

**UNIVERSITY OF LJUBLJANA  
FACULTY OF ECONOMICS**

**MASTER'S THESIS**

**EVOLUTION AND CRITICAL EVALUATION OF  
CURRENT BUDGETING PRACTICES**

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## **IZJAVA**

Študent **Dušan Banović** izjavljam, da sem avtor tega magistrskega dela, ki sem ga napisal pod mentorstvom **doc. dr. Sergeje Slapničar**, in v skladu s 1. odstavkom 21. člena Zakona o avtorskih in sorodnih pravicah dovolim objavo magistrskega dela na fakultetnih spletnih straneh.

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# 1. INTRODUCTION

Budgets as financial plans that set out anticipated revenues and estimated expenditures over a certain period of time have long been in use. Since their inception in the 1920's, every serious company has made them the central part of their planning and control system. Their ability to coordinate the allocation of resources through internal communication while at the same time serving as a means of expenditure authorization and evaluation base has made them the most important tool that is at managers' disposal today when running a company. It is exactly this importance that has contributed to budgets' longevity and caused them to remain relatively unchanged in their use since the first days of their existence. This does not of course mean that budgets are an ideal managers' tool – on the contrary. Parallel to their entrance into the business world, managers who used budgets also started to notice and complain about various dysfunctional behaviours caused by budgets and the budgeting process. This observation motivated numerous academicians to try to discover appropriate solutions for things like budget slacking, budget gaming, budgeting bias and other problems that managers had to deal with. Several theories like RAPM and contingency theories were developed, and direct and indirect relationships between budgets and employee motivation, participation and business environment were investigated. As a result of this, according to some, most extensively researched topic in management accounting, several basic rules and suggestions have emerged on how to properly budget and deal with budgeting problems. These later became accounting truths to be taught in all accounting courses. Theoretical findings contributed to a slow but certain evolution of budgeting techniques into models that are more appropriate to conditions of rapid environmental change, global competition and ever increasing customer demand for better quality and lower prices. So today, companies are at a point where they can choose to retain traditional budgeting system or to modify it. This modification can be designed to overcome some specific weaknesses using one of the better budgeting techniques or can be taken it to the extreme to carry out a total overhaul of the budgeting system as the Beyond Budgeting model suggests.

The purpose of this master's thesis is to explain the reasons and conditions that have created today's situation where managers, due to the many choices that exist and the importance of this subject, do not know what the best way forward is. This paper is intended to be used as sort of budgeting manual, but, not as the usual budget manual that exists in companies and which contains only administrative rules and regulations. My objective is to acquaint the reader with all the issues related to traditional budgeting and to disclose all the benefits and disadvantages that it brings and then present its potential substitutes in the form of advanced budgeting methods. In this way, controllers, accountants and CFOs will be able to get a more objective look at the options that are laid in front of them and make their decisions on how to make budgeting process in the future easier and more straightforward.

In order to achieve the aforementioned goal, this master's thesis will be based on the analysis of existing theoretical and practical knowledge. The analysis of knowledge that has emerged from the academic world consists of an extensive review of academic literature on wider

budgeting topics, and literature on accounting and finance course studies that cover budgeting related materials. The purpose of this is to present all the empirical links that academic researchers have found between budgeting systems and various economic, social and psychological factors directly or indirectly influencing the development and functioning of those budgeting systems. Their conclusions and recommendations will be summarized and critically evaluated together with the “common beliefs” provided by management accounting theory. On the other hand, the presentation of practitioners’ experiences will consist of a review of all the major surveys made by companies, academics, consultants and professional organizations in the last 20 years on the subject of budgets and budgeting practices all around the world in order to see what has been going on in practice and where all this is leading to.

As far as the structure overview is concerned, this master's thesis is organized as follows. After the introduction, the second chapter will be dedicated to the extensive presentation of traditional budgeting. In this chapter basic definitions and the main typology of budgets will be introduced, together with budget functions and budget history. A description of how traditional budgeting works in practice with special emphasis on its main functions of planning and control will also be given and then completed with a list of the usual benefits and problems that the traditional budgeting system brings to its users. Following this, the third chapter will provide a broad presentation of academic research and its main findings in all three main areas of budgeting research – psychology, sociology and economics. In this chapter the very important behavioural aspects of budgeting will be depicted separately. These aspects are considered by many to be the main causes of dysfunctional behaviour related to budgeting like budget slack, participation, motivation and the use of budgets as performance targets. The findings and conclusions of two major research directions – Reliance on Accounting Performance Measures (RAPM) and Contingency Theory – will also be presented. The fourth chapter will examine current budgeting practices around the world with special emphasis on advanced budgeting methods which consist of two different directions – better budgeting and beyond budgeting models. Each of these will be separately described in their own chapters where, for each method, elements such as the origin of the method and its main authors, main ideas behind the method, pros and cons of the method, and the best suggested use of the method will be presented. Finally, there will, of course, be a conclusion which will provide a short recap of the thesis and some suggestions on the way forward for managers dealing with this topic.

## **2. TRADITIONAL BUDGETING**

### **2.1. Introduction**

Firstly, a discussion on this topic with a simple definition of budget will be given. In short, budget can be defined as a quantitative economic plan made with regard to time. Therefore, for something to be characterised as a budget it must comprise the quantities of economic resources to be allocated and used, it has to be expressed in economic i.e. monetary terms, it

has to be a plan – not a hope or a forecast but an authoritative intention, and it must be made within a certain period of time (Harper, 1995, p. 318). Only a plan that has such characteristics can be called a budget.

However, if a budget is looked upon in its wider context, it can be defined as a management tool that puts executives in control of the financial health of their company. It is an objective measure of the financial structure of company's operation and a tool that forces management to be accountable in a structured and objective way. Budgets as management tools by themselves are neither good nor bad. How managers administer budgets is the key to their value. When administered wisely, budgets facilitate planning and resource allocation and help to enumerate, itemize, dissect and examine all of the products and services that a company offers to customers (Seer, 2000, p. 187). In short and taken at its simplest level, a budget is a mathematical exercise, but in reality it is much, much more than numbers on spreadsheets, which is what following text will definitely show.

Budgeting may be defined quite simply as the process of compiling budgets and subsequently adhering to them as closely as possible (Maitland, 2000, p. 1). It is a process that turns managers' perspectives forward. Thereby, looking to the future and planning, managers are able to anticipate and correct potential problems before they arise. This system allows managers to focus on exploiting opportunities instead of, figuratively speaking, fighting fires. In this way the system provides sustainability to business processes within the company. It is a process of the utmost importance to management. In the words of one observer; "few businesses plan to fail, but many of those that collapse failed to plan" (Horngren, Foster, Datar, 2000, p. 178).

The purpose of budgeting is that it gives management an idea of how well a company is meeting their income goals, whether or not expenses are in line with predicted levels, and how well controls are working. Properly used, budgeting can and should increase profits, reduce unnecessary spending, and clearly define how immediate steps can be taken to expand markets (Thomsett, 1988, p. 5). In order to achieve this, management needs to build a budgeting system, the major objectives of which are to (Viscione, 1984, p. 42):

1. Set acceptable targets for revenues and expenses.
2. Increase the likelihood that targets will be reached.
3. Provide time and opportunity to formulate and evaluate options should obstacles arise.

Since budgeting as a process is very complex, it comes as no surprise that budgets are trying to fulfil numerous functions such as (Harper, 1995, p. 321, and Churchill, 1984, p. 162):

- a) Planning – a budget establishes a plan of action that enables management to know in advance the amounts and timing of the production factors required to meet desired levels of sales.
- b) Controlling – a budget can be used to help an organization reach its objectives by ensuring that each of the individual steps are taken as planned.

- c) Coordinating – a budget is where all the financial components of an organization - individual units, divisions, and departments - are assembled into a coherent master picture that expresses the organization's overall operational objectives and strategic goals.
- d) Communicating – by publishing the budget, management explicitly informs its subordinates as to what exactly they must be doing and what other parts of the organization will be doing. A budget is designed to give managers a clear understanding of the company's financial goals, from expected cost savings to targeted revenues.
- e) Instructing – a budget is often as much an executive order as an organizational plan since it lays down what must be done. It may, therefore, be regarded by subordinates as a management instruction.
- f) Authorising – if a budget is a management instruction then conversely it is an authorisation to take budgeted action.
- g) Motivating – in that a budget sets a target for the different members of the organization so that it can act to motivate them to try and attain their budgeted targets.
- h) Performance measuring - by providing a benchmark against which actual performance can be measured, a budget clearly plays a crucial role in the important task of performance measurement.
- i) Decision-making – it should never be assumed that a budget is set in concrete and when changing course a well-designed budget is a very useful tool in evaluating the consequences of a proposed alternative since the effect of any change can be traced throughout the entire organization.
- j) Delegating – budgets delegate responsibility to the managers who assume authority for a specified set of resources and activities. In this way budgets emphasise even more the existing organizational structure within the company.
- k) Educating – the educating effect of a budget is perhaps most evident when the process is introduced in a company. Operating managers learn not only the technical aspects of budgeting but also how the company functions and how their business units interact with others.
- l) Better management of subordinates – a budget enhances the skills of operating managers not only by educating them about how the company functions, but also by giving them the opportunity to manage their subordinates in a more professional manner.

The requirements that all these functions impose upon a budget make it difficult for one system to meet them all. It is precisely because these requirements differ, that role conflicts in budgeting system arise. These need to be appropriately dealt with so that dysfunctional behaviour like budget padding or other damaging budget games for the company do not appear. Since there are three major roles for any budgeting system (see figure 1), at least three conflicts may arise (Barrett, Fraser, 1977, p. 141):

a) Planning versus motivation

For a budget to be most effective in the planning role, it should be based on a realistic assessment of the company's operating capabilities and on management's judgment about what is most likely to happen in the future. Yet this kind of budget runs the risk of setting targets so low that motivation is adversely affected since to motivate properly, budget objectives should be set higher than those for planning and be difficult yet attainable. On the



other hand, these difficult yet attainable objectives lead to an overly optimistic budget and run the risk of falling short and under using company resources.

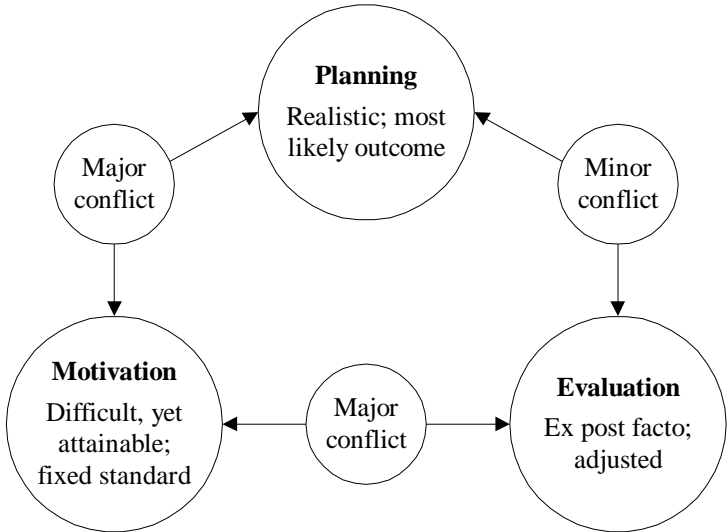
b) Motivation versus evaluation

There is a widely held belief that budget objectives should be set as fixed standards against which performance can be judged. Managers are also likely to be more committed to achieving this kind of objective since they know that the performance standards by which they are evaluated are not constantly changing. On the other hand, managers’ motivation can be impaired by rigid application of a “fixed standard” philosophy which doesn’t consider the impacts of uncontrollable or unforeseeable events and doesn’t allow for their removal from budget standards.

c) Planning versus evaluation

The planning role’s requirement of providing realistic assessment of future prospects can conflict with the need to eliminate the effects of uncontrollable or unforeseeable environmental variables from the budget used for evaluation purposes. Yet, because they are separated in time, the conflict between these requirements is considered a minor one since it can be considerably reduced if appropriate adjustments are done at the end of the budget period.

Figure 1: Conflicts between budget role requirements

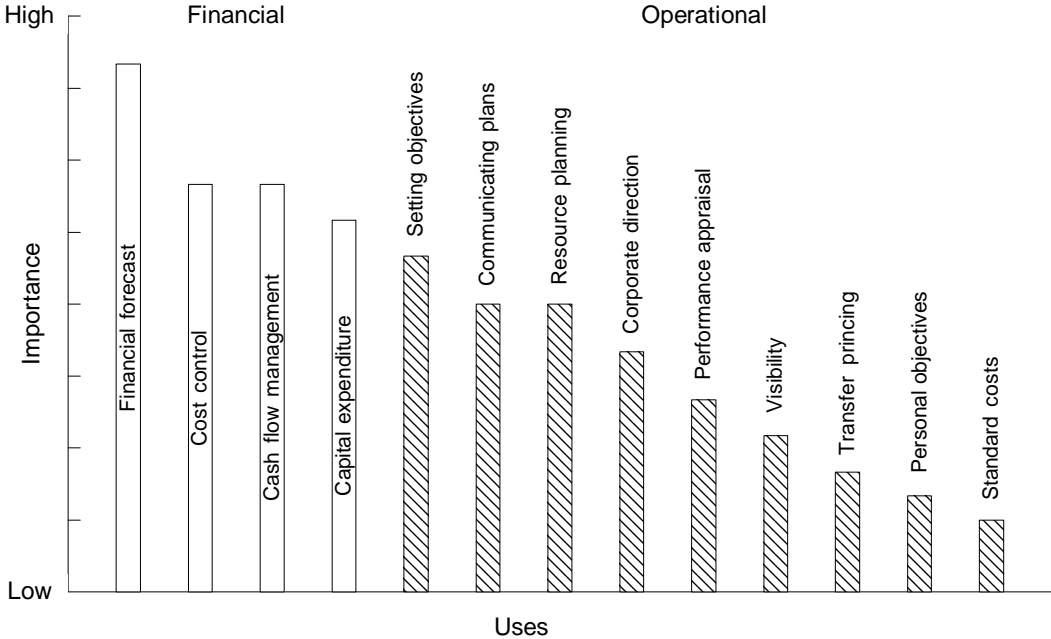


Source: Barrett, Fraser, 1977, p. 140.

As can be seen in the previous paragraph, functions that typical budgets want to cover are very wide. It comes then as no surprise that those budgets are being used today in practice for many purposes. Bunce, Fraser and Woodcock’s (1995) survey showed that general uses of budgets can be divided into financial and operational type of uses. Figure 2 clearly indicates that, of the various uses of budgeting for management, the most important are those financially oriented like the use of budgets for financial forecast, cost control, cash flow management, and capital expenditure supervision. The operational management uses of budgeting have been less common but the interviewed companies have concluded that, in today’s business environment, they are of growing importance. The need to improve performance is intensifying to the point that it is no longer enough just to control costs, but

that companies must also pay attention to things like strategy, communication, and employee evaluation. These are purposes for which budgets have not been used so much in the past.

Figure 2: Uses of budgeting for management



Source: Bunce, Fraser, Woodcock, 1995, p. 255.

As stated in the opening definition, budgets are plans set for a certain period of time, such as a month, quarter, year and so on. This time period is then usually broken into smaller sub periods. The most frequently used budgets are annual budgets that are subdivided by months for the first quarter and by quarters for the remainder of the year. Of course, actual time periods for which budgets are made depend mostly on their purpose and use, and it is solely the decision of individual companies as to what time periods will be utilized for their budgeting process.

**2.2. History of budgets**

The English word “budget” stems from the French word “bougette” and the Latin word “bulga” which was a leather bag or a large-sized purse which travellers in medieval times hung on the saddle of their horse. The treasurer’s “bougette” was the predecessor to the small leather case from which finance ministries even today in countries like Great Britain and Holland present their yearly financial plan for the state. So after being used to describe the word wallet and then state finances, the meaning of the word “budget” in 19<sup>th</sup> century slowly shifted to the financial plan itself, initially only for governments and then later for private and legal entities (Hofstede, 1968, p. 19). It was only then that budgets started to be considered as financial plans and not just as money bags.

The use of budgets as financial planning and control tools for business enterprises is historically a rather young phenomenon. In the US, early budgetary principles in companies

were mostly derived from the budget techniques in government. The other source of budgetary principles for business in the US was the Scientific Management Movement, which in the years between 1911 and 1935 conquered the US industry. Many historians agree that early budgeting systems can be seen as a logical extension of Taylor's Scientific Management from the shop floor to the total enterprise. However, it was not until the depression years after 1930 that budget control in US companies started to be implemented on a large-scale. Budgets with their focus on cost control simply became a perfect management tool for that period of time (ibid., p. 20). In Europe the idea of using budgets for business was firstly formulated by the French organization pioneer Henri Fayol (1841-1925). There was, however, little application in practice. Another practical stimulus came from the ideas of the Czech entrepreneur Thomas Bata (1876-1925) who introduced the so-called departmental profit-and-loss-control as a tool for decentralizing his international shoe company into a federation of independently run small businesses. Nevertheless, the main inducement for the development of budgets and their implementation in European companies came from across the Atlantic in the years following the Second World War (ibid., p. 21).

Companies like Du Pont and General Motors in the U.S., Siemens in Germany, and Saint Gobain and Eléctricité de France in France, which pioneered the M-form (multidivisional) organizational structure in the 1920's, first started to use budgets to support their rapid growth as they expanded into new products and markets. This was to help them to reduce the complexity of managing multiple strategies (Hope, Fraser, 1997, p. 20). The enormous diversity in the product markets served by these vertically integrated corporations required new systems and measures to coordinate dispersed and decentralized activities. In this kind of environment, budgets and ROI measure rightly played a key role in permitting central management to coordinate, motivate and evaluate the performance of their divisional managers, and perform a proper allocation of internal capital and resources (Johnson, Kaplan, 1991, p. 11). However, it is only in the 1960's that accountants started adding to budgets other functions (like management performance evaluation and motivation) in addition to those functions for which they had originally been devised – planning and control (Hope, Fraser, 1999b, p. 50). In that period, budgets became the central and most important activity within management accounting or in the words of Horngren, Foster and Datar: “the most widely used accounting tool for planning and controlling organizations” (2000, p. 178). This is exactly how budgets have remained to this day. The only thing that has changed in the meantime is the competitive environment in which today's companies operate and which has provoked many discussions about budgets' disadvantages and their alternatives, some of which will be presented in later parts of this thesis.

### **2.3. Budgeting process**

The process of budgeting generally involves an iterative cycle which moves between targets of desirable performance and estimates of feasible performance until there is, hopefully, convergence to a plan which is both feasible and acceptable (Emmanuel, Otley, Merchant, 1990, p. 31). Alternatively, if we look beyond many details and iterations of the usual

budgeting process we can see that there is a simple universally applicable budgeting process, the phases of which can be described in the following manner (Finney, 1994, p. 16):

1. Budget forms and instructions are distributed to all managers.
2. The budget forms are filled out and submitted.
3. The individual budgets are transformed into appropriate budgeting/accounting terms and consolidated into one overall company budget.
4. The budget is reviewed, modified as necessary, and approved.
5. The final budget is then used throughout the year to control and measure the organization.

The inevitable dependence of individual budgets on one another requires that budgets be prepared in a hierarchical manner. Figure 3 indicates a common hierarchical form of the budgeting process together with the necessary data flow between particular budgets and phases of their making. This picture shows that despite having only a few general phases, the budgeting process, due to its linearity and iteration loop, is in fact a very complex and time consuming process.

Figure 3: Outline of the budgetary process



Source: Lucey, 1996, p. 108.

Since it is so complex and important, the budgeting process requires lots of decision making on the particular choices that developers of budgets have at their disposal. Churchill (1984, p. 151) has provided a list of eight budget choices that managers have to be concerned with when setting up the budgeting system. Thereby, these concerns vary according to whether the company intends to use its budgets primarily for planning or for control. These budget choices are:

1. Whether it is to be prepared from the bottom-up or top-down,
2. How it is to be implemented,
3. How the budget process is linked to the strategic planning process,
4. Whether it should be a rolling budget and how often it should be revised,
5. Whether performance should be evaluated against the original budget or the one relating to the actual activity level of the organization,
6. Whether compensation/bonuses should be based on budgeted performance,
7. What budget evaluation criteria should be used, and
8. What degree of "stretch" should be incorporated into the budget.

In general, accounting theory suggests that large companies should be concerned more with operational efficiency and emphasize coordination and control aspects of budgets, while smaller innovative firms should concentrate more on the planning aspects of their budgets.

Since the first budget choice about the process used to create the budget is very important, these particular methods will be elaborated on in more detail. Generally, management's choices on how to start creating budgets fall into one of three major approaches (Rasmussen, Eichorn, 2000, p. 19):

#### 1. Top-down

The top-down approach of budgeting means that upper management completes the budgeting process with minimal involvement from the management of individual operating units or departments. The levels beneath headquarters level receive the budget amounts "from the top" and they are expected to adhere to these given amounts. Individual operating units have very little, if any, input into the determination of the budget amounts.

#### 2. Bottom-up

With the bottom-up approach the budget is established at the bottom levels of the organization – at the operating unit, departmental or cost/profit centre level – and then brought up to the corporate level. Guidelines and targets are set at the corporate level, but specific amounts and budgeted account balances are not passed down to the individual departments. Rather, these entities are given the freedom to create their own budgets at the local level.

#### 3. Top-down/Bottom-up

A top-down/bottom-up approach combines and balances the best elements of the two approaches. This approach allows input from lower and upper management into the model. The budget process becomes collaboration between lower and top management rather than a one-way exercise. In the combined approach, lower management submits the budget to upper management and then upper management modifies the submitted budget to reflect the operational knowledge that they have.

Table 1: Top-down versus Bottom-up approach

	<b>Top-down</b>	<b>Bottom-up</b>
Advantages	<ul style="list-style-type: none"> <li>- Less administration and time needed to complete the budget</li> <li>- Allows management to incorporate their overall strategic plans into the budget</li> <li>- Inclusion of corporate inter-dependencies</li> </ul>	<ul style="list-style-type: none"> <li>- Employee involvement and motivation</li> <li>- Encourages communication among and within the various units/departments</li> <li>- Increased budget accuracy and more relevant variance analyses</li> </ul>
Disadvantages	<ul style="list-style-type: none"> <li>- Employee motivation may become a problem</li> <li>- Unable to access information at the source</li> </ul>	<ul style="list-style-type: none"> <li>- Time-consuming</li> <li>- Inaccurate data</li> <li>- Opportunism if used for evaluation purposes</li> </ul>
When to be used	<ul style="list-style-type: none"> <li>- Middle management is new and does not know the operations well.</li> <li>- Middle management is not aware of all the anticipated changes and developments that will occur within the company.</li> <li>- The company is very small and middle management has little additional information to contribute to the budgeting process.</li> <li>- Communication among departments is poor.</li> <li>- Lower and middle management do not have time to create a budget.</li> <li>- The company does not possess the tools that would allow easy consolidation and review of budgets from multiple business units.</li> </ul>	<ul style="list-style-type: none"> <li>- Lower management has the most knowledge about local operations.</li> <li>- Lower management can produce relevant and accurate budgets.</li> <li>- Corporate infrastructure supports communication among and within business units.</li> <li>- Departments are unlikely to have redundant or omitted data.</li> <li>- Budget inputs from multiple sources can be easily consolidated.</li> </ul>

Source: Rasmussen, Eichorn, 2000, p. 20-25.

As in every other system, budgeting also has its own administration. This is necessary since otherwise it would not be possible to coordinate such an important and large task which involves all departments, branches, divisions and their subsequent management layers. What can usually be found in most companies are the following aspects of budget administration (Harper, 1995, p. 322):

a) Budget committee

Budgets should be set by managers since only they decide what kind of products or services will sell, what resources will be necessary to create these products or services, and what prices should be obtained for them. In addition, budgeting involves considerable management coordination from all parts of the enterprise and for this it is essential that a budget committee be set up with representatives from all departments. The task of the budget committee is to organize and supervise the preparation and administration of a company's budgets.

b) Budget officer

In addition to the committee, a budget officer should also be appointed. His/her work is essentially that of secretary to the committee. Tasks that a budget officer usually performs are: ensuring that the committee's secretarial work is carried out and that instructions are passed on to the appropriate people, collecting data and opinions from all over the company,

keeping managers to the budget timetable, and coordinating and briefing the committee members.

c) Budget timetable

Major budgets are made up of smaller, but key, budgets. If these smaller budgets are not completed on time, the preparation of the major budgets will be held up, which in turn will cause late finalization of the master budget and its ultimate approval. Since delay in approving the master budget can have serious repercussions, it is necessary to prepare a carefully thought-out timetable for all budget activities and avoid this situation. Adherence to such a timetable must be strictly enforced for the system to work.

d) Budget manual

To assist everyone who is engaged in budgeting and budget administration, a budget manual should be issued. The budget manual does not contain the actual budgets for the period – it is more of an instruction and information manual on the way budgeting operates in a particular organization and the reasons for having budgets. It usually contains sample forms and records to be used in the budgeting process, a list of accounting and control procedures, organizational structure and responsibilities, a detailed description of the process and so on.

## **2.4. Type of budgets**

A budget is not a unitary concept but varies from organization to organization. The basic concept of budgeting involves estimating future performance, comparing actual results with the estimate, and analyzing the differences between them. Factors that are relevant in determining the type or style of an organization's budget and its effects include: the type of organization, the leadership style, personalities of people affected by the budget, the method of preparation, and the desired results of the budgeting process (Cherrington, Cherrington, 1973, p. 226).

In general, budgets can be classified into two primary categories (Cohen, Robbins, Young, 1994, p. 171):

1) Operating budgets

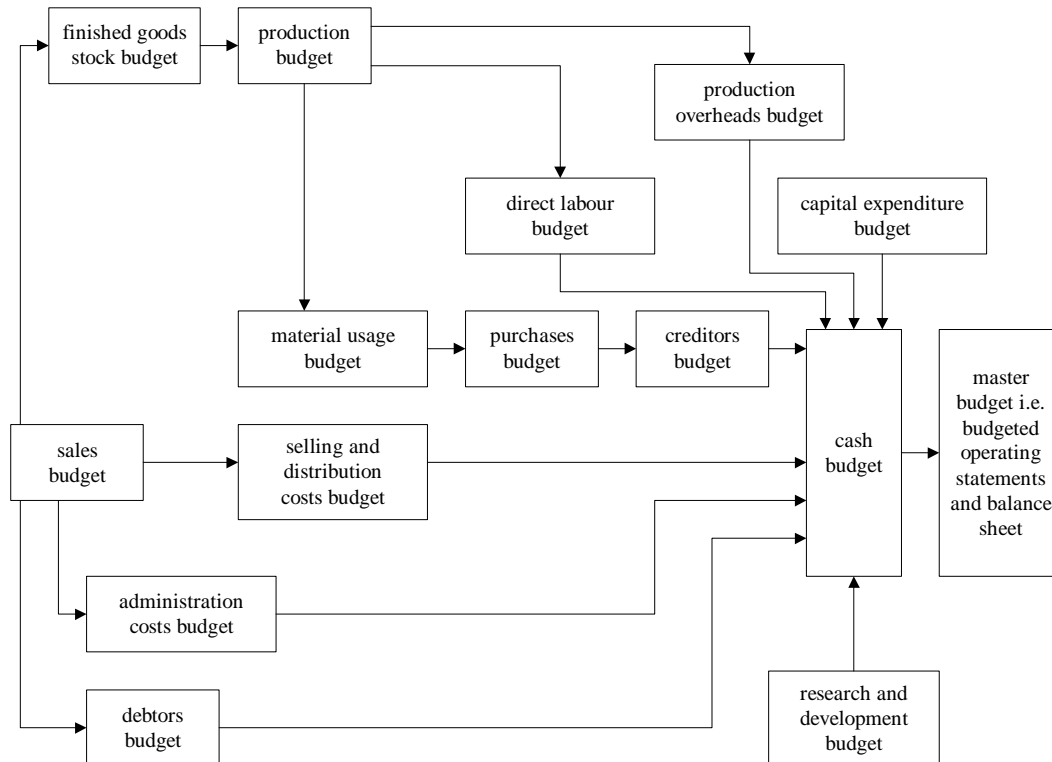
Operating budgets consist of plans for all those activities that make up the normal operations of the firm. The main components of the firm's operating budget include sales, production, inventory, materials, labour, overheads and R&D budgets.

