UDC 338.24:656.071.4

ACTIVITY-BASED BUDGETING AS A MANAGEMENT TOOL OF ECONOMIC SECURITY OF STEVEDORING COMPANY

S.V. Oneshko, Ph.D.
M.O. Boiko

The Institute of Market Problems and Economical & Ecological Researches of the NAS of Ukraine, Odessa, Ukraine

Implementation of budgeting at the enterprises of port activity is an efficient tool to ensure successful functioning on the market of port services through the effective use of their resources. The main purpose of budgeting – the decision of administrative tasks of forecasting the results of business; comparative analysis of actual evaluation and planned of the results and identified deviations. In world practice for a long time and successfully has been used budgeting. However, the method of budgeting in many Ukrainian enterprises exist unchanged (or with minor amendments) form for many years. This method meets the requirements of many years ago and received information is little use for management and as information of classical accounting. Make decisions based on these data is possible, but the available information does not meet the specific features of the company, as in the case of the stevedoring companies. To overcome these problems is possible with Activity-Based Budgeting (ABB). This tool is proposed to use to improve the economic security of the stevedoring company.

Analysis of recent researches and publications


In recent years, draws attention using ABB method on the example of enterprises belonging to different industries with practical recommendations for implementation. Thus, the work of D. Dzhanykovoy (Dita Janiková, 2011) describes the main shortcomings of traditional budgeting and given an example of how to make a budget of the whole process, using ABC (Activity Based Costing) and ABB (Activity Based Budgeting) methods based on MS Excel [1]. The work S. Kapanseanu, I. Sorynoy, K.-M. Barbé, L.-M. Ref, D. Topor ( Sorinel Căpuşneanu, Ileana Sorina (Rakos) Boca, Cristian-Marian Barbu, Letiţia-Maria Rof, Dan Topor, 2013) examined the usefulness of implementing Budgeting
in management, coordination and harmonization of companies included in mining industry in Romania and rationale decisions based on the information provided by this method. The authors define the benefits of implementing ABB towards analyzing calculating the cost and expenses, such as the exact definition of planned costs to the level of each activity for each process, which helps to establish customer requirements and the amount of work required to meet their needs internally within the enterprise, and to establish the differences at the end of the period of analysis management by comparing actual expenses with planned expenses [2]. Noteworthy work S. Pyttrzak (Zaneta Pietrzak, 2013), which suggested the possibility of using this method of a service company, ABB is considered from a theoretical point of view – a critical analysis of opportunities for the new trends in budgeting and in practical terms – increasing knowledge managers of a new approach to budgeting [3].

In the maritime transport budgeting issues are considered L. Chizj, N. Hoteeva, O. Kibik, O. Kotlubay, M. Prymachev, M. Shirokov and others.

In work A. Kotlubay [4] considered the budget planning as a tool for improving the competitiveness of shipping companies. The issue of budgeting is devoted work A. Kibik, Y. Postolenko, M. Shirokov [5], which provided proposals for the introduction of budgeting allocation centers of financial responsibility. The system considered in the budgeting N. Hoteeva, L. Chizj [6], which developed organizational and economic basis for the formation and control of system budgets enterprises of port activities in general and its business units to improve short-term and operational management, providing for consideration of improved financial structure of the port company, securing them in certain centers for, determining the structure of the consolidated financial budget and the establishment of criteria for its implementation. The paper S. Oneshko [7] reviewed the tools ABB to determining the cost of port goods and services, which involves the allocation of core and non-core business processes of port operator.

**Unsolved aspects of the problem**

In researches dedicated to budgeting and implementation of ABB, budgeting is seen as an instrument of financial and economic planning, but not in the system of economic security of stevedoring company. Differences between budgeting and Activity-Based Budgeting, primarily that the ABB takes into account the specifics of the stevedoring company and is based on a more flexible budget and get quick information.

In this article, ABB is proposed to be seen not as a tool for financial planning and not only as organizational and management technology, and as a tool for management component of economic security of the stevedoring company that allows to reach a chosen strategy through the rational use of resources, creating real conditions for the rapid diagnosis and overcoming potential threats to improve the economic security of the stevedoring company. This specification can be considered ABB system to ensure the economic security of the stevedoring company and this approach allows to take into account the peculiarities of the development budget system aimed at improving its economic security.

