THE THEORETICAL MODEL OF ACTIVITY-BASED BUDGETING IN AGRICULTURAL ENTERPRISES

Ramunė Pockevičiūtė
Alytus City Municipality Administration
e-mail: ramune.pockeviciute@yahoo.com

Abstract

Business activity of an enterprise is almost inconceivable without planning. Therefore today there are many discussions about the importance of activity planning of the enterprise and forecasting of the resources, necessary to reach the set tasks. For this reason the scientists and practitioners offer to implement the budgeting system in the enterprises. This paper introduces the new budgeting model – Activity-Based Budgeting (ABB) model. It also contains the survey of advantages of this model and its applicability in theoretical aspect. The key objective of this paper is to present Activity-Based Budgeting (ABB) as an important means of planning and coordination of activity of the agricultural enterprise (or any other type of an enterprise). After performance of analysis of the main principles of Activity-Based Budgeting (ABB) model the reasoned conclusions can be drawn that application of this model in the agricultural enterprises could be the alternative means against the variable and changing economical and business conditions. It should be emphasized that contrarily to the traditional budgeting models, ABB can help to establish the connections between the incurred costs and the company processes. The paper contains ABB analysis based upon the scientific studies and the fragments of practical application of the model.

Key words: Activity-Based Budgeting (ABB), budgeting system, cost, activity.

Introduction

Today there are many discussions about the importance of activity planning of the enterprise and forecasting of the resources, necessary to reach the set tasks. Hereby the problem of competitive ability of the enterprises is solved. Organizations cannot succeed by standing still. If the enterprise is not improving, then its competitors will soon catch up. For this reason many scientists offer to use the budgeting system as the budgets usually contribute to successful realization of the strategies of the enterprises. In practice two basic methods of budgeting of the enterprises exist: from achieved level (incremental budgeting), and from zero level (zero-based budgeting). A zero–based budget begins by preparing an operating plan or budget that starts with no authorized funds. For this type of budget, an enterprise must justify each activity every time it prepares a new budget. Incremental budgeting is a budget prepared using a previous period’s budget or actual performance as a basis with incremental amounts added for the new budget period. The choice of the budgeting method depends on the competence and the aims of the management of the enterprise. Many budget styles exit, each with a different purpose. This paper introduces the new generation budgeting system – Activity-Based Budgeting (ABB) which has gained popularity over the last few years because of its ability to link activities to expenses, giving executives a better understanding of the full costs of service and resource allocation. Activity-Based Budgeting is an outgrowth of Activity-Based Costing (ABC) and is similar to zero-based budgeting. There are many publications about the advantages of activity-based budgeting and its application in the management of activity of organizations. But there is a problem: we lack deeper analysis of application of this model and more detailed research in the agricultural sector. Under current complicated economic conditions, characterised by growing inflation, decreasing sales of products, increasing activity costs and many other reasons influencing the agricultural activity, the activity-based budgeting can be treated as a preventive means, being able to coordinate and balance all spheres of activity of the enterprise.

The aim of the paper – to introduce the activity-based budgeting as an important means of planning and coordination of activity of agricultural enterprise and the alternative to the cost-effective activity.

The object of the paper is the process of activity planning and control of the agricultural enterprise.

The methods of investigation. In the first part of the paper, the efficiency of activity-based budgeting (ABB) is analyzed in theoretical aspect, by employment of the methods of scientific analysis. In the second part, ABB model of agricultural enterprise is supplied which could be put into practice, therefore having adapted it by the managers of the enterprise in the management environment of activity, developed by them. The results of research and their interpretation are supplied in the third part of the paper.
Materials and Methods

Materials and Methods of Activity-Based Budgeting (ABB)

In the scientific literature many different opinions are supplied about the budgeting methods, their application and utility for organizations. There are observable tendencies to criticize the traditional budgeting system. Traditional budgeting system does not work in many organizations because the process is used as an agent of restrictive type of control. In reality this does not mean that the tool is no good only that it isn’t being used properly. The difference is that new approaches to budgeting require a more strategic approach. The conceptual model of Activity-Based Budgeting was codified by R. Kaplan and Robin Cooper in Cost and Effect (Harvard Business School Press, 1998). The most of scientists support the opinion that the new budgeting must become a strategic continuous improvement process rather than an operational control tool (Chr. Babbini (1999), Ch.T. Horngren (2004), G. Steven (2007), J.M. Shane (2005), G. Cokins (2008) and other). The majority of Lithuanian enterprises apply the traditional budgeting methods in planning and management of their activity (G. Kalčinskaitė (2004, 2005), V. Jagminas (2004) and others). However, the macroeconomic environment in Lithuania, sharp competition between the organizations and striving to keep their market positions encourage the managers of the enterprises to look for more improved means of planning of their activity.

