



PAPER ID: 10A18L



AN INTEGRATION OF ADVANCED BUDGETING, MODERN ACCOUNTING METHODS AND COST ANALYSIS

Adel Aleksandrovich Daryakin ^a, Ainur Airatovich Murtazin ^a, Yadgar Danilovich Valeev ^a,
Aliya Serdarovna Abdullaeva ^b, Alexey Igorevich Dudochnikov ^{a*}

^a Department of Financial Markets and Financial Institutions, Kazan Federal University, Kazan, RUSSIA.

^b Institute of Management, Economics and Finance, Kazan Federal University, Kazan, RUSSIA.

ARTICLE INFO

Article history:

Received 02 July 2019
Received in revised form 22
August 2019
Accepted 06 September 2019
Available online 30 September
2019

Keywords:

AVS method; Target
costing; Kaizen costing;
Standard costing; Direct
costing.

ABSTRACT

Advanced budgeting combines the advantages of different budgeting concepts, for example, allowing for changes and adjustments to budget forms as in the system of improved budgeting in order to increase the adaptability of the entire planning system to changes in the external environment. The adaptability of the budget planning system to the current needs of the enterprise is achieved by shifting the focus from the expenditure side of the budget towards achieving the planned indicators and taking into account important non-financial performance indicators as in the adaptive budgeting system.

In addition, advanced budgeting involves the ideas of the system outside the budget or outside the budget. However, there is not so much a complete rejection of budgets as optimization of the system of budget forms, changing their set and detailing to the needs of the enterprise and its divisions. The system also used advanced budgeting, rolling forecasts and continuous planning. The most important advantage of the advanced budgeting system is the possibility of its integration with modern methods of cost accounting and analysis. Cost accounting and analysis is an important task of any enterprise for the formation of the cost of its products and the implementation of the production plan in terms of volume, range and quality at the lowest cost. The main purpose of accounting and cost analysis in the enterprise is to manage its cost to optimize the cost structure and reduce costs without compromising product quality. From this study, an important point in this context is the need to distinguish between cost accounting and costing methods and cost analysis methods.

© 2019 INT TRANS J ENG MANAG SCI TECH.

1. INTRODUCTION

The economic situation at the present stage of development of the productive forces and the

accumulated experience in the field of management and organization of production, high competition and the search for new methods and tools to improve the management system dictate the necessity of introduction of the budgeting system in the enterprise. At the same time, this system should be included in the integrated system of management of efficiency of the commercial organization and promote improvement of system of the accounting of expenses and their rationalization.

Advanced budgeting is a modern budgeting concept based on the flexibility of the planning system, increasing motivation and monitoring the achievement of the organization's performance targets. Advanced budgeting differs from other concepts of budgeting by an increased planning horizon – more than 1 year; the ability to redistribute resources in the process and make adjustments to the system of targets and planning forms; taking into account various non-financial indicators, relative indicators; using the system of sliding planning and control of compliance of the spent resources with the achieved results.

Thus, by introducing an advanced budgeting system or transforming the existing traditional budgeting system into an advanced budgeting system, the enterprise departs from the periodic process of making plans and analyzing their implementation. The traditional budgeting system is often characterized by the non-relevance of the considered indicators, while the new system is aimed at achieving key performance indicators of the enterprise and links budget planning in the company with its strategic planning (Abdullayev, 2017).

2. METHODS

Currently, there are various methods of accounting for production costs and calculating the cost of production (Degaltseva, 2014):

- traditional methods, which include: job order costing, process cost, poperedniy, regulatory;
- innovative (non-traditional) methods, which include ABC-method, accounting system "just in time", accounting for the last operation and others.

2.1 INNOVATIVE MODERN METHODS OF ACCOUNTING AND COST ANALYSIS

The system of advanced budgeting involves the use of innovative modern methods of accounting and cost analysis. Let us consider them in more detail.

