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Budget Monitoring of Agricultural Enterprises

Introduction

At the present stage of transformation and reformation of national economy the development of business structures largely depends on the use of scientifically reasonable management technologies and construction of effective control system on enterprises. One of the most efficient management technologies for today is budgeting, which involves the development, implementation and analysis of budgets at an enterprise and helps optimize resource flows, provide economy, improve cash management, tighten fiscal discipline, promote the level of investment attractiveness and competitiveness of enterprise.

A primary goal of budgeting is the concordance of operative and perspective plans, coordination between different divisions of enterprise; working out general aims of production in detail and bringing them to the management by the various centers of responsibility; production management; promotion of efficient managers and staff of enterprise; determination of future parameters of economic activity; the periodic comparison of current performances with the plan.

Lately enterprises use the system of the budgetary planning (budgeting), which is implemented in order to save financial resources, cut back nonproductive costs, increase flexibility in management and control over production cost and also improve the accuracy targets.

Research Goals, Tasks, Objects of and of Methods

A research aim is to reveal features of budgeting of agricultural enterprises in Ukraine as one of mechanisms for improving financial management and budget monitoring. Implementation of this goal is associated with the solution to the following *tasks*:

- determination of essence of budgeting as an instrument of operative financial management;
- study of the typical system of enterprise budgets;

- research of features of budget formation of agricultural enterprises;
- consideration of budgeting as a tool for planning the process of financing, control over the state and changes in the financial resources of enterprise.

A research object is the mechanism of planning and monitoring financial and economic activity of agricultural enterprises in Ukraine. The following methods were used in the research: analytical, statistical, normative, formalization, observation etc.

Budgeting as an Instrument of Financial Management

Budgeting is a process of construction and implementation of the system of enterprise budgets, which has its goals determined by general corporate aims. It is a tool of financial management of enterprise. This process is performed in the certain sequence:

- building up budgets by all divisions;
- providing the only order of drawing up and passing budgets;
- co-ordination between subdivisions of enterprise in the process of developing budgets;
- structuring and validity of budget indexes;
- budget monitoring;
- uncovering the causes for deviation of actual results of activity from budgetary indexes;
- making reasonable management decisions.

Usually budgets are developed within the current planning, i.e. the strategy of development is chosen and according to it the annual plan of actions is formed. Then concerning the annual plan the tactical plans of operating are formed for a month and a week. In the cases of substantial changes, when an enterprise introduces the new technologies, launches a new type of product or equipment into production, budgets are developed for a longer period of time.

Unlike strategy which determines development of enterprise finances for a long period of time, operative plans are worked out for a short period. In practice of corporations of the USA – for five years, in Japan – for two-three years, in Ukraine – for a year [Mamchur 2006, p. 81]. Such operative plans include the detailed working-out of the programs of scientific researches, marketing, production indexes and logistical support for a company on the whole and for each division. The basic links of operative plans are tactical plans which show by themselves the detailed specification of aims and tasks of operative plans. They are compiled on the basis of information about the availability of orders, provision of material resources, degree of load capacity with regard to deadlines for each order. Thus the tactical plans of production

foresee expenditure on reconstruction and replacement of production capacities, training the workforce. Plans of sales are indexes of export of products, licensing.

Coordination of on-going activity takes place by means of tactical plans thus, if in case of deviation from the put tasks in one period it could be possible to attain tasks set in an annual plan due to more intensive work in other period. An annual plan is adjusted or completely changed only when implementation of the put tasks becomes impossible through the changes of external and internal environment of enterprise, and cannot be provided with corresponding tactical plans. This is done in order not to disrupt the implementation of the strategic plans of enterprise.

Operative plans are implemented through the budgets, which are drawn up in every separate division – center of responsibility, and then erected in a basic budget of an enterprise as a whole. A budget is formed on the basis of sales forecast which is a pre-condition for achieving the planned financial performances in the strategy. Moreover, the systematic changes of internal and external environment of enterprise require three options for the same budget: worst, average and better.

