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## **DEVELOPMENT OF METHODOLOGY OF ACCOUNTING AND ANALYSIS OF PRODUCTION COSTS AT INDUSTRIAL ENTERPRISES**

**Makhmudov Azamat Normuradovich,**

Candidate of Economic Sciences (PhD), Associate professor of  
Tashkent state University of Economics (Uzbekistan)  
azamat\_mahmudov69@mail.ru

**Abstract:** The article discusses the issues of improving the accounting and analysis of material and labor costs at enterprises in the corporate governance system. The influence of production technological processes on improving the efficiency of the enterprise has been investigated, proposals have been made and recommendations have been developed for improving the accounting and analysis of material and labor costs as part of the cost of production.

**Key words:** material costs, labor costs, technological processes, cost dynamics, production costs.

### **Introduction.**

In the context of market relations, the tasks of the accounting department in enterprises will also change: now accountants-economists will be engaged not only in documenting transactions related to economic activity, but also to analyze the data obtained, calculate prospects. In order to transition to such a system, it is desirable that the enterprise, first of all, has a properly organized management account.

In order to address the current economic situation in the practice of enterprises, the analysis of the status of cost accounting, product cost formation and management accounting on the example of a subsidiary of the railway transport system "Quyuv-mexanika zavodi" subsidiary company revealed the need to introduce alternative costing methods. In solving the above issues, it is important to organize and conduct the calculation and analysis of material and labor costs.

### **Analysis of the relevant literature.**

Some theoretical and methodological issues of improving the methodology of cost accounting and product costing in enterprises are the work of foreign economists H. Anderson, K. Drury [1], B. Needles [2], Ch. Horngren, Reese Dj., R.N. Anthony [3], CIS economists A.F. Aksenenko [4], M.A. Vakhrushina [5], N.D. Vrublevsky, T.P. Karpova, N.P. Kondrakov, I.A. Lamykin [6], V.F.Paliy [7], A.D.Sheremet, as well as economists of the Republic A.M.Jumanov [8], A.K.Ibragimov, A.A.Karimov, A.Kh.Pardaev [9], B It is reflected in the scientific and educational work of AA Khasanov [10], AI Alikulov [11], AB Djumanova [12], KB Urazov, RO Kholbekov and others. However, most of these scientific works do not fully cover the problems that arise in the context of modernization of the economy, that is, only some aspects of them are studied.

### **Research methodology.**

This article uses the analysis and synthesis of scientific knowledge, induction and deduction, systematic approach, statistical and financial analysis, as well as economic-mathematical methods.

### Analysis and results.

The organizational structure of the enterprise consists of complex structural units, and the production cycle consists of a number of stages. In addition, the diversity of the product range leads to changes in the composition of the units involved in the production process.

If the main production product is repaired or assembled wagons, in auxiliary production works such as spare parts, components, equipment repair, painting are carried out, and their costs are formed in separate departments, ie responsibility centers.

When all costs in the enterprise, regardless of their importance, are paid in full, the rules of separate accounting of costs by areas of activity serve as a basis for accounting for production costs and calculating the cost of production. More precisely, it is mandatory to account for and cover each cost of repairs, auxiliary farms, main and auxiliary industrial production units in the period to which it applies. Compliance with the above rules ensures optimal organization of cost accounting, objectivity and reliability of financial reporting.

On the basis of the Regulation of the Cabinet of Ministers of the Republic of Uzbekistan dated February 5, 1999 No 54 «On the structure of costs for production and sale of goods (works, services) and the order of formation of financial results» referred to. In accordance with this Regulation, the costs are described as follows:

1. Costs included in the cost of manufactured products:

- Direct and indirect material costs;
- Direct and indirect labor costs;
- Overhead costs of a production nature.

2. Periodic expenses:

- Sales costs;
- Administrative expenses;
- Other operating expenses and losses.

**Table 1. “Quyuv-mexanika zavodi” subsidiary company in 2018-2020 cost description analysis, thousand soums**

Indicators	Years			2018 of the year, %	2019 of the year, %
	2018 year	2019 year	2020 year		
Basic production costs	128 465 232	153 597 610	175 576 254	137	114
Current expenses	16 701 285	16 946 338	16 693 499	99,95	99
Financial operating expenses	932 354	487 807	97 876	10	20
<b>Total costs</b>	<b>146 098 871</b>	<b>171 031 755</b>	<b>192 367 629</b>	<b>132</b>	<b>112</b>

**Source.** Regulations on the circulation of documents and accounting in the subsidiary subsidiary company “Quyuv-mexanika zavodi” [16].

3. Expenses for financial activities:

- Interest expenses;
- Negative exchange rate differences;
- Revaluation of securities;
- Other expenses and losses on financial activities.

4. Emergency damages [13].

As can be seen from the table, a total of 146,098,871,000 soums were spent in 2018, 171,031,755,000 soums in 2019 and 192,367,629,000 soums in 2020. That is, in 2020, we can see that spending increased by 132% compared to 2018 and by 112% compared to 2019.