2.1.1 ABC METHOD

ABC method is a cost accounting and analysis of functions, operations and business processes in order to calculate the cost of production and determine the effectiveness of business processes. ABC-method involves the gradual distribution of indirect costs for the cost of production (Degaltseva, 2014). In this case, as a factor in the distribution of indirect costs can serve not only the costs of the enterprise for the maintenance of production personnel, but also such non-financial indicators as energy intensity, material intensity of the finished product. These non-financial indicators are also important in the system of advanced budgeting, being often key performance indicators, for example, in the framework of the definition of savings, efficiency evaluation.

2.1.2 JUST-IN-TIME COST ACCOUNTING SYSTEM

The "just-in-time" production system is that during the production process, the parts needed for Assembly are placed on the production line at the exact moment when it is needed and in the strictly necessary quantity. Cost accounting system "just in time" is determined by the organization of

material flows with a focus on customer demand. This principle is correlated with the adaptability of the advanced budgeting system in terms of flexibility and relevance of budget forms and the possibility of their adjustments. The disadvantage of this system of planning and accounting of costs is the difficulty of compiling the planned budgets for the long term in the turbulent external environment and an unstable economy, and the inability of some redistribution of resources among departments and projects because of their low inventory and strict purpose.

2.1.3 TARGET COSTING SYSTEM

Among the modern methods of cost accounting, we can also note the target costing system, created to provide management decisions in terms of the product being developed and compliance of the cost of this product with the specified parameters (Artikova & Nastrojov, 2016). In the target costing system, the boundaries of the future price and the size of the profit rate of the new product are set, on the basis of which the search for design, materials, technology that allows reaching the required cost value is carried out. In the advanced budgeting system, this cost accounting method can be used privately to plan and manage the cost of new products.

2.1.4 KAIZEN COSTING

Another application of the cost accounting system is Kaizen costing, aimed at the gradual improvement of the quality of business processes, cost reduction. The main function of the Kaizen costing system is to minimize the difference between the calculated and actual product costs for individual cost items. So, the predictive calculation of the cost starts in the system of target costing, then the calculation of actual expenditures incurred proceeds in the system of Kaizen costing (The Modern system of calculation of the cost of the Electronic resource, 2018).

In addition to the considered methods of cost accounting there are also such methods as standard costing, direct costing and calculation of total cost (Sizykh, 2016).

2.1.5 STANDARD COSTING

Standard costing is a cost accounting and costing using cost standards in quantitative and monetary terms. When rationing costs, the norms of resource consumption are calculated per unit of production, as for General production costs, their rationing is carried out in the monetary assessment for a certain planning period, taking into account the volume of production.

2.1.6 DIRECT COSTING

Direct costing or the method of accounting for direct costs is based on the division of costs into fixed and variable costs and the inclusion in the cost of production of only direct production costs. The favorable moment when using this method of cost accounting in the system of advanced budgeting is cost accounting by types and places of origin, the range of products. At the same time, costs are tied to technological processes and the range of products, which facilitates the goal-setting and monitoring of the implementation of key performance indicators in the integrated enterprise efficiency management system.

2.1.7 CALCULATION OF TOTAL COST

The total cost calculation or absorption costing method is based on the division of costs into direct and indirect costs. In addition to direct costs, all variable and fixed overhead costs are included

in the cost of production. All costs of the current period are related to the products released in the same period.

3. RESULT

Table 1 gives the advantages and disadvantages of using different methods of cost accounting in their integration with the advanced budgeting system in the enterprise.

Table 1: Advantages and disadvantages of using modern methods of cost accounting in their integration with the advanced budgeting system in the enterprise.

