Improving the Organization of Accounting for Internal Production Divisions of Enterprises

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Abstract. The article discusses the problem of introducing management accounting into domestic practice. Which is of paramount importance due to the need to conduct in-depth studies of the economic nature, essence and content of management accounting, its fundamental theoretical foundations, for making informed management decisions.

Introduction

In the context of modernization, technical and technological equipment of the enterprise and its industries, special attention is paid to the management of its divisions. This is due to the fact that it is here that the main material, labor and financial resources of the enterprise are concentrated. For the purpose of effective business management, it is necessary to assess the contribution of each unit to the end result of the enterprise, the implementation mechanism of which is management accounting, reporting and analysis of their activities.

Management accounting makes it possible to objectively assess the financial results of the structural divisions of the enterprise, to identify the internal reserves of production, as well as the patterns of development of intra-production divisions in order to disseminate progressive experience and prevent the wasteful use of enterprise funds.

Management accounting in reality reflects the synergy of the business processes of a single enterprise, which ultimately enables the internal users of the enterprise to increase the efficiency of their work. Therefore, the management accounting system in a modern enterprise cannot be regarded as a separate instrument or a set of any specific functions. Based on the information of management accounting, reporting and analysis, the following parameters of intra-economic relations are calculated:

-setting internal prices for products;
-preparation of the budget of income and expenses of divisions;
-development and approval of production cost estimates;
-the obligations of the divisions to each other and to the enterprise;
-accounting income and expenses of divisions;
-accounting profit (loss) of divisions.

Management accounting is the same accounting for production costs and the calculation of production costs in the accounting system. In this case, the term "management accounting" should be understood as "accounting for management" of the enterprise. This point of view is shared by P.S. Bezrukikh, S.A. Stukov, and foreign authors Ch.T. Horngren, J. Foster.

From the point of view of A. Ibragimov, I. Ochilov, I. Kuziev, N. Rizaev: "The main task of management accounting and reporting in the corporate governance system is to ensure the collection, analysis and provision of information to the management of the enterprise for making the most rational decisions."

Kh. A. Ortikov gives the following definition of management accounting: “Management accounting is internal accounting, an accounting system aimed at improving the efficiency of an enterprise’s economic activity, at studying the past, present and future processes of procurement, production and implementation processes, developing management decisions and their implementation in order to solve tactical and strategic tasks for the whole enterprise and its structural divisions ".

R.D. Dusmuratov and D.U. Mamadiyarov believe that "Management accounting is a new interpretation of internal accounting adapted to the requirements of a market economy in the context of deepening economic reforms and liberalization of the economy".

"Management accounting is a subsystem of accounting, the information of which within the framework of one enterprise is used to manage and control activities." This point of view is shared by A.D. Sheremet, N.P. Kondrakov and S.M. Shapiguzov.

As A.Kh. Pardaev writes: "The purpose of management accounting is to provide the management of the enterprise and managers with the necessary information for making informed decisions".

M.A. Vakhrushina, S.A. Nikolaeva consider: "Organization of the accounting subsystem, as management accounting is an internal affair of this enterprise.

Summarizing the above opinions, in relation to the modern conditions of the domestic methodology of accounting and the enterprise of accounting work, management accounting, in our opinion, should be considered as an independent function of the enterprise management system in the aggregate of its divisions with the help of forecasting, planning, budgeting, accounting and analysis of enterprise activities.

Analysis and results

The result of the implementation of all stages of setting management accounting will be a system that will: reflect in reports indicators that are understandable to managers and owners; accounting will be conducted conveniently and continuously; information from different reports of the system will be comparable with each other; the number of reports will be sufficient to form the company's management strategy.

To organize and implement management accounting, you must clearly follow the stages of setting up and implementing management accounting (Fig. 1).