2) Financial budgets

Financial budgets are used to control the financial aspects of the business. In effect, these budgets reveal the influence of the operating budgets on the firm's financial position and earnings potential. They include a cash budget, capital expenditures budget and pro forma balance sheet and income statement.

In figure 4, all major budgets that can be used in a typical company and how they are linked and interconnected within the larger system of the master budget can be seen. This confirms what has already been said about the budgeting process – that individual budgets are dependent on one another which requires that they be prepared in a hierarchical manner.

Figure 4: Major budgets and their relationships



Source: Lucey, 1996, p. 112.

Except for the usual division of companies' budgets into operational and financial, budgets can also be differentiated based on expenditure authority. Using this approach, two major groups of budgets can be defined (Kemp, Dunbar, 2003, p. 3):

a) Line-item budgets

These are budgets where the name of each line is set, as is the amount of money that can be spent on each item. If one works within a line-item budget, one can not overspend a specific line item and then compensate this with savings on other line (or vice versa). The authority to move money from one line item to another must be granted at a higher level.

b) Block budgets

These are the opposites of line-item budgets. Here a block of money is given. The details of the budget are presented but, later on, if one wants to spend more money on one item and less on another, one is free to do so. As long as the block of money is not overspent before the end of the year, the budget remains under control.

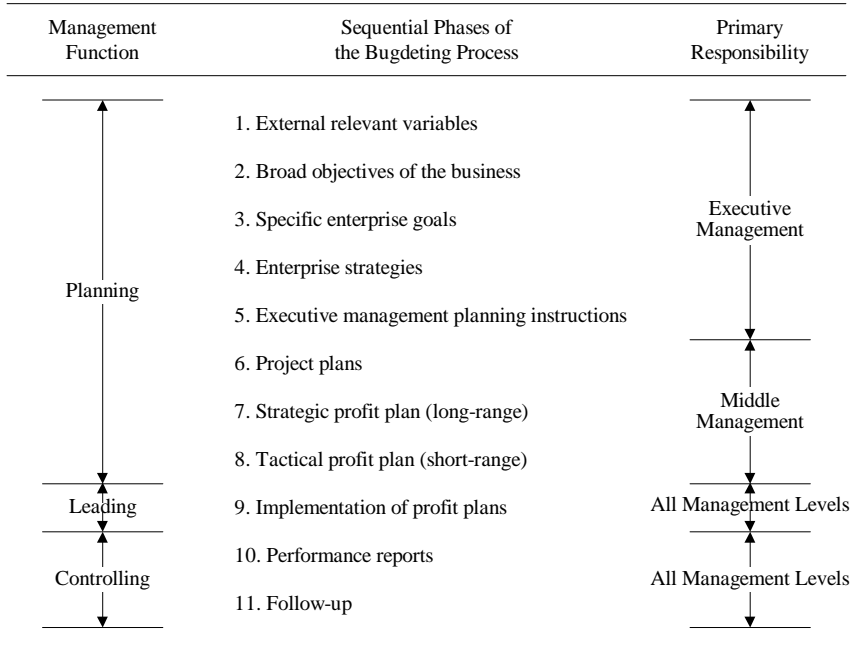
## 2.5. Budgets as planning tools

Welsch, Hilton, Gordon (1988, p. 73) have defined the budgeting process as a profit planning and control process and in that way not only have identified the two most important functions of budgets in organizations, but have also presented budgeting process in a wider context than it is usually depicted. Figure 5 clearly shows that the budgeting process is more than just a process of combining quantitative financial plans. It is a tool with which top management cascades strategy goals to operating levels. Budgets are ideal for this purpose since they are in essence the detailed quantification of targets for short-term choices of actions. Before



continuing, it must be emphasised here that budgeting is not planning – it is just the quantification of planning.

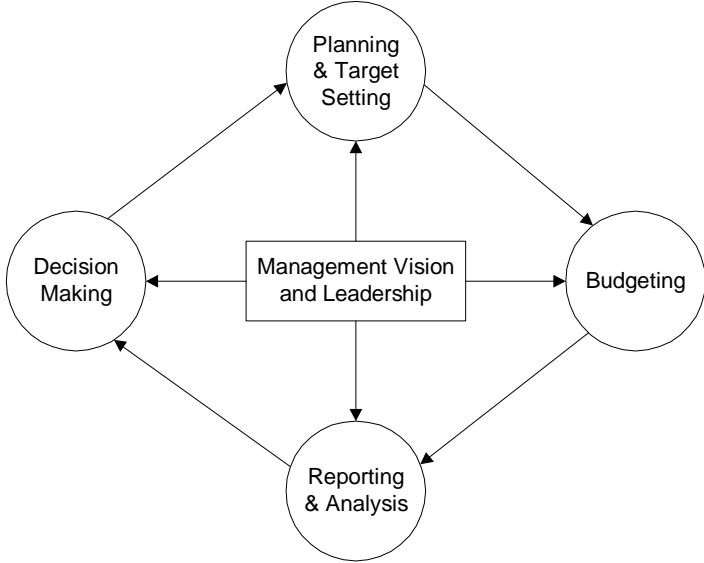
Figure 5: Overview of the budgeting process in the wider context



Source: Welsch, Hilton, Gordon, 1988, p. 73.

Since the budget is fundamentally a plan, planning is the first important element of budgeting work. Planning is one of the elementary functions of management. It is the process of developing enterprise objectives and selecting a future course of action to accomplish them. It includes establishing enterprise objectives, developing premises about the environment in which they are to be accomplished, selecting a course of action for accomplishing the objectives, initiating activities necessary to translate plans into action and current replanning to correct deficiencies (Welsch, Hilton, Gordon, 1988, p. 3). It is a phase that involves the interpretation of the broader strategic policies derived during the formulation of strategy and their translation into more specific shorter-range plans. Once these short-term plans are quantified, they become budgets. That is why in many instances short-term planning and budgetary planning are used as synonyms. However, as figure 6 will show, connection between planning and budgeting is not isolated from influences of other elements that constitute corporate planning system and it is precisely the coherent functioning of the complete system that allows corporate planning to be implemented, period by period, through the budgetary process and its two elementary phases – budgetary planning and budgetary control (Lucey, 1996, p. 104).

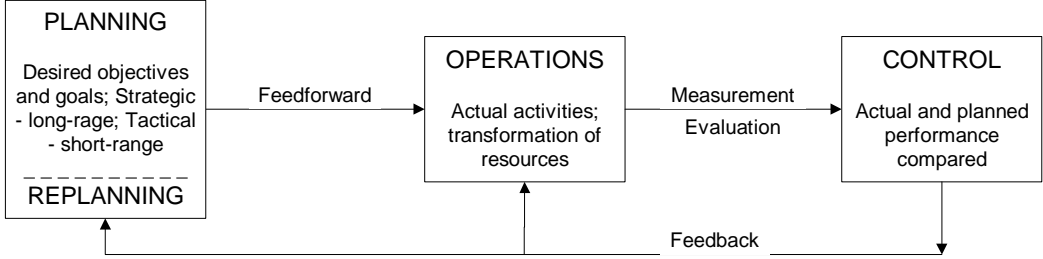
Figure 6: Budgeting and planning process



Source: Rasmussen, Eichorn, 2000, p. 6.

Apart from the purposes of setting desired objectives and goals and linking them with strategic long-range and tactical short-range plans, the fundamental objective of management planning within budgeting system is to provide a feedforward process for operations and control. It is this feedforward process that renders the planning phase of the budgeting system vitally important since it allows control and corrections of plans before they are even implemented. The difference between feedback and feedforward concepts is that feedback monitors past results to detect and correct disturbances to the plan, while feedforward reacts to immediate or forthcoming dangers by making adjustments to the system in advance in order to cope with the problem on time, i.e. feedback monitors, feedforward warns (Lucey, 1996, p. 144). Since in any organizations it is unlikely that pure feedforward or pure feedback control could operate in isolation because feedback control is too slow, while feedforward control is too risky, these two concepts usually function within a single budgeting system as can be seen in figure 7.

Figure 7: Feedforward and feedback concepts within a budgeting system



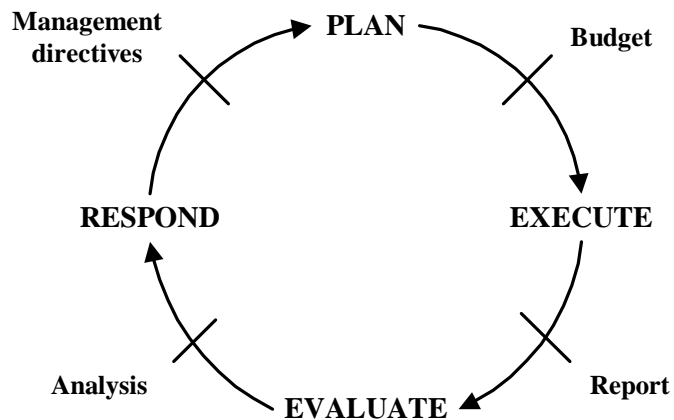
Source: Welsch, Hilton, Gordon, 1988, p. 33.

**2.6. Budgets as control devices**

At the beginning of the period, the budget is a plan. At the end of the period, the budget is a control device to measure performance against expectations so that future performance may

be improved. Control is achieved through continuous reporting of actual progress and expenditures relative to plans i.e. budgets (Shim, Siegel, 1994, p. 15). The aim of budgetary control is to provide a formal basis for monitoring the progress of the organization as a whole and of its component parts towards achievement of the objectives specified in budgets (Lucey, 1996, p. 147). Budgetary control process usually functions in a closed loop. This loop, which is illustrated in figure 8, starts with the planning phase, then records actual transactions, and finally reports against the plan and generates management response.

Figure 8: The budgetary control process loop



Source: Lalli, 2003, p. 3 · 7.

In accounting literature, budgeting is also known as responsibility accounting. This means that plans and the resulting information on the performance of the plans are expressed in terms of human responsibilities because it is people, not reports that control operations. We can define responsibility accounting as a system of accounting in which costs and revenues are analysed in accordance with areas of personal responsibilities so that the performance of the budget holders can be monitored in financial terms (Lucey, 1996, p. 147). So the crucial thing for profit control is the division of authority and responsibility to managers. This means that managers should accept responsibility only over those figures that they have control. However, in practice, controllability<sup>1</sup> is difficult to pinpoint for at least two reasons (Horngren, Foster, Datar, 2000, p. 195):

- 1) Few costs are clearly under the sole influence of one manager.
- 2) Over a long enough time span, all costs will come under somebody's control.

For this reason, companies, alongside traditional responsibility centres<sup>2</sup>, also usually set up budget centres. These can be defined as a part of an organization for which a given manager has responsibility and authority and to which profit control data can be assigned (Harper, 1995, p. 320).

<sup>1</sup> Controllability is the degree of influence that a specific manager has over costs, revenues, or other items in question (Horngren, Foster, Datar, 2000, p. 195).

<sup>2</sup> There are four major types of traditional responsibility centres: 1. Cost centre - the manager is accountable for costs only; 2. Revenue centre - the manager is accountable for revenues only; 3. Profit centre - the manager is accountable for revenues and costs; 4. Investment centre - the manager is accountable for investments, revenues and costs (Horngren, Foster, Datar, 2000, p. 194).

Together with budgetary control, there is another element that comprises responsibility accounting and that is standard costing. Standard costs<sup>3</sup> allow a process known as variance analysis by which the differences between standard costs and actual figures are analysed<sup>4</sup>. This process also enables management by exception to be practiced. The management by exception principle means that a manager should concentrate primarily on the exceptional or unusual items that appear in daily, weekly and monthly reports, thereby leaving sufficient managerial time for overall policy and planning considerations. It is the “out-of-line” items that need immediate managerial attention to determine causes and to take corrective action (Welsch, Hilton, Gordon, 1988, p. 45).

For budgeting control purposes, a special type of budget is prepared called the flexible budget. In order to understand why only those budgets can be used for the accurate measurement of performance, firstly the difference between them and fixed budgets must be explained. The fixed budget is based on the level of output planned at the start of the budget period. On the other hand, the flexible budget is developed using budgeted revenues or cost amounts based on the level of output actually achieved in the budget period (Horngren, Foster, Datar, 2000, p. 220). For this reason, from a control viewpoint, the fixed budget is likely to be inappropriate (unless by pure chance the actual level of activity turns out to be the same as the planned level - which is highly unlikely) and should not be used for control purposes. It is with respect to this sort of budget that the old saying “the budget is out of date before the budget period even begins” is often a correct one (Harper, 1995, p. 336).

## **2.7. Benefits and problems associated with traditional budgeting**

It is claimed that today as many as 99 percent of European and US companies are using budgets and have no intention of abandoning them (Better Budgeting: A report, 2004, p. 2). However, on the same page, it is stated that as many as 60 percent of those companies claim that they are not completely satisfied with their current budgeting systems and are continuously trying to improve them (ibid., p. 3). From this evidence, it is obvious that budgets carry with them many benefits and problems.

Here is a list of some of the benefits that traditional budgeting can bring into organization if properly implemented and administered (Lucey, 1996, p. 161):

- a) It is a major formal way by which the organizational objectives are translated into specific plans, tasks and objectives related to individual managers and supervisors.
- b) It is an important medium for communication of organizational plans and objectives and of the progress made towards meeting those objectives.
- c) The development of budgets helps achieve coordination between the various departments and functions of the organization.

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<sup>3</sup> Standard cost can be formally defined as a standard expressed in money. It is built up from an assessment of the value of cost elements. Its main uses are providing bases for performance measurement, control by exception reporting, valuing stock and establishing selling prices (Lucey, 1996, p. 170).

<sup>4</sup> Except differences between standard costs and actual figures, budgetary control also encompasses investigation of variances between actual results of current period and the actual results of prior period, and investigation of variances between actual results and budget goals (Welsch, Hilton, Gordon, 1988, p. 570).

- d) The involvement of all levels of management in setting budgets, the acceptance of defined targets, the two way flow of information and other features of a properly organized budgeting system all help to promote a coalition of interest and to increase motivation.
- e) Management's time can be saved and attention directed to areas of greatest concern by the exception principle which is at the heart of budgetary control.
- f) Performance at all levels is systematically reported and monitored thus aiding the control of current activities.
- g) The investigation of operations and procedures, which is part of budgetary planning and the subsequent monitoring of expenditure, may lead to reduced costs and greater efficiency.
- h) The regular systematic monitoring of results compared to the plan (i.e. the budget) provides information upon which current operations are adjusted to bring them into line with the previous plan or, adjustments are made to the plan itself where this becomes necessary.
- i) The integration of budgets makes it possible to better manage cash and working capital and makes stock and buying policies more realistic.

Nobody has better summarized in one sentence all the advantages of traditional budgeting as did Umapathy in his major work on budgeting practices in U.S. industry from 1987. Umapathy stated: "There is no other managerial process that translates qualitative mission statements and corporate strategies into action plans, links the short-term with the long-term, brings together managers from different hierarchical levels and from different functional areas, and at the same time provides continuity by the sheer regularity of the process" (Umapathy, 1987, p. xxii). It is exactly because of this that budgets will soon celebrate their century long existence.

Since budgets encompass so many different functions and are used for so many things in organizations, it is obvious to expect them to have certain weaknesses. A group of authors at the Cranfield School of Management made an extensive review of budgeting literature. As part of their research, they identified 12 significant weaknesses of traditional planning and budgeting practices. These factors fall into three principal categories and can be listed as follows (Neely, Bourne, Adams, 2003, p. 23):

- *Competitive strategy*

1. Budgets are rarely strategically focused and are often contradictory.
2. Budgets concentrate on cost reduction and not value creation.
3. Budgets constrain responsiveness and flexibility, and are often a barrier to change.
4. Budgets add little value since they tend to be bureaucratic and discourage creative thinking.

- *Business process*

5. Budgets are time consuming and costly to put together.
6. Budgets are developed and updated too infrequently, usually annually.
7. Budgets are based on unsupported assumptions and guesswork.
8. Budgets encourage gaming and dysfunctional behaviour.

- *Organizational capacity*

9. Budgets strengthen vertical command and control.

10. Budgets do not reflect the emerging network structures that organizations are adopting.
11. Budgets reinforce departmental barriers rather than encourage knowledge sharing.
12. Budgets make people feel undervalued.

Furthermore, one of the biggest problems with budgets is that they tend to promote an inward-looking, short-term culture that focuses on achieving a budget figure, rather than on implementing business strategy and creating shareholder value over the medium to long term. For all these reasons, it is believed that these weaknesses lead collectively towards business underperformance and should therefore be dealt with (ibid).

The above listed benefits and disadvantages of budgeting system have been present since the first day of their implementation in large multidivisional US companies at the beginning of last century. It was the job of managerial accountants in those and all other organizations to devise systems that would maximize utilization of budgets' benefits and minimize their negative influences. A subsequent review of budgeting theory shows that academicians have been identifying budgeting problems and suggesting solutions for them since the 1950's and that new budgeting techniques developed in 1980's and 1990's can be viewed as practitioners' attempt to incorporate some of their advice into business practice.

### **3. BUDGETING RESEARCH**

#### **3.1. Introduction**

Virtually every aspect of management accounting is implicated in budgeting. Budgeting is related to cost accounting, responsibility accounting, performance measurement, and compensation. Not surprisingly, budgeting is one of the most extensively researched topics in management accounting. It has been investigated from multiple social-science theoretical perspectives generating diverse streams of research that have developed in partial isolation from each other. Covalleski et al. (2003) have categorized the existing accounting research on budgeting in following three areas (ibid., p. 4):

##### a) Psychology-based research

The psychology-based research investigated the effects of budgeting on a variety of potentially conflicting mental states and behaviours; primarily motivation, stress, satisfaction, commitment, relations with peers and superiors, and individual managerial performance.

##### b) Sociology-based research

Sociology-based studies linked budgeting to the literature on organizational theory and produced a stream of studies based on the contingency theory that argued that organizations adopt practices (such as budgeting) that improved performance, and that these practices vary systematically depending on organizational variables such as size, strategy, culture, environmental uncertainty, organizational structure and technology.

### c) Economics-based research

This research investigated the use of budgeting practices like budget performance measures, budget targets, budget-based compensation, participative budgeting, and so on as an equilibrium response to labour market characteristics such as the skills and preferences of potential employees, information characteristics such as uncertainty with respect to costs and demand, and differences in information between owners and managers.

Since this kind of structure of budgeting research literature is very general and in some cases overlapping, this thesis will present an overview of budgeting academic research in a more specific way and focus on the particular budgeting problems that have been investigated the most and for which ideal solutions have not yet been provided even to this day – e.g. participation in budget setting and budget slack. These two topics have emerged from behavioural aspects of budgeting research where academicians wanted to find out how budgets affect people and how people in return affect budgets, and how this relationship causes dysfunctional behaviour in organizations. Also, other elements of the behavioural side of budgets which deal with budgets as targets and the motivational effects of budgeting system will be presented. Representative papers that deal with budgeting and budgets and are part of stream of work referred to as the reliance on accounting performance measures (RAPM) and the contingency approach to management accounting literature will be presented in separate chapters due to their immense role in development of budgeting theory together with table summaries at the end of each chapter.

## **3.2. Behavioural aspects of budgeting**

Until the early 1950's, accounting literature and practice had largely treated budgeting as a technical phenomenon only. Practitioners increasingly noticed, however, that organizations with good technical budgeting sometimes had undesirable social-psychological events related to budgeting. In response, the Controllershship Foundation sponsored a study by Argyris (1952, 1953) to increase understanding of budgeting's psychological effects. His exploratory field study sought to identify the nature and effects of these undesirable social-psychological events. He identified the several ways in which pressure to achieve budgets had resulted in stress, interpersonal conflicts, and distrust. These in turn caused dysfunctional behaviour like gaming, reduced effort and poor communication. The most important findings of his study were (1952, p. 25):

- First, budget pressure tends to unite the employees against management and tends to place the factory supervisors under tension.
- Second, the finance staff can obtain feelings of success only by finding fault with factory people.
- Third, the use of budgets as “needlers” by top management tends to make the factory supervisors see only the problems of their own departments.
- Fourth, supervisors use budgets as a way of expressing their own patterns of leadership.

In order to avoid these problems with budgets, Peirce (1954, p. 58) suggested three simple business principles. The first principle is that good attitudes are the key to successful

budgeting where management must explain to its staff that budgets are the most effective way of corporate planning and control. The second principle is that budgets must not be used as pressure devices – “they should be tools placed in foremen’s hands and not clubs to be held over their heads”. Thirdly, only active participation and support from top management can assure the highest possible level of budget motivation and instil a “let’s do it together” attitude instead of a short-sighted “you do it or else” attitude.

Some authors such as Caplan (1966) and DeCoster and Fertakis (1968) decided to elaborate further on Argyris’ findings and provide some other explanations, apart from budget pressure, for the dysfunctional behaviours caused by budgets. Caplan (1966, p. 505) used findings from organizational theory where individual members of an organization tend to identify with their immediate group rather than with the organization itself, as an explanation for the common state of competition for funds, recognition and authority between departments. DeCoster and Fertakis (1968, p. 245) on the other hand saw leader behaviour as the main factor that causes budget-induced pressure and its negative organizational effects. Their survey showed that both leader behaviour dimensions that they tested<sup>5</sup> were positively correlated with budgetary pressure and that the supervisor has to increase his/her behaviour in both dimensions when budget-induced pressure is high to effectively deal with it.

One of the elements of the behavioural aspect of budgeting that received extensive theoretical research was budgeting bias. Lowe and Shaw (1968, p. 314) were among the first authors who openly exposed the fact that, in many instances, managers were prepared to bias<sup>6</sup> their sales forecasts to suit their own interests. As the major sources of budgeting bias, they included reward system, recent company practice and norms, and insecurity of managers, wherein the first source seemed to cause a downward and the other two an upward bias. Their study also showed that while senior management was generally aware of biasing, their attempts to counter bias<sup>7</sup> forecasts had only limited success and varied depending on the extent of their knowledge about situation and the frequency of forecasting trials. Lukka (1988, p. 297) also found that both forms of budgetary biasing – budget slack and upward-biasing – were often seen by managers to be a legitimate part of the game of budget control where things like compensation strategy<sup>8</sup> and intentional mistakes or deliberate avoidance of their correction during the preparation of budgets were just simple ways of how this game is played.

Hofstede (1968, p. 18) found that both motivation and job satisfaction of a budgetee are positively affected when the atmosphere created around the fulfilment of standards is one of sportsmanship, i.e. of seeing budget control as a game. This observation was also supported

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<sup>5</sup> They tested two leader behaviour dimensions – “initiating structure” (leadership which is work oriented) and “consideration” (leadership which is employee oriented).

<sup>6</sup> Bias may be defined as the extent to which a forecaster adjusts his forecast due to his own personal interests and perceptions and independently of factors which might influence the actual result (Lowe, Shaw, 1968, p. 306).

<sup>7</sup> The act of counterbiasing may be defined as the attempt by other managers to eliminate that part of a forecast which stems from the personal interest of the forecaster (Lowe, Shaw, 1968, p. 312).

<sup>8</sup> Strategy that includes the allocation of bias into costs which fall outside the routine monitoring of budget figures. In this way, any slack that the controlled unit may have lost in the key figure areas can be compensated for elsewhere (Lukka, 1988, p. 297).



by Collins, Munter and Finn (1987) who discovered that subordinates use different gameplay patterns of coping with their superior's budgetary leadership style and interpersonal stress associated with budgeting. In their survey they have identified 4 distinctive budgetary game patterns (ibid., p. 46):

- 1) Devious game pattern – it involves budgeting strategies that are not straightforward.
- 2) Economic game pattern – people using this pattern present their superior with budget-related facts, demonstrate that requests can pay for themselves, and invite their superior to see for him/herself how things are.
- 3) Incremental game pattern – managers in this category use last period's amounts as a basis or starting point.
- 4) Time game pattern – this pattern is practiced by those who look for the “right time” before making a budgetary request.

However, as Schiff and Lewin (1970, p. 267) have found out, this budget gaming is not always positive and beneficial to organizations where managers work. When Schiff and Lewin re-examined the traditional relationship between the controller and the controlled within the organization, they found that, in fact, it is not only budgets which cause dysfunctional behaviour within organizations, but also people with their individual goals, which are often in conflict with organizational goals, often cause malfunction of the same budgeting process. These were the first authors who assigned part of the blame for budgeting problems to the people who make and use them and not just to the budgeting process itself. In this light, budget games became something that needs to be dealt with and not supported. Steele and Albright (2004, p. 84) went so far as to identify five types of bad behaviour used by managers to subvert decision-making standards and win resources at budget time, so that senior management can easily recognize them and apply the proper counter measures. Those are:

- The Sandbagger – managers routinely come to the table with a budget that is less ambitious than one they know they could probably fulfil.
- The Magician – division managers know things about their business that do not show up in the budget figures.
- The Lone Agent – managers contend that their business cannot conform to corporate-budgeting conventions because of their supposedly unique character.
- The Visionary – managers who don't have the numbers on their side and often appeal to emotions.
- The Hostage Taker – managers claim that they can deliver significant and immediate performance improvements if they are given a huge proportion of the available corporate budget.

Jensen (2001, 2003) claimed on the other hand that the main reason why managers game the budgeting system is much simpler one. He identified the traditional link between budgets and bonuses evident in a pay-for-performance incentive system, which rewards managers only for reaching minimum budget targets and which is capped at some maximum level, as the main reason for managers' budget diversions. He showed in his research that, in this system, managers are motivated to reach the minimal target using whatever means necessary and keep

their performance under maximum cap (ibid., 2001, p. 96). Jensen suggested a solution to curtail this problem in the form of a linear pay-for-performance system that rewards actual performance independent of budget targets (ibid., 2003, p. 389).

### ***3.2.1. Budgets as targets***

Budgets represent a definite and quantitative goal and as such can be easily used in employee evaluation and motivational purposes. In order for budgets to achieve these functions, managers have to be very sensitive to the behavioural influences that budgets as predetermined goals have on ordinary employees. The goal is to set up budget goals that satisfy top management's ever increasing demand for profit growth and employees' wishes for attainable and not too difficult targets. The psychological evidence suggests that the best results are obtained by setting the most difficult goals acceptable to employees and thus are internalized and accepted as their own personal objectives. However, as many managers have found out, putting this advice into practice is far from easy. This is why a number of studies have tried to find some solutions to help managers deal with this issue. Two basic philosophies have been developed on the levels at which budgeted amounts should be set. They can be identified as (Meigs et al., 1996, p. 1046):

#### 1) The behavioural approach

- budgeted amounts are set at reasonable and achievable levels;
- the budget is viewed as a "fair" basis for evaluating departmental performance;
- a department which operates in a highly efficient manner should be able to exceed the budgeted level of performance;
- failure to stay within the budget is viewed as an unacceptable level of performance;

#### 2) The total quality management approach

- organization is committed to the goal of completely eliminating inefficiency and non-value-adding activities and strives to achieve perfection in all aspects of its operations;
- budgeted amounts are set at levels that represent absolute efficiency;
- small failures to achieve the budgeted performance serve to direct management's attention towards those areas in which there is "room for improvement";

One of the first studies that dealt with this matter was Stedry's (1960). His research goal was to test the effects of budget difficulty and individuals' motivation (level of aspiration) on performance. He found that individual performance is conditional on whether a budget target is imposed, and if it is imposed, on difficulty of the target achievement. He basically first suggested a premise that managers' performance can be improved by choosing budget levels attuned to the motivational structures of the individual managers (ibid., p. 147). Becker and Green (1962, p. 402) suggested that one way of doing this is to frequently compare performance and budget together with feedback to the employees. Their reasoning was that:

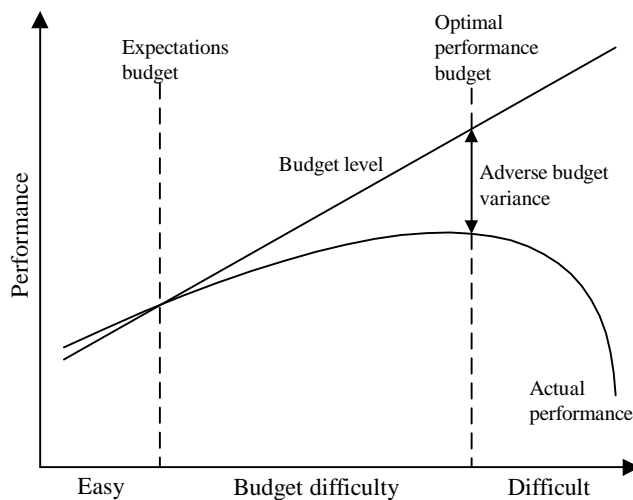
- a) If performance meets or slightly exceeds expectation, the level of aspirations will rise and budgets must be revised; otherwise employees will perform at the current budget level when they could be performing at a higher budget level.
- b) If performance is just slightly below expectations, budget changes are not necessary, but feedback is so that employees will continue to strive for the budget goals.

