

BUDGETING AND KEY PERFORMANCE INDICATORS ESTABLISHMENT AS A TOOL FOR DECISION-MAKING PROCESS OPTIMIZATION

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Abstract. *Traditional budgeting methods and planning of business activities have been widely used as one of the basic management techniques. Traditional budgeting methods are very often criticized for the low flexibility and strong focus on resource allocation. The current business framework points at the necessity of adopting modern budgeting methods, which could help to both: better management performance and efficiently control of financial activity. Actually trends lie in adopting flexible budgeting system focused on the use of key performance indicators (KPI). The objective of the study was to analyze the importance of the budgeting systems for company decisional process based on KPI. The study is realized using the interdisciplinary, descriptive and dialectical methods of research, which allowed to confirm research hypothesis based on the fact that budgeting is an instrument of planning, which makes a higher efficiency of decision making process and which allow to achieve higher level of performance using financial and non-financial key performance indicators.*

Key words: *budgeting; planning; KPI; decisional process; management; control environment;*

JEL CLASSIFICATION: M-40, M-41

INTRODUCTION.

The key to success of a profitable economic activity is based on a rational and efficient budgeting process. In the absence of an adequate budgeting process, managers get an unclear image of the entity's financial performance. Thus, the efficient organization of the budgetary system helps to identify the entity's strengths and weaknesses by comparing the actual results with the budgeted indicators. The main objective of this research is to identify the key performance indicators reasonable for the budget elaboration which can be relevant for the overall corporate performance as well as for the entity's managers in their decision-making process.

MATERIALS AND METHODS.

The research has been conducted by making use of outcomes of studies carried out by national and foreign scholars as *Ahmed P. K., Bahrusina M.A. Hrutchii B.E., Sizova T.B., Gamaiunov B.B. Belverd E. Needles, JR. Henry R. Anderson, James C. Caldwell, Grabarovschi L., Constantinescu V., Bugaian L., Boulescu M., Ghita M., Gunasekaran A., Kobu B., Doran G.T.* and others.

The study is based on the interdisciplinary, descriptive and dialectical methods of research, including also the fundamental elements, i.e. deduction, synthesis, analysis, as well as on methods appropriate to economic disciplines such as comparison, observation, selection, etc.

To identify the relationship between selected KPI and overall corporate performance, the following research hypothesis were formulated:

1. The author assume that if businesses use a system of key performance indicators (KPI) will achieve higher level of performance;
2. The author assume that businesses applying in addition to financial indicators also non-financial indicator, will achieve better performance;

RESULTS AND DISCUSSIONS.

The content of the researchers approaches in the field of budgeting can be reduced to identifying the budget as:

- an estimate, a financial document created prior to the proposed or established objectives related to the future periods [1, p.305];
- quantitative expression of the planned activities, which reflects the possible and necessary financial and natural economic indicators of the enterprise for a certain period [2, p.294];
- financial plan of the enterprise, which covers all aspects of its functionality, to forecast the future financial transactions [3, p.178];

- planning document, drawn up before the anticipated operations [4, p.1045];
- financial plan that covers all aspects of the entity's activities and compares all expenses incurred and revenues received for the upcoming period as a whole and in parts.[5, p.185].

From the author's point of view, the budget is the tool that allows achieving the company's strategic goals through timely monitoring of planned objectives. The managers establish at the initial phase the plan of activities that includes the general strategic objectives of the entity, as well as the deadlines for their implementation using a planning (Table no.1). Operational objectives are derived from strategic objectives, which allow task segregation between the responsible persons of departmental structures. The overall corporate performance of the budgeted activity largely depends on the established objectives and the relevant indicators required to be monitored in order to avoid the risk factors with negative influence timely.