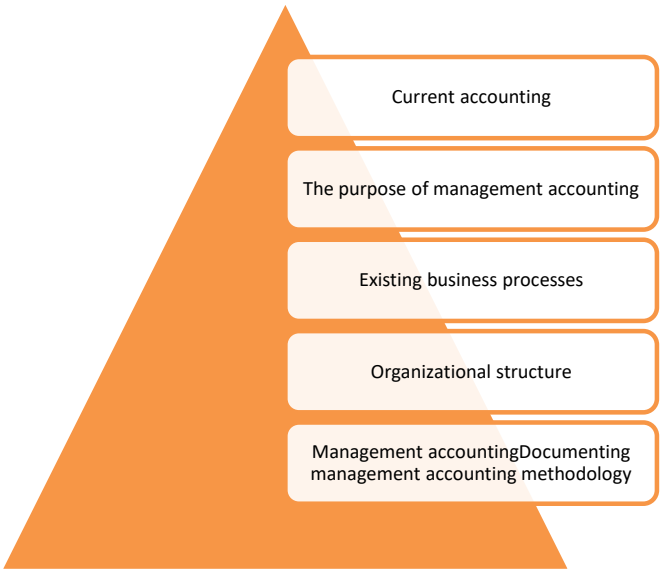

Figure 1. Stages of organizing management accounting

Discussion Regression Results

The use of certain techniques allows to increase the speed of implementation of management accounting automation systems and significantly optimize business management processes. Figure 2 shows 2 models of organizing the implementation of management accounting.

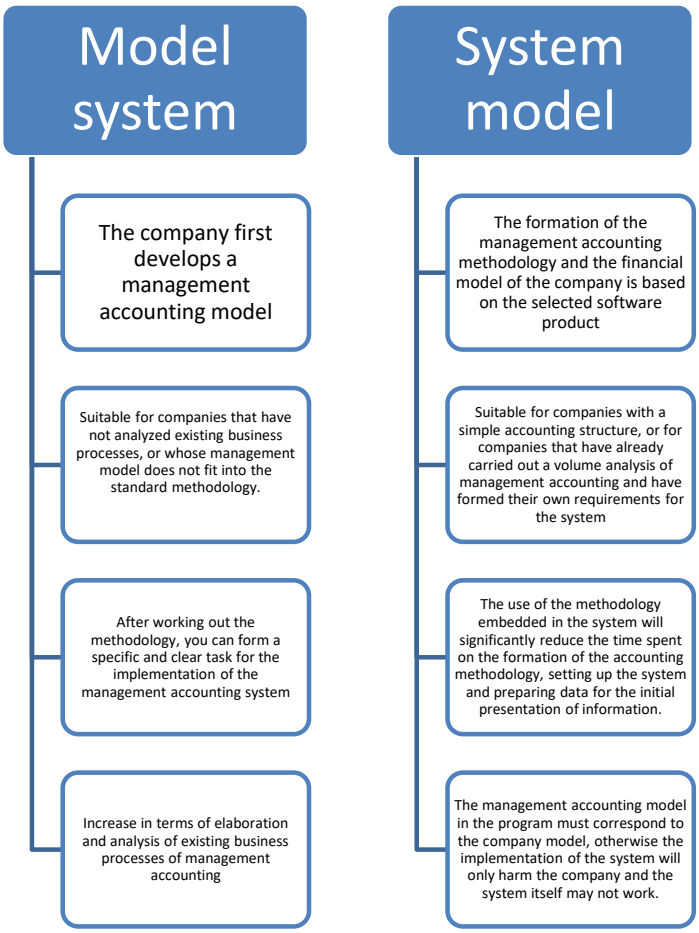

Figure 2. Models for organizing the implementation of management accounting

The use of these techniques allows you to test the capabilities of the future system, assess the compliance of its functionality with accounting purposes, form a list of system improvements and requirements for changing processes within the company.

Based on the results of studying the external and internal factors that determine the potential for the development of the project, the enterprise is also recommended to conduct an expert assessment and make a SWOT analysis of the project's prospects and possible strategies for the development of the enterprise.

For a SWOT analysis by an expert group, it is necessary to select the most important and critical factors, give a ranking of the assessment of the importance of the selected factors. Each parameter within the field "Strengths", "Weaknesses", "Opportunities", "Threats" is assessed on a five-point scale.

Table 1 shows the average estimates of the strengths and weaknesses, opportunities and

threats of the external environment in the framework of the enterprise and the planned implementation of the project.

