QUALITY COST MANAGEMENT THROUGH BUDGETS: PARADIGMS AND OPPORTUNITIES UNDER POST CRISIS EVENT

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Abstract.

Current economic paradigm for obtaining the desired level of quality products and services represents a long and difficult approach which every company wants to achieve in order to highlight the economic and financial benefits. Quality cost management through budgets involves, in medias res, a clear classification of expenses by cost centers in order to avoid shortcoming processes, such as scrap, rework, scrap, etc. The establishment, ad rem, of the quality budget promotes implementing an efficient system of cost control quality by comparing achievements with predictions. Thus, we can take measures to timely correct the deviations and by the existence of clear connections between quality budget and other budgets, to ensure, a fortiori, the fulfillment of the company's general objectives and increasing the prospects of future economic benefits.

Keywords: *quality, costs, budget, management*

JEL classification: *G30, L15, M41*

1. Introduction – quality budgeting basics

Ab initio, the current economic paradigm for obtaining the desired level of quality products and services represents a long and difficult approach which

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every company wants to achieve in order to highlight the economic and financial benefits. Most of the times, the top management point of view linked to quality is tenuous, quality being therefore perceived as an isolated department rather than as a strategy. From this point of view, one of the primary issues in establishing a quality budget is that management is not aware about the added value produced by this department, which why the necessity of drawing up a budget specifically created for this purpose becomes a secondary task.

However, the existence of such a budget would be a "gold mine" for any company towards the achievement of the proposed objectives - profitability, liquidity, risk mitigation etc. - for the next financial year. Quality cost management through budgets involves, in medias res, a clear classification of expenses by cost centers in order to avoid shortcoming processes, such as scrap, rework, scrap, etc. From this perspective, it is necessary to develop a quality budget as a premise for planning short-term costs. As a tool of management control, **quality budget should be developed according to specific procedures within the company**, in order to make financial forecasts more plausible.

The establishment, *ad rem*, of the quality budget promotes implementing an efficient system of cost control quality by comparing achievements with predictions. Thus, we can take measures to timely correct the deviations and by the existence of clear connections between quality budget and other budgets, to ensure, a fortiori, the fulfillment of the company's general objectives and increasing the prospects of future economic benefits.

Quality budget is very important for any company because, besides the fact that presents systematically the structure of the quality cost, it may soon become significant sources of income. So, given the fact that **when building a quality budget we must rely on a realistic estimate**, based on the age of the company, forecast revenue and expenditure quality is different, as follows:

- ***Companies in their early stages*** - there is no previous experience to draw on budgeting trends. The most correct prediction in this case, could be achieved with specialized studies to simulate a situation closer to actual reality. The vision of the research should cover both the internal environment and external environment of the company, and the results will be future premises for the quality budget;
- ***For companies already established*** the quality budget planning must take into consideration the experience of previous years, the budgets

allocated to other activities / departments of the company, sales volume, etc. Trend forecasts can be dictated by the company`s history related to the current situation and also by the more realistic revenue estimates and considered expenditure. Also possible existing contracts can be a concrete starting basis for a rational and justified forecast.

Revision of quality budgets is an ex professo obligation assigned to the financial department within the economic entity. Normally, this review is taking place monthly and is made to determine the actual impact on revenue and expenditure, and establish differences between predictions and reality. There are cases when some budgets were wrongly allocated over a certain period of time which is why the revision is intended to reallocate the funds in order to meet the management objectives. In extenso, applying the system of continuous budgets (or sliding), the approved budget is monthly retroactively recalculated, based on indicators such production volume, sales etc., actually implemented at that time. The formula for the approved budget of recalculation is:

$$BR = BA \times \left(\frac{Q_r}{Q_p} \times p_{cv} + p_{cf}\right) \qquad (1)$$

Where:

BR – represents the recalculated budget;

BA – represents the approved budget;

Q_r – represents the physical production/sales monthly achieved;

Q_p – represents the physical production/sales monthly planned;

p_{cv} – represents the percentage share of variable costs in the total budget;

p_{cf} – represents the percentage share of fixed costs in the total budget;

Having regard to the financial problems that many companies have faced during the last period, once with the emergence of global economic crisis, budget structure was drastically affected. In any company, budgetary forecasts are realized and gravitate according to the turnover. The same in this case, quality budget appears to be in close interdependence with the sales budget. Therefore, given the current economic picture, at which time top management tries to revive sales at any cost, it is necessary to take drastic measures in order to review the amount allocated for each budget separately. Considering the flexible nature of quality budget, it is possible to reassign unused monthly approved budget of the previous month, keeping the nature and purpose of the expenditure item as well as work which includes the cost center with the unconsumed budgets. In this case, reallocation amounts by cost center will be requested by the budget`s responsible manager service at the level of service / sector / departments within the company. The formula which reallocates the approved unused budget, for a month is the following:

$$R = BA - BR \tag{2}$$

Where:

R – represents the difference between the approved and the recalculated budget;

Thereby, appears the idea of ***reducing budgets***, which includes quality budget, but this reduction is preferable to be made based on strong reasons that will not affect the actual quality of the products sold, works performed or services rendered.