- c) If performance is well below the budget, the budget must be revised downwards. If such revision is not made, employees' level of aspiration will fall, the budget will be viewed as unattainable and output will fall.

Once this triangular relationship between level of budget goals, motivation and performance was acknowledged in accounting literature, many authors wanted to make their contribution to the development of this model. As can be seen in figure 9, when Hofstede (1968, p. 144) studied this matter, among other elements, he found that:

- Loose budgets are poor motivators.
- The motivating effect of budgets becomes stronger when they become tighter.
- Over a certain limit of budget tightness, motivation is poor again.
- This limit, and in general, the extent to and the way in which people internalize standards, depends on factors in the situation, in management and in the personalities of the budgetees.

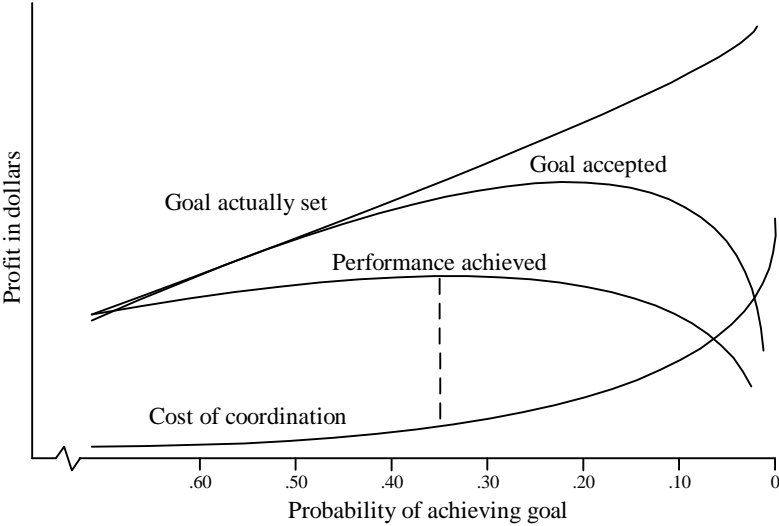
Figure 9: The effect of budget difficulty on performance



Source: Emmanuel, Otley, Merchant, 1990, p. 173.

In addition to this, Dunbar (1971, p. 90) also found that monetary incentives encouraged the setting of less difficult goals when the reward depended strictly on goal achievement and that inadequate extrinsic rewards may result in the setting of difficult goals and higher performance. His model on this topic, as presented in figure 10, claimed that as the budget goals are increased, the discrepancy between planned and achieved performance increases leading to an increase in coordination costs and a reduction in profits.

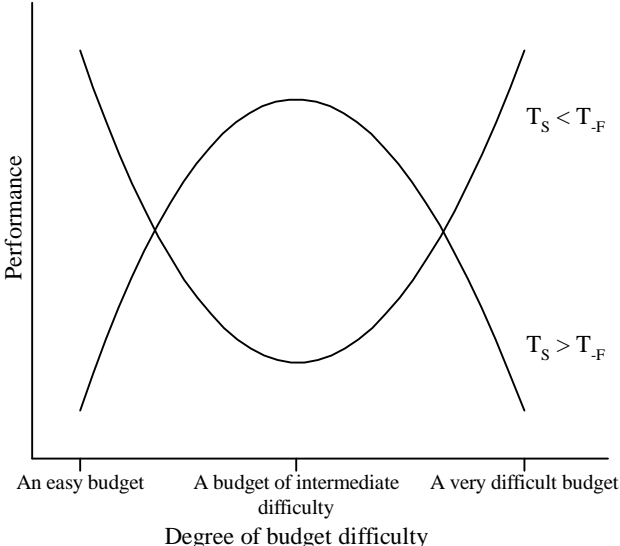
Figure 10: Trade-off between harder goals, performance and coordination costs



Source: Dunbar, 1971, p. 91.

Another author worthy of mention who also researched this topic of the appropriate level of budget goal difficulty was Hopwood (1976, p. 58). For the purposes of his research, he borrowed a concept from the achievement motivation theory and defined overall budget achievement tendency as the outcome of a conflict between two opposing tendencies – motivation to achieve success ( $T_S$ ) and motivation to avoid failure ( $T_{-F}$ ). Depending on which motivation is more present within a manager, the relationship between the perceived difficulty of the budget and the level of overall performance can be bell or U-shaped as seen in figure 11.

Figure 11: Relationship between degree of budget difficulty and performance



Source: Hopwood, 1976, p. 62 and 68.

As the debate on the appropriateness of budget participation sparked in the 1970's, authors like Kenis (1979, p. 718) suggested that upper level management may be able to improve the attitudes and budgetary performance of lower level managers by emphasizing the clarity of budget goals and by soliciting the participation of managers in the determination of goals. In

line with this research, Shields, Deng and Kato (2000, p. 197) proved in their study that standard-based incentives and standard tightness are influenced by the degree of subordinate participation in standard setting, and that the effects of these control-system components are indirect on job performance through job-related stress as the intervening variable. Suggestions like these that came from the later studies basically only updated the existing models and beliefs, but brought nothing new or revolutionary. Even the most recent studies such as those of Fisher, Peffer and Sprinkle (2003, p. 70) confirmed what is now a generally held belief, that both motivation and performance can be enhanced by budget levels of moderate difficulty and tools like group budget-linear contracts.

However, as one particular study revealed, not all companies in the real world stick to the general recommendations that come from the accounting theory. Merchant and Manzoni (1989, p. 554) found evidence that the vast majority of profit centres' budgets that they investigated are challenging, but with the management team's consistent effort, very likely to be achieved. This finding was surprising as it seemed inconsistent with conventional wisdom that suggested that, for optimal motivation, budget targets are missed more often than they are achieved. They explained this discrepancy by the realisation that budgeting is not a system in itself, but rather a part of the wider corporate plan and control system, where goal achievability cannot be separated from issues like compensation, design of the reward function, role of accounting measures in performance evaluation, and organizational structure. In this way, they confirmed that budgeting system is something that is customized and adopted to the specific needs of a particular company and not a generic model that is copied from company to company.

### **3.2.2. Budgeting and motivation**

The relationship between budgets and employee motivation has also been one of the very important topics that received substantial interest in accounting research. In order to examine the behavioural impact of budgets, accounting theorists have used the expectancy theory of motivation. In this theory, people select actions based on (1) the expectation that the action will result in particular outcomes and (2) the valences (or personal satisfaction) associated with the outcomes. The expectancy model of motivation can be written as follows (Ronen, Livingstone, 1975, p. 672):

$$M = IV_b + P_1 \left( IV_a + \sum_{i=1}^n P_{2i} EV_i \right)$$

where

$M$  = Motivation to provide effort

$IV_a$  = Intrinsic valence as a result of successfully performing the task

$IV_b$  = Intrinsic valence resulting from behaviour directed toward goal achievement

$EV_i$  = Extrinsic valence from the  $i$ -th extrinsic reward, contingent on the task being completed

$P_1$  = Expectancy that goal-directed behaviour will result in the task being accomplished

$P_{2i}$  = Expectancy that completion of the task will leads to the  $i$ -th extrinsic reward

The expectancy theory of motivation makes it clear that budgets, in themselves, have little motivational impact. Sources of positive motivation lie on the one hand in the intrinsic satisfaction that may be gained from actually attaining a pre-set budget target and on the other in the extrinsic rewards, such as salary bonuses, enhanced promotion prospects or status that are associated with budget attainment (Emmanuel, Otley, Merchant, 1990, p. 175). Ronen and Livingstone (1975, p. 674) are the earliest authors to have written about this topic. They first managed to explain the connection between the expectancy model and the accounting budgeting process using the following relations:

- Budgets reflect management's expectations about what constitutes successful task performance. Implicit in this is the promise of extrinsic rewards for subordinates if the budget is accomplished which specifies the level of extrinsic valences associated with work-goal accomplishment  $EV_i$ .
- Perceived difficulty of the budget affects the expectancy of the subordinate that his/her effort will lead to budget achievement, thus the content of the budget serves as an input for the subordinates to formulate their  $P_1$  expectancies.
- The degree to which superiors were consistent or inconsistent in delivering the contingent rewards following budget accomplishments may induce the subordinates to revise their estimates of  $P_{2i}$ .
- Budgets may also fulfil the role of providing structure to an ambiguous task as well as of coordinating activities so that merely working towards accomplishment of the budget provides satisfaction. In this way, the budget affects the intrinsic valence associated with goal-directed behaviour  $IV_b$ .

Subsequently, several authors decided to conduct an experimental evaluation of the relevance of expectancy theory in budgetary setting. Rockness (1977, p. 899) found that difficult budgets, a predictable reward structure, and formal feedback on results resulted in better performance and a higher level of employee satisfaction, while Brownell and McInnes (1986, p. 596) discovered that participation and performance, although positively related, can not be explained using the expectancy theory as a framework since the path between them through motivation explained very little about their relationship. Overall, these results supported the expectancy theory model, and all these studies added credibility to using the expectancy framework in developing models of budgetary motivations. However, it should be noted that the model fared less well when it was used to predict the performance of audit staff members by Ferris (1977, p. 613). He found that while the expectancy model was generally a weak predictor of audit staff performance, it was on other hand, a significant predictor of employee job satisfaction, thereby confirming the budget's motivational effect only on satisfaction.

The most specific work in the study of relationship between budgets and motivation was done by Hofstede (1968). He explored various sources from which motivational effects of budget system could be explained and predicted, trying in that way to provide an answer to his basic research problem – how to live with budgets and yet be motivated by them. The results of his finding are summarized in table 2, which presents the most comprehensive list of motivational effects that a budgeting system can induce and as such can be used as a useful guide for

managers that are responsible for dealing with the behavioural aspects of budget in their companies.

Table 2: Summary of the main positively and negatively motivating characteristics in budget systems

<b>Types of basic needs mainly involved</b>	<b>Characteristics in system positively motivating</b>	<b>Characteristics in system negatively motivating</b>
Safety Needs		<ul style="list-style-type: none"> <li>- Heavy stress on salary rewards and penalties, leading to possible feelings of injustice and unfairness.</li> <li>- Heavy stress on status and promotional rewards and penalties.</li> <li>- Management by fear.</li> <li>- Stress on accountability.</li> <li>- Changes for which the budgetee is not prepared.</li> </ul>
Affiliation Needs	<ul style="list-style-type: none"> <li>- Frequent communication budgetee-superior, developing in budgetee a positive perception of superior's budget motivation.</li> <li>- Formation of coherent peer-groups of budgetees with norms reinforcing budget motivation, by using group methods of supervision.</li> </ul>	<ul style="list-style-type: none"> <li>- Stress on the power element in the budgetee-superior relationship.</li> <li>- Formation of coherent peer-groups of budgetees with group norms against the budget.</li> <li>- Breaking interdepartmental cooperation by budget pressure; making budgetees department-centred; divide and rule.</li> <li>- Breaking "psychological work contract" between budgetees and their subordinates by budget pressure.</li> <li>- Controller's department exercising bureaucratic power through the system; being misunderstood and seen as spoilsports.</li> </ul>
Esteem-from-others Needs	<ul style="list-style-type: none"> <li>- Moderate use of praise as well as criticism.</li> <li>- Separation of appraisal and goal-setting.</li> </ul>	<ul style="list-style-type: none"> <li>- Bias towards personal criticism when unfavourable budget variances are shown.</li> <li>- Management by unfavourable exceptions only.</li> </ul>
Achievement Needs	<ul style="list-style-type: none"> <li>- Knowledge of results.</li> <li>- Potential of budgets to be internalized into personal levels of aspiration.</li> <li>- Value of budget as a public standard for achievement, having meaning to others than the budgetee only.</li> <li>- Balance of success and failure-experiences, adapted to personality, age, etc. of the budgetee.</li> <li>- Budgets seen as challenging.</li> </ul>	<ul style="list-style-type: none"> <li>- Consistent failure-experiences.</li> <li>- Budgets seen as easy.</li> <li>- Budgets seen as impossible.</li> </ul>
Autonomy Needs	<ul style="list-style-type: none"> <li>- Participation in decisions to structure the budget and variance reporting system.</li> <li>- Using external reference points for standards wherever available.</li> <li>- Participation in finding reference points for standards.</li> <li>- Using participation in standard-setting where external reference points are not available, to an extent adapted to the need for autonomy in the particular budgetee.</li> <li>- Using standard-setting by higher authority where external reference points are not available, also to an extent adapted to the</li> </ul>	<ul style="list-style-type: none"> <li>- Participation in standard-setting that is not perceived by the budgetee as such ("pseudo-participation").</li> <li>- Participation in setting of standards for areas outside operational control.</li> <li>- Using participation in standard-setting indiscriminately.</li> <li>- Using standard-setting by higher authority indiscriminately.</li> </ul>

Types of basic needs mainly involved	Characteristics in system positively motivating	Characteristics in system negatively motivating
	need for autonomy in the particular budgetee. - Participation in decisions to act on reported variances.	

Source: Hofstede, 1968, p. 74.

### 3.2.3. Budget participation

Accounting literature indicates the importance of participation in budget setting. It states that the participation of middle and lower level managers in the budgeting process can have beneficial effects in at least two ways. First, the process of participation reduces information asymmetry in the organization, thereby enabling top management to gain insight into issues about which lower level managers have specialized knowledge. Second, the process of participation may bring about a greater commitment by lower level managers to carry out the budget plan and “meet the budget” (Welsch, Hilton, Gordon, 1988, p. 98). Participation is a process that can be used for planning and goal setting when there is environmental uncertainty, for motivating subordinates when there is task uncertainty, and for coordinating interdependence when there is task interdependence (Shields, Shields, 1998, p. 65). Some authors even claim that participation is the main solution to the dysfunctional effects of budgeting (Argyris, 1952, p. 28). Nevertheless, there are also dangers inherent in participative budgeting. Some managers may use the opportunity given by participation to reduce the standards demanded of them and to bias the estimates they submit (Young, 1985, p. 830). In many companies pseudo-participation, where a superior lets a subordinate be involved with but have no influence on setting the subordinate’s budget, instead of proper participation, where a superior lets a subordinate be involved with and influence budget setting, is used (Becker, Green, 1962, p. 401). Thus, participation is no universal solution. It is an essential part of effective budgetary control, but needs to be used with care and understanding (Emmanuel, Otley, Merchant, 1990, p. 172).

Studies related to the topic of budget participation can be in general divided into two major groups. One set of researchers tried to investigate and determine the optimal conditions of budget participation, while others were more interested in depicting the links between participation and variables like performance and job satisfaction. The first group of authors like Bruns and Waterhouse (1975, p. 200) discovered in their studies that that managers in highly structured organizations tend to perceive themselves as having more influence and therefore participate more in budget planning and appear more satisfied with budget-related activities. Managers in organizations where authority is concentrated are generally held accountable for fewer financial variables, experience superior-related pressure, and see budgets together with participation as less useful. Also similar to this are the findings of Hofstede (1968, p. 192) who observed that those who do not usually participate in budget setting mostly do not desire it and that participation usually becomes attractive only after it has been experienced.



Although a positive relationship between budget participation and employee performance has never really been in doubt, how exactly this functions in reality, has remained an open question to this day. Some authors claim that this link is simple but not direct where various elements can play the role of an intervening variable. So, for example, we have Brownell (1981, p. 844) who found that the link between participation and performance was dependent upon the personality of the manager involved. Managers who felt that they had a significant degree of control over their destiny exhibited the expected relationship, but for those who felt their destiny was controlled by luck, chance or fate, budgetary participation resulted in poorer performance. The same results were also confirmed when he repeated his research in a field study (1982a, p. 766). Other intervening variables that were often used to explain the effects of budget participation on job performance were: budget adequacy and organizational commitment (Nouri, Parker, 1998, p. 477), cultural background of the managers (Tsui, 2001, p. 138), fairness perceptions and goal commitment (Wentzel, 2002, p. 248) and similar. On the other hand, authors like Shields and Young (1993, p. 276) claim that this link is much more complex. The relationship that they discovered was where the extent of information asymmetry affects budget participation, which affects the use of budget-based incentives, which then positively affect performance. Similarly, the results that Kren (1992, p. 523) and Chong and Chong (2002, p. 79) obtained, proved to be consistent with the proposition that budgetary participation facilitates job-relevant information acquisition by managers via budget goal commitment, and that job-relevant information, in turn, is associated with improved performance.

Positive association between the degree of budget participation and employees' attitudes towards their jobs and the company is also something that accounting literature took for granted (Milani, 1975, p. 282). Similarly to the previous relationship, researchers only argued about the intervening variables that connect participation and job satisfaction. Chenhall (1986, p. 269) claimed that the effects of participative budgeting on subordinates' satisfaction with their jobs and budgets are influenced by the configuration of authoritarianism between the subordinate and the superior, while Dunk's (1992b, p. 215) study showed that these effects can also be influenced by the managerial level where participation is significantly more effective in enhancing job satisfaction of higher-level managers than those in the lower ranks. Another study worthy of mention was done by Cherrington and Cherrington (1973, p. 250) who managed to confirm that budget participation can lead to the maximization of both performance and satisfaction if the type of budgetary control exercised by supervisors and the type of reinforcement contingencies are matched in a proper way – group-based participation together with output-budget emphasis or imposed participation with output only emphasis.

Table 3: Budget participation – summary of the relevant studies

Study	Sample	Conclusions
Becker & Green 1962	N/A	<ul style="list-style-type: none"> <li>- Participation is divisible into process (the act) and content (the discussion topic).</li> <li>- The setting in which participation occurs is determinant of the production outcome (e.g. participation will lead to lower output in authoritarian organization).</li> </ul>
Hofstede 1968	90 managers & 50 controllers from 6 plants	<ul style="list-style-type: none"> <li>- Participation leads to higher motivation to attain budgets.</li> <li>- Participation is found more at higher management levels.</li> </ul>

Study	Sample	Conclusions
	of 5 Dutch industrial companies	<ul style="list-style-type: none"> <li>- The effect of participation on the relevance of the budget is stronger for non-authoritarians than for authoritarians.</li> <li>- Those who do not usually participate in budget setting mostly do not desire it.</li> <li>- People new at their jobs and younger people tend to desire more participation.</li> </ul>
Cherrington & Cherrington 1973	Experimental session with 230 undergraduate students	<ul style="list-style-type: none"> <li>- Participation leads to the highest performance and satisfaction when conducted in output-budget contingency environment.</li> <li>- In cases of output-only and budget-oriented contingency environments it is better to impose budget goals or use pseudo-participation if we want to achieve the highest performance and satisfaction levels.</li> </ul>
Bruns & Waterhouse 1975	284 managers directly involved in budgeting process from 26 different companies	<ul style="list-style-type: none"> <li>- Organizational structure influences level of participation.</li> <li>- Size of organization and technology are positively correlated with structuring activities, and structuring implies distribution of authority and increase in participation.</li> </ul>
Milani 1975	82 foremen in production plant of one manufacturing company	<ul style="list-style-type: none"> <li>- Relationship between budget-setting participation and performance is weakly supported.</li> <li>- Participation and attitudes towards the job and the company are significantly positively associated.</li> </ul>
Brownell 1981 & 1982a	- Laboratory experiment with 46 undergraduate students & 48 middle level managers	<ul style="list-style-type: none"> <li>- There is significant interaction between participation and locus of control affecting performance, where:</li> <li>- participation has positive effect on performance with individuals who feel they have a large degree of control over their destiny (“internals”), and</li> <li>- participation has a negative effect on performance with individuals who feel that their destinies are controlled by luck, chance or fate (“externals”).</li> </ul>
Brownell 1982b	48 managers of one manufacturing company	<ul style="list-style-type: none"> <li>- The impact of supervisory evaluative style on performance is moderated by budgetary participation, where:</li> <li>- high participation/high budget emphasis and low participation/low budget emphasis are associated with higher performance, and</li> <li>- high participation/low budget emphasis and high participation/low budget emphasis are associated with lower performance.</li> </ul>
Young 1985	Laboratory experiment with 43 MBA students	<ul style="list-style-type: none"> <li>- Participation in the budgetary process leads to building slack into the budget.</li> </ul>
Chenhall 1986	39 departmental managers and their supervisors from 9 manufacturing organizations	<ul style="list-style-type: none"> <li>- Budgetary participation increases subordinates’ satisfaction with their jobs and budgets.</li> <li>- Participation is more strongly associated with subordinates’ job satisfaction and budgetary attitudes in dyads comprised of subordinates and superiors who have the same levels of authoritarianism (homogeneous dyads) than in heterogeneous dyads.</li> </ul>
Kren 1992	80 managers from 63 Fortune 500 manufacturing firms	<ul style="list-style-type: none"> <li>- The effect of participation on performance through job-relevant information is persisted across all levels of environmental volatility and is somehow more pronounced when environmental volatility is high.</li> </ul>
Dunk 1992b	26 production managers from various firms	<ul style="list-style-type: none"> <li>- Higher-level managers derive significantly greater job satisfaction from participation than lower-level managers.</li> </ul>
Shields & Young 1993	98 corporate controllers from S&P 500 firms	<ul style="list-style-type: none"> <li>- The extent of information asymmetry positively affects budget participation.</li> <li>- There is positive association between the use of participative budgeting and the use of budget-based incentives, which then positively affect firm-wide performance.</li> </ul>
Nouri & Parker 1998	135 managers from large multinational corporations	<ul style="list-style-type: none"> <li>- Budget participation affects job performance directly and indirectly through two intervening variables – budget adequacy and organizational commitment.</li> </ul>
Shields & Shields	60 managers graduates of	<ul style="list-style-type: none"> <li>- Participative budgeting exists for planning and goal setting</li> </ul>

Study	Sample	Conclusions
1998	MBA program	when there is environmental uncertainty, for motivating subordinates when there is task uncertainty, and for coordinating interdependence when there is task interdependence.
Tsui 2001	89 subunit managers of 7 large manufacturing companies in China	- Effect of budget participation and management accounting systems on managerial performance depends on cultural background of managers, where: - for Chinese managers (high-collectivist, large-power distance & long-term orientation culture) relationship between management accounting systems and managerial performance is negative for high levels of participation, and - for Western managers (high-individualist, small-power distance & short-term orientation culture) the relationship between management accounting systems and managerial performance is positive for high levels of participation.
Chong & Chong 2002	79 middle-level managers from manufacturing companies	- Participation influences budget goal commitment, which in turn influences the acquisition of job-relevant information, which then influences performance.
Wentzel 2002	74 responsibility-area managers at large urban hospital	- More participation fosters a higher sense of fairness, which, in turn, increases managers' commitment to budgetary goals and subsequently enhances performance.

As can be seen in the summary above, most studies proved that budget participation is a very useful management tool in achieving higher performance. Although this link is not direct but aided through numerous intervening variables like managers' motivation, personality, fairness perception, and cultural background, its direction is positive. This represents a very important fact since it implies that budget participation should be a non-excludable part of the budgetary process. Studies also showed that budget participation increases job satisfaction and leads to positive attitudes toward budgets, making the arguments for its use even more convincing.

### **3.2.4. Budget slack**

Budgetary slack can be defined as the difference between the total resources available to the firm and the total resources necessary to maintain the organizational coalition responsible for the budgetary slack (Welsch, Hilton, Gordon, 1988, p. 55). Typical examples of budget slacking and reasons why it occurs can be as follows (ibid.):

1. Sales budget estimates are understated "to protect ourselves and exceed the sales budget certainly can not be criticized."
2. Overestimating expenses "so we will have plenty of money and spending less than the budget looks good to the management."
3. Requesting more cash than needed "so that we won't have to ask for more and if we turn some down it will look good."
4. Approving unnecessary expenditures near the end of the budget period when there is excess of funds "because our budget allowance for the next period will be cut if we turn money down now."

It is important to notice that budgetary slack often results from a logical circular phenomenon. Slack is built into a budget because the budget is typically cut in a higher-level review, and budgets are cut because slack has been built in. Many managers also tend to create budgetary slack to satisfy personal aspirations in "good years", only later to convert it into profit during

the “bad years”. So it can be said that in a way budget slack provides managers with a hedge against unexpected adverse circumstances.

According to the results of the study conducted by Schiff and Lewin (1970, p. 263) budgetary slack in some companies may be quite significant and according to their estimates may account for as much as 20-25 percent of a division’s budgeted operating expenses. For this reason it is of no surprise that many authors have tried to provide some solutions on how to curtail this anomaly caused by the traditional budgeting process. Studies done on this topic to date have identified the use of the budgeting system for control and evaluation purposes when the budget is tight (Onsi, 1973, p. 546), and information asymmetry (Young, 1985, p. 840) as the main factors that contribute to the increase in managers’ propensity to create slack. Some results also indicate that business units that operate in more diversified companies, pursue a differentiation strategy, and/or have been more profitable have more budgetary slack (Van der Stede, 2001, p. 43). On the other hand, strong corporate culture in the form of reputation and ethical concerns (Stevens, 2002, p. 169), participation in budgeting process, technological predictability, and superiors’ ability to detect slack seems to reduce managers’ propensity to create slack (Merchant, 1985a, p. 207). It must be emphasised here that although participation provides managers with the opportunity to build slack into their budgets (Dunk, Nouri, 1998, p. 82), they do not necessarily attempt to do so always, for reasons that include moral, ethical and career advancement considerations (Dunk, Perera, 1997, p. 660). Many authors recommend that managers create the environment of mutual trust between all levels of management during the budget preparation phase and in that way create a so called truth-inducing scheme. This is because numerous studies have shown that, when a truth-inducing scheme is introduced, budgetary slack decreases significantly, particularly for risk-neutral subjects such as lower levels of management, (Waller, 1988, p. 96) and in situations where a high level of information asymmetry is present (Chow, Cooper, Waller, 1988, p. 169).

However, it must be mentioned here that it is possible in accounting theory to find examples of studies like that of Dunk (1993, p. 406) who uncovered evidence contrary to that suggested in literature, which suggests that when information asymmetry and budget emphasis are high, participation leads to a reduction in slack. He reported that slack was low (high) when information asymmetry, participation, and budget emphasis were all high (low). His results suggest that the nature of the relationship between these predictors and budgetary slack may be more complex than initially anticipated and, as such, will require further research in the future.