Table 2. Assessment of SWOT-Analysis Factors

Strengths	Average rating
A mechanism for calculating the total cost of each product, based on structured accounting of information	
Cost allocation mechanism for each process	
Ready-made regulations for the work of personnel for each business process	
Weak sides	Average rating
Staff resistance to change	
High implementation difficulties	
Threats	Average rating
Excess of effort expended over utility	
Lack of necessary skills of employees for performing tasks, and as a result, the need for qualified specialists	
Short-term effect of implementation, the need maintaining the implemented changes throughout the existence of the company, as well as	
A sharp change in production processes due to changes in the range of products	
Possibilities	Average rating
The ability to take weighted management solutions based on the analysis of management reporting	
Finding ways to reduce costs	

Even with the choice of the techniques described above, implementation inaccuracies may arise. This is due to insufficient study and analysis of the current control system or the absence of formed requirements for the system. This is due to insufficient study and analysis of the current control system or the absence of formed requirements for the system. Possible errors during implementation and their impact on the operation of the system are shown in Fig. 3.

In addition to the listed errors in the implementation of the system, it should be borne in mind that over time, the company may change priorities in strategic management. Change the goals of management accounting. To avoid these mistakes and obtain objective information about the financial position of the company, it is necessary to carefully study each stage of the implementation of management accounting, especially the analysis of the current state. Then the accounting system will maximally correspond to the needs of managers and the goals of strategic management.

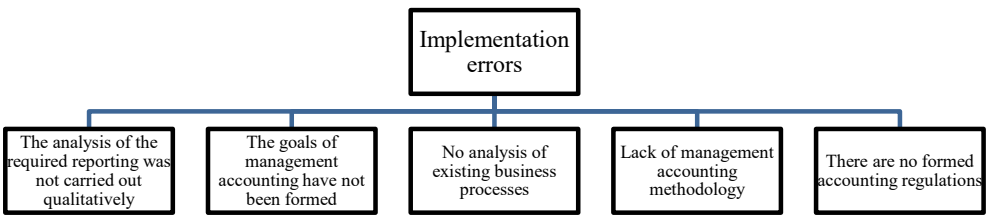

Figure 3. Possible errors in the implementation of management accounting

Conclusion

Here is an assessment of the impact of factors on the accounting profit of a transport company.

Table 2. Profit formation at the enterprise, million soums*

№	Indicators	2016 y.	2017y.	2018y.	2019 y.	2020y.
1	Income	80737	120987	157882	187521	
2	Expenses	80013	119983	155292	185156	
3	Financial results	724	1004	2592	2365	
4	Profit	393	586	2104	1814	

As a statistical method of identifying and measuring the influence of various factors on the dynamics of the profit of the transport enterprise UP "Uztemiryylmashtamir", we use correlation and regression analysis. Using this method of analysis, we will identify the degree and form of the analytical dependence of profit on each of the factors listed in Table 2 [2].

According to the results of the study, five main factors were selected in the factor model that actively affect the level of profit of products (denote Y) [4]: X1 - income, thousand.sum; X2 - expenses, thousand.sum; X3 – financial result, thousand.sum; X4 – number of employees, people; X5 - depreciation of fixed assets, %; X6 - the share of wages in total costs, %; Y - profit, thousand soums.

Table 3. Data for the construction of a correlation profit model of the "Uztemiryylmashtamir"

Indicators	Model designation	2016 y.	2017 y.	2018 y.	2019 y.	2020 y.
Income, thousand soums	X_1	80737	120987	157882	187521	207521
Expenses, thousand soums	X_2	80013	119983	155292	185156	205156
Financial result, thousand soums	X_3	724	1004	2592	2365	2365
Number of employees, people	X_4	1278	1084	1010	1058	1151
Depreciation of fixed assets,%	X_5	21058927	21598810	22081073	22581072	23231662
Share of wages in total costs,%	X_6	35	25	20	25	30
Profit, thousand soums	Y	393	586	2104	1814	2156

For the analysis, the annual information of the UP "Uztemiryylmashtamir" enterprise for 2016-2020 was collected. All the factors included in the model are linearly independent, but at the same time each of them has a certain impact on the annual profit. To verify these assumptions, paired correlation coefficients were calculated using the Statistica PPP, both between the factors and between the factor and the performance indicator [3]. The matrix of paired correlation coefficients characterizes the closeness of the relationship of factors with the effective indicator is presented in Table 3.