Typical System of Budgets of Enterprise

Based on the fact that budgeting is a tool of financial management, which, in turn, is one of the systems of general structure of management, three constituents of this concept should be taken into account: methodology, organization and automation.

Methodology of budgeting assumes that the current plans and actions as to their implementation must meet the global development objectives and long-term strategy of enterprise. Therefore budgets are set on certain methodical charts [Savchuk 2001, p. 352]. Different predictions are served as a starting point, namely: predictions of sales and availability of sufficient resources. After that the fundamental limited factor which restricts the activity of enterprise and impacts on decision-making is determined. Such limitation can be both external (for example, market demand) and internal (availability of resources). For agricultural enterprises the basic limited factor is land. For limitations, which should and can be removed the principle possibility of such liquidation and charges needed for this purpose is determined.

A budgetary structure provides for budgets of operational, investment and financial activities; a basic budget which contains the generalized information, and also budgets of structural divisions, composition of which depends on the organizational structure of enterprise. A basic budget of enterprise is coordinated

between all divisions by the plan of work of enterprise on the whole. It consolidates the information from operating and financial budgets, the composition of which an enterprise determines itself.

For productive enterprises, including agricultural ones, a standard set of budgets is as follows:

1. Operating budgets:
 - budget of sales;
 - budget of production;
 - budget of inventory;
 - budget of direct material costs;
 - budget of general production costs;
 - budget of direct labor costs;
 - budget of commercial costs;
 - budget of general and management charges.
2. Financial budgets:
 - budget of credit funds;
 - budget of tax payments;
 - budget of capital investments;
 - budget of revenues and charges;
 - budget of cash flow;
 - current balance.

Depending on the methods of building up budgets, flexible and fixed budgets are distinguished. When preparing fixed budgets figures do not depend on the parameters of basic activity (e.g., budget costs for labor management, budget costs for scientific and research work, budget costs for advertising), that is why these budgets are used for planning costs, which are partly regulated and are not influenced by the level of output.

When preparing flexible budgets figures depend on the indexes of enterprise activity (e.g. on the level of output). A flexible budget is suitable for the centers of the fully managed costs, and also for the centers of revenues, as it shows how change in the level of output can influence costs or revenues. Revenues and costs for basic materials are planned following a formula of flexible budget.

Formation of Budgets of Agrarian Enterprise

Introduction of budgeting into agricultural enterprises, unlike other productive enterprises, has several features predefined by technology of agricultural production. They include: the use of land as the basic limiting factor, seasonality of production, dependence on natural and climatic conditions, availability of biological assets and others. In this regard the formation of budgets is suggested to begin with the budgets of crop and livestock production (Figure 1).

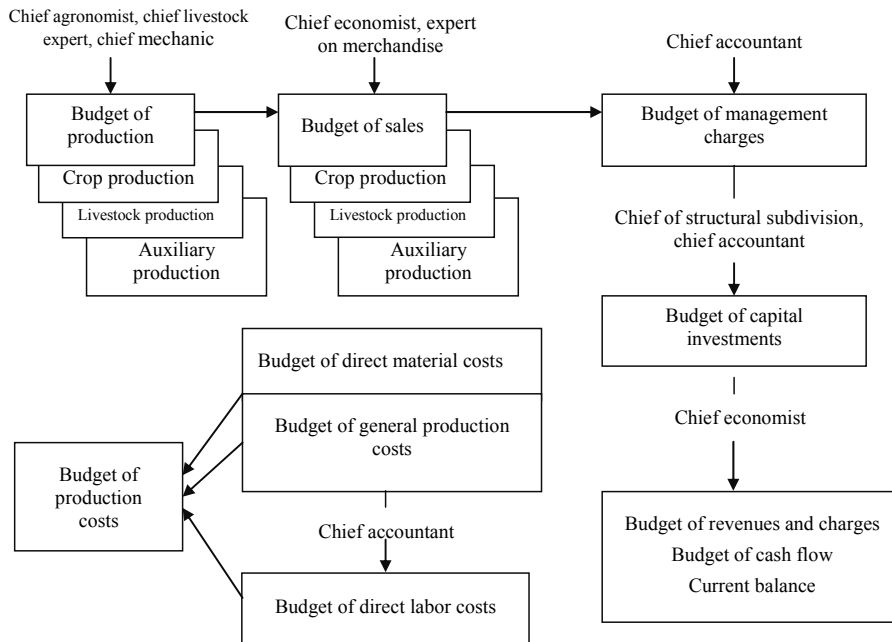


Figure 1
Chart of Budget Formation of Agricultural Enterprise
Source: Authors' presentation.