The aim of the article is to develop methodological approach to the introduction of Activity-Based Budgeting in the activities of stevedoring company as a tool for management component of economic security by building a system of budgets stevedoring company to the specifics of its business processes.

**The main part**

Improving the effectiveness of economic security management is manifested in many aspects, one of which is to achieve maximal value of indicators for each component of economic security. An important is the management component, which is the key to optimal decision-making and linked directly to the management now at the highest level and should prevent the manifestation of threats in planning, choosing a wrong purpose and business opportunities, the emergence of imbalances of individual units, the choice unreliable partner contractors and investors. For stevedoring company separation of the component due to the presence of increased attention to the observance of labor discipline and safety standards in the port area, education support workers and staff stability. Enterprises of port activities should accumulate human resources specialists on economic security who have a general knowledge of the concept of economic security, and guided the specifics of the transport process, well-known issues, which remain neglected state structures.

Nowadays more and more dissemination acquires using such technology management of financial and economic activities as budgeting, directed on profit management.

Established that feature of using budgeting is the availability of an effective feedback system to ensure economic security, which increases management efficiency and increase the financial and economic activities and formed the necessary conditions to ensure economic security.

Traditionally budgeting seen as a tool for financial planning, but the modern view of budgeting defines it as organizational and management technology. From this position of budgeting should be viewed as a set of planning, accounting, control and analysis of the enterprise, the implementation of which is based on medium-term and short-term budgets. Budgeting does not operate independently of management systems company, whose main objective is to ensure manageability and integrity of the entity. These priorities are also important fundamental terms of economic security, and therefore of the system of economic security [8].

The system of the budget reflects: how does the company functioning, what is the structure of cost which its creates; at what stage is the cash flow and how they are spent as flowing from one responsibility center to another; how much are the service
Departments. It should always play different scenarios budget to understand which will result in optimistic and in pessimistic scenarios. Furthermore, budgeting enables coordinate strategic goals of the company plans to achieve them and ensure the implementation of these plans in connection with the operational processes.

In general, "activity-based budgeting enables every employee of the organization to create value. This is achieved through planning and management of future activities and business processes in order to achieve the projected workload indicators and strategic objectives. Plan, aimed at creating value, gives organizations the opportunity to understand the causes of variations, so that it was possible to control these variations" [9].

Thus, based ABB assigned business processes and the development budget which must collectively meet the objectives of the company – both operational and strategic. Achieving such compliance possible only if controlled by parameters contained in the budgets listed for each company can be individual and may change based on the change in strategy, the influence of impact factors.

ABB approach may be applied to companies of port activity where the separation of functions between the various business units and departments.

Practical application of budgeting described in the O. Korneva research for example onshore fish processing enterprises Kaliningrad region and noted that "change management finances caused economic benefits as a reduction in the total cost of production and sale of fish products and canned goods, increase the growth rate and profitability implementation of financial and economic activity of the studied fish processing enterprises. Profit growth has provided a financial base for the economic development of enterprises of the fishing industry" [10].

In order to improve management of economic security of the stevedoring company's particularly important to create proper conditions to ensure the proper level of its economic security. To achieve this is possible in case of reasonable budgets system and indicators for evaluation of individual sections and departments of stevedoring company and the relevant information and analytical support to budgeting, which will enable to make the best management decisions towards improving economic security.

So, Activity-Based Budgeting directed on a permanent and effective development of the company according to the chosen strategy. Considering this fact, can state that the result of ABB – a process that is justified in terms of finances and boost the efficiency of the stevedoring company and increase its economic security. It reveals the objectives and outcomes of budgeting under the management of economic security of stevedoring company (fig. 1).

---

**The objectives of implementing activity-based budgeting in the activities of the stevedoring company**

- Coordination of activities of units to meet strategic goals and objectives of development
- Motivation of staff to achieve appropriate indicators
- Evaluating the effectiveness of stevedoring company, heads of financial responsibility centers
- Planning and management of production and financial activity of stevedoring company
- Control of production, financial and investment activity of stevedoring company

**The results of implementing activity-based budgeting in the activities of the stevedoring company**

- Optimizing business processes of stevedoring company, information systems development business
- Achieving the set strategic goals, economic justification of the decisions taken
- Increased flexibility and adaptation to change stevedoring company in the environment
- The increase resource efficiency
- Achieving financial stability and the stability of the stevedoring company

**Increasing the level of economic security of the stevedoring company**

---

*Fig. 1. Objectives and outcomes of budgeting in the activities of the stevedoring company*  
*Source: Own elaboration*
Application method ABB allows to navigate the existing financial possibilities of the stevedoring company and choose a course of action aimed at its steady financial growth, improves the quality of financial management at the expense of the current subordination of the company development strategy and the level of economic security.