Table 4. Matrix of paired correlation coefficients

	X_1	X_2	X_3	X_4	X_5	X_6	Y
X_1	1	0,999967	0,882894	-0,53304	0,984988	-0,38997	0,906252
X_2		1	0,879037	-0,52943	0,985841	-0,38549	0,902957
X_3			1	-0,67726	0,818611	-0,60174	0,988203
X_4				1	-0,3966	0,981466	-0,5905
X_5					1	-0,24747	0,866892
X_6						1	-0,50942
Y							1

According to the data in Table 2, we see that there is the following negative inverse relationship between the factors:
- financial result (X3) and the number of employees and expenses (X4) - gx3x4 = - 0.68 strong inverse relationship;
- number of employees (X4) and depreciation of fixed assets, %; (X5) - rx6x5 = -0.3966 weak feedback;
- depreciation of fixed assets, %;(X5) and the share of wages in total costs, % (X6) - rx5x6 = -0.24747 weak feedback;
- expenses (X2) and the share of wages in total costs, % (X6) - rx2x6 = -0.38549;
- between income (X1) and the number of employees (X4) - rx1x4 = -0.38997 weak feedback; ;
– there is a weak feedback between expenses (X2) and the number of employees (X4) - rx2x4 = -0.38549;

An important step in constructing the multiple regression equation is the selection and inclusion of factor features. The complexity of forming a multiple regression model lies in the fact that many factorial features are dependent on one another. The close relationship between the factor features included in the model is called multicollinearity. One of the indicators for determining the presence of multicollinearity between features is the excess of paired correlation coefficients of 0.8. The elimination of multicollinearity is primarily due to the exclusion of one or more related independent variables from the regression model. The matrix shows that none of the factors are collinearly connected, therefore, it is not necessary to discard the factors. Based on the analysis, we considered that it is advisable to include all factors in the initial model, and then discard those that are not suitable. To do this, a step-by-step regression analysis is used with the gradual exclusion of insignificant factors.

The analysis shows that there is a negative inverse relationship between profit and the number of employees, the correlation coefficient ryx4 =- 0.5905. There is an inverse relationship between profit and the two factors identified, i.e. with an increase in the number of employees and the share of wages in total costs, profit decreases. That is, both factors have a negative impact on the profit of the Uztemiryylmashtamir .

To determine the characteristics of the effect of changes in the parameters Xi on the variation Y, a regression model is constructed. The parameters of the multiple regression equation are calculated by the least squares method. Using the "Statistica" PPP, a regression equation is obtained, which has the following form:

$$Y= -25291,8 - 0,02275 \cdot X_1 + 1,062722 \cdot X_3 - 0,5519 \cdot X_4 + 0,001304 \cdot X_5$$

Table 5. Checking the statistical model for statistical significance

Regression statistics								
Multiple R	0,909725							
R-square	0,847451							
Normalized R-square	0,810365							
Standard error	8,71457							
Observations	5							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	6	2914631	485771,9	48,006	2,318675			
Remainder	0	1518122	65535					
Total	6	2914631						
	Odds	Standard error	t-statistics	P-value	Bottom 95%	Top 95%	Bottom 95.0%	Top 95.0%
Y-intersection	-25291,8	0	65535	0,02574	-25291,7829	-25291,8	-25291,8	-25291,8
x1	-0,02275	0	65535	3,20215	-0,02274647	-0,0225	-0,0225	-0,0275
x3	1,062722	0	65535	2,45782	1,06272215	1,0622	1,0622	1,0622
x4	1,551904	0	65535	0,22578	-0,55190483	-0,5519	-0,5519	-0,5519
x5	0,001304	0	65535	2,1247	0,0013038	0,0013	0,0013	0,0013

At the final stage of the correlation and regression analysis, we will identify the influence of each factor attribute on the value of the effective attribute (the profit of the enterprise). The signs of the regression coefficients indicate the nature of the influence on the effective feature. So, in our case, an increase in the values of factors X2 - expenses, X4 - the number of employees, X5 - depreciation of fixed assets and X6 - the share of wages in total costs leads to a decrease in the profit of the enterprise, and an increase in factors X1 - income and X3 - financial result lead to an increase in the profit of the enterprise UP "Uztemiryylmashtamir".

As a result of the research, a multifactorial correlation model has been obtained that can be used to analyze the influence of factors on the level of risk of an economic entity, check current and prospective business plans, which will improve the quality of enterprise risk analysis and, consequently, increase their reliability and scientific validity.

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