Table 1. The model for strategic and operational objectives planning on the first phase of budgeting

Strategic planned objectives	Period of implementation	Departments	Operational planned objectives	Indicators	Responsible persons
Profit increase with 5%	9 months	Sales	1.Sales increase with 13% 2. etc.	1.Sales revenue; 2.Sales costs; 3. etc.	Sales manager
		Supply	1.Increasing the materials supply at the lower cost and at the same level of quality 2. etc.	1.Percent of damaged materials; 2. etc.	Supply manager
		Production	1.Production increase with 11% 2. etc.	1.Perecent of material waist;	Director of production department
		Marketing	1.Increase the number of regional advertising 2. etc.	1.Sales by region;	Director of marketing department

Source: Developed by the author based on [6, p.27];

Any economic or financial operation or activity is analyzed not only by itself, but also related with established criteria, or with a basis of comparison [7, p.35]. Thus, in the author's opinion, the *comparison* process is the point of contact between the budgeting and operational phases and the decision-making process (figure 1).

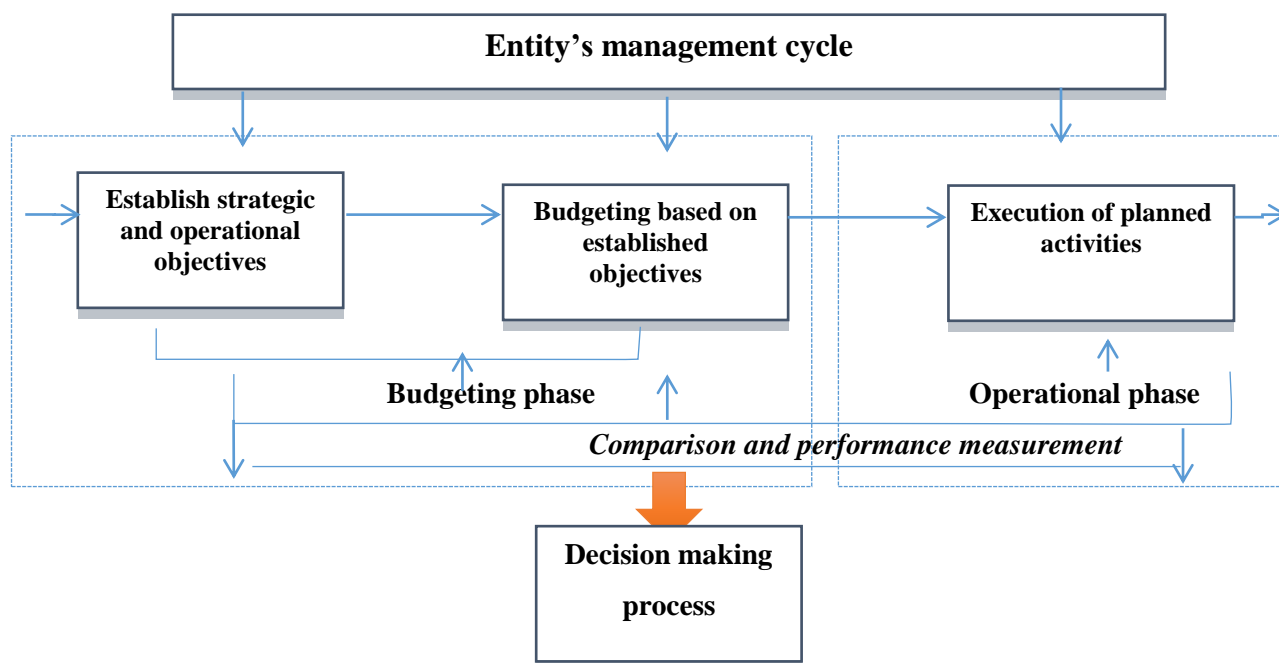


Figure 1: Phases of the entity's management cycle

Source: Developed by the author

Namely, the comparison process helps managers in decision making process following the certain objectives:

- ✓ Identification of positive and negative deviations from the budgeted level;
- ✓ Determination of the factors that contributed to the deviations occurrence with both, positive and negative influence;
- ✓ Analyze of internal and external factors of influence;
- ✓ Quantification of losses;
- ✓ Developing internal regulations for adjusting negative deviations and reducing risk factors in future;
- ✓ Taking conclusions and approving optimization steps for the next financial year.