Table 4: Budget slack – summary of the relevant studies

Study	Sample	Conclusions
Schiff & Lewin 1968, 1970	3 divisions, parts of multi-division companies	<ul style="list-style-type: none"> <li>- Managers create slack in budgets through a process of understating revenues and overstating costs.</li> <li>- There is a close correlation between type of costs reductions undertaken in “bad years” and expense categories in which slack accumulates during “good years”.</li> <li>- The type of control system employed affects how slack is created within division and how it is managed: in decentralized company slack is concentrated at divisional management level</li> </ul>

Study	Sample	Conclusions
		<p>while in centralized company slack is diffused through all management levels.</p> <ul style="list-style-type: none"> <li>- The organization's reward structure together with uncertainty avoidance are main factors for slack creation by management.</li> <li>- Slack builds up cumulatively and it becomes largely irretrievable in the long run.</li> <li>- Increasing participation of top management in the budget process through budget task groups is proposed as a solution for budget slack.</li> </ul>
Onsi 1973	107 managers from 7 large multinational corporations	<ul style="list-style-type: none"> <li>- There is a relationship between budgetary slack and manager's attitude toward an authoritarian top management budgetary control system.</li> <li>- Budgetary slack is created as a result of pressure and the use of budgeted profit attainment as a basic criterion in evaluating performance.</li> </ul>
Merchant 1985a	170 managers from 19 organizations in electronics industry	<ul style="list-style-type: none"> <li>- Budgeting system for control purposes does not increase managers' propensity to create slack significantly except where budget is tight.</li> <li>- Participation in budgeting process reduces slack.</li> <li>- Technological predictability has a minor negative effect on slack creation.</li> <li>- Superiors' ability to detect slack reduces managers' propensity to create slack.</li> </ul>
Young 1985	Laboratory experiment with 43 MBA students	<ul style="list-style-type: none"> <li>- Participation in the budgetary process leads to building slack into the budget.</li> <li>- The amount of slack is positively associated with risk aversion.</li> <li>- Increasing social pressure decreases the amount of slack.</li> <li>- Participation with private information does not lead to more slack than when information is shared.</li> </ul>
Chow, Cooper & Waller 1988	Laboratory experiment with 40 college students	<ul style="list-style-type: none"> <li>- The difference in slack under the truth-inducing and slack-inducing pay schemes is greater when there is a superior-subordinate information asymmetry about subordinate performance capability.</li> </ul>
Waller 1988	Laboratory experiment with 51 college students	<ul style="list-style-type: none"> <li>- Worker's risk preference is an important determinant of budget slack in truth-inducing pay scheme.</li> <li>- When truth-inducing scheme is introduced, slack decreases for risk-neutral subjects but not for risk-averse subjects.</li> </ul>
Dunk 1993	79 managers from manufacturing organizations	<ul style="list-style-type: none"> <li>- Slack is lowest (highest) when information asymmetry, participation, and budget emphasis are all high (low).</li> </ul>
Dunk & Perera 1997	7 managers from manufacturing organizations	<ul style="list-style-type: none"> <li>- The association between participation and slack is dependent on the levels of both budget emphasis and information asymmetry, and personal factors like moral, ethical and career advancement considerations.</li> <li>- Managers are aware that participation provides them with the opportunity to build slack into their budgets.</li> </ul>
Dunk & Nouri 1998	N/A	<ul style="list-style-type: none"> <li>- The extent to which slack is created may be influenced directly through budgetary participation, indirectly through intervening variables or through an interaction with specific predictors.</li> </ul>
Van der Stede 2001	153 business units managers from 37 firms	<ul style="list-style-type: none"> <li>- Corporate diversification is positively associated with slack in business unit budgets.</li> <li>- Tight budgetary controls and high-powered incentives effectively curtail budgetary slack.</li> <li>- Business units that pursue a differentiation strategy and/or have been more profitable enjoy more budgetary slack.</li> </ul>
Stevens 2002	Laboratory experiment with 52 college students	<ul style="list-style-type: none"> <li>- Reputation and ethics are negatively associated with the budgetary slack.</li> </ul>

A joint conclusion drawn from the summary of studies related to budget slack is that slack is an elementary part of every budgetary process which will, despite managements' attempts to curtail it through increased use of budget control and budget participation, always exist due to its connection with employee psychology. Of course, being so much present in every day life, budget slack can hardly be treated as a mystery. On the contrary, it is a well known occurrence that is, in many cases, willingly allowed in order to compensate for simultaneously occurring tight budget requirements and pressure.

### **3.3. Reliance on Accounting Performance Measures (RAPM)**

With the publication of his book, Argyris (1952) was one of the first to document the dysfunctional behavioural effects of using budgets to measure and evaluate performance. His book motivated a stream of work referred to as the reliance on accounting performance measures (RAPM) literature. This construct signifies the extent to which superiors rely on and emphasize those performance criteria which are quantified in accounting and financial terms, and which are pre-specified as budget targets (Harrison, 1993, p. 319). Common elements of RAPM studies are the focus on the use of accounting information for managerial performance evaluation, the frequent use of contingency frameworks in which the contextual appropriateness of RAPM is analyzed, and the heavy reliance on research methods from psychological and sociological research fields (Hartmann, 2000, p. 455).

Initial research in this area was conducted by Hopwood (1972) and Otley (1978) who focused on the relationship between the evaluative style and a range of dependent variables including job-related tension, interpersonal relations and performance. Subsequent studies influenced by this research have tried to further specify the RAPM model, linking the evaluative style to subordinate attitudes and behaviours by examining the effect of contingency factors. These have, among others, included task and environmental uncertainty (Hirst, 1983; Govindarajan, 1984), budget participation (Brownell, 1982b; Brownell, Hirst, 1986), business unit strategy (Govindarajan, Gupta, 1985), task interdependency (Imoisili, 1989), and national culture (Harrison, 1993). Implicit in these studies was the assumption that a match between a superior's evaluative style and contingency factors will mean that the style is seen as appropriate by subordinates and with that resolve dysfunctional behaviour in the budgeting process (Harrison, 1993, p. 319).

Continuing on from the work of Argyris (1952), Hopwood (1972) wanted to know whether the dysfunctional behaviour in budgeting is the consequence of using the accounting data in performance evaluation or whether it is dependent upon the precise manner in which the accounting data are used. In order to do that, he developed and tested three styles of evaluating performance which make distinctly different use of the accounting data (ibid., p. 160):

- 1) Budget Constrained Style in which budgets play a key role in evaluating performance and are used in a rigid manner so that failure to achieve budget targets results in poor evaluations regardless of the reasons for failure.

- 2) Profit Conscious Style in which budgets provide targets for indicating whether performance is good or bad, but they are used in a more flexible manner and viewed as just one indicator of a longer-term concern with profits.
- 3) Non-accounting Style in which budgets are of secondary importance and performance is primarily evaluated by reference to non-accounting information.

Hopwood (1972) extended the psychology-based study of budgeting by investigating whether the extent and style in which managers use budgets to evaluate their subordinates' performance influences subordinates' mental state, behaviour, and performance. He hypothesized and found that if a cost centre head perceives that he is evaluated on the basis of a budget constrained performance evaluation style, rather than on profit conscious and non-accounting performance evaluation styles, he is more likely to experience job related tension, have poor relations with superiors and peers, and manipulate accounting data. He also presented evidence that the Budget Constrained Style was associated with lower budget-related performance (ibid., p. 176).

A subsequent study by Otley (1978) repeated some of Hopwood's (1972) work in the setting of independent profit centres where it was thought that the budgetary information would represent a much more adequate measure of managerial performance. In this situation, rigid performance evaluation based on budget achievement appeared to be the most effective management style (ibid., p. 135). Contrary to what was expected, the style of budget use did not affect job- or budget-related tension, nor did a budget-oriented style decrease job ambiguity or ambiguity of evaluation. On the other hand, job-related tension did increase when a manager disagreed with the way in which budgets were set or his performance evaluated. Otley (1978) also found that the use of a particular style of evaluation by group managers was conditioned partly by their own managerial philosophy, but varied from unit to unit according to the toughness of its operating environment, and its size and profitability. Senior managers thus acted in a way which suggests that no uniformly best style exists, but that the style of budget used should be matched to the circumstances. On top of this, he did not find any evidence to indicate that the style of budget used affects actual performance (ibid., p. 146).

As the results of Hopwood (1972) and Otley (1978) were contradictory, several authors later attempted to reconcile them. Brownell (1982b, p. 13) claimed that this discrepancy between Hopwood's and Otley's results were due to the fact that that directly observable associations between leadership evaluative style and performance can not be expected because the relationship is moderated by budgetary participation. His research confirmed his hypothesis suggesting that a budget-focused leadership style is most effective under conditions of high participation, but is ineffective where participation is low. Other researchers like Imoisili (1989, p. 334) searched for reasons in the differences between testing samples used by Hopwood and Otley. His explanation was that the financial condition of the organizations used in the analysis and managers' lack of awareness of how their performances were evaluated and rewarded were the most contributing factors to why Otley failed to support Hopwood's hypotheses.

However, most of the studies done within the RAPM framework, tried to describe the relationships between the use of accounting performance measures to evaluate subordinates' job performance and their effects on the manager's role ambiguity and budgetary participation within a certain business environment. The most important results that these studies discovered were that the use of accounting performance measures to evaluate subordinates' job performance reduces the manager's role ambiguity, whereby this is more valid for production than for non-production jobs (Hirst, Yetton, 1984, p. 57). On the other hand, studies like those by Govindarajan (1984, p. 132) and Brownell (1985, p. 503) found that managers of business units which face higher environmental uncertainty will use a more subjective performance appraisal approach, while those managers that face lower environmental uncertainty will use a more formula-based performance evaluation approach. The stronger the fit between environmental uncertainty and performance evaluation style, the higher business unit performance and the lower job related tensions will be (Brownell, Hirst, 1986, p. 249). These studies clearly support Hirst's (1983, p. 602) conclusions that high (low) reliance on accounting measures of performance under conditions of low (high) uncertainty is likely to predispose effective performance and minimizes the incidence of dysfunctional behaviour, whereby this relationship between uncertainty and the appropriateness of accounting performance measures is often moderated by behavioural factors such as managers' tolerance of ambiguity (Hartmann, 2005, p. 18). By dysfunctional behaviour are meant the negative side effects of managers' reactions to the high budget pressure under conditions of relatively uncertain environments like manipulations of performance measures and encouragement of short-term orientation (Merchant, 1990, p. 311). Of course, as was expected, budgetary participation under conditions of high budget emphasis regardless of level of task difficulty will always be associated with improved managerial performance as some RAPM studies have proved (Lau, Low, Eggleton, 1995, p. 376). Budgets on the other hand, can have a more positive, comforting role to play. When confronted with uncertainties associated with role ambiguity managers may respond by becoming positively committed to achieving budgetary targets because budgets offer a source of structure and certainty. The use of budgets as an antidote to role ambiguity has a powerful influence on managers' budgeting behaviour since it affects their commitment to the budget and in that way their level of self-reported performance (Marginson, Ogden, 2005, p. 435).

Subsequent RAPM studies, as afore mentioned, dealt mostly with the effects of contingency factors on the use of accounting performance measures. From this part of RAPM work, several recommendations for practitioners can be singled out. With regard to the business unit's strategy can be said that greater reliance on long-run criteria<sup>9</sup> as well as greater reliance on subjective (non-formula) approaches for determining the managers' bonus contribute to effectiveness in the case of build strategy<sup>10</sup> (Merchant, 1985b, p. 81), but hamper

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<sup>9</sup> Govindarajan and Gupta (1985) have defined long-run performance evaluation criteria as consisting of the following measures: sales growth, market share, new product development, market development, R&D, personnel development, and political/public affairs. Short-run performance evaluation criteria are made of cost control, operating profits, profit margins, cash flow, and return on investment (ibid., p. 54).

<sup>10</sup> Build strategy – the phase of product and territory expansion, enhancing services and increasing market share all geared up towards long term objectives; Harvest strategy – the phase of declining investments, large cash



effectiveness in the case of harvest strategy (Govindarajan, Gupta, 1985, p. 63). The influences of culture and personality on the relation between RAPM and work-related attitudes of subordinates were also examined. Harrison (1993, p. 336) found in his survey that high reliance on accounting performance measures and budgets in a superior evaluative style was associated with lower tension and higher job satisfaction in a high power distance and low individualism society (like Singapore); while low reliance on such measures and budgets was associated with lower tension and higher job satisfaction in a low power distance and high individualism society (like Australia).

Table 5: Reliance on accounting performance measures – summary of the relevant studies

Study	Sample	Conclusions
Hopwood 1972	167 cost centre managers in one manufacturing division of a large company	<ul style="list-style-type: none"> <li>- Managers' evaluation based on Budget Constrained style leads to higher level of job related tensions, deterioration of relations with supervisors and peers, and larger engagement in manipulative behaviour than when Profit Conscious or Non-accounting style are used.</li> <li>- Positive relationship between perceived absolute importance of meeting the budget and goal clarity occurs only in Profit Conscious and Non-accounting groups.</li> <li>- Profit Conscious style is likely to result in a higher general level of efficiency than the Budget Constrained style.</li> </ul>
Otley 1978	41 unit managers in a single, large organization	<ul style="list-style-type: none"> <li>- Style of budget use does not affect job- or budget-related tensions, nor does a budget-oriented style decrease job ambiguity or ambiguity of evaluation.</li> <li>- Job-related tension increase when a manager disagrees with the way in which budgets are set or his performance is evaluated.</li> <li>- The style of performance evaluation has little effect on subordinate manager's feelings about his job; however it does affect his performance relative to budget.</li> <li>- Budget-oriented style is associated with relatively high budget accuracy and greater unit profitability.</li> </ul>
Brownell 1982b	48 managers of one manufacturing company	<ul style="list-style-type: none"> <li>- Participation has positive effect on performance.</li> <li>- The impact of supervisory evaluative style on performance is moderated by budgetary participation.</li> <li>- Budget-focused leadership style is most effective under conditions of high participation, but is ineffective where participation is low.</li> <li>- There is no significant interaction between supervisory evaluative style and budgetary participation affecting job satisfaction.</li> </ul>
Hirst 1983	111 part-time students from various organizations	<ul style="list-style-type: none"> <li>- Accounting performance measures are relatively incomplete (complete) measures of performance where task uncertainty is high (low).</li> <li>- Where task uncertainty is high (low), a medium to low (high) reliance on accounting performance measures minimizes the incidence of dysfunctional behaviour (job related tension).</li> </ul>
Govindarajan 1984	58 business units managers from 8 Fortune 500 firms	<ul style="list-style-type: none"> <li>- Superiors of business units which face higher environmental uncertainty will use a more subjective performance appraisal approach, whereas superiors of business units which face lower environmental uncertainty will use a more formula-based performance evaluation approach.</li> <li>- Contingency relationship between environmental uncertainty and performance evaluation style will be stronger for more effective business units than for less effective business units.</li> </ul>

inflows from previous investments, holding or decreasing market share and line of products and services, planning for divesting or liquidating business (MacMillan, 1982, p. 48).

<b>Study</b>	<b>Sample</b>	<b>Conclusions</b>
Hirst & Yetton 1984	111 managers attending evening classes at 4 tertiary education institutions	- Use of accounting performance measures to evaluate subordinates' job performance reduces the manager's role ambiguity, whereby this effect is stronger for production than for non-production jobs.
Brownell 1985	61 managers from R&D and marketing departments of one large multinational electronics business	- Reduced reliance on accounting information is appropriate within a more complex environment. - There is no significant interaction between reliance on accounting information and functional areas affecting performance.
Govindarajan & Gupta 1985	58 strategic business unit (SBU) managers from 8 Fortune 500 firms	- Greater reliance on long-run criteria as well as greater reliance on subjective (non-formula) approaches for determining SBU managers' bonus contributes to effectiveness in the case of build strategy, but hampers it in the case of harvest strategy, whereby this relationship is independent of SBU's strategy.
Merchant 1985b	54 profit centre managers of one large company	- Discretionary program decisions are affected by many controls, including net income targets, expense targets, headcount constraints, requirements for approval, and directives given by higher management. - The controls are the strongest for businesses with growth strategies.
Brownell & Hirst 1986	76 line managers in one large manufacturing company	- Compatible combinations of participation and budget emphasis (high/high and low/low) are more effective in reducing job related tensions in low as opposed to high task uncertainty activities.
Imoisili 1989	102 managers with budget responsibilities from 3 organizations	- Style of budget use when evaluating managerial performance has no effect on job stress, attitude towards the budget, and performance.
Merchant 1990	54 profit centre managers in one firm	- Manipulation of performance measures and encouragement of short-term orientation are both positively associated with the pressure to meet financial targets. - Managers operating in relatively uncertain environments are significantly more likely to react to budget pressure than are those operating in a relatively certain environment.
Harrison 1993	115 managers from Singaporean and 96 managers from Australian organizations	- High reliance on accounting performance measures and budgets in superior evaluative style is associated with lower tension and with higher job satisfaction in high power distance and low individualism society. - Low reliance on accounting performance measures and budgets is associated with lower tension and higher job satisfaction in a low power distance and high individualism society.
Lau, Low & Eggleton 1995	112 managers from 80 Singapore manufacturing companies	- High budget emphasis and high budgetary participation in low task difficulty situations are associated with improved managerial performance. - High budgetary participation in high task difficulty situations, regardless of budget emphasis, is associated with improved managerial performance.
Marginson & Ogden 2005	221 managers from 5 SBUs of single UK organization	- Those that experience high levels of role ambiguity are more likely to commit to meeting the budget than those whose experience of role ambiguity is minimal or absent. - The higher the commitment to the budget, the higher the level of self-reported performance.
Hartmann 2005	196 managers from 11 Dutch organizations	- Environmental (task) uncertainty has a positive (negative) effect on managers' opinions about the appropriateness of accounting performance measures. - Uncertainty has a strong effect on the perceived appropriateness of accounting performance measures for managers with low tolerance for ambiguity than for those with high tolerance for ambiguity.

The conclusion that can be drawn from this line of research is that using accounting performance measures like budgets when evaluating managers only potentially has inherent defects. The extent to which they are truly defective and the extent to which their use results in dysfunctional behaviour, depends on the exact organizational context in which they are used. It all depends on contingency variables, like environmental complexity, organizational size and profitability, task uncertainty and so on. They are the ones which form the specific conditions in which a company functions and as such lead to an appropriate perception of fairness in performance evaluation. The key is therefore to recognize the proper conditions for the use of accounting performance measures so that they invoke a sense of fairness and trust in those who are being evaluated. Only in that way can dysfunctional behaviour caused by budgets be minimized and the business unit's performance increased.

### **3.4. Contingency Theory**

The contingency approach to management accounting is based on the premise that there is no universally appropriate accounting system which applies equally to all organizations in all circumstances. Rather, it is suggested that particular features of an appropriate accounting system will depend upon the specific circumstances in which an organization finds itself. Thus a contingency theory must identify specific aspects of an accounting system which are associated with certain defined circumstances and demonstrate appropriate matching (Otley, 1980, p. 413). After reviewing all major contingency-based studies in the last 20 years Chenhall (2003, p. 128) identified six major classes of contingent factors: external environment, technology, organizational structure, size, strategy, and culture. This classification to present relevant contingency-based studies will be used.

#### ***3.4.1. The external environment***

The external environment is a powerful contextual variable that is at the foundation of contingency-based research. The most widely researched environmental variables are (Chenhall, 2003, p. 137): uncertainty, turbulence (risky, unpredictable, fluctuating, ambiguous), hostility (stressful, dominating, restrictive), diversity (variety in products, inputs, customers), and complexity (rapidly developing technologies). The most general conclusion that has emerged from this line of research is that perceived environmental uncertainty, as a proxy for variables external to organization, has a much stronger impact on the design of the corporate budgeting system than the variables relating to the corporate context like managerial autonomy and size (Ezzamel, 1990, p. 193). This impact on budgeting system can usually be seen in a way that sub-units that face a certain environment or have routine technology use a more formal, centralized budgeting system, than those operating in unpredictable and technologically non-routine environment (Waterhouse, Tiessen, 1978, p. 73). For companies that operate in an unpredictable environment it is significant that their managers use budgetary slack as a cushion to protect themselves in the face of environmental uncertainty (Linn et al., 2001, p. 91). The use of a formal budgeting system can also lead to a higher level of performance under conditions of high uncertainty if there is substantially more interaction between accountants and other managers (Chapman, 1998, p. 765). As far as the effect that environmental and economic conditions have on the managerial style used by

business unit managers, Otley (1978, p. 141) found that a rigid style of performance evaluation that emphasized the attainment of budget targets is effective in a liberal environment, while a more flexible style is required in a tough environment. However, studies also showed that variables like different functional activities within organizations (Brownell, 1985, p. 511) and certain specific elements of competitive position, such as strength of market position and stages in product life cycles (Merchant, 1984, p. 301) were not associated with the importance of budgets, budget based evaluation and participation.

### **3.4.2. Technology**

At a general level, technology refers to how the organization's work processes operate and includes hardware, materials, people, software, and knowledge. In organizational literature three generic types of technology can be identified as being important for management control system design. These are complexity, task uncertainty and interdependence (Chenhall, 2003, p. 139). A study done by Bruns and Waterhouse (1975, p. 198) showed that technology is correlated with size and activities structure in such a way that, as companies become more technologically sophisticated (measured by workflow integration), they become larger and more structured. Technology, together with size, affects organizational structure, which then thorough intervening variables of control system complexity and perceived control, defines budget-related behaviour and attitudes. The complexity of technology used, perceived in the form of task analyzability and number of exceptions, influences the suitability of accounting-based controls like budgets in the way that, where the number of exceptions is high, this type of control is unsuitable. That is why, under conditions like these, more personnel-based controls should be used (Abernethy, Brownell, 1997, p. 245). Another important discovery in this field of research was that companies with highly automated production technologies, place greater emphasis on formal budgeting than those with rudimentary production technologies (Merchant, 1984, p. 300). The same relationship is also valid for companies that pursue high levels of customization so that they manage to coordinate increased interdependencies between departments caused by this choice of manufacturing strategy (Bouwens, Abernethy, 2000, p. 234). As such, there is a general belief that firms may benefit from reliance on budgetary control in the evaluation of production subunit performance as manufacturing processes become more automated (Dunk, 1992a, p. 200). The reverse is valid for product standardization. Namely, when product standardization<sup>11</sup> is low, high participation and use of budgets as static targets are each found to be significantly more effective in promoting departmental performance than where product standardization is high (Brownell, Merchant, 1990, p. 394). The same fit among technology condition, participative budgeting and a high budget emphasis must be set for the level of task difficulty<sup>12</sup> in order to achieve strong performance, i.e. low task difficulty, high participation and high budget emphasis lead to improved performance (Brownell, Dunk, 1991, p. 702).

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<sup>11</sup> Product standardization is measured here as level of knowledge of input/output relations. It varies from “one-of-a-kind” (low) to “commodities” (high) (Brownell, Merchant, 1990, p. 388).

<sup>12</sup> Task uncertainty is characterised in terms of two attributes of the process by which inputs are transformed into outputs. These are task difficulty – the extent to which work can be reduced to programmable, mechanical steps; and task variability – the frequency with which unexpected and novel events occur in the planning and production processes (Brownell, Dunk, 1991, p. 694).

### ***3.4.3. Organizational structure***

Organizational structure is about the formal specification of different roles for organizational members, or tasks for groups, to ensure that the activities of the organization are carried out. Structure has been measured in terms of decentralization of authority, structuring of activities, interdependence and organic-mechanistic orientations (Chenhall, 2003, p. 148). Studies done by Bruns and Waterhouse (1975, p. 179) and Merchant (1981, p. 825) discovered that larger, more diverse, decentralized firms tend to use budgeting in an administrative manner with greater importance placed on achieving budget plans, greater middle-management participation in budget-related activities, more formal patterns of communication, and use of more sophisticated budgeting support. On the other hand, smaller, more centralized firms tend to rely more on direct supervision and frequent personal interaction and less on formal budget communication. Independently owned small and medium firms also have a less structured approach to strategic planning and therefore tend to place less emphasis on formal planning than wholly owned subsidiaries of larger organizations (O'Regan, Ghobadian, 2002, p. 670). Merchant (1984, p. 305) found that functional differentiation (degree of different responsibilities within manufacturing department), together with another organizational characteristic (size), was linked to the formality of budgetary processes. This relationship between the organizational departments and formal budgeting process was observed in a form where standard operating procedures were an important control device when interdependence was low (pooled interdependence); budget and statistical reports were used more extensively when interdependence was moderate (sequential interdependence); and when interdependence was high (reciprocal interdependence) the role of all three control systems diminished (Macintosh, Daft, 1987, p. 49). Some studies also investigated the effects that budgetary participation has on managerial performance depending on the level of decentralization. Gul et al. (1995, p. 112) have found in their study that for more centralized organizations, participation is associated with lower levels of managerial performance whereas in decentralized organizations, participation is associated with higher levels of managerial performance.

### ***3.4.4. Size***

Few contingency studies have explicitly considered size as a contextual variable. Those studies that have examined size have considered its effects together with other elements of context such as technology, product diversity and the array of controls. Concerning measurement, studies have used several ways to estimate size including profits, sales volume, assets, share valuation and number of employees. Most contingency-based studies have defined and measured size in terms of number of employees (Chenhall, 2003, p. 149). The general assumption of this contingency variable is that administrative control is characteristic of larger, more technologically sophisticated firms where formalized and standardized operating procedures rule. Interpersonal control predominates in organizations that are small or dependent on other organizations and which are characterised by centralization and lack of autonomy (Bruns, Waterhouse, 1975, p. 200). However, as those small organizations grow, an informal approach to the coordination and control of organizational activities becomes harder (and costlier) and formalizing these management activities becomes vital for future growth. That is why size is a key driver of the emergence of formal control systems like budgeting

(Davila, 2005, p. 243). Business unit size also influences the choice of performance evaluation style used by a unit's manager. Stronger stress on meeting the budget was found to be associated with larger operating units and managers in those units tended to use budget-oriented style more often. These units also usually installed greater formality in the budgeting process, which included greater importance being placed on meeting the budget, more formal budget communication, and greater manager participation in budgeting activities (Merchant, 1984, p. 305). This was explained by the fact that group managers usually stress budgetary measures of performance to a greater extent in large and, for them, more important operating units than in smaller, less significant divisions (Otley, 1978, p. 138). Other results, like those of Merchant (1981, p. 821), showed that in larger organizations, where there was greater diversity and decentralization of decision making, there was greater participation in budgeting despite the less personal interaction between managers. Perhaps the most significant finding from this author in relation to this topic was that performance was highest in the larger firms when an administrative approach to budgeting was used, in contrast to smaller firms where the best performance was associated with a more interpersonal approach (ibid., p. 826). Powell (1994, p. 131) also found that strategic planning directly affects companies' sales growth and indirectly their profitability with firm size as an intervening variable – these relationships are more expressed in large firms than in small ones. This comes from the notion that formal planning will lead to sales growth but its cost will at the same time influence companies' short-run profitability.

### ***3.4.5. Strategy***

Strategy is somewhat different to other contingency variables. In a sense it is not an element of context, rather it is the means by which managers can influence the nature of the external environment, technology of the organization, and structural arrangements. Several generic classifications of strategies have been developed and subsequently used in contingency studies including entrepreneurial-conservative, prospectors-analysers-defenders, build-hold-harvest, and product differentiation-cost leadership (Chenhall, 2003, p. 150). Authors like Govindarajan (1988) and Van der Stede (2000) explored the relationship between differentiation business strategy and accounting based control systems used by those business units that employ such strategy. Their results indicated that business units which either pursue differentiation strategy or have been more profitable in the past are subject to less rigid budgetary controls and therefore have more leeway to build slack and are more concerned about their long-term results (Van der Stede, 2000, p. 617). They also found that when managerial locus of control and budget evaluative style are properly aligned with the requirements of business unit strategy, superior performance occurs, i.e. high managerial internal locus of control and low emphasis on meeting a budget are associated with high performance in business units employing a strategy of differentiation (Govindarajan, 1988, p. 843). Another example of classical contingency work related to strategy is in research done by Simons (1987, p. 370) who found that high performing prospectors<sup>13</sup> seem to attach a great

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<sup>13</sup> Simons (1987, p. 359) used typology for generic strategies devised by Miles and Snow where: Defenders – operate in relatively stable product areas, offer more limited products than competitors, compete through cost leadership, quality and service, and engage in little product and market development; Prospectors – compete

deal of importance to forecasting data in control systems, setting tight budget goals, monitoring outputs carefully, emphasizing frequent reporting, and using uniform control systems. On other end of the strategy spectrum, defenders appear to use their control systems less intensively. In fact, negative relationships were noted between performance and attributes such as tight budget goals and output monitoring. Despite the general belief that formal management accounting systems such as budgets are inconsistent with entrepreneurial organizations, Chenhall and Morris (1995, p. 488) showed that if they are used to provide a discipline for resource planning and integration that assists in the translation of ideas into effective innovations, they can lead to increased performance in entrepreneurial organizations, especially if combined with organic processes like participation and information sharing.