According to the organizational structure of the enterprise, the management apparatus begins with the head of the enterprise and his deputies. Each deputy is responsible for overseeing the work of several departments and divisions, depending on their area of responsibility.

**Table 2. Analysis of the factors influencing the change in material costs of PC “Quyuv-mexanika zavodi” subsidiary company**

Material costs and factors influencing their change	Years		
	2018	2019	2020
Material costs according to the plan, thousand soums	41 913 579	43 273 437	72 948 374
Material costs in the plan, recalculated on the volume and composition of the actual product, thousand soums	42 332 714	43 706 171	73 677 857
Actual material costs, thousand soums	46 570 643	49 174 360	80 163 048
Total change, including thousand soums:	4 657 064	5 900 923	7 214 674
Due to changes in production volumes	4 191 358	4 327 344	7 294 837
Due to changes in the structure of the product produced	-3 772 222	-3 894 609	-6 565 354
Due to changes in the composition of materials	4 237 929	5 468 189	6 485 191

*Source. Financial reporting data of the subsidiary company “Quyuv-mexanika zavodi” for 2018-2020 [14].*

The results of the analysis in the table show that the volume of material expenditures in 2020 increased by 172% compared to 2018 and by 163% compared to 2019. According to the annual business plan of the enterprise, the planned cost of material costs in 2018 is set at 41,913,579 thousand soums, in 2019 - 43,273,437 thousand soums and in 2020 - 72,948,374 thousand soums. However, its actual cost in 2018 amounted to 46,570,643,000 soums, in 2019 to 49,174,360,000 soums and in 2020 to 80,163,048,000 soums. The total change in material costs in 2018 amounted to 4,657,064 thousand soums, in 2019 - 5,900,923 thousand soums and in 2020 - 7,214,674 thousand soums. This change is due to changes in production (due to the fact that material costs increase in line with the volume of production as part of variable costs) in 2018 increased by 4 191 358 thousand soums, in 2019 - 4 327 344 thousand soums and in 2020 - 7 294 837 thousand soums. due to structural changes in 2018 -3 772 222 thousand soums, in 2019 -3 894 609 thousand soums and in 2020 -6 565 354 thousand soums, due to changes in the composition of materials in 2018 4 237 929 thousand soums, in 2019 5 468 189 thousand soums and in 2020 it was 6,485,191,000 soums. If we add up the effect of all the factors, we can see that it is equal to the total change.

The analysis includes the following indicators as the most important indicators in the study of wage costs of the enterprise: the wage bill, the average monthly wage per employee, the average monthly wage per employee, labor productivity.

The change in the salary fund at the enterprise in 2020 compared to 2018 amounted to 21 239 044 thousand soums, compared to 2019 - 3 369 438 thousand soums. In 2020, the average number of registered employees increased by 109% compared to 2018, the salary fund increased by 165%, and in 2019, as a result of a corresponding increase of 102%, the salary fund increased by 107%. The changes are characterized by an increase in the number of new jobs after reconstruction, an increase in the wage bill. We can see from the results of the analysis that there has been a decline in the trend of change in social insurance contributions, in 2020 it decreased by 79% compared to 2018 and by 51% compared to 2019. (Table 3).

**Table 3. Analysis of the salary fund of the foundry “Quyuv-mexanika zavodi” subsidiary company for 2018-2020, thousand soums**

Indicators	Years			Absolute change (+/-), thousand soums	Growth rate, %		
	2018	2019	2020		2018 year	2019 year	2018 year
Salary fund	32 783 485	50 653 091	54 022 529	21 239 044	3 369 438	165	107
<i>including the payroll fund of key workers</i>	16 679 795	21 026 877	22 183 928	5 504 133	1 157 051	133	106
Social security contributions	8 195 871	12 663 273	6 482 704	-1 713 168	-6 180 569	79	51
Share of basic salary expenses in the salary fund, %	50,88	41,51	41,06	-10	-0,45	81	99
The average salary of employees	2 042	3 291	2 882	840	-409	141	88
<i>including the average wage of key workers</i>	1 583	3 555	3 278	1 695	-276	207	92
Labor productivity	123 923	142 221	147 468	23 545	5 247	119	104

**Source:** Financial reporting data of the subsidiary company “Quyuv-mexanika zavodi” for 2018-2020 [14].

In accordance with Article 405 of the Tax Code of the Republic of Uzbekistan, the main factor in reducing social insurance contributions in 2020, inversely with the increase in the salary fund, is the reduction of social insurance contributions from 25% to 12%. The reduction in social security contributions directly leads to a decrease in the cost of production, an increase in the amount of profit per unit of output.

Labor productivity is determined by the number of products produced by a worker per unit of time or the time spent on producing a product. In 2020, it increased by 119%

compared to 2018, and by 104% compared to 2019. The higher the productivity, the higher the profitability of the enterprise. This increase will be achieved through the introduction of new technologies, automation of production processes, product quality and diversification of the workforce, staff training, replacement of low-load staff units, changes in working conditions.