It should be noted that the lack of budgeting for transport companies may be relatively high cost of this technology, in principle, be solved in terms of automating a significant number of management functions in modern companies, including functions of accounting and cost analysis. This shortcoming of scale with significant economic benefit is covered by the introduction of budgets and their benefits, such as target orientation, operational assessment of revenues and expenses of the economic entity, as well as saving limited resources in the most advantageous to use.

Considering that business processes and activities is the basis of cost management using an activity-based budgeting, consider the features of the enterprise sector. For stevedoring companies transportation services characterized by some specifics character that affect the partition operation processes and, ultimately, to budgeting. In the economic sense, refers to the services of any functions or transactions that are in demand.

In this regard the services as any other product in its external manifestation act as resulting reaction enterprises focused on existing or projected market situation. Furthermore, "Activities port operator involves the use of significant production capacity, a large share of indirect costs and complex pricing system that determines the usefulness of implementing process-oriented approach to cost management, based on the definition of business processes is one of the promising areas of cost management Ukrainian port operators" [7].

Implementation of ABB in the activities of the stevedoring company to enhance its economic security includes implementation of several stages (fig. 2).

Step 1. Evaluation of economic security and stevedoring company deciding on the need for its improvement by implementing Activity-Based Budgeting

Step 2. Isolation of business processes and financial responsibility centers of stevedoring company

Step 3. Formation of budgets stevedoring company

Step 4: Modern automated information systems of budgeting (computer technology databases)

Step 5. Evaluating the effectiveness of the implementation of the budgeting system

Step 6. Analysis and adjustment of budgeting stevedoring company

Step 7. Evaluation of the economic security of the port after implementation Activity-Based Budgeting

Fig. 2. Stages of implementation of Activity-Based Budgeting in the activities of the stevedoring company to enhance economic security

Source: Own elaboration

The main requirement for system design activity-based budgeting is the presence of the company clear about the activities and business processes occurring on it is therefore appropriate to identify the business processes of stevedoring company.

Business processes of port activity were investigated in [5-7, 11, 12], the authors identify the main, auxiliary and service business processes. Basic business processes are of strategic importance and determine profits of stevedoring company. Assistive business processes ensure the normal operation of basic business processes, their contribution to the creation of use value is indirect, it is realized through the results of key business processes. Budgets are necessary to make based on business processes for the enterprise as a whole and for its structural divisions – business units of stevedoring company because of the need to share responsibilities. Business units are the centers of financial responsibility (CFR), it is independent, separately managed business units, responsible for all the activities necessary for the implementation of business processes assigned to it.

Systematization of stevedoring company’s business processes represented in fig. 3.

Implementation of ABB should start to create a structure of the company in the context of business processes and responsibility centers. Based on the studies [6, 11-13] in the structure of stevedoring company is proposed to allocate such responsibility centers:

1. Centers for profit (profit centers) – business units, whose activities are directly related to the performance of one or more business processes that ensure and record profits, they are include ‘production facilities, terminals, warehouses.
2. Center of income – a business unit managers are responsible for income, they may include marketing department, commercial department.

3. Cost center – a business unit, responsible only for the cost, and the only ones that can control (workshops, maintenance departments, brigade dock workers, management, accounting, legal, economic planning department, personnel department).

4. Centers of Investment (Venture Centers) – a business unit that is directly related to the organization of new business projects and managers are responsible for the efficiency of investment (capital construction department, development department).

Correspondence between business processes and organizational structure of the stevedoring company is achieved by providing business process limits and areas of financial responsibility. Center responsibility of top-level company acts in general (port operator, stevedoring company) headed by the director, he delegated responsibility and profit. At the secondary level out of financial responsibility centers – business units that manage key business processes. At this level CFR manager has the authority and responsibility entrusted to him by the effectiveness of the business process. Managers CFR lower levels of delegated rights and responsibilities only for specific performance of their centers (income or expense). Thus, responsibility for stevedoring company income relies on commercial and marketing departments. Responsibility for spending is almost all business units of the stevedoring company.