### **3.4.6. Culture**

Culture has become an important element in management control systems design over the past 20 years as many companies have developed multinational operations. Compared to studies of other contextual variables, research into culture has been limited and somewhat exploratory. Values that were used to study the influence of culture were (Chenhall, 2003, p. 153): power distance (acceptance of unequal distribution of power), individualism vs. collectivism (placing self-interest ahead of the group), uncertainty avoidance (preference to avoid uncertainty and rely on rules and structures), masculinity vs. femininity (achievement, assertiveness and material success vs. modesty and preference for quality of life), and Confucian dynamism (status, respect for tradition, saving face). Contingency studies that dealt with culture most often used dimensions of power distance<sup>14</sup> and individualism<sup>15</sup> to examine the cross-cultural or cross-national generalizability of effects that budget participation and budget emphasis have on subordinates' job related attitudes (O'Conner, 1995, p. 383). All of them assumed that behaviour and attitudes would be different primarily because of cultural differences, especially when managers from a low-individualism, large-power distance and long-term orientation culture (like are China or Singapore) are compared to Western managers that represent a culture of high-individualism, small-power distance and short-term orientation. Their findings showed that the relationship between management accounting systems and managerial performance of the first group of managers was negative for high levels of participation, but positive for Western managers (Tsui, 2001, p. 125). On the other hand, an increased level of budget emphasis was found to be associated with reduced job

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through new products and market development, change their product line more often and are constantly seeking new market opportunities.

<sup>14</sup> Power distance relates to how power is distributed among organizational members at various hierarchical levels in different societies. In some cultures power is unequally distributed, with those at the top making all the decisions and those at the lower levels simply carrying out orders given by powerful groups at the top (high power distance cultures). In other societies, power is more evenly distributed among the members at the various hierarchical levels in the system and more egalitarian relationships prevail (low power distance cultures) (Ueno, Sekaran, 1992, p. 661).

<sup>15</sup> The dimension of Individualism-Collectivism refers to the relationship one perceives between one's self and the group of which one is a member. Members in individualistic societies are described as self-centred, competitive rather than cooperative, having low loyalty for the organizations they work for, pursuing their own goals, having low need for dependency upon others, and being calculative. Members of collectivistic societies have "we" rather than "I" orientation, have high loyalty for the organization working towards its goals, interact with each other in interdependent mode, and take action as a group in a cooperative fashion accepting values of joint efforts and group rewards (Ueno, Sekaran, 1992, p. 661).

related tensions on the part of subordinates in both cultures, but was not associated with job satisfaction in either of above mentioned cultures (Harrison, 1992, p. 13). Therefore, the general conclusion of this set of contingency work would be that organizational culture has a crucial role in the functioning of an organizational control system. That is why control systems which are inconsistent with an organization's value system are likely to create resistance and produce motivations aimed at defeating their purpose, which is a valid threat to all companies whose operations reach beyond their national borders (Flamholtz, 1983, p. 168).

Table 6: Contingency Theory – summary of the relevant studies

Study	Sample	Conclusions
<b><i>Contingency Factor – THE EXTERNAL ENVIRONMENT</i></b>		
Otley 1978	41 unit managers in a single large organization	<ul style="list-style-type: none"> <li>- Rigid style of performance evaluation is effective in a liberal environment, while more flexible style is required in a tough environment.</li> <li>- In a liberal environment the most accurate budget estimate occurs under a flexible style of budget use; but in a tough environment it occurs under a rigid style of use.</li> </ul>
Waterhouse & Tiessen 1978	N/A	- Organizational sub-units that face a certain environment or have routine technology use a more formal, centralized control system, than those operating in unpredictable and technologically non-routine environment.
Merchant 1984	170 managers in electronics industry	- Market factors like strength of market position and stages in product life cycles have little or no effect on budgeting.
Brownell 1985	61 managers from R&D and marketing departments of one large multinational electronics business	<ul style="list-style-type: none"> <li>- Constraints from suppliers and impacts of government regulation are two environmental elements which contribute the most to the overall difference in complexity between R&amp;D and marketing.</li> <li>- Budget participation has greater positive effects on managerial performance in R&amp;D than in marketing.</li> <li>- There is no significant interaction between reliance on accounting information and functional areas affecting performance.</li> </ul>
Ezzamel 1990	81 financial directors from Times 1000 list of UK companies	<ul style="list-style-type: none"> <li>- Perceived environmental uncertainty is positively associated with budget participation, budgetary evaluation, required explanation of variances, and interactions with superiors.</li> <li>- This correlation is stronger in the case of larger size companies than with the smaller size companies.</li> </ul>
Chapman 1998	4 companies from UK clothing and textiles industry	- Formal planning and control can have a beneficial role in highly uncertain environmental conditions, where interaction patterns between accountants and managers are a crucial moderating factor of this relationship.
Linn, Casey, Johnson and Ellis 2001	200 managers from Fortune 1000 firms	- Perceived environmental uncertainty and budget emphasis are significantly positively associated with budgetary slack.
<b><i>Contingency Factor – TECHNOLOGY</i></b>		
Bruns & Waterhouse 1975	284 managers directly involved in budgeting process from 26 different companies	- Technology affects organizational structure which then thorough intervening variables – control system complexity and perceived control – defines budget-related behaviour and attitudes.
Merchant 1984	170 manufacturing managers in electronics industry	- Companies that have a higher degree of automation of the production processes tend to place greater emphasis on formal budgeting.
Brownell & Merchant 1990	146 production department managers from 19 electronic firms	- Higher (lower) standardization of products combined with flexible (static) budgets and low (high) budget participation enhances performance.
Brownell & Dunk 1991	79 managers from 46 different companies	- Under conditions of low task difficulty, low participation should be accompanied by low budget emphasis for effective



Study	Sample	Conclusions
		managerial performance. - When task difficulty is high, participation serves a positive role across all levels of budget emphasis.
Dunk 1992a	26 managers from different companies	- When reliance on budgetary control and manufacturing process automation are both high (low), production subunit's performance is high (low).
Abernethy & Brownell 1997	127 research officers in R&D divisions of large US and Australian companies	- Reliance on accounting controls has significant positive effects on performance when both task analyzability and number of exceptions are lowest (low task uncertainty). - The same relationship is valid for personnel controls in condition of highest uncertainty.
Bouwens & Abernethy 2000	170 production and sales managers from various Dutch companies	- Customization does not have a direct relation with management accounting system used, but rather operates via departmental interdependencies created when such a choice is pursued.
<b>Contingency Factor – ORGANIZATIONAL STRUCTURE</b>		
Bruns & Waterhouse 1975	284 managers involved in budgeting process from 26 companies	- Decentralized and structured organization operating in a stable organizational environment is well suited to the use of budgetary control.
Merchant 1981	170 manufacturing managers in electronics industry	- Large, more diverse, decentralized firms tend to use budgeting in an administrative manner with greater importance placed on achieving budget plans, greater middle-management participation in budget-related activities, more formal patterns of communication, and use of more sophisticated budgeting supports. - Small, centralized firms tend to rely more on direct supervision, frequent personal interaction and formal budget communication.
Merchant 1984	170 manufacturing managers in electronics industry	- Functional differentiation is positively related to the formality of budgeting use.
Macintosh & Daft 1987	90 department managers from 20 different organizations	- Under condition of pooled interdependence, organizations rely more on standard operating procedures and less on budget and statistical reports. - In sequentially interdependent departments managers use budgets and statistical reports more than standard operating procedures. - Under condition of reciprocal interdependence standard operating procedures and budget are used less than when interdependence was low, while statistical reports play expanded role in planning and coordination.
Gul, Tsui, Fong, and Kwok 1995	37 managers from 26 different manufacturing companies	- At high levels of decentralization there is a positive relationship between budgetary participation and managerial performance, but at low levels of decentralization this relationship is negative.
O'Regan & Ghobadian 2002	194 small and medium size manufacturing UK firms	- Emphasis on the characteristics of strategic planning by formal planning firms is higher compared with non-formal planning firms.
<b>Contingency Factor – SIZE</b>		
Bruns & Waterhouse 1975	284 managers directly involved in budgeting process from 26 different companies	- Size is a strong predictor of organization's structure: bigger companies – decentralized structure; smaller companies – centralized structure. - Size affects organizational structure which then thorough intervening variables – control system complexity and perceived control – define budget-related behaviour and attitudes.
Otley 1978	41 unit managers in a single large organization	- Stronger stress on meeting the budget together with budget-oriented style is associated with larger operating units.
Merchant 1981	170 manufacturing managers in electronics industry	- Performance is highest in the larger firms when an administrative approach to budgeting is used, in contrast to smaller firms where the best performance is associated with

<b>Study</b>	<b>Sample</b>	<b>Conclusions</b>
		more interpersonal approach.
Merchant 1984	170 manufacturing managers in electronics industry	<ul style="list-style-type: none"> <li>- Size, functional differentiation and the degree of automation in the production process lead to greater formality in the budgeting process.</li> <li>- In departments where the expected context-budgeting relationships existed, the self-ratings in performance tended to be higher than in departments where they did not.</li> </ul>
Powell 1994	113 CEOs from US companies in furniture and apparel industry	<ul style="list-style-type: none"> <li>- Relationship between strategic planning and profitability is positive and significant, but spurious when firm size is held constant.</li> <li>- Link between strategic planning and sales growth is large and significant with or without firm size effect.</li> <li>- Correlation between planning and financial performance is greater among large firms than among small firms.</li> </ul>
Davila 2005	95 managers from technology-oriented firms in California's Silicon Valley	<ul style="list-style-type: none"> <li>- In the early stages of the growth of an organization, size is a key driver of the emergence of formal control systems.</li> <li>- Size is relevant explanatory variable of management control systems.</li> </ul>
<b><i>Contingency Factor – STRATEGY</i></b>		
Simons 1987	76 managers from 12 different companies	<ul style="list-style-type: none"> <li>- Prospectors attach a great deal of importance to forecast data in control systems, set tight budget goals, monitor outputs carefully, emphasize frequent reporting, and use uniform control systems.</li> <li>- Defenders use control systems less intensively, have a negative relationship between performance and tight budget goals, and emphasize bonus remuneration based on the achievement of budget targets.</li> </ul>
Govindarajan 1988	121 strategic business unit (SBU) managers from 24 firms	<ul style="list-style-type: none"> <li>- Deemphasizing budgetary goals during performance evaluation is associated with high performance in SBUs employing strategy of differentiation.</li> <li>- SBUs employing low cost strategy are more effective when they use a high budget-based evaluation style.</li> <li>- When budget evaluative style, decentralization, and locus of control are aligned appropriately to meet the requirements of SBU strategy, superior performance occurs.</li> </ul>
Chenhall & Morris 1995	154 general managers of strategic business units from different large companies	<ul style="list-style-type: none"> <li>- The association between enhanced performance and the interaction of organic processes with use of management accounting systems is stronger in entrepreneurial than in conservative entities.</li> </ul>
Van der Stede 2000	153 business unit general managers	<ul style="list-style-type: none"> <li>- Business units that either pursue a differentiation strategy or have been more profitable are subject to less rigid budgetary controls and have therefore more leeway to build slack, and are more concerned about long-term results.</li> </ul>
<b><i>Contingency Factor – CULTURE</i></b>		
Flamholtz 1983	Case studies of control systems of 3 different organizations	<ul style="list-style-type: none"> <li>- Control systems which are inconsistent with an organization's value system are likely to create resistance and produce motivations aimed at defeating their purpose.</li> <li>- Organizational cultures characterized as sales and entrepreneurial with their emphasis on "closing the deal", informal relationships and freedom from restraints, prevent budgeting system from facilitating organizational control.</li> </ul>
Harrison 1992	115 managers from Singaporean and 96 managers from Australian organizations	<ul style="list-style-type: none"> <li>- High budget emphasis style is associated with lower job related tension and higher job satisfaction in Singapore, while a low budget emphasis style is associated with such outcomes in Australia.</li> </ul>
Ueno & Sekaran 1992	70 managers from US and 149 managers from Japanese companies	<ul style="list-style-type: none"> <li>- U.S. companies use more communication and coordination, build more slack in the budget, and resort to short-term performance evaluations more than the Japanese companies.</li> </ul>
O'Conner 1995	125 managers from 14 local and 30 foreign companies in Singapore	<ul style="list-style-type: none"> <li>- Increased budget participation at foreign subsidiaries leads to lower role ambiguity and improved superior/subordinate relationship.</li> </ul>

Study	Sample	Conclusions
		- For local companies participation was associated with enhanced superior/subordinate relationship only when participants perceived that the process is providing them greater “influence” and “contribution”.
Tsui 2001	89 subunit managers of 7 large manufacturing companies in China	- For Chinese managers the relationship between management accounting systems and managerial performance is negative for high levels of participation. - For Western managers relationship between management accounting systems and managerial performance is positive for high levels of participation.

Despite revealing many contingency factors that influence the development and functioning of a typical budgeting system within organizations, the idea that “it all depends” which is often associated with the contingency theory, seems to indicate rather the absence than the presence of concrete solutions. Many factors that evidently impact on the budgeting system have been suggested, but their precise effect and relative importance have yet to be explained. The theory basically suggests that no uniformly best budgeting system exists, but that senior managers must keep on looking until they find those solutions that are appropriately matched to the circumstances in which their companies operate. However, the contingency framework of budget system design provides valuable guidance in conceptualizing the importance of designing proper accounting information systems and has as such made a major impact on the development of current budgeting techniques.

### 3.5. Summary

Budgeting theory has steadily grown since the 1950's into what has become the most extensively researched topic in management accounting (Covaleski et al., 2003, p. 4). Its evolution followed the problems that practitioners encountered in their organizations but set its own direction and intensity of research. Many accountants will say that the numerous pieces of advice that emerged from the budgeting theory have often been contradictory and, in some cases, out of touch with the real world. Nevertheless, they present today the core of managerial accounting literature and as such must be taken into consideration when setting, modifying or upgrading the budgeting system within an organization. Here is a list of the most important and the most researched recommendations, or as some authors would say “accounting literature truths”, that came as a result of more than half a century of academic research on budgets and budgeting:

- High budget pressure leads to stress, interpersonal conflicts and distrust, which then cause dysfunctional behaviour like gaming, reduced effort, poor communication, and budget slack. Budgets should, therefore, not be used as pressure devices.
- The key to successful budgeting is communication. Management must communicate to employees that budgeting is the most effective way of corporate planning and control. It has to pass its goals and goal achievement strategy down the hierarchy.
- Budgetary biasing (budget slack and upward-biasing) is a common element of the budgetary process which occurs when budget variances are used to evaluate performance. It can be reduced using participation and tight budgetary control but never totally eliminated despite the fact that top management is aware of it.

- Budgets should not be administered rigidly. Flexible budgets should be used instead of fixed budgets, while managers should be held responsible only for things over which they have reasonable control.
- Budget goals should be negotiated through budget participation and be set at a tight but attainable level. Only this kind of budget goals can cause motivational effects that will increase the level of budget performance.
- Management must clearly define what constitutes successful budget performance and link extrinsic rewards to its accomplishment. This system must be transparent and consistent so that evokes motivation and satisfaction in employees.
- Participation is an essential part of effective budgetary planning and control and is the primary tool for reducing the dysfunctional effects of budgeting. Participation affects, directly and indirectly, budget performance through various intervening variables and it leads to higher motivation and satisfaction with budget-related activities.
- There is no universally appropriate budgeting system that applies equally well in all organizations. Its development and use is contingent on the circumstances faced by the organizations which vary depending on organizational variables such as size, strategy, culture, environmental uncertainty, organizational structure and technology.

## 4. BUDGETING IN PRACTICE

### 4.1. Budgeting practices around the world

For years, companies have viewed their budgets simply as a mandatory estimate of the upcoming year's revenues and expenses. However, this attitude is quickly changing as the marketplace is becoming more competitive and organizations more dynamic. A study by the Institute of Management and Administration shows how important budgeting and planning is becoming to corporations (see table 7). Controllers of large and small companies were asked to identify their most critical job function, and nearly 59 percent rated budgeting as their key job function (Rasmussen, Eichorn, 2000, p. 3).

Table 7: Critical job functions for controllers

	Number of employees		
	Combined	Less than 250	More than 250
Annual planning and budgeting	58,6%	56,6%	63,3%
Balance sheet management	52,2%	57,8%	48,0%
Monitoring spending	45,2%	50,6%	37,8%
Performance measurement	36,6%	32,5%	40,8%
Internal control	30,6%	26,5%	33,7%
Closing procedures	29,0%	30,1%	28,6%
Long range financial planning	29,0%	28,9%	28,6%
Other	8,1%	6,0%	10,2%

Source: Harris, 1998, IOMA's Controller's Report #1 (taken from Rasmussen, Eichorn, 2000, p. 4)

The same study showed that the budgeting process now involves more activities and individuals throughout the entire organization. In other words, the days when a few people at corporate headquarters created the budget in isolation are quickly disappearing – budgeting has become an organization-wide activity. This is why it comes as no surprise to see the widespread use of budgets all over the world (see table 8 on page 50). Although there are some differences in budgeting systems due to specific business environments and inevitable influences of national cultures, in the great majority of countries, companies have accepted budgets as the main planning and control tool. What is also noticeable from this presentation of budgeting practices around the globe is that some theoretical recommendations, as the use of participation and flexible budgets, have not been implemented in the real world to the extent that the books on accounting suggest. In the case of flexible budgets, it can even be said that their relatively low usage is highly inconsistent with the relatively high usage of variance analysis noticeable in the same companies. Yet this contradiction is nothing else but another evidence of budgets' imperfection under conditions where external environments are constantly and rapidly changing, where managers' responsibilities are not clearly defined but overlap, where many organizational units are at best cost centres and where what is controllable shades imperceptibly into what is not (Emmanuel, Otley, Merchant, 1990, p. 103).

The above mentioned imperfections of a budgeting system have led to a situation where today, despite widespread use, very few firms are satisfied with their budgeting processes. In a 1998 survey magazine CFO Europe revealed that 88 percent of responding managers were dissatisfied with the traditional budgeting model (Banham, 1999, p. 1). Reasons for this extensive dissatisfaction with the budgeting process can be found in the facts that 78 percent of companies use very a rigid budgeting system where they do not change their budgets at all during the fiscal cycle (Fraser, 2001, p. 22), and that 85 percent of management teams spend less than one hour a month discussing strategy (Kaplan, Norton, 2001, p. 13). It is due to this last fact that more than 60 percent of companies do not link strategy and budgeting at all (ibid., p. 274). Furthermore, 66 percent of surveyed managers believe that their planning and budgeting process is influenced more by politics than by strategy or other economic factors (Lazere, 1998, p. 28). At the same time, budgeting has evolved into an expensive and highly complex system that is adding less value than expected. A benchmarking study conducted by The Hackett Group in 1998 showed for the first time the actual costs of operating the budgeting model. It revealed the following: the average company invests more than 25,000 person days per billion dollars of revenue in planning and performance measurement processes; the average time taken to develop an average budget that contains some 90 line items is four months; and companies need on average 21 days to complete a budget forecast (Neely, Sutcliff, Heyns, 2001, p. 8).

Table 8: Budget practices around the globe\*

	U.S.	Japan	Holland	Bahrain	U.K.	New Zealand	Malaysia	India	Australia	Ireland	Greece	Sweden	Finland
1. Percentage of companies that prepare complete master budget	91%	93%	100%	100%	95%	98%	95%	91%	96%	91%	93%	89%	94%
2. Percentage of companies that use flexible budgets	27%	81%	–	39%	42%	27%	66%	52%	64%	57%	–	–	–
3. Percentage of companies reporting division manager participation in budget committee	78%	67%	82%	65%									
4. Percentage of companies that manage reduction of excessive budget cost estimates through negotiations between managers and their superiors					57%	62%	72%						
5. Ranking of the most important budget goals for division managers													
- ROI	1	4											
- Operating income	2	2											
- Sales revenues	3	1											
- Production costs	4	3											

Source: Horngren, Foster, Datar, 2000, p. 181. modified with: Ahmad, Sulaiman, Alwi, 2003, p. 719.; Bailes, Assada, 1991, p. 137.; Ballas, Venieris, 1996, p. 133.; Chenhall, Langfield-Smith, 1998, p. 4.; Drury et al., 1993, p. 29.; Ekholm, Wallin, 2000, p. 524.; Guilding, Lamminmaki, Drury, 1998, p. 577.; Joshi, 2001, p. 97.; Joshi, Al-Mudhaki, Bremser, 2003, p. 745.; Pierce, O’Dea, 1998, p. 42.; Puxty, Lyall, 1989, p. 28.; Umapathy, 1987, p. 82.; Wijewardena, De Zoysa, 1999, p. 53.

\* Data displayed in this table are for presentational purposes only, since they come from different studies done on different samples in various time periods.

Given such a long list of problems and many calls for improvement, it seems odd that the vast majority of companies retain a formal budgeting process. One of the reasons why budgets are retained is because they are so deeply ingrained in an organization's fabric that they often present the only centrally coordinated activity within the business that covers all areas of organizational life (Neely, Sutcliff, Heyns, 2001, 9). It then comes as no surprise that 70 percent of companies have not updated their budgeting process in the last 5 years (O'Connell, 2000, in Neely, Sutcliff, Heyns, 2001, p. 8). The literature identifies a number of reasons why organizations fail to change their planning and budgeting processes (ibid.):

- The cost of overhauling the budgeting system can be very high.
- The benefits of changing budgeting systems are less quantifiable than they are for other systems such as information systems.
- Analysts estimate that as many as half of organizations that embark on such an overhaul become overwhelmed and decide to give up.

However, a recent survey of Finnish companies found that although 25 percent are retaining their traditional budgeting system, 61 percent are actively upgrading their system, and 14 percent are either abandoning budgets or at least considering doing so (Ekholm, Wallin, 2000, p. 527). That is a clear sign that although budgeting is the cornerstone of the management control process in nearly all organizations, companies are aware that it is not perfect and that some of its flaws must be seriously addressed before it is too late. In the following chapters, exactly how companies are changing their budgeting system and what kind of alternatives are offered for those that decide to do so will be presented.

## **4.2. Advanced budgeting models**

The previous chapter showed that there are companies that are more than happy with their traditional budgeting systems and are doing quite well with them. However, those are usually large, well established companies that operate in stable business environments with large market shares and high entry barriers. For those firms that are not so lucky and are barely surviving global competition, practitioners in Europe and the U.S. proposed two distinct approaches to address what they believe are the shortcomings of traditional budgeting practices (McNally, 2002, p. 10):

- a) Better budgeting approach – advocates improving the budgeting process and primarily focuses on the planning problems with budgeting.
- b) Beyond budgeting approach – advocates radical changes to the budgeting process and is concentrated on performance evaluation problems with budgeting.

Despite having different focuses, both approaches share a common belief that traditional budgeting is fundamentally mismatched to today's rapidly changing and uncertain environments and that something has to be changed.

The purpose of advanced budgeting models<sup>16</sup> is to address the limitations of traditional budgeting (see table 9). Although in practice many of the operational management functions

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<sup>16</sup> This is how better budgeting techniques together with the beyond budgeting models can be named together.

of traditional budgeting are being by-passed by modern management methods, such as total quality and business process re-engineering, the core budgeting limitations still have not been overcome. That is why many practitioners think that what is really needed is a total overhaul of the budgeting system so that it will be able to respond to requirements of today's business environment that can be characterized as being highly competitive and rapidly changing where innovation, service, quality, speed and knowledge-sharing are the crucial competitive factors.

Table 9: Traditional budgeting and advanced budgeting models

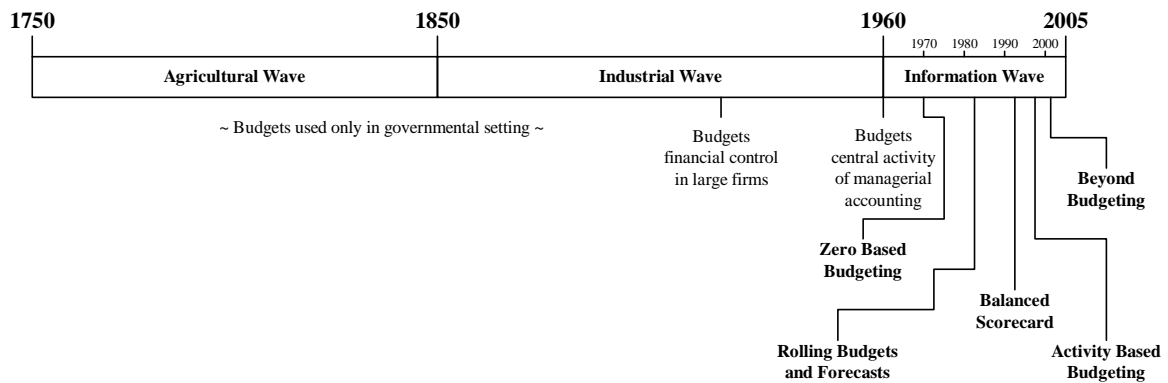
<b>Objective</b>	<b>Traditional budgeting</b>	<b>Problem</b>	<b>Advanced budgeting models</b>
Strategic coherence	- Last year plus - Across-the-board budget reductions	- Not linked to strategy - Wrong services cut	- Link budgets to vision, mission and strategy - Decide explicitly between competing demands
Resource rationality	- Functional organization - Cost element focus - Investment benefits understated - Annual process	- Sub-optimal performance - Outputs not visible - Surplus resources - Inappropriate cycle times	- Accommodate different cycle times - Focus on task outputs and productivity - Ensure benefits of investments are realized
Continuous improvement	- Incremental improvement - Fixed and variable	- Internally driven targets - Inefficiencies masked	- Drive improvements towards externally-based targets - Make waste visible and address it
Congruent behaviour	- Command and control - Financial emphasis	- Lack of commitment - Dysfunctional behaviour	- Improve consensus building and decision-making - Use a balanced set of performance measures
Added value	- After-event reporting - Bureaucratic	- Variances not prevented - Wasted opportunities	- Emphasize planning, improvement and prevention - Integrated budgeting with the management process

Source: Bunce, Fraser, Woodcock, 1995, p. 256 and 257.

In the information and digital era within which companies operate today, the key competitive constraint is no longer land, labour or capital. It is knowledge or intellectual capital – competent managers, skilled workers, effective systems, loyal customers and strong brands (Hope, Fraser, 1997, p. 20). This is a period which Hope and Hope (1997) call “information wave”, in which the way a successful company operates is shifting from a “make-and-sell” to a “sense-and-respond” approach. “Make-and-sell” is an industrial-age model based on transactions, capital assets, mass production, economies of scale and product margins, while “sense-and-respond” is an information and service-age model, which emphasises client relationships, intellectual assets, mass customisation, economies of scope and value creation (Fraser, 2001, p. 24). If we look at the timeframe presented in figure 12, we can see that all the advanced budgeting models have actually developed in this period. It is my personal belief that these models present a sort of natural response from companies that are slowly but surely realizing the basic rule of evolution – adapt or become extinct.