2. Responsibilities regarding quality budget

Like any other budget within a company, quality budgeting involves primarily a forecasting of the resources allocation to specific destinations. By default, this inevitably involves certain responsibilities, as follows:

Top management is responsible for:

- Transmitting the quality policy and objectives;
- Establishing the budget system of quality costs;
- Approving the budgets;
- It manages controlling budget execution;

Quality department is responsible for:

- It manages the documentation concerning necessity, cost and period of time in which are recorded quality costs of products and services;
- Transmitting data on implementation costs budgeting;
- Estimate and centralize costs for each item of budget, time limits (usually calendar month);
- Analyze the possibility of reallocating income in order to finance future expenses;
- Verifies and notifies constantly if there is nonconformance relating to budget execution;

Financial department is responsible for:

- Drawing up the schedule of the quality budget execution and monitor the compliance of deadlines;

- Outlines the main hypotheses taken into consideration at the establishment of budgets;
- Develops pre-budgets or draft budgets as a result of confrontation between company management, quality department and other departments involved;
- Transmits to quality department collection layouts of quality budget particular data;
- Regular review of the budget and reallocation of unused amounts.

3. Quality cost management through budgets

Using budgets regarding quality on expenditure centers is the easiest way to highlight and reflect the actual costs of quality. As a recommendation concerning methodology of such budgets would be the systematization of existing expenditures in the general accounting plan types of quality costs. The classification of operating expenditures in cost of quality starts from financial accounting organization within any economic entity. Thus, starting with synthetic accounts, from the balance sheet of existing accounts, and then going on each analytical part can be achieved rapidly a brief analysis to include the expenditure in the four categories of total quality cost. In this category we include only operating expenses, and some examples of such expenditures can be reviewed in Table 1.

Table 1: Operating expenditure assimilated to quality costs

Quality costs		**Description of quality costs**	**Examples of operating expenditure found in the quality budget**
Costs of conformance (Costs of control)	Prevention costs (is also known as the costs of avoiding investments)	Occur because of prevention efforts in order to avoid defects. Prevention costs include all costs involved in supporting employee to do the job right every time	-expenditure related to implementation and certification of quality management systems; -quality training and workforce development; -expenditure related to implementation of statistical quality control processes; -costs of planning, design, quality audits; -expenditure incurred for quality information systems; -investment in quality improvement tools etc.
	Appraisal costs	Arise from efforts to detect defects through inspections, tests, audits. Adds all the expenses incurred to determine whether an activity was well done	-costs of tests and inspections (before the production process, during production); -expenditure related to final product quality control; depreciation and maintenance, testing, etc.
Costs of non-conformance (Failure costs, also known as costs of poor quality)	Internal failure costs	Occur due to defects discovered internally, in the attempt to scrap or to repair defective parts	-the net cost of waste; -damage and rework; -re-inspection and retesting products; -expenditure relating to removing / touching up defective products; -costs debugging process errors, software, etc.
	External failure costs	Arise from defects that were not detected internally and reached to the customers	-expenditures representing manipulation and / or improper storage; -repair and / or replacement of products occurring during the warranty and post-warranty; -recall / return of defective products; -various charges arising from the marketing of defective products; etc.

In the large multinational companies, budgeting quality can be achieved by grouping the expenditure of the specific departments in the area of quality, namely: quality audit department, engineering department, quality measurement department and quality control, adjustments department, safeguards department dealing with solving various problems reported by customers, etc. According to Douglas C. Wood (2007), in most cases these departments work to serve quality assurance processes, products, works performed or services rendered. However, there are cases where expenditures cannot assimilate 100% for the quality budget, which is why there must be a safety when making your selection costs to see whether or not they are included in the cost of quality.

Making a quality budget involves two stages: forecasting revenues and expenditures related to quality and breakdown of annual budgetary provisions for short periods of time (usually a month or quarter).

Actual drafting of a model for establishing this kind of budget should consider the following elements:

- ***Quality budget revenues*** are actually those revenues that the company is liable to get from the sale of specific services to third parties, for example:

• income from conducting quality tests;
• revenues from specialized training in quality;
• external audits of quality;
• income from various activities convergent to quality (depending on the characteristics of the entity) measurement, metrology, laboratory, engineering etc.;

- ***Quality budget expenditures*** are considered to be those operating expenditures which include the quality department activities, and other various expenditures carried out by the company in order to improve product quality or repairing a defect:

• expenditure relating to the functioning of quality department, for example:

- Salary expenditures;
- Expenditures made on staff training;
- Travel expenditures;

- Social expenditures;
- Expenditure on utilities;
- Expenditures made for the purchase of: inventory, stocked materials, work equipment, personal protective equipment;
- expenditure made by the company due to poor quality (this will include the costs of non-conformance, displayed in Table 1);
- expenditure made by the company in order to obtain good quality (this will include the cost of conformance, displayed also in Table 1).

Depending on the specific operating activities of the business and internal corporate procedures, quality budgeting methodology must follow certain principles, namely:

- In terms of budget tracking, a resource allocation from the beginning of the calendar year remained unused from the approved budget, it will be considered null after each financial year;
- If the amounts that were forecasted in the budget for a whole year, were not allocated, will be requested and motivated in order to continue that activity next year, on the same budget code;
- Any non-compliance must be reported on the budget until the last business calendar day of the month in question.

Controlling quality costs can be translated into efficiency and effectiveness at all levels of the company. However, in practice there are a number of obvious flaws affecting budget execution. From this point of view, any inconsistencies shall be presented to the financial department for correction, and the positive and negative differences will affect next month's budget review. Any request for correction of any erroneous entries, received after the month in question, will not be considered.

3. Conclusions

Quality cost budgeting is particularly important for any company no matter what industry it operates. In addition to the many benefits they offer, establishing and preparing a quality budget is crucial in highlighting quality costs. Subsequently, these costs are likely to turn into revenues for the following financial years. In the current economic conditions, this process of quality cost management through Budgets is particularly useful since leads to the optimization of the resource allocation and profit.

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