In the process of analysis of scientific materials it was noticed that Activity-Based Budgeting really has many advantages in comparison with the traditional company budgeting system. In the case of traditional budgeting system, the constant disputes and negotiations between the managers and the directors do not make any substantial changes to the existing situation - the budget of the past year is rarely reviewed. This is a sore point, as in the process of solving of production effectiveness and rational use of resources problems, many questions arise. When applying the Activity-Based Budgeting method, the managers have to plan the resources of raw materials. First of all, the managers suppose the approximate production and sales volumes for the forthcoming periods. Under such system all activities developed by the enterprise shall be forecasted. ABB provides more information to the managers about the variable medium and long-term development tendencies of the fixed costs. In other words, the fixed costs are the uniform costs, as the decisions of the managers and the managers themselves can give a more flexible response to the changing production of raw materials and the environment.

The group of scientists from UK (L. Liu, J. Martin, J. Robinson) treats the Activity-Based Budgeting (ABB) as the converse method to Activity-Based Costing (ABC) (see Figure 1).

Figure 1. Differences in model design specifications between ABC and ABB (Liu et al., 2002).
The Activity-Based Budgeting (ABB) model was designed on the basis of ABC in reverse. In summary, ABB holds promise as a solution to the faults and frustrations of traditional budgeting methods:
1) traditional budgets don't identify waste; ABB exposes non value costs;
2) traditional budgets focus on workers; ABB focuses on workload;
3) traditional budgets focus on division cost; ABB also focuses on process cost;
4) traditional budgets focus on fixed versus variable costs; ABB also focuses on used versus unused capacity;
5) traditional budgets measure effect; ABB measures root cause.

After evaluation of the advantages of Activity-based budgeting in the enterprise in general, it is interesting to find out what methodological consistent patterns of budgeting are developed in the agricultural enterprises. Based on the studies of scientists (White, 2007), G.L. Greaser, J.K. Harper (1994), D. Doye, R. Saho (2005), broad tendencies of application of the traditional budgeting systems are observed. Agricultural economics specialists are maintaining that enterprise budgets are designed to provide a decision framework for short- and long-range economics analyses of production agriculture. Enterprise budgeting system assists in understanding the costs and returns of a production activity, identifying potential sources of risk, and evaluating alternatives. Knowledge of budgeting and the ability to use them help producers make sound business decisions.

The main uses of an agricultural enterprise budget are:
1) clearly identifying all of the inputs needed to produce that enterprise;
2) easily identifying top 5 expenses for cost control management;
3) which helps to determine potential changes in the operation;
4) determining how much revenue can be generated from the enterprise;
5) Breakeven analysis for price and yield.

According to aforementioned main uses, the budgeting system of agricultural enterprises does not discover the cause-effect relationships, on identifying leading and lagging measures. To predict financial results more accurately, managers must be confident about their productions of operational metrics. So, the activity-based budgeting model offers an in-depth model for improving planning, budgeting and general management in agricultural enterprises.

Activity-Based Budgeting (ABB) application on agricultural enterprise

The rural economy specialists believe that the enterprises budgets represent estimates of income, costs, and profits associated with production of agricultural products. The information contained in the enterprise budgets can be used by agricultural producers, financial institutions and over making decisions in the food and fibre industry.

Classical model of enterprise budgeting system should be prepared with specific objectives. G.L. Greaser, and J.K. Harper are of the opinion that “budgets can be used to: 1) itemize the income received for an enterprise; 2) list the inputs and production practices required by an enterprise; 3) evaluate the efficiency of farm enterprises; 4) estimate benefits and costs for major changes in production practices; 5) provide the basis for a total farm plan; 6) support applications for credit; 6) inform no farmers of the costs incurred in producing food and fibre crops”. In fact, these aims of use of the budgets are reasoned and sound; however, it would be expedient to closer relate the costs incurred by the agricultural enterprise with the processes in the enterprise. Clear relations between the costs and processes enable better control and planning of the enterprise resources (land, labour, equipment, etc.). Establishment and assignment of variable, fixed costs to the definite products and Breakeven analysis give the particular results which shall be accepted and supplied as the fact. And application of the principles of Activity-Based Budgeting provides wider opportunities of management and control of agricultural activity. Growing complication of economic situation any additional information obtained from the budgets is useful for further development of the enterprise activity and for reengineering process.