The formation of budgets requires the formation of an integrated system budget, which consists of strategic, operational and financial budgets. The operating budget is a budget of business transactions, is limited to a specific business process. With a line-item structure, it provides a quantitative and cost estimation of used within a business process resource. Consolidated financial budgets consist of the company as a whole on the basis of operating budgets and Budget Balanced system of indicators. These include budget revenues and expenditures, cash flow budget, balance budget. They form a financial model company and allow to analyze its future financial condition [10].

The proposed system budget business process (BP) stevedoring company shown in Fig. 4.

Formation of the budget structure of stevedoring company includes determining the structure of budgets and their articles imposition of the budget to the business processes of a stevedoring company, combining budgetary structure CFR. It is necessary to avoid duplication of articles according to the nature of the expenditure. For example, the cost of servicing the business process "legal support" is not the expenses of law department, on this process would be assigned for the costs of other cost centers – transport department (transport department employees), repair stations and others. Thus, maybe receive the full cost of the process.

Imposing structure of the budget and business processes on a budget very laborious and responsible process, because of the need to consider the organization and the specifics of the stevedoring company. This will provide an opportunity cost analysis centers of responsibility, you need the approval of the budget structure take into account all types of expenses responsibility centers. First need, determine the relationship between the budget and budget items. One and the same item may be associated with many budgets, and vice versa, the same item in one budget can be attributed to the process, but under another budget no.
Budget expenditures are the basis for controlling costs. In this case the foundation is about feasibility collaborating institutions and acquisition of property, which will choose a supplier and conclude an agreement on terms most favorable to the stevedoring company. In these criteria may include bilateral agreement on price, quality of service (work) and dates of their execution.

Consideration of budget repair is a primary need (depreciation of portal equipment in Ukrainian ports is about 90%, which is unacceptable from the standpoint of competitiveness), and responsibility for quality lies immediately repaired to the stevedoring company and must take into account the implementation of production plans.

The budget for capital investments is almost fundamental to the Ukrainian stevedoring company. Topical is the construction and modernization of berths, rail and road entrances, warehouses, facilities engineering support of others. Modern production is impossible without the development of significant investment inflows and the biggest problem is the funding source.

Consider these processes more on the example of the stevedoring company, which manages the container terminal at the port under a lease. The company passes the different types of containers in the export and import direction, in addition, the company provides services in stuffing and unstuffy containers makes storage containers. Maybe make budgets for each container and budgets export (load) and import (upload). However, the imposition budgets might get complicated structure, especially in the case of stevedoring company that rolled over a wide range of goods. The best in this allocation will budget by type of container that will help in calculating the cost of maintenance, and loading and unloading should be considered as separate business processes.

To illustrate the features of budgeting stevedoring company by imposing examples of items and business processes budgets stevedoring company and the combination of budget structure with centers of financial responsibility. The process of imposition of item and business processes on budgets of containers are shown on Fig. 5.

Further research in this area includes the determination of combining fiscal structure CFR in terms of processes and budget items. For the stevedoring company are CFR formation processes in the supply, management, personnel department, legal department, planning and economic department, accounting in the context of items wages, payroll taxes, premiums, fuel, communication services, office expenses and so on.

The criterion of effectiveness of the implementation ABB stevedoring company is the ability to achieve its strategic objectives for a given amount of resources. To assess the effectiveness of budgeting to compare key indicators of stevedoring company before and after the introduction of budgeting, taking into account the efficiency of business processes.
Specific, measurable, achievable goals budgeting stevedoring company may estimate during the budget process on certain parameters listed in Table 1.

After evaluating budgeting need to analyze the implementation of budgeting and in case of inefficiency and inconsistency on indicators in the stevedoring company to make the necessary adjustments. To assess the level of economic security of stevedoring company may use the indicators proposed in a research of M. Boiko [16].

One of the obstacles to widespread practice ABB as a management technology is moving away from traditional accounting information needs of managers and high cost of method application.

Accounting for costs only at the place of their origin is insufficient. When it is necessary decide to reduce or increase costs, increase funding for a particular business unit or division of the stevedoring company, is ABB helps answer what processes or functions will be included these costs.

