

## CERTAIN CONSIDERATIONS ON THE PRINCIPLES AND TECHNIQUES OF BUDGET MANAGEMENT

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**Abstract.** *The management of financial public administration leaves increasingly less room for change, while developing mechanisms that are difficult to manage, thus leading to stereotyped practices. In this sense, people with practical tasks need to demonstrate the rigor and innovation, to justify the costs and if possible, to estimate the amounts to be collected. Throughout this paper we focus on marginal analysis of budget programming techniques, as well as on non-marginal techniques. We will also demonstrate the importance PPBES system that has as main objective the synchronization of strategies, budgets, distribution of forces and investment. This system connects the policy of management to the policy of decision, thus being a complex system that offers the possibility to identify optimal solutions.*

**Keywords:** principles, procedures, budgeting, management, objectives, cost control, efficiency.

### INTRODUCTION

The dominant fact of public financial management remains the determination of budget control, offering less and less amplitude and sometimes leading to stereotyped exercises. However things have changed: it requires public officials to make the necessary evidence and innovation, the costs are justified and, if possible, the amounts that are to be collected be imagined. The budget managing does not order all the games of public financial management, even if this one continues to be in the middle. This is preceded by an economic analysis of financial flows, followed by consideration of liquidity problems.

Analysis of financial flows from an economic perspective ought to be the focus of public activities. But, conversely to what happens in the private sector, the public sector functions less with financial results than with social outcomes.

Proposals involving public expenditure invariably exceed the resources available to finance them. That is why, the choice between different options and priorities are inevitable responsibilities of public authorities, which require a systematic evaluation of all proposals involving the public sector.

### MATERIAL AND METHOD

**Typology of costs.** To be efficient in the current environment requires, among other things, the use of a computer system and cost management. Companies and state institutions financed from their own benefits, use cost information in various forms such as taking decisions. The manager expects from the accounting management a permanent assistance before, during and after the action is taken, in

order to define objectives, to understand whether they are relevant or not, and to measure performance.

In order to quantify the resource consumption within the economic activity, it is used the notion of financial accounting expense and of cost in management accounting (Matei, 2003). Although considered as a whole, the two concepts are the same; they are different because they bear the seal and the type of the accounting backgrounds they come from, namely:

- expenditure is a translation of the application of accounting principles (independence of exercises, prudence, historical cost) and sometimes need to respect the tax laws, while the costs are directed towards making decisions, their composition not being regulated

- expenditure belong to the accounting exercises and face the past, record consumption, while the costs often are looking forward to the future and may have a different temporal rhythm;

- expense, as an accounting information that will be published, must be neutral, reliable, relevant, comparable, comprehensive, while the first cost must be flexible and relevant information, even approximate (to be known at the time) and less neutral (role of management accounting and control is to cause certain behaviors).

In general, the cost is a sacrifice, consumption of resources, management accounting using this term in many cases, depending on management needs. For various types of cost calculation is required a classification according to their behavior and laws, as follows:

a) *Depending on the extent of damage without ambiguity to a product - direct costs and indirect costs.* The latter can not be attributed directly to a product, rather than through calculation and division (in most cases, arbitrarily). Direct costs include the costs of delivered service, or general administrative work. In the direct costs, three situations may occur: the volume of services to maintain the previous level, expand existing services or introducing a new service (Prahoveanu and Matei, 2005). When the volume of services is maintained to the existing amount, revenue sources should be rechecked, that is to say, if their known amount from the previous period is maintained, which represents the guarantee funding.

If it concludes that it is necessary to increase the supply of services by expanding, the cost analysis is more complex. In this situation, the additional investment costs are taking into account (if necessary to increase production capacity), additional costs for current activity, as well as an increased cost due to hiring additional staff. When introducing a new service, the cost estimate is calculated, based on accurate definition of the target group and taking into account all cost categories determined by extension, the costs can add some additional tasks for the government, which may arise in this process.

Indirect costs affect the local management and central costs are "bouncing" from administrative measures. For example, a policy that encourages rapid growth in the number of cars attracts indirect costs on widening the road network and on traffic regulation so as to avoid congestion etc. In addition to this expenditure of funds, in the assessment of indirect costs must be taken into consideration the moral

currency that can not be assessed, but which adversely affect people's lives (such as increasing time spent on the road because of road congestion).