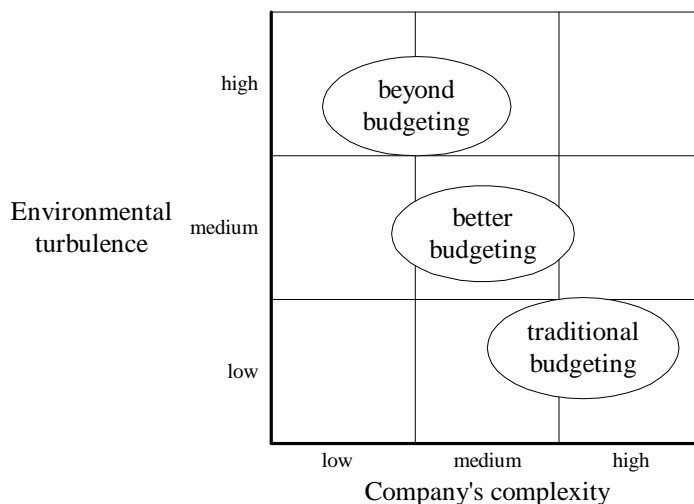
Figure 12: Evolution of budgeting within the three waves of economic change



Source: Adopted from Hope, Hope, 1997, p. 2.

Authors Weber and Linder (2005, p. 25) also agree that with the increase in business environment’s turbulence, companies need to change their budgeting system. While traditional budgeting, and to a lesser degree better budgeting, are both quite robust with respect to growing complexity (inside and outside the organization), they have problems handling environmental change. This is exactly why the Beyond Budgeting model, according to them, is a much more appropriate system in today’s highly volatile business environment since it does not rely on plans but on group agreements. However, there is also downside to it. As can be seen in figure 13, coordination through group agreements or internal markets (as used in the Beyond Budgeting model) is not suited for ensuring effective and efficient coordination in complex contexts. In fact, they claim that there is a trade-off between company’s complexity on the one hand and environmental turbulence on the other (ibid., p. 26).

Figure 13: Effectiveness and efficiency of traditional budgeting, better budgeting and beyond budgeting models



Source: Weber, Linder, 2005, p. 24.

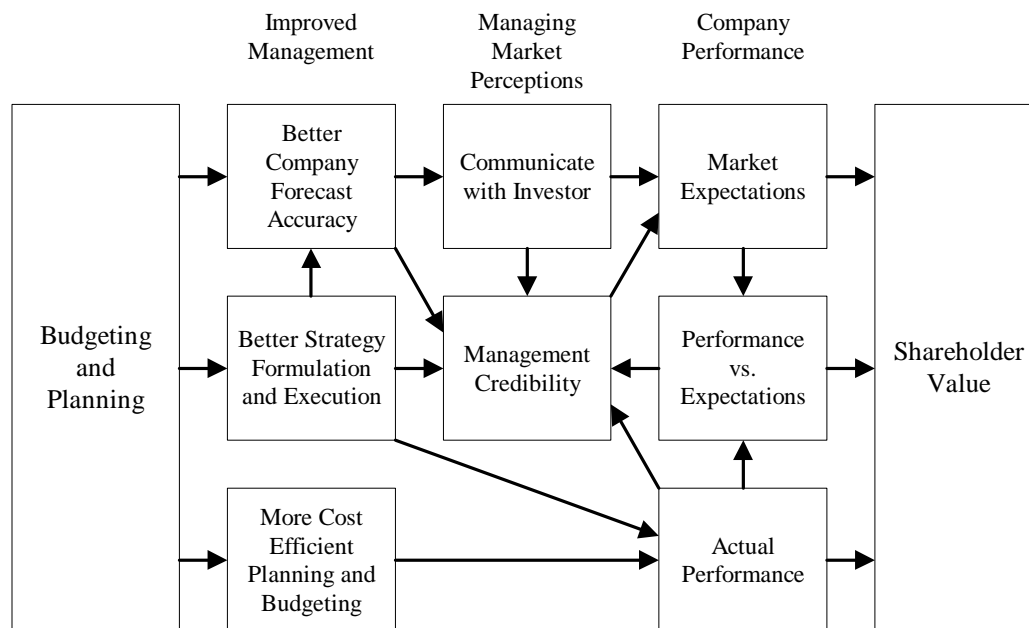
Despite the literature’s emphasis on the cost of putting together budgets as the main reason why organizations should re-engineer their planning and budgeting processes, some practitioners contend that the major value lies in aligning plans and budgets to strategies.

Whatever the real reason, advocates of traditional budgeting have always claimed that proving the effect of budget process re-engineering on the company's bottom line is almost impossible and as such these often very expensive and cumbersome changes to the budgeting system should not be engaged in. That is why a consulting company called Accenture developed the theoretical model in which it tried to show exactly how improved budgeting process can lead to increased shareholder value. Their model suggests that more efficient and effective planning and budgeting processes should result in greater shareholder value through 3 specific routes (Neely, Sutcliff, Heyns, 2001, p. 17):

1. Improved management by better planning and budgeting, which can be done in 3 ways:
  - by improving the cost efficiency of the planning and budgeting activities themselves,
  - by improving strategy formulation and execution, and
  - by improving the accuracy of the forecasts that the company produces.
2. Managing market expectations, which can be strengthened by:
  - better communication with investors, and
  - increased management credibility.
3. Improved organizational performance, which will be achieved by:
  - better actual financial performance,
  - better expected future performance, and
  - more predictable performance against expectations.

As can be seen in figure 14, the logic behind Accenture's model is quite simple. They claim that shareholder value is a function of a business's ability to pick the right strategy and execute it better than its competitors. Furthermore, without a good planning process, an organization will experience high costs and inefficiency – two characteristics that deflate shareholder price. Accenture also conducted research into the share price performance of organizations that have improved their planning and budgeting practices relative to sector performance through time in order to validate their model. It was found that organizations with improved planning and budgeting practices experienced a share price growth of 116 percent over three years compared to 101 percent for the sector, 280 percent over five years compared to 221 percent for the sector and 373 percent over ten years compared with 280 percent for the sector (ibid., p. 31). To that must also be added the 84 percent of interviewed analysts who stated that they believe that planning and budgeting systems have either a direct or indirect impact on the evaluations that they make of a company and therefore on share price performance (ibid., p. 32). However, both findings are still far from proving a definite causality link between improved budgeting and increased shareholder value. That is why this model is still a theoretical concept to be used for discussion purposes and not a concrete prescription for sure gain.

Figure 14: The theoretical link between planning and budgeting and shareholder value



Source: Neely, Sutcliff, Heyns, 2001, p. 19.

Following the introductory section, the ensuing chapters will be dedicated to specific advanced budgeting techniques like zero base budgeting, rolling budgets and forecast, activity based budgeting, the Balanced Scorecard, and the Beyond Budgeting. Each method will be evaluated in detail, so that in the summary, an objective review of the value that these methods have brought to the evolution of budgeting systems can be presented.

### 4.3. Zero Base Budgeting

#### 4.3.1. Origin of the method and its main authors

Modern zero-base budgeting (ZBB) methodology was developed by Peter A. Pyhrr for implementation at Texas Instruments in 1969<sup>17</sup>. Pyhrr advocated a budgeting system where managers need to build each year's budget from the ground up, building a case for their spending as if no baseline exists – start from zero, and present their requests for appropriations in such a fashion that all funds can be allocated on the basis of cost/benefit or some similar kind of evaluative analysis. This was in total contrast to the traditional budgeting process which allowed managers to start with last year's expenditures and add a percent for inflation to come up with next year's budget, making them justify only those incremental increases while automatically accepting current levels of spending without question (Suver, Brown, 1977, p. 77).

The focuses of zero-base budgeting process are two basic questions: “Are the current activities efficient and effective?” and “Should current activities be eliminated or reduced to fund higher-priority or new programs?” ZBB is trying to find answers to these questions by

<sup>17</sup> As with the most management techniques, ZBB concept was not entirely new when Pyhrr introduced it at TI. The US Department of Agriculture had begun using a “ground up” budgeting technique in 1962, while as early as 1924, E. Hilton Young advocated re-justifying budget programs annually (Burrows, Syme, 2000, p. 227).

using the decision-package ranking process. This process provides management with an operating tool to evaluate and allocate its resources effectively and efficiently, and provides the individual manager with a mechanism for identifying, evaluating, and communicating his/her activities and alternatives to higher levels of management (Pyhrr, 1977, p. 1).

#### ***4.3.2. Main ideas of the method***

The zero-base approach requires each organization to evaluate and review all its programs and activities systematically on the basis of performance output as well as costs, to emphasize managerial decision making first and numbers-oriented budgets second, and to increase the analysis of allocation alternatives. Although management approaches to the adoption of ZBB differ among organizations since the process must be adapted to fit the specific needs of each user, the basic steps to effective ZBB can still be identified (Pyhrr, 1976, p. 7):

- Identify “decision units”.
- Describe each decision unit as a “decision package”.
- Evaluate and rank all these packages by cost/benefit analysis to develop a budget request and profit and loss account.
- Allocate resources accordingly.

ZBB starts with the creation of decision packages which are the building blocks of ZBB. The decision package is a document that identifies and describes a specific activity in such a manner that management can a) evaluate it and rank it against other activities competing for the same or similar limited resources and b) decide whether to approve it or disapprove it. Each package includes a statement of the goals of the activity, the program by which the goals are to be achieved, the benefits expected from the program, the alternatives to the program, the consequences of not approving the package, and the expenditures of funds and personnel the activity requires. There are two basic types of decision packages (Pyhrr, 1970, p. 113):

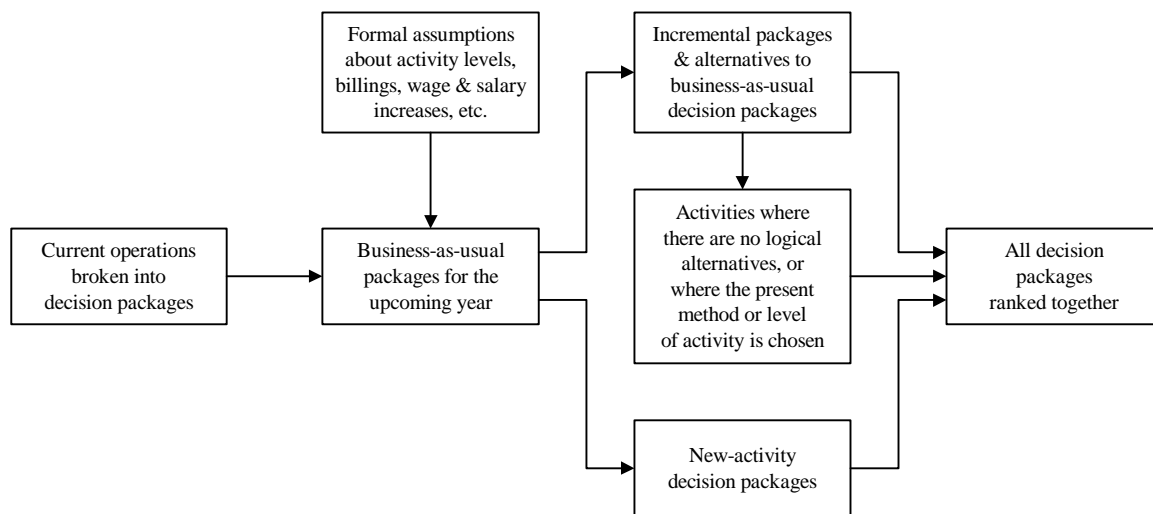
1. Mutually exclusive packages – identify alternative means for performing the same function.
2. Incremental packages – reflect different levels of effort that may be expended on a specific function.

Figure 15 presents the detailed process of decision packages’ formulation which can be described in the following steps (ibid., p. 114):

- Each manager takes his/her area’s forecasted expense level for the current year, identifies the activities creating this expense, and calculates the costs for each activity.
- Once the manager has formulated his/her preliminary list of decision packages and has received the formalized set of assumptions about next year’s operations, s/he translates the packages into “business-as-usual” packages for the upcoming year.
- The manager then develops his/her final set of decision packages from his/her business-as-usual packages by segmenting each of them into mutually exclusive and incremental packages wherever possible and noting the discarded alternatives. When determining incremental packages, the manager must establish a minimum level of effort, which must be below the current level of operation, and then identify additional levels or increments as separate decision packages.

- Finally, the manager should identify all the new activities in his/her area for the upcoming year, develop the decision packages that handle them, and attach them to his/her final set.

Figure 15: Formulation of decision packages



Source: Pyhrr, 1970, p. 115.

The identification and evaluation of different levels of effort represent the two most difficult aspects of the zero-base analysis, yet they are the key elements of the process. By identifying a minimum level of effort, plus additional increments as separate decision packages, each manager presents the following alternatives for top management's decision making (Pyhrr, 1976, p. 9):

- eliminate the operation,
- reduce the level of funding,
- maintain the same level of effort, or
- increase levels of funding and performance.

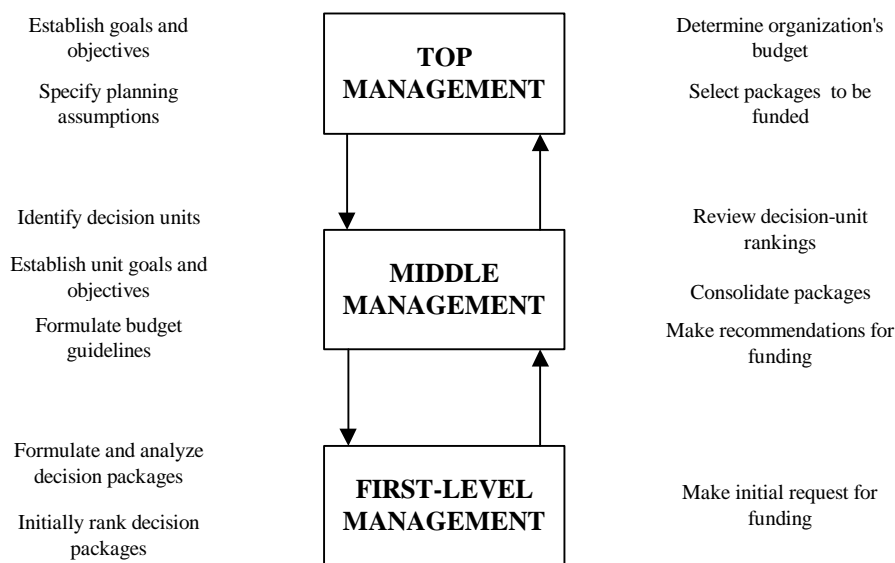
The second important phase of ZBB is the ranking process. This technique allows management to allocate its limited resources by listing all the packages identified in order of decreasing benefit to the company. It also helps management to identify the benefits to be gained at each level of expenditure and to study the consequences of not approving additional decision packages ranked below that expenditure level. The process itself follows a hierarchical structure of the company where at each level the decision packages are reviewed, ranked and consolidated, and then forwarded to the next higher organizational level for the same procedure all the way to the top. The organization's final budget equals the sum of the budgets of those decision packages accepted for funding (Pyhrr, 1977, p. 6).

In order to reduce the number of packages to be reviewed in detail by successively higher levels of management and to concentrate top management's attention on the lower ranked activities, a cut-off expense line should be established at each organizational level. In this way, management can briefly review packages above the cut-off line while at the same time can devote most of the available time to decision packages below the line which are then studied in detail and ranked. The ability to achieve a list of ranked packages at any given

organizational level allows management to evaluate the desirability of various expenditure levels throughout the budgeting process. Also, this ranking list provides management with a reference point to be used during the operating year to identify the activities to be reduced or expanded if allowable expenditure levels change or if the organization is over or under budget during the year (Pyhrr, 1970, p. 116).

If the complete ZBB process is contemplated, it can be said that it is a top-down, bottom-up approach to budgeting, which requires the participation of managers at all levels within the organizational hierarchy. The participative nature of the ZBB process is illustrated in the following figure.

Figure 16: Management's involvement in the zero-base budgeting



Source: Dean, Cowen, 1979b, p. 77.

To sum up, it can be said that the purpose of the ZBB process is to help management evaluate expenditures and make tradeoffs among current operations, development needs, and profits for top management decision making and allocation of resources (Pyhrr, 1976, p. 6).

#### 4.3.3. Advantages and disadvantages of the method

Advantages of zero-base budgeting:

- Properly carried out, it should result in a more efficient allocation of resources to activities and departments.
- ZBB focuses attention on value for money and makes explicit the relationship between the input of resources and the output benefits.
- It develops a questioning attitude and makes it easier to identify inefficient, obsolete or less cost-effective operations.
- ZBB process leads to greater staff and management knowledge of the operations and activities of the organization and can increase motivation.
- It is a systematic way of challenging the status quo and obliges the organization to examine alternative activities and existing costs behaviour patterns and expenditure levels.

Disadvantages of zero-base budgeting:

- It is a time consuming process which can generate volumes of paper work.
- There is a considerable management skill required in both drawing up decision packages and in the ranking process.
- ZBB might be perceived as an implied threat to existing programs.
- There are considerable problems in ranking packages and there are inevitably many subjective judgements.
- The thought of creating a budget from scratch causes considerable resistance if support groups and training programs are not in place.

#### ***4.3.4. Practical use of the method***

Zero-base budgeting finds its main use in areas where expenditures are not determined directly by manufacturing operations themselves – in areas, that is, where the manager has the discretion to choose between different activities (and between different levels of activity) having different direct costs and benefits. These ordinarily include marketing, finance, quality control, maintenance, production planning, engineering, R&D, personnel, data processing, and so on (Pyhrr, 1970, p. 112).

Due to the large amount of time that it takes to prepare ZBB, it is suggested that it should be used as a short-term (usually one year) budgeting method which could be selectively applied on a rolling basis throughout the organization. In many cases, ZBB has been used in situations where cost stabilization or control, or even cost reduction was necessary, though most of the benefits that users of ZBB reported have been achieved in reallocating funds and reassigning personnel (Dean, Cowen, 1979a, p. 56).

### **4.4. Rolling budgets and forecasts**

#### ***4.4.1. Origin of the method and its main authors***

Survival in a competitive environment means that businesses must be flexible and innovative, largely through the development of new products and services, while simultaneously improving productivity and customer services. However, incorporating the effects of innovation into the budget can be difficult, especially if companies are using fixed budgets that cover a specific time frame – usually one fiscal year. These fixed budgets may be reviewed at regular intervals so that adjustments and corrections can be made if needed, but the basic budgets remain the same throughout the period. In an effort to address the problem of rigid time frame in a fixed budgets, some firms, particularly those in rapid-change industries, have adopted a rolling budgets and forecasts (Hayes, 2002, p. 116).

A rolling budget (or continuous budget) is a plan that is continually updated so that the time frame remains stable while the actual period covered by the budget changes. For example, as each month passes, the one-year rolling budget is extended by one month, so that there is always a one-year budget in place. Due to the rolling budget, managers have to rethink the process and make changes each month or each period. The result of this is usually a more

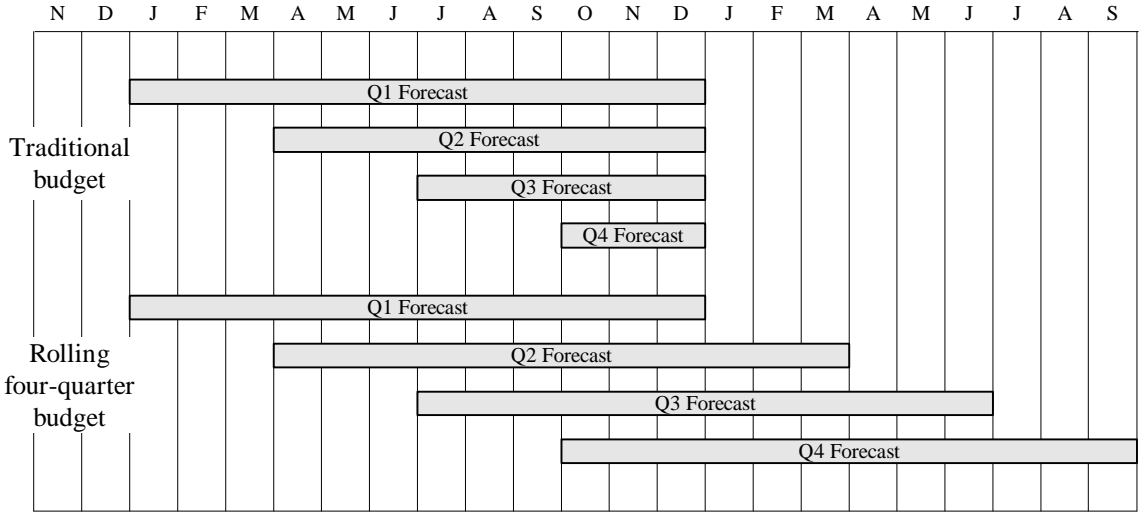
accurate, up-to-date budget incorporating the most current information (Horngren, Foster, Datar, 2000, p. 182).

Rolling forecasts are not a set budget per se, but rather a continuous updating of the budget. Often a 12-month window is used, whereby each month the prior budget amounts are replaced with the actual amounts and budget figures are entered for the new month. Based on actuals, the amounts in future periods may be updated to take into account information that was not available when the original amounts were budgeted. Often rolling forecasts are used in conjunction with a budget and not to replace the budget. An annual budget may be created and held static, but during the year the budget will also be updated to reflect the latest results. Continuously updating the original budget allows management to determine how the assumptions used at the beginning of the year have changed (Rasmussen, Eichorn, 2000, p. 32).

**4.4.2. Main ideas of the method**

Most organizations set up annual budgets that follow the fiscal calendar. In those cases budgets prepared during the year will extend through to December 31st of that year but not any further. An increasing number of organizations are challenging this approach and are implementing rolling budgets and forecasts that extend the budgets over a consistent time horizon, typically four to eight quarters out, depending on the nature and cycle of the business. Figure 17 compares the traditional calendar-based budget with a four-quarter rolling budget.

Figure 17: Traditional budget versus rolling budget



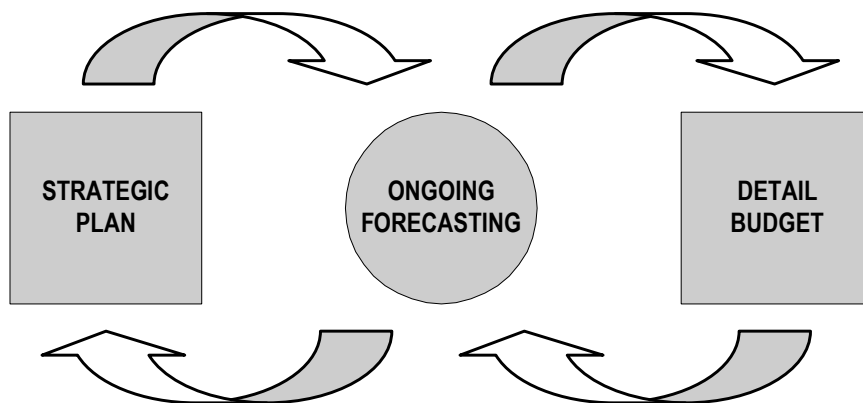
Source: Axson, 2003, p. 196.

Implementing a rolling budget involves more than going through the annual budgeting process four times a year instead of once. Due to the time between budgets being compressed, management must access and process information more quickly than it was able to do in the past. To do that, line managers must become more involved in the process and the company must embrace technology that will allow it to quickly capture and disseminate the raw data needed for decision making and forecasting (Myers, 2001, p. 44).



No matter whether it is used for planning or for control, a budget is always more than a forecast. Churchill (1984, p. 150) explained the difference between forecast and budget when he said that “forecast is a prediction of what may happen and sometimes contains prescriptions for dealing with future events. Budget, on the other hand, involves a commitment to a forecast to make an agreed-on outcome happen.” As it is evident from this definition of forecast and budget, these two concepts are very much interlinked within the everyday planning and control system of companies. Namely, forecasting allows organizations to close the gap between the overall strategic plan and the detailed operational budget creating in this way an ideal planning cycle. In this cycle, an ongoing forecasting component flows directly from the overall strategic plan and then integrates with the operating budget impacting its outcome. In other words, forecasts translate broad-based initiatives into key statistical and operational factors and results, while operational budget, in turn, provides plans and budget-to-actual control functions at the lower levels of the organization. Figure 18 depicts this integrated planning cycle.

Figure 18: Integrated Planning Cycle



Source: Montgomery, 2002, p. 42.

Once an organization has decided to perform strategic financial planning through rolling forecasts, it should ensure that the forecasts are focused appropriately and not simply an extension of the budgeting process. To be most effective, rolling forecasts should (Montgomery, 2002, p. 43):

- Have a clear strategic financial planning mind-set.
- Be performed at a more summarized level of detail.
- Be modelled with operating metrics and parameters instead of general updates of previous forecast figures.
- Be closely integrated with the operating budget.

In this system the budget can become the integral planning and control device for achieving strategic objectives like on-going product and service development and continuous improvement. By planning in smaller time frames (months or quarters), managers and front-line employees can make a better assessment of their work improvements and thus set more realistic targets. This interactive approach pushes decisions down to the production floor and,

as a result, helps gaining employee commitment and faster adoption of productivity improvements (Drtna, Hoeger, Schaub, 1996, p. 20).

#### ***4.4.3. Advantages and disadvantages of the method***

The advantages of rolling budgets and forecasts are:

- Encourages managers to think about planning as an ongoing process, rather than as a static event.
- An opportunity to provide more “real time” response to rapidly changing environment.
- In theory, the annual planning process is eliminated; the projection for next year is simply the first rolling forecast.
- Planning is not dictated by the calendar, but can be triggered by important events and changes.

The disadvantages of rolling budgets and forecasts are:

- Like a budgeting process, managers and employees must forecast responsibly and not regard it as a routine task.
- Rolling budgets and forecasts have to be completed every month or quarter, instead of annually as before, which increases work and costs related to budgeting.
- Constantly changing assumptions and the financial implications of those assumptions tends to invalidate targets, along with the commitment to achieve them.
- The planning process can become too time-consuming.

#### ***4.4.4. Practical use of the method***

This budgeting improvement technique is proposed for companies that are very young or are in industries experiencing rapid growth, where actual results often vary significantly from the original budgeted amounts. It is also suggested that the focus of rolling forecasts should only be the important figures of variables like orders, sales, costs, profits and cash flows, since these are the most important ones for companies’ future and should be continuously observed and updated (Lynn, Madison, 2004, p. 63).