Cost accounting	Method Advantages	Disadvantages
1	2	3
AVS-method	Accounting for non-financial relative indicators in the distribution of costs, which play an important role of key performance indicators in the advanced budgeting system; the possibility of using different options for grouping indicators for accounting and budgeting	The presence of conventions in the calculations and in determining the cost drivers, in particular when considering complex indicators
Accounting system "just in time"	Focus on the current needs of the production system, the changing demand of consumers, which corresponds to the principle of flexibility and adaptability of the advanced budgeting system	High accuracy of long-term forecasts only in a stable environment; impossibility of redistribution of some resources between departments and projects due to their low reserve and strict purpose
Accounting for the last operation	Elimination of excessive information for management; focus on performance indicators; reducing the complexity of planning	A high proportion of non-compliance with accounting data, which are more correlated with the data of the budgeting system, especially in conditions when these forms are reporting for the enterprise
Target costing	High efficiency taking into account the cost of innovation, the cost of developing a new product	The limited use of this method by the nature of activity; mandatory need for integrated application with other methods of accounting and cost analysis – Kaizen costing, functional and cost analysis
Kaizen costing	The use of various improvements in the production process to improve quality, which corresponds to the principle of advanced budgeting for the formation of planned indicators with specific measures to achieve them	Efficiency depends on the constant application and use of staff motivation methods
Standard costing	Formation of the base for the plan-fact analysis of budget forms; simplicity and low labor intensity of application	Limited application for types of costs and stages of the product life cycle; low level of detail of deviations of actual indicators from the planned for specific products and technological areas; dependence of the results on the adequacy of standards
Direct costing	Cost accounting by types and places of origin, the range of products, which is convenient for the preparation of individual budget forms; a high degree of compliance with accounting data; linking costs to technological processes and the range of products	The complexity of differentiation of fixed and variable costs; the lack of complete information about the cost of the product, the possible distortion of financial budget forms; a high degree of compliance with accounting data; linking costs to technological processes and the range of products
Full cost calculation	High information content, compliance of costs with their reflection in the reporting periods, which increases the reliability of indicators of budget forms	Possible distortion of the volume of fixed costs in the cost of a particular product and difficulties in determining the place and causes of these costs in the cost of a particular product

Let us turn to the table . All considered modern methods of cost accounting when using them in the enterprise in integration with the advanced budgeting system determine the target costs, ensure the implementation of the objectives of the cost reduction strategy, align the planned costs with the financial results of the enterprise and its divisions.

With regard to the considered modern methods of cost accounting, there are various methods of cost analysis, the main of which are cost analysis, functional cost analysis and strategic cost analysis (Sizykh, 2016).

Cost analysis is the study of cost elements and identification of ways to reduce them.

Functional-cost analysis determines the value of products based on the functions and resources used in production, marketing and quality assurance. At the same time, functional and cost analysis provides information on indicators of labor intensity and other relative indicators characterizing the effectiveness of the centers of responsibility in the enterprise.

Strategic cost analysis considers the activities of the organization as a chain of formation of consumer value, that is, the sequence of operations to create value (Egorova & Yudanova, 2015). At the same time, each link is justified from the position of its role in the production process and from the position of consumed resources. Strategic cost analysis allows you to compare the performance of the enterprise with the performance of competitors and determine the strategic position of the enterprise in a particular market of goods or services.

All considered methods of cost analysis can be successfully used in the system of advanced budgeting as tools for analyzing deviations of actual indicators from the planned, identifying their causes and directions of cost reductions.

4. SUMMARY

Thus, advanced budgeting is an element of an integrated system of organizational performance management, one of the tools of which are the methods of accounting and cost analysis.

In the applied aspect of the integration of advanced budgeting and cost accounting and analysis methods, it should be noted that the most influence on the budgeting process is the methods of cost accounting and calculation in the aspect of the formation of production budgets. If the main budgets – the Forecast balance sheet, the Budget of income and expenses, the budget Of cash flows are formed mainly according to accounting data, the Operating budgets operate also with management accounting data, which in turn are formed at the expense of the methods of cost accounting and calculation considered in the article. These Operating budgets include, in particular, the inventory Budget of finished products, the Budget of commercial expenses, budgets Of management expenses, as well as Production budgets – the budget Of direct material costs, the Budget of overhead costs and others. It is in the formation of these budgets that the principles of cost allocation and their accounting are important.

The methods of cost accounting and costing considered in the study are actively used in the US, Japan, Europe, while in Russia they are practically not used (Stupina et al., 2014). This situation has a negative impact both on the level of development of management accounting in Russia and on planning and control in the budgeting system of Russian enterprises. The use of modern methods of

cost accounting and cost calculation would allow to identify problem areas in the enterprise, to find ways to minimize costs, improve the reliability of planning and, as a result, to improve the competitiveness of the enterprise.