*b) Depending on the dynamics and behavior - variable costs and fixed costs*

Fixed costs are insensitive to changing values of a parameter, while the variable ones evolve in accordance to these. These terms have no meaning unless they are tied to an organizational segment or a cost object. Cost calculation goal is to identify their causes and not just transfer the cost objects. This approach shows the ability of computing the cost calculation system to provide an analysis that links the entity's financial performance to its activities and processes.

A cost is controllable if it is likely to act on it (for the permit) at the level of management. For example, advertising costs are controllable by the manager of sales department only if it is authorized (by delegating resources and responsibilities) to set their size. In determining the perimeter of cost controllability one must take into account the universe of time: long-term control costs may not be controllable on short time. A separation between controllable and uncontrollable costs can be done using instruments that measure performance (reporting, dashboard).

To measure performance, the projected costs are calculated (standard or ex ante), which are compared to the obtained costs (real or ex post).

B. Martory shows how the costs measure:

- ignorance of the company: the outsourcing costs - those costs are transferred to third party company (e.g. remediation supported by the community) and hidden costs - which are caused by an element known, but whose size can not be isolated, (such as the cost of delays production process, the cost of non-quality);

- incompetence of the company: through social costs;

- inability of the company - discretionary, irreversible and uncontrollable costs. Most of these costs affect the quality of sold products, the organization's image and therefore its performance.

**Asymmetry between costs and benefits.** Treatment costs are crucial for public management. Cost-benefit analysis is included in the concept used for evaluating public projects, taking into account all benefits and all costs, regardless of who they are sustained by. In this approach, a benefit is any gain in utility, whereas any loss of utility represents a cost, although there is a possibility to transform loss into a new utility.

Supply of goods and services is effective until the marginal costs of any goods and public services are equal to marginal benefits of goods and services. A maximum bound, or any other economic optimum can be described as a point where marginal cost equals marginal benefit.

Let's see how this rule maximizing decisions does. If the original decision maker chooses a certain level of what he is interested in maximizing; then he attempts to determine if this initial level represents his maximum; is this level as good as he can do, given the constraints? He can answer that question by making very small changes, which one economist called it marginal, compared to baseline. Suppose the decision maker proposes to grow slightly above the initial level, whatever this is. There will be a cost associated with the small increases, called

marginal cost. But it will also be a benefit from having or doing more of what he wants to maximize. The benefit of this small increase is called marginal benefit. The decision maker will perceive as being in better shape at this new level, compared to its initial level, as long as the marginal benefit of the small increase is greater than the marginal cost of change. He will continue to make these small or marginal adjustments as long as marginal benefit exceeds marginal cost and will stop making any changes when the last marginal cost is equal (or greater than) to the marginal benefit. That level is the maximum of decision-maker.

In perfect competition (adjustment amount), the price is fixed so as to be equal to marginal cost to obtain a maximum profit. In normal monopoly there is an area where increasing marginal cost intersects the curve of decreasing sales. This point of intersection is the combination of the quantity offered and the price obtained that maximize total return to the monopolist. This price is, ceteris paribus, higher than the price fixed by those adapting the amount, whereas the offered amount is less than in the case of perfect competition.

In the case of "natural monopoly" the average costs decrease according to quantity. In this case there isn't a point of intersection between marginal costs and average costs, because marginal costs are always below average costs.

Therefore, such a monopoly can not cover its costs with marginal costs, but must set a price at least equal to average costs. Only when the marginal costs exceed average costs, the price can equal the marginal costs to be covered all costs. If marginal costs are higher than average costs, without fixed costs, the minimum threshold of profitability is obtained. If a company produces below the minimum threshold of profitability, it is not profitable to produce more worthwhile because it can not even cover variable costs. It is better when marginal costs exceed average costs, including fixed costs. From this point, the optimal threshold of profitability, the producer gains profit. If it continues to deliver goods or services beyond that point of equality, the costs are greater than the benefits, which mean that the provision is no longer effective.