Basic wage costs accounted for 50.88% of the enterprise's labor fund in 2018, 41.51% in 2019, and 41.06% in 2020. This means that almost 50% of the salary fund falls on the share of administrative expenses, which are not reflected in the cost, but directly affect the reduction of the final financial result.

We will analyze the production and sales costs of the foreign enterprise «Global Komsco Daewoo» LLC using horizontal and vertical analysis methods (Table 4).

**Table 4. Analysis of product production and sales costs, in thousand soums**

Indicator name	Total in the reporting year	including by type of main economic activity	Non-production costs
<b>Costs - total</b>	190 573 263	140 329 887	50 243 376
<b>-Material costs</b>	110 149 510	108 966 994	1 182 516
-raw materials and supplies (purchased)	99 482 147	99 042 631	439 516
-imported fuel	5 744 020	5 580 444	163 576
-purchased electricity	2 422 406	2 282 890	139 516
<b>-works and services performed by other organizations</b>	1 487 539	1 356 519	131 020
-current maintenance of buildings and structures	165 520	109 000	56 520
-current maintenance of machines and equipment	107 000	32 500	74 500
-overhaul of machinery and equipment	137 520	137 520	
-other material expenses	1 013 398	704 510	308 888
<b>Labor costs</b>	11 182 050	8 184 822	2 997 228
<b>Social security deductions</b>	1 341 847	982 179	359 668
<b>Depreciation of fixed assets and intangible assets</b>	17 500 193	13 103 835	4 396 358
- of which: depreciation of fixed assets	17 500 193	13 103 835	4 396 358
<b>Other expenses</b>	50 399 663	9 092 057	41 307 606

**Source.** Author's development based on the report data of the foreign enterprise «Global Komsco Daewoo» LLC [15].

According to the analysis of the table, the results of the horizontal analysis of the foreign enterprise «Global Komsco Daewoo» LLC show that the production costs of the enterprise in 2020 are 190,573,263 thousand soums, of which 140,329,887 thousand soums are the main economic activity, non-production costs are 50 It was 243,376 thousand som. The next task is a vertical analysis of the company's expenses by economic elements.

In the vertical analysis, we can see that among the costs, material costs are 110,149,510 thousand soums, labor costs are 11,182,050 thousand soums, and other expenses are 50,399,663 thousand soums.

However, today the implementation of cost accounting and analysis in the enterprise is slow. The cost analysis by the Planning and Economics Department is carried out only on the basis of the requirements of higher organizations and the analysis templates provided. Deviations and deviations of the plan and actual costs, the causes of their occurrence are not studied, remedial measures are not developed.

**Table-5. Analysis of the share of production cost elements at the textile enterprise «Betlis tekstil» LLC**

№	Cost elements	2021 year	%
1	Payment of estimated labor	6 985 525	25%
2	Production material costs	6 251 495	23%
3	Period costs	5 770 649	21%
4	Expenses on financial activities	202 513	1%
5	Losses from exchange rate differences	202 513	1%
6	Fees for banking, depository, consulting, information and auditing services	2 214	0%
7	Depreciation of fixed assets and intangible assets	1 277 699	5%
8	Social security deductions	1 047 828	4%
9	To fuel	85 641	0%
10	To electricity	78 245	0%
11	Profit tax, taxes other than profit and compulsory payments	1 859 232	7%
12	Payments to the budget-total (paid by invoice)	3 735 060	14%
	<b>Total expenses</b>	<b>27 498 614</b>	<b>100%</b>

**Source.** Author's development based on the report data of the «Betlis tekstil» LLC [17]

Accounting does not reflect information on planned indicators, does not keep a breakdown of costs by their items and elements, and because the information is reflected in the accounting reports in a constantly growing order, there are difficulties in obtaining timely information about costs. In our view, accounting does not provide the financial board with the necessary and timely information to make important decisions in the conduct and control of the enterprise. Typically, business processes are completed when financial statements are prepared and approved. This does not create the conditions for editing economic transactions that have taken place in the past and making decisions to improve the financial situation in terms of time periodicity.

Practice shows that the use of a cost accounting system integrated with the accounting system is widespread in large manufacturing enterprises. In keeping records of expenses, expense items are kept in conjunction with the relevant accounting accounts. The chart of accounts allows you to keep financial accounts and management accounts in parallel. The introduction of such a system in the enterprise will allow both the management account and the production account to be kept accurately and reliably, providing timely information necessary for management needs.

### **Conclusions and suggestions.**

This article examines the methodological and practical issues of accounting and analysis of material and labor costs in connection with the technological processes of

production at the subsidiary company “Quyuv-mexanika zavodi”, which belongs to the joint-stock company of railway transport.

Reduction of costs in production processes and the use of international methods of their effective management allow to alternate the movement of resources, more efficient use of material resources, increase labor productivity, timely and targeted management decisions.

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