5. CONCLUSION

In comparison with the system of periodic budgeting, the introduction of the proposed method of sliding budgeting allows to obtain a number of advantages (Pilyaev, 2009):

- improving the accuracy of forecasting the company's activities through regular accounting of external changes (for example, the emergence of inflation, changes in demand for products, etc.), changes in its goals, as well as adjustments to plans depending on the results already achieved;
- formation of the company's managers understanding of the relationship of their actions and initiatives with the company's strategy;
- availability of the company's activity forecast with a constant planning horizon;
- motivation of the initiative by the employees of the company through the use of the mechanism of quarterly review and clarification of the budget.

Implementation of the principles of sliding budgeting allows the company's management to rethink the entire system of management of its resources. As a result, the increasing flexibility of management of the company as a whole contributes to the formation of its management understanding that the real role of budgeting in the company's activities is the integrated management of the company's resources.

At the moment, the company needs to allocate specialized structural units dealing exclusively with budgeting.

6. DATA AND MATERIAL AVAILABILITY

Relevant information about this study is available by contact the corresponding author.

7. ACKNOWLEDGEMENT

The work is performed according to the Russian Government Program of Competitive Growth of Kazan Federal University.

8. REFERENCES

- Abdullayev, A. C. (2017). Aspects of the modern transformation of budgets in commercial organizations. *The Young scientist*, 13(147), 221-224.
- Artikova, J. O., & Nastrojov, O. (2016). The Choice of method of cost accounting is one of the main tools of profit growth. *Bulletin of the Ural Institute of Economics, Management and law*, 4(37), 4-9.
- Degaltseva, J. V. (2014). Comparative characteristics of different methods of cost accounting and cost calculation. *The Scientific journal of the Kuban state agrarian University*. № 4. Electronic resource. Mode of access: <https://cyberleninka.ru/article/n/sravnitelnaya-harakteristika-razlichnyh-metodov-ucheta-zatrat-i-kalkulirovaniya-sebestoimosti> (accessed 5.04.2018).
- Egorova, S. E., & Yudanova, L. A. (2015). Comparative analysis of new methods and systems of cost accounting and calculation of production costs. *Vestnik Pskovskogo gosudarstvennogo universiteta= Vestnik PskovSU*, (2), 94-106.
- Pilyaev, M. G. (2009). Peculiarities of implementing the principles of moving budgeting to integrated companies. *Proceedings of Baikal state University*, 4, 28-31.

Sizykh, E. O. (2016). Methods of accounting and analysis of logistics costs of industrial enterprise. *Actual problems of aviation and cosmonautics*, 2, 1021-1023.

Stupina, A. A., Zheltkevich, P. A., Karabitsina, E. F., Galtsova, V. A., & Alexandrova, U. A. (2014). The Newest systems of management accounting. *Modern problems of science and education*, 2. Electronic resource. Mode of access: <https://www.science-education.ru/ru/article/view?id=12407> (accessed 5.04.2018)

The Modern system of calculation of the cost of the Electronic resource. (2018). Mode of access: <http://www.elitarium.ru/kalkulyaciya-sebestoimost-produkciya-sistema-zatraty-raskhody-biznes-process-organizaciya-uchet-pokazatel/> (accessed 5.04.2018)



Dr. Adel Aleksandrovich Daryakin is an Associate Professor at Department of Financial Markets and Financial Institutions, Kazan Federal University, Kazan, RUSSIA. He got a Bachelor of Economic in Finance and Credit, and Economics from Kazan State Institute of Finance and Economics. He earned a PhD (Economics) degree. His researches are Traditional and partner banking and related financial services in Russia and abroad, International banking and finance, Financial and green economy. Financial ecosystem and financial architecture. Banking and business.



Ainur Airatovich Murtazin is a student at KFU. He is interested in Financial Management.



Yadgar Danilovich Valeev is a student at KFU. He is interested in Financial Sciences.



Aliya Serdarovna Abdullaeva is a Lecturer at Institute of Management, Economics and Finance, KFU. She is interested in Digital Management.



Alexey Igorevich Dudochnikov is a graduate student, Department of State and Municipal Management, Kazan (Volga region) Federal University. He is interested in Economic and Management.