Comparing the efficiency analysis that private companies are carried out in the public sector, it appears that the latter are more complex, as both seek to highlight the cost-benefit effects of direct and indirect ones. In general, public sector benefits are more difficult to quantify, because most public goods and services do not have a market price.

Most costs are unambiguously manifested as money, and preparing public decisions involves what it is known for:

- comparing alternatives in terms of cost;
- comparing public and private alternatives;  
providing development in desired time and nature;
- allocating available budgets in an efficient manner.

The starting point of the analysis of public financial management lies in determining unit costs of services.

Determining the unit cost has three advantages:

- provides an indicator of relative effectiveness, thus being able to choose between several ways to achieve an objective;

- provides an indicator of effectiveness over time, thus being able to see the evolution of the cost of a received service;
- allows management control of set rules.

On the other hand, this cost also raises some questions:

- is most often organized around the production of intermediate targets and not utility, evading quality problems;
- is sensitive to the imposition of common costs between services.

Relative costs of a given service are borne by the organization or institutions that emphasize design and by the agencies that will have to bear the costs on this occasion. The coordinating principle of cost-benefit analysis is of economic nature. The purpose of this analysis is to show that public resources through their use leads to maximizing the total public benefits, and therefore, if their allocation is efficient. Thus, cost-benefit analysis is a guide for using public resources, in the sense of efficient allocation purposes.

**Cost analysis of a system. Life cycle cost method – LCC.** A cost analysis is developed in parallel with the analysis in terms of effectiveness. This analysis estimates the total life cycle cost (LIFE CYCLE COST - LCC) for each alternative, and the results are combined with results from the efficacy analysis, thus identifying the best option. Life cycle cost analysis takes into account the total cost for each alternative during the present cycle of life and also includes costs for Research and Development (R &D) investment, operating and maintenance (O & M), necessary quashing expenses. This analysis does not include amounts that have been already spent; they do not influence the decision. LCC elements are presented below:

*1. Necessary costs R&D*

Necessary costs for R& D phases (includes design and development technologies, and also, system development) are included. There are several types of R&D costs for prototypes, equipment, component testing, and government support for the program. Costs for environmental safety, affordability and system maintenance efforts are also included, as well as the necessary equipment and personnel training.

*2. Investment costs*

Investment cost includes the cost of purchasing the necessary equipment for production process, as follows:

- staff training;
- initial savings;
- implementing a pre-plan to improve production.

*3. The cost of operating and maintenance O & M*

Operating and maintenance costs are those expenses for operating programs, maintenance and system maintenance capabilities, including all elements of direct or indirect influence, personnel expenditure, etc..

*4. Cost necessary for quashing*

These costs involve the costs necessary for removal of material from excess or surplus inventory (redistribution, transfer, donation, sales, greening and recycling of certain products). LCC analysis involves finding alternatives that are compared on the basis of a cost estimation system. LCC methodology is first presented to study the plan and developed during the production process. The description level of

viable alternatives cost analysis will depend on how to define the system and its technological maturity.

Below there is a list of rules and requirements that must be taken into account life cycle cost analysis of a system:

- true estimate of costs;
- specification of the inflation indices;
- programming needs, including limits and major events;
- logistics and maintenance concepts are well defined and appropriated;
- necessary environmental costs;
- necessary expenses for personal.

Since the estimate is a projection into the future, there must be a constant concern on the knowledge of all the problems that could cause discrepancies between what is expected and what will be found at a given point in time.

Most of the estimated cost assumes the existence of two terms: risk and uncertainty. The risk can be valuable sources:

- change of system configurations;
- technical problems and of employment breach over time;
- erroneous estimate of the cost.

If the last two items can be specified when considering risk factors, the first element of the plan involves major changes and a redefinition of the components. Results obtained from analysis of risk factors will be included in the final analysis of the life cycle costs. Very important is that the risk estimation methodology, analyzed and implemented, to be adequately described in the plan, whereas the risk analysis to be included in final cost estimates.

In conclusion, life-cycle cost analysis of a system is a particularly important and far-reaching effect on the final results if the process goes wrong. The economic literature states that 75% of a cost reduction program implemented in research and development phase and only slightly in the production phase. So to achieve a price / quality ratio as a better product, you should invest in this segment. Further research for a product typically leads to lower operating costs and maintenance costs, which in most cases is a very large share of the life cycle cost.