Table 1. Indicators evaluation the efficiency of the activity-based budgeting of the stevedoring company

<table>
<thead>
<tr>
<th>Indicators</th>
<th>The direction of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total profitability, %</td>
<td>Growth</td>
</tr>
<tr>
<td>Cost price, ths. $</td>
<td>Abbreviation</td>
</tr>
<tr>
<td>The volume of turnover, ths. tons</td>
<td>Growth</td>
</tr>
<tr>
<td>Share of expenditures revenue from the sale</td>
<td>Abbreviation</td>
</tr>
<tr>
<td>Market share of turnover, %</td>
<td>Growth</td>
</tr>
<tr>
<td>The production cycle, days</td>
<td>Abbreviation</td>
</tr>
<tr>
<td>The level of business process automation, %</td>
<td>Growth</td>
</tr>
</tbody>
</table>

Source: Compiled by the author according to the materials [5, 6, 16]
In terms of empowerment automate many accounting functions and analysis of this issue is losing its costs. Modern automation software cost management allows time to monitor the dynamics depending on product prices and volumes of production and sales processes on a combination of financial and economic activity and changes in market conditions and the resulting costs of basic processes. On the other hand, it facilitates a clear definition of these requirements as to the products and services of a certain class quality, and to ensure a quality process.

Modern information technologies offer significant potential to improve the budgeting process. Today, the IT market is a wide range of specialized business management software products based on the process approach that enable to automate the budgeting process. They are distinguished value for its functionality. Therefore, every company chooses for themselves the software depending on their objectives, sizes, specific of work.

For enterprises of port areas there are many companies offering their design systems, such as, Geac Performance Management (Comshare MPC) and SAS. Comshare MPC uses a single database that allows for the formation of any budget to use the data of the last budget, and various data and aggregated data used in analytical reports. Such systems greatly increase the efficiency of budget planning. The required information is supplied to the on-line directly from the workstation workstations budgets.

Another important factor of practical implementation of ABB is to determine relevant information. Separation of relevant information in making management decisions enables the company to react quickly to various aspects of activity, freely navigate in a constantly changing external environment, identify internal reserves to reduce costs. Information manager must provide the right solution and be presented in an easy to understand form and cannot contain redundant data. Thus, the results will increase the chance to receive an effective selection of information for management purposes and to accelerate the decision making process of the stevedoring company as a whole and for individual activities.

Conclusions

The methodical approach to the introduction of Activity-Based Budgeting in port activity allows the stevedoring company to achieve their strategic objectives by constraints of available resources, taking into account the specific business processes of stevedoring company, to increase its effectiveness and level of economic security. Synergetic effect of the ABB is manifested in getting effective results at each stage of implementation and consistent with the objectives of providing stevedoring company strategies aimed at improving the economic and financial indicators. Focus on activity-based budgeting will improve management efficiency and dynamic development in all areas and activities to prevent risks and financial losses caused by the use of available resources. In addition, the use of budgeting allows companies of port areas make better management decisions through logical analysis of internal information and statements assembly prevents a situation of "loss of profits".

Abstract

In the article the use method of Activity-Based Budgeting to improve the economic security of the stevedoring company.

Developed the methodical approach to the implementation of activity-based budgeting system in the activities of the stevedoring company, as a tool for management component of economic security by building a system of budgets of stevedoring company taking into account the specifics of its business processes. The methodical approach to the introduction of activity-based budgeting in port activity allows the company to achieve their strategic objectives by constraints of available resources, taking into account the specific business processes of stevedoring company, to increase its effectiveness and level of economic security. Features illustrated budgeting stevedoring company, are examples of the overlay item and business processes budgets stevedoring company and the combination of budget structure with centers of financial responsibility. Synergetic effect of the activity-based budgeting is manifested in getting effective results at each stage of implementation and consistent with the objectives of providing stevedoring company strategies aimed at improving the economic and financial indicators. Focus on activity-based budgeting will improve management efficiency and dynamic development in all areas and activities to prevent risks and financial losses caused by the use of available resources. In addition, the use of budgeting allows companies of areas make better management decisions through logical analysis of internal information and statements assembly prevents a situation of "loss of profits".

JEL Classification: M21.


References:


Надано до редакційної колегії 02.05.2016

Онешко Світлану Володимирівну / Svitlana V. Oneshko osvfox@mail.ru

Бойко Марію Олександрівну / Maria O. Boiko

life_is_good@bk.ru

Посилання на статтю / Reference a Journal Article:

143

http://economics.opu.ua/files/archive/2016/n3.html