The researches revealed other features of budget formation, peculiar only to agricultural enterprises. The relationship between crop and livestock production foresees preliminary calculation of sowing acreage and plan of the use of feed crops for a budgetary period, after that a plan of acreage for other crops is made. All further calculations in the sphere of crop and livestock production are carried in parallel. Not all manufactured products are reflected in the sales budget, some of them will remain for internal use. The budget of production requires the development of auxiliary plans – sowing areas, turnover of herd and poultry, annual output of milk and others. The budget of production costs in plant-growing includes some costs of last year.

It is expedient to carry out budgeting in three stages: *preliminary* – determination of projected macroeconomic indexes; justification of the potential consumers of products of enterprise and potential suppliers of raw material; calculation of size of supplies needed for the permanent work of enterprise, and also stocks of the complete products and commodity-material values, work in progress; analysis of production capacities; *basic* – formation of budgets of production and sales of enterprise, and also budget of purchase of raw materials, energy resources; calculation of profitability and revenue forecasts from all types of activities; formation of budget of revenue and expenditures; forecast of cash flow. *The last*

stage is the calculation and analysis of the projected financial statements. Exactly after this the management must decide whether to accept the general budget or specify the plans.

Analysis of Current Activity of Enterprise and Budget Monitoring

Budgeting is not only the instrument of planning the process of financing, but also control instrument over the state and changes in the financial resources of enterprise. Therefore, along with the budgets for the next period it is expedient to make reports on budget performance for the previous period, as well as to compare planned and actual indexes. According to the results of comparison the analysis of variance is carried out, namely: the level of variance of actual indexes from planned ones is estimated and reasons of their origin are investigated. Thus, variance can be:

- negative, when actual indexes are below planned performance indicators;
- positive, when actual indexes are higher than planned performance indicators.

Plan-fact analysis can be conducted for all basic budgets. If there is a necessity for more detailed study of the causes for deviations, a plan-fact analysis is conducted even for individual operating budgets. In addition, it can be done both for an enterprise on the whole and for specific businesses included in its composition. In any case the choice of objects of a plan-fact analysis is an internal affair of each individual enterprise and depends only on the goal of budgeting set by management.

Basic elements of a plan-fact of analysis are:

- objects of analysis are budgets of structural divisions;
- subjects of analysis are separate descriptions of the state of budgets (limits and standards which are determined directly on each individual enterprise);
- technology of analysis is realization of procedures essential for identifying deviations of actual indexes from planned ones.

In the process of analysis of current activity of enterprise and budget monitoring the following constituents can be distinguished:

- appointment of agents responsible for implementation of items of enterprise budget;
- collection of information about economic activity of enterprise;
- determination of control indexes to analyze budget implementation;
- comparison of planned and actual performance indicators;

- identification and analysis of variances and their causes (change in the position of enterprise at the market, increase in prices on raw materials or energy supplies, change in production volume, taxes, force-majeure, incompetence of workers of planning services, et cetera);
- decision-making about adjustment of budget or more strict control over its implementation (Figure 2).

