THEORETICAL ISSUES OF ANALYSIS OF THE PRODUCTION COSTS AND SELF-COSTS IN AGRICULTURE ON THE BASIS OF FOREIGN EXPERIENCE

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Abstract: This article is devoted to the consideration of theoretical issues of analysis of the production costs and self-costs in agriculture on the basis of foreign experience.

Key words: production, expenses, self-cost, analysis, competitiveness, variable costs, fixed costs.

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Introduction. One of the most important issues in the Republic of Uzbekistan is the development of agriculture and on its basis providing the population with cheap and high quality products. Due to the significance of this problem the President of the Republic of Uzbekistan issued the Decree № 5199 "On measures on protecting the rights of farmers and land owners and radical changes of the system of the efficient use of the cultivated areas in agriculture" dated from October 9, 2017.

According to the document, this decree has been aimed at further support of agricultural producers, providing efficient use of the cultivated areas in agriculture by the farmers and land owners, and, as a result, raising the earnings of the land owners.

Thus, nowadays the formation of the economic competition environment among economic entities in the present period results in the necessity to use the advanced systems of calculation and analysis of production costs.

Literature review. In foreign countries, under modern conditions of performing management analysis, the decision-making process which possesses strategic and tactical peculiarities, relies on information on the farm's expenditures and financial performance. A number of modern systems play a significant role in performing these tasks. One of them is the "Standard-cost" system. The principles of the accounting and supervision within the established limits and possible deviations represent the basis of "Standard-cost" system.

Determination of expenditures by the standard method was first introduced in the USA at the beginning of the 20th century. This was one of the principles of the scientific management proposed by is F.Taylor, G. Emerson and other engineers. They gave impuls to the development of the standard accounting of expenditures. These scientists used standards to determine the single and the most appropriate way to use labour force and materials. These standards serve as the information source for accepting the plan of minimizing the degree of labour and consumption (Fayol, 1992). Ch. Harrison was the first who worked out and implemented in practice the system of expenses accounting of with the application of the standard method in the USA in 1911. His article named "Calculation of self-cost facilitates manufacturing" (1918) was

devoted not only to consideration of the importance of the previously existing "historical" system of calculating self-cost, but also provided a number of options to organize "Standard-cost" method.

The concept of "Standard-cost" proposed by Ch. Harrison is based on two ideas: all expenditures must be compared with the standards in accounting; while comparing expenditures with real standards the reasons for shifts determined and the responsibility centres should be taken into accounting (Harrison, 1996).

As "Standard-cost" represents the system for calculating expenses and determining self-cost, first it calculates self-cost of the goods (works, services) manufactured and then evaluates it with the help of the standard expenses. Afterwards it compares this self-cost with actually made expenses. The difference between the standard and actual expenditures is called dissociation. It is considered to be one of the important tools for the efficient management of the expenditures. In this process determination of the marginal revenue is considered to be a significant issue.

The marginal revenue method was used in the western countries as a new model for intensive development instead of previously existing model of the extensive development of manufacturing. The application of this model, in turn, classifies all expenditures into direct and indirect, general expenses and additional expenses, constant and variable expenditures and on this basis requires the solution of this starategic task of the management. From above-provided recommendations it is obvious that the main aim of "Direct-costing" system is general and variable expenses as expenses of the company connected with production volume. For cassification of the "Direct-costing" method not only its name, but also its aim is very important. While accepting various decisions at different levels of production the majority of people use **Cost-volume-profit (CVP) analysis** which is used to determine how changes in costs and volume affect a company's operating income and net income (Atkinson, 2005).

Having conducted a comprehensive research of the methods for financial analysis developed in foreign countries, a wide application of these methods in our country is a crucial issue. In this

regard, N.P. Lyubushin expressed the opinion which states that: "The analysis of the production self-cost is implemented in the following directions:

- Analysis of dynamics of the generalization indicators for self-cost indicators and the factors impacting this dynamics;

- Self-cost of the unit of production or self-cost of the production for 1 rouble;

- Analysis of the composition of expenses and their dynamics;

- Analysis of the production self-cost by the expenditure items;

- Analysis of the self-cost factors by the expenditure items;

- Determination of the reserve to reduce self-cost.

The analysis of the self-cost can be performed in the retrospective, operational and forecasting forms (Lyubushin, 1999). Thus, performing self-cost analysis the possibility to implement operational, preliminary and forecasting analysis facilitates determination of the self-cost reduction. Afterwards the measures to reduce a self-cost are developed and in this sphere the conditions necessary for making management decisions are created.

