1, with options 2 and 3 being higher level service options. The school may, on the other hand, consider two mutually exclusive decision packages - providing a service internally or outsourcing the whole catering activity to an external provider.

While some form of cost-benefit analysis may be useful at this stage, a degree of quantitative analysis must also be incorporated. For example, cost-benefit analysis may show that the minimal level of provision for the school (option 1) is the most cost-effective. However, this would present the school in a negative light to parents of potential pupils and would deter some parents from sending their children to that school. Consequently, more able students may be discouraged from applying, thus leading to poorer results which, in turn, could have a negative impact on the school's future funding. Simple cost-benefit analysis would find it difficult to incorporate the financial effect of such considerations.

2. Management will then rank all the packages in the order of decreasing benefits to the organisation. This will help management decide what to spend and where to spend it. This ranking of the decision packages happens at numerous levels of the organisation. For example, in the case of the school, the catering manager will rank the numerous decision packages that he prepares. Then, the headmaster will rank the catering packages amongst all the packages prepared for the rest of the school.

3. The resources are then allocated based on order of priority up to the spending level.

#### **Benefits of ZBB**

The benefits of ZBB are substantial. They would have to be otherwise no organisation would ever go to the lengths detailed above in order to implement it. These benefits are set out below:

- Since ZBB does not assume that last year's allocation of resources is necessarily appropriate for the current year, all of the activities of the organisation are re-evaluated annually from a zero base. Most importantly therefore, inefficient and obsolete activities are removed, and wasteful spending is curbed. This has got to be the biggest benefit of zero-based budgeting compared to incremental budgeting and was the main reason why it was developed in the first place.
- By its nature, it encourages a bottom-up approach to budgeting in order for ZBB to be used in practice. This should encourage motivation of employees.
- It challenges the status quo and encourages a questioning attitude among managers.
- It responds to changes in the business environment from one year to the next.
- Overall, it should result in a more efficient allocation of resources.

#### **Drawbacks of ZBB**

- Departmental managers may not have the necessary skills to construct decision packages. They will need training for this and training takes time and money.
- In a large organisation, the number of activities will be so large that the amount of paperwork generated from ZBB will be unmanageable.

- Ranking the packages can be difficult, since many activities cannot be compared on the basis of purely quantitative measures. Qualitative factors need to be incorporated but this is difficult. Top level management may not have the time or knowledge to rank what could be thousands of packages. This problem can be somewhat alleviated by having a hierarchical ranking process, whereby each level of managers rank the packages of the managers who report to them.
- The process of identifying decision packages and determining their purpose, costs and benefits is massively time consuming and costly. One solution to this problem is to use incremental budgeting every year and then use ZBB every three to five years, or when major change occurs. This means that an organisation can benefit from some of the advantages of ZBB without an annual time and cost implication. Another option is to use ZBB for some departments but not for others. Certain costs are essential rather than discretionary and it could be argued that it is pointless to carry out ZBB in relation to these. For example, heating and lighting costs in a school or hospital are expenses that will have to be paid, irrespective of the budget amount allocated to them. Incremental budgeting would seem to be more suitable for costs like these, as with building repair costs.
- Since decisions are made at budget time, managers may feel unable to react to changes that occur during the year. This could have a detrimental effect on the business if it fails to react to emerging opportunities and threats.
- The organisation's management information systems might be unable to provide the necessary information.  
It could be argued that ZBB is far more suitable for public sector than for private sector organisations. This is because, firstly, it is far easier to put activities into decision packages in organisations which undertake set definable activities. Local government, for example, have set activities including the provision of housing, schools and local transport. Secondly, it is far more suited to costs that are discretionary in nature or for support activities. Such costs can be found mostly in not for profit organisations or the public sector, or in the service department of commercial operations.

## **CONCLUSION**

Since ZBB requires all costs to be justified, it would seem inappropriate to use it for the entire budgeting process in a commercial organisation. Why take so much time and resources justifying costs that must be incurred in order to meet basic production needs? It makes no sense to use such a long-winded process for costs where no discretion can be exercised anyway. Incremental budgeting is, by comparison, quick and easy to do and easily understood. However, the use of incremental budgeting indisputably gives rise to inefficiency, inertia and budgetary slack.

In conclusion, neither budgeting method provides the perfect tool for planning coordination and control. However, each method offers something positive to recommend it and one cannot help but think that the optimal solution lies somewhere between the two.

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