From the documentation focused on the variation cost categories depending on the nature of the acquisition program, we can distinguish a number of conclusions about their value. Thus for a particular type of product, they can be classified as follows:

- cost of research - development, 5 to 10% of the total life cycle cost;
- cost of production, 5 to 15% of the total life cycle cost;
- operating and maintenance cost, approx 60% of the total life cycle cost;
- cost of destruction, 0.1 ÷ 0.2% of the total life cycle cost.

## RESULTS AND DISCUSSION

**Some aspects of budget management.** Budget management is to outline the program of expenditure and resources of a service in a given period. This management occurs or should occur after a series of decisions and leave the issue of financial management subsequent funds. However, often budgetary accounting takes

the first place in the scene and appears as the most symbolic moment of public management.

In this respect, one can identify:

- *shape*, which is often a compromise between the requirement of annual review and programming which is more logical than the multi-annual one;
- *accounting system used*, a system placed at the interface control requirements of the credit's nature, after a comprehensive and exhaustive analysis of the cost - the costs incurred;
- *movement itself*, which can be organized in a more legal or economic manner.

Once voted, the budget becomes a tool of control, which makes it difficult to adapt the expenditure considering the difficult circumstances encountered by the change during exercise, without altering the logical content of controls. Programming that aims to control the budget will not prevent the next budget planning based on the current budget control: control of the last budget will therefore play an important role in determining the budget. Instead of a simple process *planning* → *control*, we have *planning* → *control* → *planning*.

Budget preparation process evolves between two paradigms:

- that the budget is determined by a marginal adjustment of acquired assets in the past;
- that the budget is reconstituted as comprehensive as possible to each new year.

#### ***Marginal techniques of budget preparation***

*A. The principle of the budget margin.* Under this principle, the budget of a year is always determined by the gap in the past. But another difficulty is added to this: when the budget for the year X is determined, no one knows the budget of the year X-1. Therefore, we do not have a real starting point, which will lead to a double result:

- transmission of imbalances in the future action;
- will be unable to take corrective action.

We will proceed so that budgetary decisions are taken at late as possible in order to have maximum knowledge. But the problem is insoluble and actual financial data are often known after the term of reference.

*B. The auction system.* Such systems operate as a tender process even though the forms may vary. Various ministries and agencies prepare their requirements independent of each other starting from a common point of all: the highest budget in the past becomes a kind of basic budget. These requirements are compared with resource possibilities, possibilities that exceed, in general, very much. It is convenient to reduce costs, but the lack of time in carefully examining the project and their reconstruction, the only way to reduce them is to apply a proportional reduction coefficient.

These systems have many shortcomings in the sense it passes to the exclusion of most of the analysis of the budget from 90% in many cases, what is paradoxical for a method that tends to control expenditure growth.

This preparing method circulates a system in favor of the government. Funds are distributed according to the competences acquired by the administration, where it should be based on issues to be resolved. Budgetary procedure leads not only to the rigidity of existing institutions, but also reduces their ability to adapt.

***Non- marginal budgetary programming techniques***

*A. The principle of budgetary programming.* It is a method of budget preparation and budget tracking, the effects of which are investigated on long-term, so as to derive coherent action programs for medium-term, and then through superposition, the content of annual expenditure. It builds on the concepts and techniques that are not known by the practitioners of traditional budget: political analysis which aims at determining the objectives of the public sector, cost-benefit analysis to assess the effectiveness of actions taken, finally, accounting programs developed to ensure effective control of budget, assess the effectiveness of actions taken, finally, accounting programs developed to ensure effective control of budget.