Discussion. When analyzing expenditures of economic entities a particular attention is paid to their structure. In particular, Professor O.V. Yefimova has proposed the following: "All expenses of the enterprise can conventionally be divided into two parts: variable expenses which change proportionally in relation to the production volume, and constant costs which remain unchanged in spite of the change in volume of the performance.

Variable expenses include direct material expenses, wages of the employees and deductions in relation to it. Moreover, under certain conditions variable expenses can also include the expenses on storage of goods in warehouses, as well as transportation and delivery expenses.

When variable expenses are calculated by a unit of production, it is usually implemented as comparatively variable expenses or the rate of variable expenses. Constant expenses usually include administrative and management expenditures, depreciation deductions, expenses related to the sale of goods, expenses related to marketing activities, other commercial, management or general expenses (Yefimova, 2002). It should be noted that expenses mainly impact on the profit indicators and as a result at calculating final indicators it plays an important role. Mentioning its

importance and using foreign experience in financial analysis of the foreign countries, it is recommended to calculate it by diving into certain blocks. The Russian economist-scientist V.V. Kovalev has expressed the following idea: "In this block the profitability ratio is calculated by the overall production and its some types on the basis of product sales income and profit indicators. In the first case product sales income and product sales profit are compared, in the second case – income received from sales of the certain product are compared (this division is considered to be appropriate if the domestic company performs its activities within the framework of financial analysis). In the accounting-analytical practice used both in our country and foreign countries it is possible to witness different variants of evaluating profitability from sales. Thereat it is considered which calculations have been taken as the basis for the profit indicator, however, in the majority of cases gross, operational or net profit indicators are used. In accordance with the established procedure three indicators of the profit from sales are calculated:

- Gross Profit Margin (GPM) is a financial metric used to assess a company's financial health and business model by revealing the proportion of money left over from revenues after accounting for the cost of goods sold (COGS). Gross profit margin, also known as gross margin, is calculated by dividing gross profit by revenues;

- Operating Income Margin (OIM)—also known as operating income margin, operating profit margin and return on sales (ROS)—is the ratio of operating income to net sales, usually presented in percent;

- Net profit margin is the ratio of net profits to revenues for a company or business segment. Typically expressed as a percentage, net profit margins show how much of each dollar collected by a company as revenue translates into profit. The equation to calculate net profit margin is: net margin = net profit / revenue.

$$GPM = \frac{\text{Gross profit}}{\text{Income received from sales}} = \frac{S - COGS}{S} \quad (1)$$

$$OIM = \frac{\text{Operational profit}}{\text{Income received from sales}} = \frac{S - COGS - OE}{S} \quad (2)$$

$$NPM = \frac{\text{Net profit}}{\text{Income received from sales}} = \frac{P_n}{S} \quad (3)$$

Here COGS –self-cost of the production sold;

OE- operational expenses (related to management and commerce) (Kovalev, 2005)."

When calculating these indicators self-cost of the manufactured goods makes an impact on the amount of profit. Therefore self-cost analysis deserves a particular attention and analysis of the factors affecting the profit is considered to be a crucial issue. From this point of view, economists-scientists L.V. Dontsova and N.A. Nikiforova have generalized above-mentioned factors and developed the following table (Table 1, Dontsova, 2008).

Table 1

Consolidated table of the factors affecting net profit   **in the reported period**

№	Indicators of factors	Amount	Impact
1.	Volume of goods (works, services) sold	-993	⊕
2.	Price change of the production sold	+3243,5	⊕
3.	Self-cost of goods (works, services) sold	+6097	⊕
4.	Commercial expenses	-4920,5	⊕
5.	Management expenses	-2888	⊕
6.	Interest receivable	-3044	⊕
7.	Interest payable	+1086	⊕
8.	Income participating in other companies	+3750	⊕
9.	Income from the fixed assets sale	+149	⊕
10.	Expenses on asset transactions	+1073	⊕
11.	Other income	+1109	⊕
12.	Other expenses	-7760	⊕
13.	Deferred tax assets	+2150	⊕
14.	Deferred tax liabilities	-1620	⊕
15.	Profit tax	+1667	⊕
	Total impact of factors	-901	⊕

As we can see from this table, various factors made different impact. In particular, self-cost of goods (works, services) sold, income participating in other companies, deferred tax assets made a

positive effect while commercial expenses and others showed a negative impact. Thus, a particular attention must be paid to the factors of the significant impact.