Traditional corporate performance measures have mostly financial character which measures the rate of return on investment, cash flow and profit margins [8, p.26]. From the author's point of view and after extensive literature resources search, the issue of business performance measurement system should combine the financial and non-financial indicators which can be applied using Key Performance Indicators.

Key Performance Indicators (KPIs) are the main indicators of progress toward an intended goals. KPIs provides a focus for strategic and operational improvement, create an analytical basis for decision making process [9, p.2821]. A key performance indicator may be a number or a ratio. As defined by Doran, G. T, the KPI should also meet the SMART principals. [10, p.35–36.]

- **Specific**—it is clearly defined, and targets a specific area of improvement;
- **Measurable**—it can be quantified;
- **Assignable/Attainable**—it is someone's responsibility, it is realistic and achievable;
- **Realistic**—it is based on practical, not theoretical considerations;
- **Time-related**—it can be measured over time;

The KPI objectives are settled in order to improve the corporate performance measurement through obtaining a clear framework of the entity's business position at a certain moment. The main KPI aims is to:

1. Provide objective evidence of progress towards achieving a desired result;
2. Measure what is intended to be measured to help inform better decision making;
3. Offer a comparison that gauges the degree of performance change over time;

4. Can track efficiency, effectiveness, quality, timeliness, governance, compliance, behaviors, economics, project performance, personnel performance or resource utilization;
5. Are balanced between leading and lagging indicators;

Based on performed research, the author propose a model of KPIs (Table 2) which should be established by the entity's managers with a quiet confidence that the results obtained by using selected KPIs would be reasonable for the decision making process.

Table 2. Model of financial and non-financial KPIs

KPI (Key performance indicators)		Budget	Actually	Ratio (Actually/Budget)
Financial indicators	Revenue			<i>the ratio of the actual indicator to the planned</i>
	Cost			<i>the ratio of the actual indicator to the planned</i>
	Profit			<i>the ratio of the actual indicator to the planned</i>
	Accounts receivable			<i>the ratio of the actual indicator to the planned</i>
	Solvency			<i>the ratio of the actual indicator to the planned</i>
	EBITDA (Earnings Before Interest, Taxes, Depreciation, & Amortization)			<i>the ratio of the actual indicator to the planned</i>
Non-financial indicators	Number of new attracted clients			<i>the ratio of the actual number of attracted customers to the planned number</i>
	Timeliness of reports submission			<i>the ratio of the actual deadline for report filing to the planned deadline</i>
	Staff turnover rate			<i>the ratio of actual% of "turnover" to planned% of "turnover"</i>
	Percentage of product defects			<i>the number of defective units divided to the total number of units produced. Actual vs budgeted percentage.</i>
	Machine downtime			<i>the actual machine downtime divided to the planned downtime</i>

Source: Developed by the author

It is important to note that the KPIs are absolutely flexible and can be set by the entity's managers depending on the established strategic objectives, the type of activity, financial and human resources available. Thus, budgeting through key performance indicators allows to obtain complete information and clear image on overall corporate performance by comparing actual data with budgeted figures and as a result, to answer at the general question: are the strategic objectives met or not? Managers of the entity should follow four steps to answer the above mentioned question (Figure 2).

	Defining the strategic goals and objectives;
Decision making process based on Key Performance Indicators	Identifying the KPIs that align with strategic goals and objectives
	Selecting the KPIs that meet the SMART criteria and align with the stated goals and objectives
	Monitoring and comparing the budgeted indicators with the actual ones, and taking a decision based on the results obtained

Figure no.2: Decision making process based on KPI;

Source: Developed by the author;

With the help of the KPI system, the managers can not only to monitor and evaluate the performance and effectiveness of the actions performed, but also build an effective payroll system through employees stimulation for successful completion of the actions proposed.

CONCLUSIONS.

Over the last decades, the budget system has been actively developed and improved. In order to ensure the functionality of the budgeting system, it is necessary to create a mechanism of data collection and verification, which will allow objective assessment of the achievement of the proposed objectives [11, p.8].