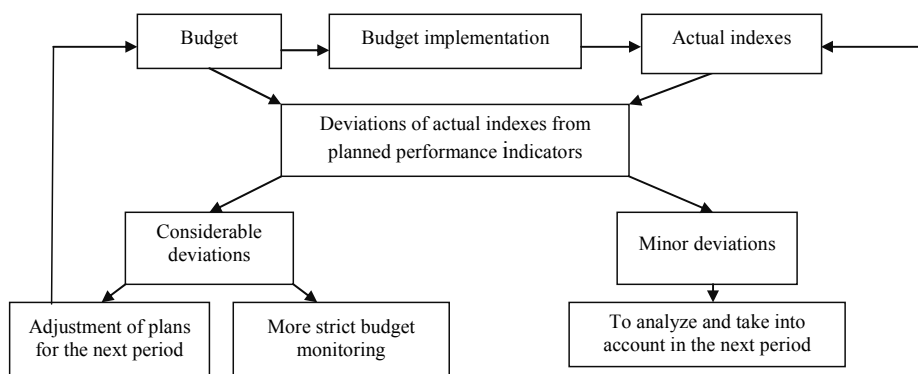


Figure 2
Chart of Estimation of Deviations During Realization of Plan-Fact Analysis
Source: Authors' presentation.

Monitoring of budget revenue must be based on the analysis of composite plans of marketing, namely: on the analysis of marketing charges, analysis of sales, marketing audit. It will allow to compare the actual progress in sales with the indicators planned for this period of time. Analysis of marketing charges allows to estimate cost efficiency of such factors, as promotional activities, sales channels, sales territory, different ways of sales, various groups of products. Analysis of sales is conducted to assess the efficiency of marketing strategy. The goal of marketing audit is forming a base for the future planning of sales activity of enterprise on the basis of critical assessment of sales objective of enterprise.

Monitoring the observance of budget expenditure is crucial as efficiency of economic activity of enterprise depends largely exactly on it. This type of monitoring involves assessment of activity of individual subdivisions of enterprise and organization as a whole.

Before analyzing deviations of actual performance indicators from the planned ones, it is expedient to adjust budgetary data in accordance with an actual output. A flexible budget (variable budget) which provides the projected data for the different levels of production within the normal level of business activity is used with this goal.

Thus, not all specialists in the sphere of budgeting feel the need to analyze budget execution on the basis of the adjusted output. So V.Y. Hrutsky, V.V. Garmayunov do not consider analysis of budget execution [Hrutsky 2002, p. 278]. While K.V. Schiborsch reveals methodology of plan-fact analysis in detail and conducts comparison of actual and budgetary indicators [Drury 1997, p. 315–504]. V.P. Savchuk also indicates the necessity of the use of flexible budget [Savchuk 2001, p. 168].

At the same time foreign specialists underline that in any case it is not expedient to compare indexes relating to the different production volumes. Namely, K. Drury notes that “... when monitoring and regulating costs it is very important to compare actual and projected costs for the same volume of output” [Drury 1997, p. 52].

Thus, a flexible budget is the instrument of the exact measuring of the produced work on an enterprise.

Many costs are variable and, thus, they change when the level of activity differs from the budgeted level. The manager expresses wrong criticism saying that he has high amount of costs in the case when such costs result from increase in output. And vice versa, if the level of activity below planned, it is expedient to expect lower costs, and thus the initial budget should be changed in order to have the opportunity to reflect this cost reduction. A variance report, based on a flexible budget, compares actual results with expenses budgeted for the actual level of activity.

The key points of flexible budget are:

1. A flexible budget is set at the beginning of period on the basis of the preliminary calculated level of production, it is an initial budget.
2. Then it changes to meet the actual level of activity.
3. The result is compared with actual expenditures, deviations are recorded and analyzed.

The features of budget monitoring on the basis of flexible budgets are:

- a division into variable and fixed costs is on the basis of methodology;
- budgetary indexes are adjusted at first, coming from an actual output for the budget period, then their implementation is monitored;
- variable costs are included in the adjusted budget in accordance with the cost standards per unit of products;
- the value of variable charges in the adjusted budget is determined by multiplying standards of articles by actual output;
- fixed costs are transferred from a basic budget into flexible without changes.