In Romania, this system is called the System of Planning, Programming, Budgeting and Evaluation (PPBES), and has in addition to the American system-evaluation system of integrated phase. PPBES system introduced a series of instructions, policies, principles and basic procedures (Doval, 2001):

- assigning key responsibilities for major decisions regarding the establishment of requirements, allocation and management programs;
- respect of the principle that there is not any acquisition program without the existence of an approved requirement, without full coverage of resources and without any acquisition strategy for which a program director be responsible;
- leading programs using work teams whose members have clear responsibilities;
- consensus among the technical authority, contracting authority and financial authority in the acquisition process;
- achieve consistency between allocated resources and the actual needs for the programs in defense procurement;
- analysis of more feasible options prior to an acquisition program;
- distinct structure phases of the process, moving from one phase to another represent points of decision;
- reduce cost and risk that are analyzed at each decision point;
- purchase agreement to consider negotiating a fair and equitable sharing of risk;
- awarding of programs based on competition;
- cost, performance schedule, performance parameters will be established at the beginning of the acquisition program, then will be evaluated and adjusted throughout the program.

*B. Budgeting programs.* PPBES partial simplified version, budget implementation programs, has the advantage of focus on objectives to be achieved and determine all the necessary means. The program budget appears to be such a useful tool for programming and original budget because:

- allows each ministry to establish relative priorities and then to propose priority actions;



- establishing the costs and putting them against the results, making possible a discussion in terms of objectives and effectiveness.

This allows the budget rectification, favoring areas where the opportunity to achieve better operation is ensured and plays a training role.

*C. Zero based budget.* Zero based budget is one of the techniques designed to boost budgetary practice, as an alternative to physical inactivity that characterize in general this process. The difficulties faced by the entity controlling the costs of unproductive activities appear to be the main cause of occurrence of these budgeting techniques. Designed originally to assist in greater cost control and staff support functions (so unproductive), entity management tool has attracted more systematic character of the proposed approach.

Developed in the early 1970s by American Peter Pyhrr, BBZ is a budgetary procedure that restructures the company without regard to the past, retaining only those items from that period that are really useful (Cowen and Shovlin, 1986).. Thus, the creator of the method defines it as being “a planning process that requires each responsible of a decision center to justify in detail the necessity of carrying costs in the budget of its center”. The possibility to redefine, at fixed intervals, all costs of a budget, new services and authorization vote, appears as the middle of drawing a boundary between what is and what is not a priority.

In building the budget, all information relating to the past are ignored (so-called zero-based), resource needs are determined based on analytical way from volume production and technical standards.

## CONCLUSIONS

The management of any activity requires knowledge of the objectives to be achieved and the resources required to meet these objectives. In accounting management budgets are tools of controlling by comparing forecasts with achievements, while allowing the unit cost calculation and thereby work a close relationship between budgetary control and system costs.

So we can say that the budget is a tool for analysis of activity by comparing it with the provisions of actual achievements and responsibilities for determining exact violations and deviations, to base management decisions on future work.

In terms of competitive market economy, when companies must conduct business profitably the budget contributes to profit growth and reduce spending, thus the budget represents a management tool as well.

Using the entity's budget assumes that the following conditions are fulfilled:

- dividing the entity, the organizational structure according to the established objectives on profit business centers, cost centers and spending places, internal management centers, profit centers;
- setting specific objectives for each activity center on the costs and revenues that are to be obtained;
- establishing responsibility, competences and relations of cooperation for each activity center so as to function as a center of responsibility;
- existence of a system for programming, analysis and control of expenditure and revenue of the entity and its organizational subdivisions

called information system. The information is intended to provide an opportunity to establish deviations from expenditure and revenue-generating places, causes and responsibilities, so as to produce an effective leadership;

- existence of a system of rules and regulations, financial and economic standards, through which the expenses and revenues be dimensioned as close to reality as possible and to monitor the budget on the basis of accounting.

These rules relate to consumer standards for materials, equipment, rules or time standards, wage rates, transport rates. All these regulations shall be known for calculating the costs and revenues when drawing up budgets.

The systematic analysis of the budgetary process in public institutions requires a good knowledge of the tasks, objectives and actions to achieve and also an ongoing evaluation of the effectiveness and use of funds provided through budget efficiency. Following the evaluation results on specific time intervals, decision makers can make corrections during a budget exercise so as to eliminate any funding or payment of budgetary funds that are uneconomical. Finally, specialized personnel and financial and economic planning must have appropriate qualifications and skills to achieve new tasks in full accordance with the laws and regulations in force, so that public funds are spent with maximum efficiency.

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