Actually, the budgeting system comes as a universal tool applied by entities for the financial management and decisional making process. The decisional making process is based on the results obtained through the measurement of performance and the degree of strategic achievements in correlation with the established criteria, or with a basis of comparison.

Further development of the budget tool makes it more adapted to new trends, namely a modern model based on KPI. Nevertheless, the entity's budgeting practices are based mainly on financial KPIs, which limited the understanding of the overall corporate situation at a certain moment and negatively affect the decision making process efficiency. The research results confirm that budgeting system based on key performance indicators (KPI) allow to achieve higher level of performance through applying financial indicators and also non-financial indicators.

If the entity decides to implement budgeting system based on KPI, in order to optimize the decisional making process the following actions are recommended:

- *Identification of the business strategies.* Here the author refers to concrete actions and the deadlines established for achieving the planned outcomes;
- *Developing the operational tasks and functions.* Establishing the result-oriented operational objectives and dividing them through the appropriate departments under the responsibility of the pre-determined persons.
- *Selection of the appropriate KPIs according to S.M.A.R.T criteria.* The established KPIs should match the chosen strategy and may include financial and non-financial indicators in order to cover larger area of the entity's operational objectives. For example, in the production processes the non-financial KPIs can include the percentage of product defects, scrap, machine downtime, customer returns, on-time delivery and others.
- *Making decision process based on results obtained.* Comparing the budgeted indicators with the actual ones, and taking a decision based on the results obtained.

REFERENCES

1. AHMED, P. K., LIM, K. K., ZAIRI, M. *Measurement practice for knowledge management.* In *Journal of Workplace Learning*, 1999, Vol. 11 Issue: 8, pp.304-311, <https://doi.org/10.1108/13665629910300478>
2. BAHUSINA M.A. *Бухгалтерский управленческий учет.* Moscow: Ed. OMEGA-L, 2002, 528 p.
3. VOLCOVA O.N., *Бюджетирование и финансовый контроль в коммерческих организациях.* Moscow: Ed. Финансы и статистика, 2007, 272 p.

4. HRUTCHII V.E., SIZOVA T.B., GAMAIUNOV V.B. *Внутрифирменное бюджетирование: Настольная книга по постановке финансового планирования*. Moscow: Ed. Финансы и статистика, 2005, 464 p.
5. BELVERD,E., NEEDLES, JR.,HENRY R. ANDERSON, JAMES C. CALDWELL, *Principle of accounting*. Chișinău: Ed. ARC,2000,1240 p.
6. GRABAROVSKI L., CONSTANTINESCU V., *Бюджетирование в управленческом учете как инструмент стратегического планирования*. In Science Journal Studia Universitatis, No.3(13), Chișinău, 2008, p.p. 185-191.
7. BOULESCU M., GHÎȚĂ M. *Control financiar și expertiză contabilă*. București: COPYRIGHT,1996. 372p.
8. BUGAIAN, L.,ȘONTEA, D., *Coordination of budgeting with management by objectives*. In Economic growth in conditions of globalization: international scientific and practical conference, october 13-14 2016. XI-th edition. Ed. a 11-a/Vol. 2. 2016. Chișinău: Ed. Complexul Editorial INCE, 2016, pp.25-29.
9. GUNASEKARAN, A., KOBU B. (2007). *Performance measures and metrics in logistics and supply chain management: a review of recent literature (1995-2004) for research and applications*. In International Journal of Production Research, pp. 2819-2840. <https://doi.org/10.1080/00207540600806513>
10. DORAN, G.T. *There's a S.M.A.R.T. way to write management's goals and objectives*. In Management Review 1981, Vol.70, Issue 11, pp.35-36.
11. GANEA V., MIHAILA A. *Procesul de bugetare pe bază de performanță: Evoluție și avantaje*. In Science Journal Studia Universitatis, No.7(107), Chișinău, 2017, pp.3-9.