The formula of flexible budget is:

$$C = (C_1 / PO_b) O_a + C_{fx}$$

where:

C is amount of budget costs, UAH;

C_1 are costs of basic budget for the 1st article of variable expenses, UAH;

PO_b is production output in natural units on a basic budget, *unit*;

PO_a is actual production output in natural units for a budgetary period, *unit*;

C_{fx} is the amount of fixed budget costs, UAH.

Using formula 1 any budget of enterprise as a whole or of its divisions can be applied to the actual level of production output. Thus deviation of actual costs from budgetary ones is adjusted in accordance with the changes in production output, only after it the deviations caused by other factors are analyzed.

Analysis of break-even budgets is the formation of such indexes of profit and expenses at which an enterprise can cover its costs without income, i.e. the amount of fixed and variable costs in a break-even point equals the profit of enterprise. In the system of financial management on the basis of budgeting determination of critical ratio of sales revenue from production output allows to get an answer to the following questions: whether the possibility of break-even work of enterprise increases or decreases in a budgetary period, whether introduction of new technologies and production of new products are compensated.

It should be noted that it makes no sense to produce a particular type of products in two cases:

- firstly, when an enterprise has a smaller package of orders for certain products than their value in the critical point of sales (break-even point);
- secondly, when an enterprise must sell the whole production volume to cover fixed costs.

The basic elements of CVP-analysis are a profit from sales, variable costs per unit of output, fixed costs for the certain interval of time, a target revenue of budgetary period. The results of CVP-analysis are: a break-even point, target sales volume, operating leverage, financial security. The calculation is made for each production.

The next important step of budget monitoring and analysis is *determination of those costs, which are subject to adjusting*, because not all costs can be influenced with the aim of their diminishing. It is expedient to conduct detailed analysis of deviations exactly on those expenses which are regulated (payments to primary and support staff, costs of raw materials, maintenance and electricity).

When monitoring it is important to set the limit of deviations, thus, only the most significant costs should be controlled. So V.Y. Hrutsky and V.V. Gamayunov consider that "... there is no sense to reduce costs the share of which in the total sales is less than 0.5%. Reducing these costs even twice will not help an enter-

prise significantly increase profitability. Conversely, if any resource accounts for half the cost of product, its savings of 5.0% can significantly affect the overall profitability of the business... Today most businesses are not able to control those costs, the share of which is less than 2.0% of sales” [Hrutsky 2002, p. 67].

According to Jae K. Shim and Joel G. Siegel “... deviation is not significant, when it is less than 5.0%, but 10% deviation is controlled only in companies with stringent standards” [Shim 2001, p. 98]. A rejection can be set in terms of value, in percentage or in terms of production in accordance with maintenance of the budgetary article and its influence on the accounting center.

The final stage of budget implementation is *an analysis of the causes for deviations*. So K.V. Schiborsch provides methodology of analysis of budget implementation based on vertical and horizontal factor analysis, calculation of the final effect [Schiborsch 2004, p. 315–504]. S. Kovtun analyzes deviations by the cost of direct materials, labor and by total production costs [Kovtun 2005, p. 304–307]. The total rejection of all the above costs is determined as the difference between actual and budgetary costs in the relevant articles.

It is much more difficult to analyze variations of the actual profit and the profit planned in the budget, as it is necessary to consider the impact of change in the amount of sales and costs. Such approach can be suggested for detailed analysis of deviations of net income (Figure 3).