Hence, analyzing the theoretical aspects of Activity-Based Budgeting model, we can notice that accumulation of costs first of all is related to the activities of the enterprise. There is a direct dependence between the resources and the incurred costs. In order to clarify such dependence it is recommended to split the big enterprises into smaller, easier managed units, so called cost centres. The cost centre can be defined as the function or subdivision of the enterprise, being able to take the corresponding solutions, to control the resources and accept responsibility for taken solutions and for achieved results. Each of above mentioned cost centres is treated as an independent activity of the enterprise. Such splitting of activity of the enterprise allows the directors and the managers to control the corresponding income and the cost flows better. It is possible to make the value chain
from the cost centres (see Figure 2). That demonstrates which activities of the enterprise contribute to the value of the created product and which does not. It could be

![Figure 2. The value chain of the enterprise.](image)

As it was mentioned, it is very important to identify the enterprise activities, and to measure the enterprise resources and output. The enterprise activities and resources can be direct and indirect. The direct activities are such that directly impact the product. The indirect activities just support necessary creation of the product, as well as some of them create the certain reaction with respect to the product. The direct resources are necessary for the maintenance of the direct activities, while the same resources are indirectly used for obtaining of the other resources. In the agricultural enterprise, the labour, forage, premises/land administration, etc., create the costs which can be related to corresponding activity. Hereby the way is defined, how the corresponding activities create the costs and how the necessary resources are used in accordance with the assigned criterion.

The agricultural enterprise can be one-branch and multi-branch (it can develop several activities, for example, dairying, stockbreeding, and the plant cultivation). Both one and the other types of the enterprises can apply ABB. In Figure 3, the algorithm of application of Activity-Based Budgeting method in the agricultural enterprise is supplied. The steps of this algorithm could be as follow:

1) the supplied organizational structure of the enterprise shall be clear (hierarchy, subordination connections of personnel);
2) establishment of the cost centres (stockbreeding, plant cultivation or dairying activities);
3) determination of costs being accumulated in the cost centres;
4) establishment of relation between the costs and the processes in the enterprise.

The managers of agricultural enterprises should harmonize traditional cost and budgetary view on a vertical alignment, whereas work is along a horizontal axis and in so doing its have not only lost sight of the true (see Figure 3). The vertical alignments show the costs directions towards the enterprise activities (having determined theretofore the cost bearers and their volumes), and the horizontal alignment – the structure of processes of the enterprise. Process moves across the functions in the enterprise. Activity-Based Budgeting address these basic truths. With ABB resources are linked to the level of activity undertaken and the efficiency with which it is performed. ABB uses the driver volume of major activity drivers as the basis of forecast activity levels and efficiency improvement is measured and forecast as a reduction in the Unit Driver Costs. ABB captures multiple functional inputs to both individual activities and to a workflow.
Thus the Activity-Based Budgeting model is suitable for the agricultural enterprises, not only managing the resources, but also endeavouring at concretization of striving for strategic objectives. According to this model to each activity of the enterprise the tasks and solutions can be assigned, which that activities will enable to take. Due to employment of ABB methods, the participant of every activity will know what to do and how to do, which resources and how much of them should be used in pursuance of the set tasks.

Results and Discussion

This paper presents the advantages of ABB and the possibility to apply this model in the agricultural enterprises. It may be questioned whether the Activity-Based budgeting system will be useful for the enterprise or it will just increase the costs of activity. The answer will depend on the managers of the enterprises, responsibly evaluating the possibilities and aims of their companies, and their knowledge of where they want to find themselves with the enterprises they run. We should agree that it is difficult to manage the enterprise without the budget. CFO Research Services (2006) polled the enterprises about the alternative budgeting methods. This survey shows that the managers of the companies realize the significance of budgeting. It is important to understand that the new budgeting model will not solve the problems of the enterprise. First of all it is necessary to review the company processes, strategy, objectives, and tasks. Moreover, the results of the current year should be compared not only with the last year, but also with the gains of the competitors. Thus the reasoned action plans of how to reach the particular goals would be drawn. So, in my opinion, we should not be afraid of experiments, as the more precise forecast of the results will influence not only the quantitative (products volumes, sales, income, profit, etc.), but also qualitative (motivation of the employees, competence, etc.) indexes.

Conclusions

1. Based on scientific research, application of Activity-Based Budgeting (ABB) in the agricultural enterprises could be an alternative means against the variable and changing economical and business conditions.
2. Contrary to the traditional budgeting models, ABB can help to establish the connections between the incurred costs and the company processes.
3. The ABB model explicitly emphasizes and links operational performance with financial results. This model encompasses the demand for product services, related activity requirements, resource requirements, capacity requirements, and interrelationships.
4. Without the preparation of an Activity-Based Budget many managers are paralyzed into defending the status quo.

References