### **4.5. Activity Based Budgeting**

#### ***4.5.1. Origin of the method and its main authors***

The activity-based budgeting (ABB) approach, developed by consultants from Coopers and Lybrand Deloitte<sup>18</sup>, combines a number of well proven management practices, drawn mainly from priority base budgeting and total quality management, together with activity-based cost (ABC) management concepts. ABB is designed as a management process, operating at the activity level, for continuous improvement in performance and costs. Its key features are shown in figure 19 and are outlined below (Brimson, Fraser, 1991, p. 42):

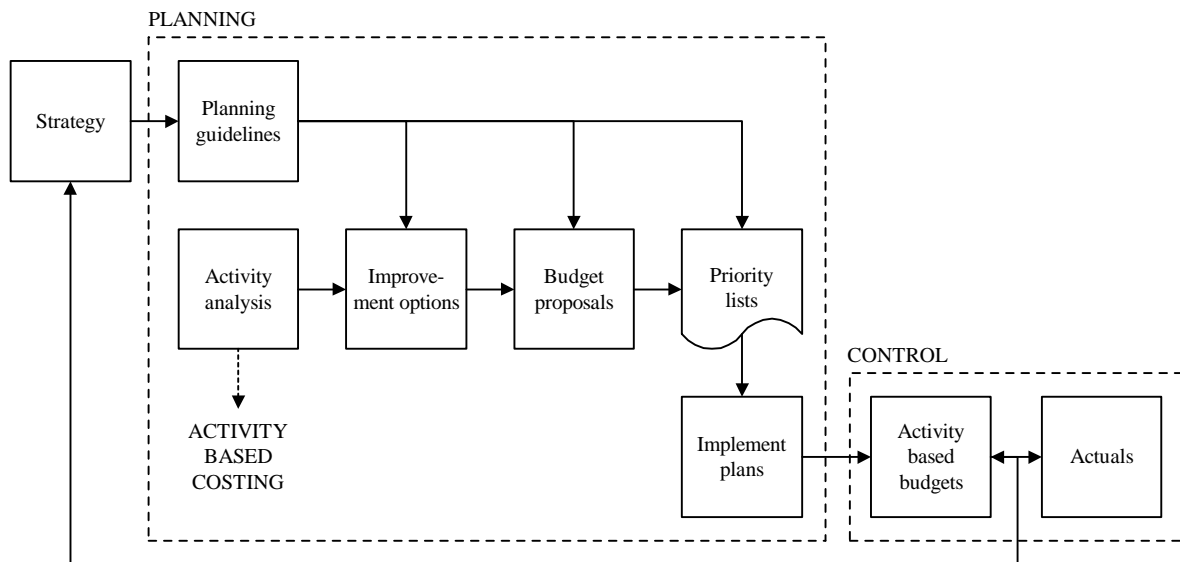
- Planning process linked to the organization’s strategic objectives.

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<sup>18</sup> Coopers & Lybrand and the UK firm of Deloitte Haskins & Sells adopted the business name Coopers & Lybrand Deloitte from January 15th, 1990 and merged on April 29th, 1990. Coopers & Lybrand Deloitte became later Coopers & Lybrand from June 1st, 1992. Today this company is known as PricewaterhouseCoopers after its merger with Price Waterhouse on July 1st, 1998.

- Use of well proven activity analysis techniques.
- Identification of cost improvement opportunities.
- Analysis of discretionary spending options and priority ranking.
- Establishment of performance targets for control.
- Integration with activity planning and accounting to provide effective control.
- Participative process to control and sustain continuous improvement.

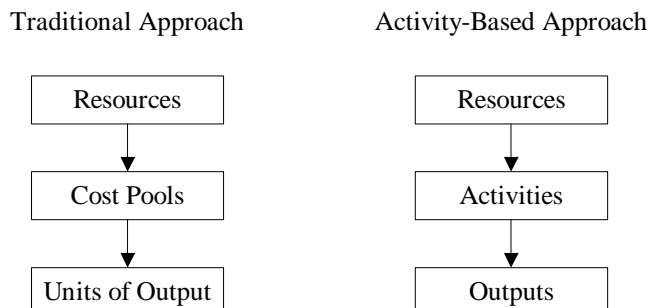
Figure 19: The Activity-Based Budgeting process



Source: Brimson, Fraser, 1991, p. 42.

Activity-based concepts that form the underlying base of the activity-based budgeting model come from activity-based cost system which differs from the traditional cost system by modelling the usage of all organizational resources on the activities performed by those resources and then linking the costs of these activities to outputs such as products, services, customers and projects (see figure 20).

Figure 20: Traditional and activity-based cost approach



Source: Cooper et al., 1992, p. 10.

#### 4.5.2. Main ideas of the method

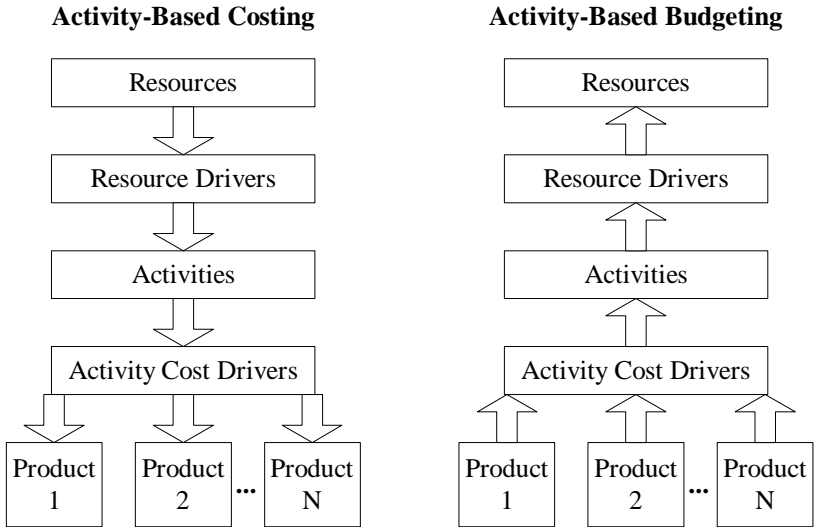
Activity-based budgeting is a quantitative expression of the expected activities of the organization, reflecting management's forecast of workload and financial and non-financial

requirements to meet agreed strategic goals and planned changes to improve performance. Its main principles can be listed as (Brimson, Antos, 1999, p. 26):

- Achieve excellence by eliminating waste and by reducing workload.
- Change the focus from variable and fixed cost budgeting to used and unused capacity.
- Synchronize and coordinate activities within and outside of the organization.
- Control the process rather than the results and understand underlying causes and effects.
- Include customers and suppliers in the decision-making process.
- Use mistakes for learning, not for blaming.
- Use features and customer characteristics to understand the source of product variation and how customers are creating it.

Cooper and Kaplan (1998) defined activity-based budgeting simply as activity-based costing performed in reverse – while ABC traces costs from resources to activities and then from activities to specific products and services, ABB moves in the opposite direction and traces costs from products to activities and then from activities to resources (see figure 21).

Figure 21: Activity-Based Budgeting is Activity-Based Costing reversed



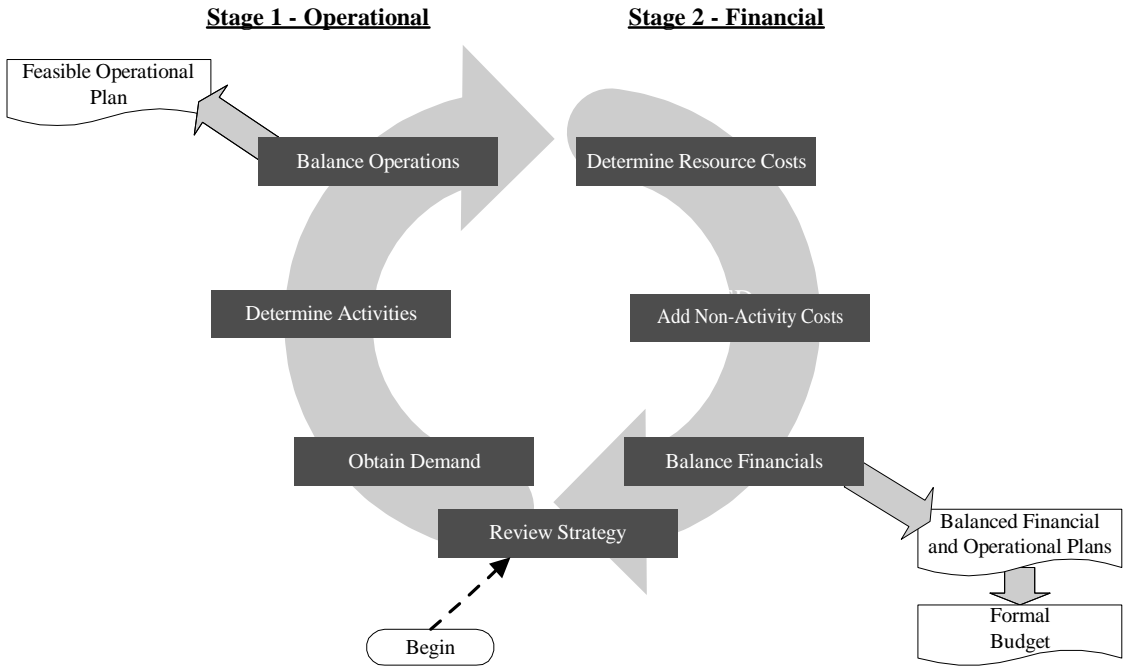
Source: Cooper, Kaplan, 1998, p. 116.

Since subsequent research showed that there are too many practical problems with the concept of ABB being simply ABC in reverse, the Activity-Based Planning and Budgeting (ABPB) interest group of the CAM-I<sup>19</sup> was formed in 2000 to investigate how the ABB model could be improved. The ABPB-group’s fundamental thrust was to expand activity-based and capacity management concepts into budgeting. The result of their work was a new planning and budgeting framework known as the Closed-Loop model shown in Figure 22. This model incorporates three important features which distinguish it from the traditional budgeting approach: 1) it is activity based, 2) it explicitly matches resource demand and

<sup>19</sup> Consortium for Advanced Manufacturing International (CAM-I) is an international non-profit making organization of industrial, consulting and academic members based in North America, Europe and Japan whose main purpose is to develop new management tools that will contribute to improvement of efficiency and effectiveness of managerial accounting systems in corporations (Newing, 1994a, p. 28).

resource capacity, and 3) it achieves operational balance and then confirms financial balance (Hansen, Torok, 2004, p. xi).

Figure 22: Overview of the CAM-I Activity Based Budgeting Closed-Loop Model



Source: Hansen, Torok, 2004, p. 32.

Detailed implementation of the Closed-Loop model consists of two stages – stage one wants to achieve operational balance while stage two wants to achieve financial balance (see figure 23).

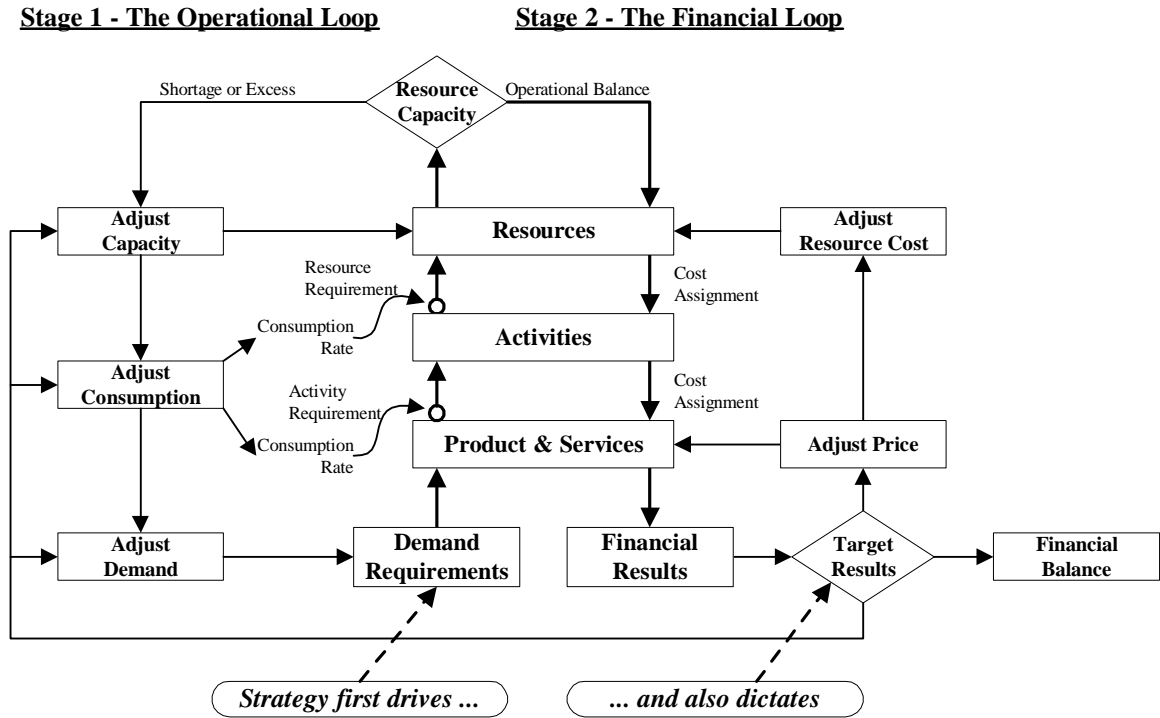
Stage one (the operational loop) begins with the organization’s strategy and uses this strategy to develop a feasible operational plan. Based on the strategy and the projected demands for a specific future time period, activity-based concepts are used to create the resource requirements for key operational areas of the business. This is achieved by converting the quantity of demand into activity requirements using activity consumption rates, and subsequently converting the activity requirements into individual resource requirements using resource consumption rates. Once the activity and resource consumption requirements are known, the Closed-Loop model works to achieve an operational balance between the resources required to fulfil the demands and the available capacity of these resources (Sandison, Hansen, Torok, 2004, p. 18).

Once operational balance is achieved, in stage two (the financial loop) the Closed-Loop model calculates the costs of resources, links those costs with the costs of activities, the costs of products and ultimately with projected financial performance. The organization then uses the projected financial numbers to investigate financial balance and feasibility. In total, the ABB approach allows the organization to adjust five possible elements (three levers for operational balance and two levers for financial balance) to achieve the budget target: (1)

product/service demand quantities, (2) activity and resource consumption rates, (3) resource capacities, (4) resource unit costs, and (5) product/service prices (ibid., p. 19).

When both operational and financial balances are achieved, a more formal line-item budget is created which includes both activity-based and non-activity-based components. Basically, the Closed-Loop Model demonstrates how changing activity and resource consumption rates, or other operational parameters, can affect the budget.

Figure 23: Implementing the CAM-I Activity Based Budgeting Closed-Loop Model



Source: Hansen, Otley, Van der Stede, 2003, p. 100.

In short, the ABB approach combines a more complete operational model with a detailed financial model where work activities are set as building blocks for budgets. The resulting model makes resource consumption highly visible while identifying sources of imbalance or inefficiencies. The resulting transparency of the activity-based budget promotes the allocation of resources to their best uses in line with organizational priorities, decreases the scope for political gaming, enhances decision making and performance evaluation, and improves operational flexibility (Klammer, Ansari, Bell, 1997, p. 29).

**4.5.3. Advantages and disadvantages of the method**

Advantages of the activity-based budgeting:

- By first balancing operational requirements, the ABB approach avoids unnecessary calculations of the financial effect of operationally infeasible plans.
- The ABB approach focuses on generating a budget explicitly from activities and resources. This highlights the sources of imbalances, inefficiencies, and bottlenecks, which allows better product, process, or activity costing and decision making, and better resource allocation to support organizational priorities.

- The explicit analysis of resource capacity and the increased visibility of resource consumption allow organizations to identify capacity issues and make adjustments earlier in the budgeting process than in traditional budgeting processes.
- Lower level managers and employees can more easily understand and communicate budgeting information in operational rather than financial terms; activity-based budgets can lead to improved performance evaluations by specifying accountability.
- The activity-based approach reinforces horizontal process view of the organization cutting across departmental borders, in contrast to the traditional budgeting's vertical orientation.

Disadvantages of activity-based budgeting:

- One potential limitation of this approach is information availability about activities, processes and resources, and the cost of creating and maintaining the information.
- It is difficult and costly to implement if the company doesn't already have activity-based costing system.
- The ultimate success of ABB depends heavily on management's commitment to act on the data.
- Due to numerous cause-and-effect linkages among the demand for products and services, activities required to provide them, and the resources required to perform the activities, the ABB system is time consuming and cumbersome to maintain.

#### ***4.5.4. Practical use of the method***

Activity-based budgeting is a planning and budgeting tool which works by understanding the linkages between the activities and the drivers behind them, particularly for those involved in creating value in the product for the customer. It should be used where there is a need to understand the cost impact of significant changes in levels of activity and where a decision in one part of the organization affects another in order to ensure that there is an optimum allocation of scarce resources across the business (Connolly, Ashworth, 1994, p. 33).

Although having an activity-based costing system is not a precondition for implementing activity-based budgeting (the Closed-Loop Model), having an activity-based mindset will greatly simplify and assist in the implementation of ABB especially if the company already has a strong informational support system (Hansen, Torok, 2004, p. 26).

## **4.6. The Balanced Scorecard**

### ***4.6.1. Origin of the method and its main authors***

The Balanced Scorecard approach has been developed at the Harvard Business School by Kaplan and Norton at the beginning of the 1990's. It is essentially a multi-dimensional approach to performance measurement and management that is linked to organizational strategy (Otley, 1999, p. 374). During their initial research Kaplan and Norton realized that no single measure can provide a clear performance target or focus attention on the critical areas of the business, especially not traditional financial performance measures like return-on-investment and earnings-per-share (Kaplan, Norton, 1992, p. 71). So they devised the Balanced Scorecard (BSC) framework which complements the financial measures with

operational measures on customer satisfaction, internal processes, and the organization's innovation and improvement activities.

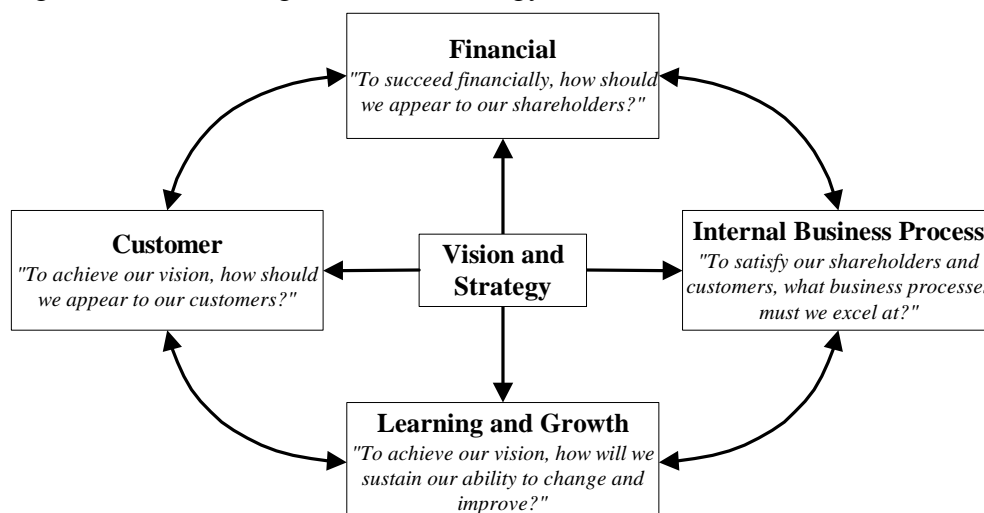
Unlike conventional metrics, the information from the four perspectives provides balance between financial and non-financial measures, leading and lagging performance indicators, short-term and long-term objectives, and external and internal performance perspectives, allowing the organization to better anticipate the future and react to unexpected environmental changes. Another peculiarity of the Balanced Scorecard is that it is not a template that can be applied to businesses in general. Different market situations, product strategies, and competitive environments require different and unique balanced scorecards (ibid., 1993, p. 135).

#### 4.6.2. Main ideas of the method

The main idea of this method is that the Balanced Scorecard translates an organization's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategy measurement and management system. The scorecard measures organizational performance across four balanced perspectives as can be seen on figure 24 (ibid., 1996a, p. 25):

- 1) Financial performance measures indicate whether a company's strategy, implementation and execution are contributing to bottom-line improvement.
- 2) From the customer perspective, managers identify the customer and market segments in which the business unit will compete and the measures of the business unit's performance in these targeted segments.
- 3) In the internal business process perspective, executives identify the critical internal processes that will have the greatest impact on customer satisfaction and achievement of the organization's financial objectives in which organization must therefore excel.
- 4) The learning and growth perspective identifies the infrastructure (people, systems and organizational procedures) that the organization must build to create long-term growth and improvement.

Figure 24: Translating vision and strategy



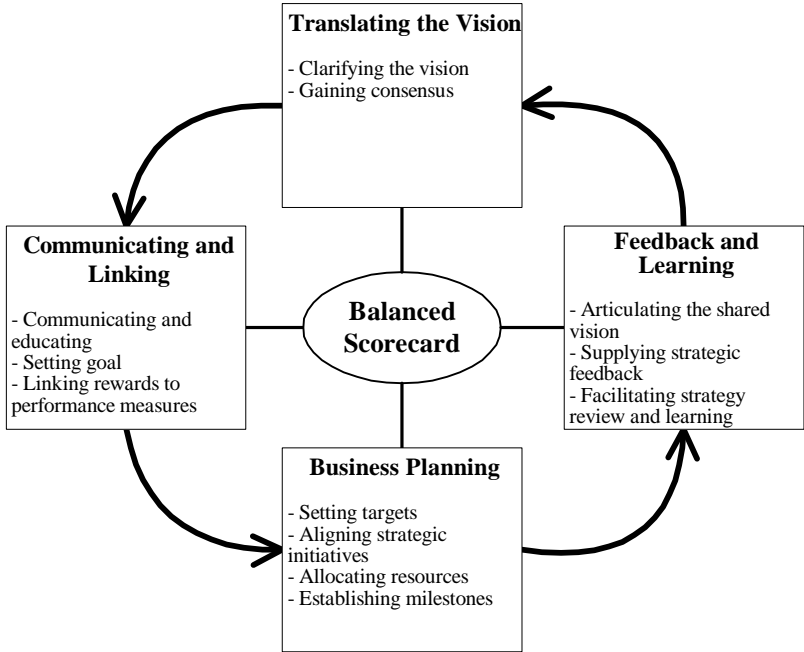
Source: Kaplan, Norton, 1996b, p. 76.



The Balanced Scorecard is more than a tactical or operational measurement system. Innovative companies are using the scorecard as a strategic management system to manage their strategy over the long run (see figure 25). They are using the measurement focus of the Balanced Scorecard to accomplish following the critical management processes (Chow, Haddad, Williamson, 1997, p. 25):

- The first process – *translating the vision* – helps managers build a consensus around the organization’s vision and strategy. For people to act on the words in vision and strategy statements, those statements must be expressed as an integrated set of objectives and measures, agreed upon by all senior executives, that describe the long-term drivers.
- The second process – *communicating and linking* – lets managers communicate their strategy up and down the organization and link it to departmental and individual objectives. The scorecard gives managers a way of ensuring that all levels of the organization understand the long-term strategy and that both departmental and individual objectives are aligned with it.
- The third process – *business planning* – enables companies to integrate their business and financial plans. When managers use the ambitious goals set for balanced scorecard measures as the basis for allocating resources and setting priorities, they can undertake and coordinate only those initiatives that move them toward their long-term strategic objectives.
- The fourth process – *feedback and learning* – gives companies the capacity for strategic learning. With a the Balanced Scorecard at the centre of its management systems, a company can monitor short-term results from four different perspectives and evaluate strategy in the light of recent performance.

Figure 25: The Balanced Scorecard as a strategic framework for action



Source: Kaplan, Norton, 1996b, p. 77.

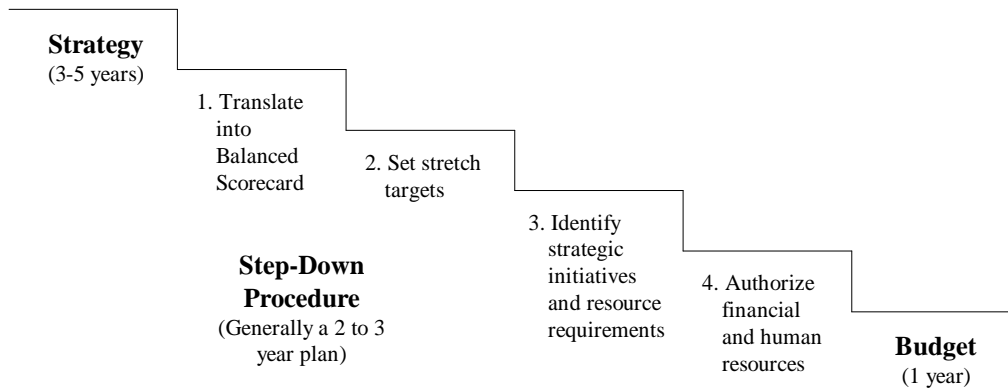
The Balanced Scorecard can only translate a company's strategy into specific measurable objectives. It can not implement it. It is management's job to devise strategy maps and link individual measures in all four areas in order to put their strategy into operation. A properly constructed balanced scorecard should identify and make explicit the sequence of hypotheses about the cause and effect relationships between outcome measures and the performance drivers of those outcomes. Due to the existence of double-loop learning in the Balanced Scorecard framework, any failure to convert improved operational performance, as measured in the scorecard, into improved financial performance will give the signal to executives to go back to their drawing boards and rethink the company's strategy or its implementation plans (ibid., 1992, p. 78). This is yet another peculiarity of the Balanced Scorecard which provides a framework for managing the implementation of strategy, but also at the same time allows the strategy to evolve in response to changes in the company's competitive environment.

The Balanced Scorecard should tell the story of the strategy, starting with the long-term financial objectives, and then linking them to the sequence of actions that must be taken with financial processes, customers, internal processes and finally employees and systems to deliver the desired long-term economic performance. The very exercise of creating the Balanced Scorecard forces companies to integrate their long-term strategic planning and budgeting process and therefore helps to ensure that their budgets support their strategies. In this way, managers are expanding the traditional budgeting process by incorporating in budgets strategic as well as financial goals. In the Balanced Scorecard framework budgets are still used as short-term performance measures, but they now include short-term targets for all four perspective measures and are as such in line with companies' strategies and their long-term goals (ibid., 1996b, p. 83).

Kaplan and Norton (2001, p. 281) suggest that companies should follow a step-down procedure to make transition from high-level long-term strategy goals to annual budgets for local operations in following way (see figure 26):

1. Translate strategy into the Balanced Scorecard by defining the strategic objectives and measures.
2. Set stretch targets for specific future times for each measure and identify planning gaps to motivate and stimulate creativity.
3. Identify strategic initiatives and resource requirements to close the planning gaps, thereby enabling the stretch targets to be achieved.
4. Authorize financial and human resources for strategic initiatives and embed these requirements into the annual budget. The annual budget should consist of two components – a strategy budget to manage discretionary programs and an operating budget to manage the efficiency of departments, functions and line items.

Figure 26: Linking strategy to budgets in a step-down procedure



Source: Kaplan, Norton, 2001, p. 281.

As the Balanced Scorecard replaced the budget as the centre for management processes, companies in effect created a new kind of organization based on the requirements of their strategy – the organization that Kaplan and Norton (2001, p. 25) named as the strategy-focused organization. The common feature of this kind of organizations is that they have, by clearly defining the strategy, communicating it consistently, and linking it to the drivers of change, developed a performance-based culture that has linked everyone and every unit to the unique features of the strategy. Research on the successful implementations of the Balanced Scorecards by Kaplan and Norton led them to reveal a consistent pattern of achieving such strategic focus and alignment. They presented this in the so-called five principles of the strategy-focused organization, as can be seen in the following figure.

Figure 27: The principles of a strategy-focused organization



Source: Kaplan, Norton, 2001, p. 9.

Thanks to the innovative CEOs that used the Balanced Scorecard not only to clarify and communicate strategy, but also to manage strategy, the Balanced Scorecard model in its decade long existence has passed the road of transformation from an improved measurement system to a core management system that can motivate breakthrough competitive performance and change, through aligning and focusing companies' resources on formulated strategy.

#### ***4.6.3. Advantages and disadvantages of the method***

Advantages of the Balanced Scorecard can be summarized as follows:

- BSC allows managers to look at the business from four important perspectives simultaneously (financial, customer, innovation and learning, and internal business perspective).
- BSC minimizes information overload by limiting the number of measures used to those that are the most critical.
- BSC guards against sub-optimization by forcing managers to consider all the important operational measures together.
- BSC demands that managers translate their general mission statements into specific measures that really matter.
- BSC fills the void that exists in most management systems – the lack of a systematic process to implement and obtain feedback about strategy.