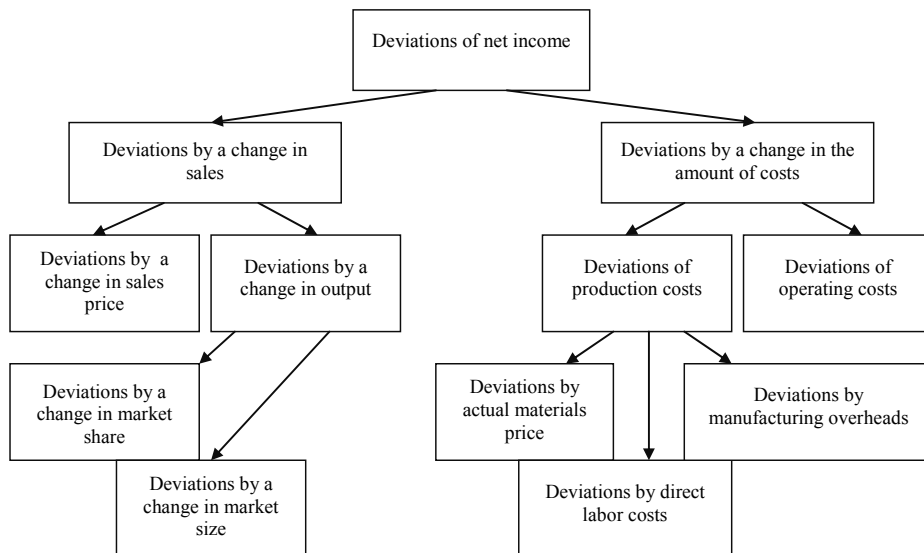


Figure 3
Detailed Analysis of Deviations of the Net Income
Source: Authors' presentation.

Deviations occurred in the process of budget implementation must be regulated, i.e. they are subject to managerial influence in achieving this goal. Thus three approaches to implementing control system should be distinguished:

- simple analysis of variance;
- analysis of variance, focused on the next management decisions;
- a strategic approach to the analysis of variance.

Conclusions

1. In Ukraine the properly built system of budgeting of agricultural enterprises is practically absent, at the same time, enterprises, where it is involved, have proven its effective functioning. Thus choice of objects of budgeting, types of budgets, approaches to their preparation, planning horizons are not standard solutions, and determined by every enterprise individually and depends on the goal of budgeting, structure of activity, management style and organization of control at the enterprise.
Enterprises, where budgeting is absent, conduct monitoring of the financial state, fixing the results of the activity which have already happened, thus not more frequently than one time per a quarter. It is impossible to correct financial ratios in such case and the whole system of financial management becomes incapacitated, it is also impossible to assess options for the future.
2. The feature of budgeting as a system that includes planning, analysis and control is that these functions are implemented in relation to the centers of responsibility and accounting, but not to the commodities and services, as it is done in the traditional accounting system. This fact allows to secure the personal liability for the costs of resources, profit and income.
3. It is expedient to carry out budgeting in three stages – preliminary, basic and final. The features of budget implementation of agricultural enterprises are land as basic limiting factor, seasonality of production, dependence on natural and climatic conditions, availability of biological assets and others.
4. As a constituent of financial management, budgeting is not only a tool for planning of financial process but also instrument of the control over the state and changes in the financial resources of enterprise. Therefore along with budgets for the coming period it is necessary to make reports on implementation of budgets for the previous period, and also to conduct comparison between planned and actual indexes. According to the results of comparison the analysis of variance is conducted. The most difficult is the analysis of deviations planned in the budget and actual profits. It is expedient to work out the analysis of variance in detail, taking into account the impact of changes in sales and costs.

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Kontrola budżetu w przedsiębiorstwach rolniczych

Streszczenie

Autorzy przedstawili analizę czynników kształtujących proces budżetowania w ukraińskich przedsiębiorstwach rolniczych, który pozwala na poprawę zarządzania finansami wraz z kontrolą budżetu. Znaczenie budżetowania jako instrumentu operacyjnego w zarządzaniu finansami jest kształtowane przez tradycyjny system budżetowania w przedsiębiorstwach, którego charakterystyka oraz proces tworzenia został zbadany. Autorzy skoncentrowali się na zagadnieniu związanym z wykorzystaniem budżetowania jako instrumentu wspierającego proces planowania finansowego, kontroli obecnego stanu oraz zmian źródeł finansowania przedsiębiorstw. Udowodniono, iż w przedsiębiorstwach, w których budżetowanie wraz z kontrolą jego wdrożenia było powszechnie stosowane, podniosło ono ekonomiczną efektywność w ujęciu finansowym i operacyjnym w relacji do środowiskowej i klimatycznej sfery ich lokalizacji.