Analysis of financial ratios is considered one of the factors influencing expenses. When financial ratio analysis is implemented the following indicators are taken into consideration: liquidity, profitability, labour force, market-related liquidity and structural factors of the company's capital. In turn, financial ratios are divided into two groups:

➢ Distribution ratios;
➢ Compliance ratios.
➢

Regarding distribution ratios the following structural indicators are analyzed: the share of fixed assets and current assets in the structure of the company's property, the share of tangible assets and cash in the structure of the total current assets, the share of equity funds and liabilities in the structure of the company's reserve sources.

Regarding compliance ratios, financial soundness, balance liquidity and company's profitability ratios are analyzed.

For example, financial soundness ratio represents mutual interrelation between company's tangible resources and coverage resources, balance liquidity ratio - relation between company's current assets and company's short-term liabilities.

It should be noted that financial ratios are widely used in financial analysis in practice of foreign countries. In certain counties the number of financial ratios may account for up to 80.

These indicators enable to perform comprehensive analysis of the financial conditions of the company.

Conclusion. Thus, it is necessary to develop appropriate conclusions on the basis of the stages of this analysis and work out the methodology for performing management analysis for farms.

Taking into consideration peculiarities of the farming entities it is possible to formulate the following conclusions:

1. Currently the financial-economic crisis ongoing in the world, as well the competition among companies have resulted in the fact that market participants have to sell their production at the price lower than its self-cost and under these circumstances the main aim is to get profit, and can be achieved through economizing expenses without making harm to the quality of this production. Cost cutting can be achieved due to attraction of reserves. In our opinion, when performing analysis of the self-cost of the plant breeding and cattle raising production, first of all, the following main factors must be taken into consideration: the type and complexity of the agriculture production, range and features of the production of plant breeding and cattle raising, completion of expenses, as well as expenditures made for the next year harvest, etc.

2. Management analysis at the farming entities starts with the verification of the indicators reflecting dynamics of change of the self-cost of the production of plant breeding and cattle raising, as well as the self-cost reduction of the main production due to the business-plan. Afterwards the factors impacting the increase or reduction of the production self-cost are studied. Threat, first self-cost of the farming plant-breeding production, then self-cost of cattle raising are analyzed.   Self-cost of the plant-breeding production can be influenced by two main factors: first, change of the amount of expenditures spent on one hectare of land, second, change of the crop productivity received from one hectare of land. Furthermore, from our point of view, other factors of influence can also be taken into consideration. For example, in plant-breeding the following factors must be taken into consideration: weather conditions, drought, frequent rains, various natural disasters, non-observance of agro-technical events and others.

3. Standard method of determining production self-cost at farming entities enables to organize production costs on the basis of the management analysis, to define and further use untapped reserves in the manufacturing on the basis of the analysis by farmers. In this respect, we believe, this method has unambiguous advantages in comparison with other methods. The following measures must be undertaken to provide an efficient use of this method: within the framework of farming entities to develop the range of types of crops, groups of cattle, as well as final

products on the basis of the standard calculation; working out standards on fixed production costs (fodder, mineral and organic fertilizers, main and supplementary materials, wages); timely formalization and accounting of the changes in active standards as well as further analysis.

4. A particular attention must be paid to changes of the production costs at farming entities. In addition, the issues of structural changes in the constant and variable expenses are also of a great importance. It should be noted that the total amount of the production cost can be changed upon any of the following:

Volume of production manufacturing;

Production structure;

Degree of relevant variable expenses by each production unit;

Amount of constant expenses.

The following measures should be undertaken to provide interconnection of «Expenses-volume-profit» and an accurate information on the basis of possible deviations and forecasts:

It is possible to precisely determine constant and variable expenses; expenses and the production degree from the sales of goods have a linear dependence; efficiency isn't changed inside active degree of the relevancy; variable expenses and price planned aren't changed during the period of time; production structure isn't changed during the reporting period; production volume and volume of sales are approximately equal each other.

5. In our opinion, in order to reveal the reasons for alienation between actual and standards expenses in the activity of farming entities it is necessary to analyze the accounting process as well as the reasons for these alientaion. If there are too many indicators in farming entities, it is recommended to use sampling method to analyze deviations existing in complicated manufacturing, plant-breeding, cattle- raising and processing of goods. Having analyzed the alienations existing only in the framework of the activity of farming entities, we have come to the conclusion that they can be classified into 3 categories: alienations on the expenses on fixed assets, alienations on the direct labour expenses and alienations on expenses on plant-breeding, cattle-raising and production processing from the overall production costs.

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