Some of the disadvantages of this method include:

- Actual data for each metric can be difficult, sometimes even impossible to reasonably track.
- BSC is a relatively complex and costly measurement system.
- The Balanced Scorecard, although superior to traditional budgeting system, still contains the same problems of bad targets, tunnel vision, and the manipulation of performance measures. In fact many managers suggest that corrupting non-financial targets is a lot easier than corrupting financial targets.
- Many companies find the cause-and-effect linkages between the four dimensions of BSC – financial, operational, customer and learning – difficult to prove.
- The inter-relationships of the selected measures need to be well understood and the efforts to improve them well coordinated; otherwise the organization will be pulled in different or even competing directions.

#### ***4.6.4. Practical use of the method***

The experiences of organizations that have implemented the Balanced Scorecard reveal that it is most successful when it is used to drive the process of organizational change. Although examples exist where very successful organizations used the Balanced Scorecard to achieve even better results by refocusing their strategies, Kaplan and Norton showed that the best results of the Balanced Scorecard implementation have been accomplished in organizations that were unprofitable and unsuccessful, and desperately needed major organizational change (ibid., 1993, p. 142).

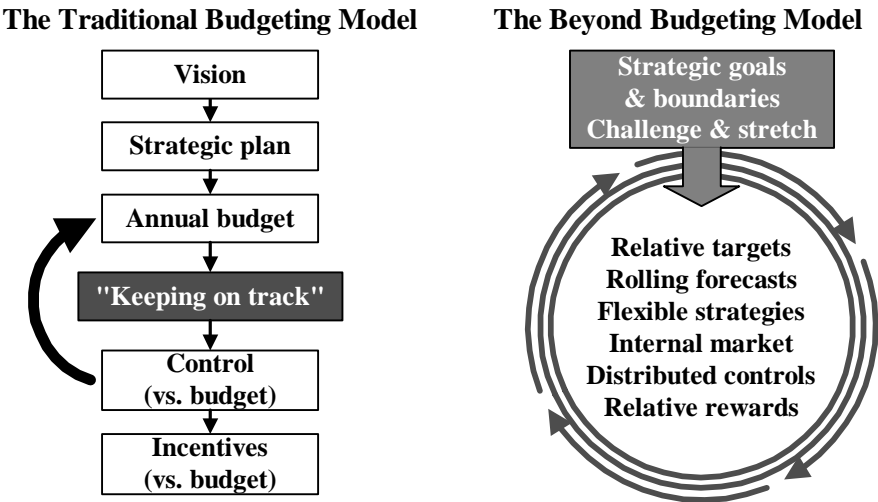
The same authors also suggest that implementation of the Balanced Scorecard should start at separate divisions or individual operational units rather than at the corporate-headquarters level (a rule that is especially valid for conglomerates), where it is important that this division or unit has identifiable and unique strategy (ibid., 2001, p. 337). Successful implementations of the Balanced Scorecard have been recorded for large and small, new and mature, profit and non-for-profit businesses and in various countries and cultures, so from this point of view no implementation problems should be expected.

**4.7. The Beyond Budgeting Model**

**4.7.1. Origin of the method and its main authors**

The Beyond Budgeting model was developed by consultants Jeremy Hope and Robin Fraser. They devised the model within the Beyond Budgeting Round Table (BBRT), a research project by CAM-I, which was set up in late 1997 by 33 companies in order to find out if traditional budgeting can be replaced. The drive behind this project was the growing dissatisfaction and frustration of these companies with the traditional budgeting process that was described on one occasion by Lionel Woodcock, CAM-I vice-president for Europe, as the following (Newing, 1994b, p. 49): “Several months before year-end the annual budgeting begins. Management translates vision of the chief executive into strategic plan by setting revenue forecast and budget goals. Departmental budgets are then prepared on the basis of an extrapolation of last year's costs and year to date actuals, ‘plus a bit’. These are then reduced by across-the-board management cuts. An uneven negotiation between budget holders and their supervisors follows and after the budget is ‘agreed’, all that is demanded is strict adherence to the plan” (see figure 28). It is exactly this kind of underlying culture of “contract, compliance and control” embedded in traditional budgeting that CAM-I members wanted to change into culture of “responsibility, enterprise and learning”.

Figure 28: Traditional Budgeting Model versus the Beyond Budgeting Model



Source: Hope, Fraser, 2000, p. 34.

Realizing that attempts to improve traditional budgeting system with introducing zero-base, activity-based or faster budgeting are not solving the problems caused by the fast-changing business world, BBRT members have decided to create a flexible and responsive management model that will be based on more effective strategic management and the replacement of the command and control organizational design with the dispersion of effective authority to front line managers. Its principal features include (Hope, Fraser, 2000, p. 35):

- *Targets* that are relative to the competition and thus are always self-adjusting and stretching the performance of the business unit.
- *Effective anticipatory management systems* that enable managers to continuously adjust strategy and manage investments and shareholders expectations.
- *A rolling strategy process* that is devolved to business unit teams and that operates within clear boundaries and values.
- *An investment management process* that forces managers to build flexibility and exit routes into their forecasts.
- *Distributed controls* aimed at supporting front-line managers and keeping senior managers informed.
- *Rewards based on relative performance* at a business unit or company level that encourage team performance and cross-company sharing at various levels.

#### ***4.7.2. Main ideas of the method***

The Beyond Budgeting model represents a set of best practices – from organization design and devolution of authority to planning and performance management – which companies, that have abandoned the traditional budgeting model in one form or another, are now using to respond to continuous market change, unpredictable competition and increasing customer demands. Their aims have been not only to reduce the costs of budgeting and implement more adaptive planning processes, but also to devolve the responsibility and the accountability to teams closer to customers. The way these organizations dealt with rewards was a key determinant of a successful transformation. The more successful cases have based evaluation and rewards on relative improvement contracts with hindsight rather than on fixed performance contracts agreed upon in advance (Hope, Fraser, 2003b, p. 109).

Research by BBRT over the past five years has shown that fixed performance contracts (fixed budget targets reinforced by incentives) are one of the primary causes of dysfunctional behaviour in organizations today. These contracts, based on central control and an absence of trust, are exactly the thing that leaders must eliminate in order to break free from the annual performance trap and to move to a more lean, adaptive and ethical organizations. Instead of negotiating, in advance, the targets managers must reach, the resources they will have, and their rewards for simply doing what is already expected of them, companies that have turned to the usage of relative improvement contracts now trust their managers to claim the resources needed to seize opportunities, beat the competition and earn their rewards, while at the same time adapting to changing conditions (Hope, Fraser, 2003c, p. 111). Table 10 presents in the best way differences between these two performance management approaches.

Table 10: Contrasting the fixed performance and relative improvement contracts

	<b>Fixed Performance Contract</b>	<b>Relative Improvement Contract</b>
<b>Targets</b>	Your sales/profit target is fixed at \$x million.	We trust you to maximize your profit potential to continuously improve against the agreed-upon benchmarked KPIs and to remain in the top (quartile) of your peer group.
<b>Rewards</b>	Your rewards for reaching this target are x% of profits, starting at 80% and capped at 120% of target.	You trust us to assess your rewards by a peer review panel based on your performance “with hindsight” at the end of each year.
<b>Plans</b>	Your agreed-upon action plans are attached to this contract.	We trust you to take whatever action is required to meet your medium-term goals within agreed-upon governance principles and strategic boundaries.
<b>Resources</b>	The agreed resources to support the capital and operating budgets are set out in the attached budget statements.	You trust us to provide the resources you need when you need them. We trust you to keep within agreed KPI boundaries.
<b>Coordination</b>	Your activities will be coordinated with other budget holders according to the agreed plan or as redirected by your superior.	We trust you to coordinate your activities with other teams according to periodic agreements and customer requirements.
<b>Controls</b>	Your performance will be monitored monthly. Any variations will be reviewed, and executives reserve the right to take further action. Forecasts in the form of revised budgets will be required on a quarterly basis.	We trust you to provide forecasts based on the most likely outcome. You trust us to monitor performance and interfere only when indicators/trends move out of bounds.

Source: Hope, Fraser, 2003a, p. 27.

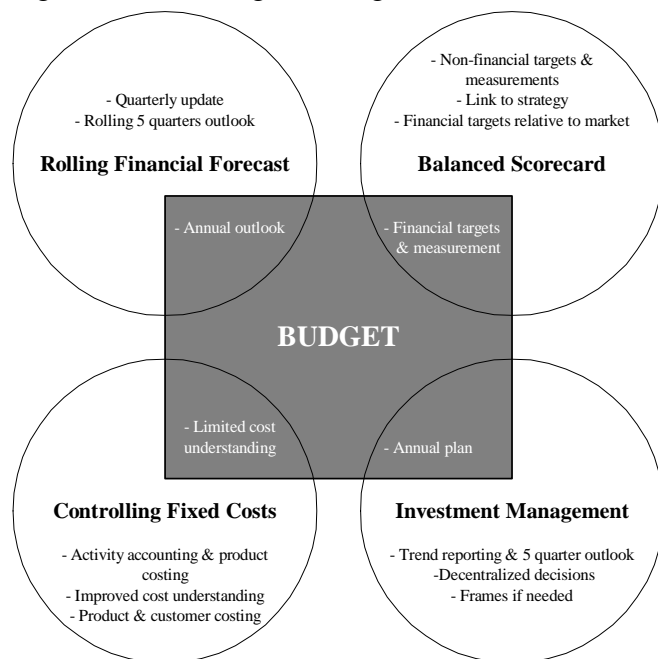
The same research by BBRT also helped authors of this model to realize that there is more to it than just dismantling the traditional budgeting system. They noticed several important changes in the management principles and practices used by companies that were managing without budgets. By summarizing them together, they formed a framework upon which this model continued to evolve and develop. These Beyond Budgeting Principles and Practices are (Hope, Fraser, 1999a, p. 18):

1. Target setting – Set targets to maximise long-term value and beat the competition, not the budget.
2. Strategy – Devolve strategy to the front line and make it a continuous and open process, not a top-down annual event.
3. Growth and improvement – Challenge people to think radically, not incrementally.
4. Resource management – Manage resources on the basis of value creation over the lifetime of an investment, not on the basis of short-term (budget) allocation.
5. Co-ordination – Achieve co-ordination by managing cause-and-effect relationships across business units and responsibility centres (such as processes), not by using departmental budgets.
6. Cost management – Challenge all costs on the basis of whether they add value, not whether they should be increased or decreased compared with last year.
7. Forecasting – Use rolling forecasts for managing strategy and making decisions, not merely for ‘keeping on track’.
8. Measurement and control – Use a few key leading and lagging indicators to monitor performance, not a mass of detailed (historical) reports.
9. Rewards – Base rewards on company and unit-level competitive performance, not on personal financial targets.

10. Delegation – Give managers the responsibility and freedom to act, don't micro-manage them.

Since its inception, BBRT has identified several examples of companies that successfully managed to radically change their traditional budgeting systems. The case of Borealis<sup>20</sup> is an example of the best implemented the Beyond Budgeting model so far, which came close to the ideal management system of planning and control devised by BBRT to be used in the future (see figure 29). Borealis abandoned its traditional budgeting system in 1995. The primary reasons for their decision were to improve financial management and performance measurement, to decentralize authority and decision making, to support process management, and to reduce resource usage. The key in designing the new management system at Borealis was a decision to separate performance management and financial planning systems, and install a set of tools that allowed the company to motivate managers to reach stretch targets and have an accurate picture of its financial future at the same time (Hope, Fraser, 1999b, p. 51).

Figure 29: Breaking the budget at Borealis – the four pillars of the budget-less organization



Source: Boesen, 2000, p. 3.

The process of replacing something so deeply ingrained in a company's culture as budgeting took a lot of time and resources, but after 6 years management succeeded in their intention and achieved the project. The crucial thing for successful execution of the project was a stepwise approach where traditional budgeting was first gradually abandoned and then alternative measurement and control systems were implemented where for each function of traditional budgeting a new management tool was found that could do a better job: the

<sup>20</sup> Borealis is the largest polyolefin plastics producer in Europe and the fourth largest in the world, which was formed in 1994 by the merger between the petrochemical divisions of two Scandinavian oil companies, Statoil of Norway and Neste Oy of Finland. It is a company with more than 6.600 employees and annual sales of around € 3,8 billions headquartered in Copenhagen, Denmark (Jorgensen, Kaplan, 2001, p. 1).



Balanced Scorecard was used for target setting; trend reporting, activity-based management and cost targets helped to control fixed costs; rolling forecasts were utilized for financial and tax planning, while capital budgeting was handled through authority levels (Boesen, 2000, p. 4). The details of the replacing process can be seen in table 11.

Table 11: Replacing the budgeting process at Borealis

<b>The budget was used for:</b>	<b>We achieved the same through:</b>
High-level financial and tax planning	⇒ Rolling financial forecasts
Setting targets	⇒ Medium-term relative targets ⇒ Key performance indicators aligned with goals (the Balanced Scorecard)
Improvement initiatives	⇒ Actions derived from strategy reviews
Prioritizing and allocating investment/projects resources	⇒ Authority levels are used to approve investment decisions: <ul style="list-style-type: none"> <li>• Small projects – local approval (trend reporting)</li> <li>• Medium projects – local/central approval (varying hurdle rates)</li> <li>• Major projects – central approval (case by case)</li> </ul>
Coordinating plans and actions	⇒ Process linkages (through IT system) ⇒ Service level agreements between central and services and operating units
Controlling fixed costs	⇒ Trend reporting and moving averages ⇒ Benchmarking ⇒ Cost targets ⇒ Activity Based Costing
Controlling performance	⇒ Fast actuals compared with prior period ⇒ Rolling forecasts ⇒ KPIs relative to last year, competition, etc. (including league tables) ⇒ Trends
Delegating authority	⇒ Devolving authority to meet KPIs to operating teams using existing mandates/authority schedules

Source: Jorgensen, Kaplan, 2001, p. 13.

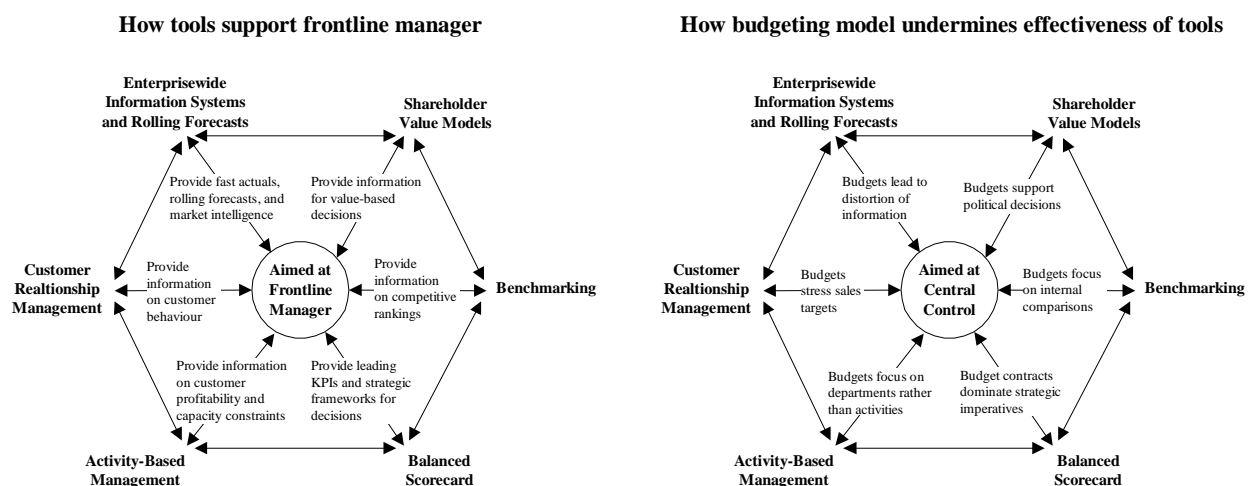
BBRT is keen to stress that Beyond Budgeting is not about new tools or techniques – it is a management philosophy based on a set of principles developed from real cases leading to adaptive performance management. The management tools that have been developed in order to address problems caused by changes in the external environment already exist. These are (Hope, Fraser, 2003a, p. 178):

- *Shareholder value models* – such as economic value added (EVA) and value based management (VBM), align the decisions of internal managers with the expectations and interests of external shareholders.
- *Benchmarking models* – enable firms to compare their performance with the best-in-class companies as well as with internal peers and display the results in terms of ranking lists.
- *The Balanced Scorecard* – provides a strategic framework for local decisions and provides leading KPIs that tell managers if strategic goals are being met.

- *Activity-based management* – informs managers about the causes of costs and thus better equips them to understand the net profit contributions of products, channels, and customers.
- *Customer relationship management models* – focus managerial actions on knowing and satisfying customer needs profitably. They change “make and sell” corporate culture to “anticipate and respond” culture.
- *Enterprise information systems and rolling forecasts* – combine different functions of the organization and enable managers to relate work and cost inputs to customer outputs across the business. They also enable managers to better anticipate events by providing fast actuals, integrated forecasts and market intelligence.

However, all these management tools can help companies to claim results only if they are implemented in the right way. That means that the tools and information systems will work if the culture of the organization is supportive, its leaders are committed, decision makers have the freedom and capability to act on the information provided, and, most importantly of all, if companies have moved away from the “predict and control” model with budgets to the “adaptive and devolved” model without budgets. Figure 30 shows how these tools can potentially support the needs of the frontline manager in an adaptive and decentralized organization and how they can be blocked or hindered from achieving their potential by the budgeting system. Figure 30 basically demonstrates that if companies keep the traditional budgeting in its unchanged form at the heart of their planning system, this will block complete development of potential that those management tools have and in that way prevent them from functioning as a combined system. It is due to this that the advocates of Beyond Budgeting insist on discarding traditional budgeting so that the above mentioned management tools can function as a system at the centre of which are frontline managers and the customers that they serve, and not the wishes of top management presented in a form of negotiated/imposed budgets.

Figure 30: Management tools and their relationship with budgeting



Source: Hope, Fraser, 2003a, p. 178.

### ***4.7.3. Advantages and disadvantages of the method***

Advantages of the Beyond Budgeting models are:

- Above average financial results of the first companies that implemented the Beyond Budgeting models.
- They offer a great deal of support to the decentralized type of companies that want to devolve the power of decision making to frontline managers and employees.
- They are the results of various attempts of companies to deal with a growing amount of dissatisfaction with traditional budgeting in today's business environment, which guarantees them practical usability.

Disadvantages of the Beyond Budgeting models can be listed as follows:

- The Beyond Budgeting model is not a standardized recipe type of solution for budgeting problems. It is simply a set of best practices used by advanced companies that managed to successfully deal with certain shortcomings of traditional budgeting. This means that each company has to find its own combination of management tools and customize them to their internal budgeting system in order for BB model to work.
- The BB concept is very difficult to implement. It involves the implementation of various complicated systems (like ABC and BSC) and requires their harmonization in such way that not only the budgeting system, but also organizational and cultural environments must radically be changed.
- Despite being highly publicized by BBRT, there is very small number of companies that have decided to implement the Beyond Budgeting models and even fewer of those that managed to complete the process all the way.

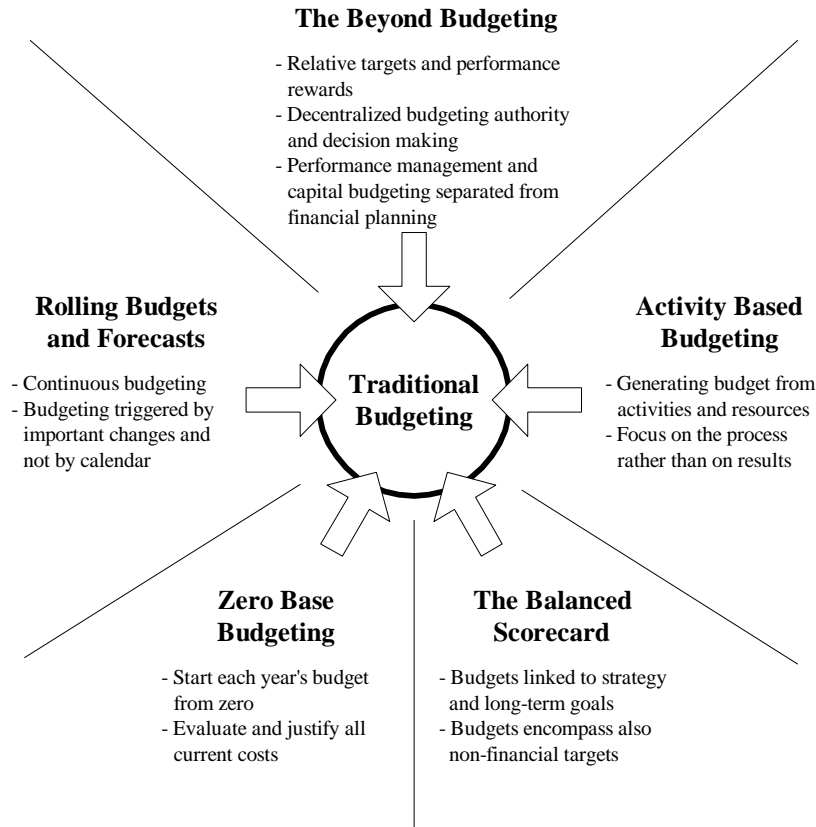
### ***4.7.4. Practical use of the method***

Companies that operate in a highly competitive environment and which have already successfully implemented various management tools like the Balanced Scorecard, activity-based management or rolling forecasts, should be ideal candidates for the Beyond Budgeting Model. Hope and Fraser (2003a, p. 36) often emphasise that in order to reach to fully integrated and functioning BB model, managers must pass this path in two phases – first introduce adaptive processes into the company, and then radically decentralize performance responsibility to front line personnel. It is obvious that achieving the final goal would be much easier for companies that are at least half way there, than for those that, except for a current traditional budgeting system, do not have anything else. In each case there is no simple way to implement Beyond Budgeting. The steps chosen will depend on each company's culture, structure, history, IT infrastructure and so on. However, there are lessons to be learned from those that have already implemented it. In many cases, it is simply about managing cultural change – building and selling a case and creating a shared vision for the future – than it is about changing the way numbers are compiled and analyzed (Better Budgeting: A report, 2004, p. 10).

## 4.8. Summary

As the world in which organizations compete changes, so must budgeting systems to support strategic objectives and competitive priorities. However, what this change should look like and what exactly should be changed is something to which there is no simple answer. Alternatives to traditional budgeting offered today in the form of advanced budgeting techniques still have not persuaded practitioners and academicians that they are a viable solution to commonly known problems of traditional budgeting, although each has contributed at least something to the evolution of traditional budgeting as can be seen in figure 31. What is present today is a situation where the first two advanced budgeting techniques – zero base budgeting and activity based budgeting – undoubtedly help to improve the focus and accuracy of budget outputs, but the problem that they share is that they tend to involve even more work than traditional budgets. Since thorough cost-benefit analysis must be done prior to its implementation in order to produce benefits that surpass increased costs, it is advisable to use these techniques on a one-off basis rather than on a regular basis. The next two techniques – rolling budgets and forecasts and the Balanced Scorecard – deal separately only with one problematic dimension of traditional budgeting. Rolling budgets and forecasts are solutions designed to improve forecast accuracy and overcome the traditional budgeting time-lag problem, while the Balanced Scorecard successfully manages to link budgets with strategy. However, none of these approaches provides a complete solution. At best, they are point solutions designed to overcome some of the specific weaknesses that have been outlined. This is why the Beyond Budgeting model, with its radical demand for abandoning traditional budgeting altogether, has been positively received by practitioners as the first possible comprehensive solution for all the problems of traditional budgeting. Only the future will tell if this, for the time being mainly theoretical model with only a few implemented examples in the real world, will become yet another futile search for the holy grail of an ideal budgeting system or whether it will fulfil the mission for which it was devised.

Figure 31: Impact of advanced budgeting techniques on traditional budgeting



## 5. CONCLUSION

Despite the many criticisms that have come from practitioners, budgeting theory has been very useful in pinpointing specific problems and providing adequate solutions related to budgeting systems. Sometimes, the findings of budgeting studies have been contradictory and vague, but in general most recommendations have been tested and verified in real situations. What I personally have found rather strange is that some basic pieces of advice like the use of flexible budgets and responsibility accounting are not actually being implemented in practice. Very few companies even today use flexible budgets and make a clear distinction between controllable and non-controllable costs when evaluating their managers. It comes then as no surprise to see that many advanced models that were subsequently developed to improve traditional budgeting, actually carried with themselves lots of the findings and recommendations developed by budgeting theory over the last 50 years. Presumably, only the environmental changes that came after the 1970's with the appearance of the so-called information wave, created conditions where the disadvantages of traditional budgeting for the first time since budgets' initial use outweighed its advantages and forced managerial accountants to start thinking about how to deal with them. Nevertheless, as can be seen in figure 12, although traditional budgeting has changed over the last 30 years, this change has been neither dramatic nor radical. Instead, incremental improvements have been witnessed, with traditional budgets being supplemented by new tools and techniques. Budgeting is therefore evolving, rather than becoming obsolete.

What can freely be said is that traditional budgeting is not dead or totally obsolete yet, since it is still being used in the majority of companies around the world. However, many of them are starting to realize that exactly the same budgeting model as was used in the 1920's can not be used now in the 21<sup>st</sup> century. Business environment conditions are no longer the same and budgeting systems need to become more responsive to the needs of customers and requirements set by competition. How exactly this change in budgeting system will evolve, is something that each individual company needs to discover for itself. The point is to customize internal systems, including planning and control, to requirements, needs and abilities that each company faces, i.e. to achieve adequate fit between external environment and internal systems as contingency theory suggests. Whether that will be achieved by the installation of rolling budgets and forecasts or of the Balanced Scorecard or any other method of better budgeting techniques, only depends on the dimension of traditional budgeting that managements want to target and change. Those companies that are bold enough and that have corporate culture that thrives on constant improvement can even go so far as to implement one of the Beyond Budgeting models, which have no budgets at the core of their approach. Well, there are no longer budgets in traditional meaning of this word, but financial plans and forecasts are still there.

What one must realise is that the need for planning, forecasting, coordinating and controlling activities within business entities will never go away. What will, in my opinion, hopefully change is the way these quantitative economic plans are actually used in everyday life. By this is meant the following: instead of being incremental exercises done only once in a year for the whole business year in advance and then rigidly used to evaluate employees, budgets should be flexible and done continuously, updated possibly every quarter, where their financial targets are linked with long-term strategy. If done so, the several times afore mentioned dysfunctional behaviours like budget padding and budgeting games will be reduced to at least an acceptable level. As people are not perfect and they are the ones who make and use budgets, it is unrealistic to expect that these behaviours will ever be completely eliminated. Budgets should also cease being used for control and employee evaluation purposes. This process should be completely separated and implemented so that the key performance indicators, made out of a joint set of financial and non-financial indicators, are used for evaluation and progress control. The key performance indicators must be based on benchmarked results of major competitors and expectations of owners and investment community, and not on the assumptions and wishes that management thought of some 18 months before the real numbers are actually evaluated.

If changes like these are implemented and if each individual function of budgeting system is taken out of the system and replaced with some modern management tool like the Balanced Scorecard or activity based costing, then it is very easy to understand the main premise of the Beyond Budgeting model. Namely, the Beyond Budgeting model claims that this kind of planning and control system is very much different to the traditional budgeting system and as such should not longer be named so and therefore should abandon its budgeting name. However, in my opinion, the most important conclusion of this thesis is that it is really not important whether financial plans are called budgets or by any other name, whether they are

used for control and evaluation or not, or whether they are done in the traditional or in some more modern way. My comment is that “budgets are nothing, but budgeting is everything”. I have come to conclusion that the process itself is more relevant than the actual numbers, since budgeting is the only process within a company that forces everyone to think and talk about the factors influencing the future performance of a business. It is also the only process that quantifies management’s vision and strategy making them operational and therefore realistic and attainable. Only when managers and other participants in the budgeting process realize that the thinking process is more important than the figures themselves, will budgets and all their benefits be fully utilised. Until then, simple changes in the methods and techniques of how budget figures are compiled will simply not be enough.

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