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PROBLEMATIC ASPECTS OF ORGANIZING CVP-ANALYSIS IN THE ENTERPRISES OF UZBEKISTAN

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Abstract
This article covers the issues the optimization of costs in relation to product sales and production volume is the focus of this essay in order to increase profit in enterprises in Uzbekistan. In international practice, this technique, known as CVP-analysis , is used in "Ohangaronsement" JSC, which holds a dominant market share in Uzbekistan's cement production, based on organized using conditional data on the volume of product production and sales in 2019–2023 , study "cost-volume-profit" indicators, and emphasize both the theoretical and practical aspects of problem solving . Relative indicators, data aggregation, logical reasoning techniques, and analytical solutions were applied in the calculations that were carried out.

Keywords: CVP-analysis, extensive growth, intensive growth, operational efficiency, optimal cost

Introduction

Constant monitoring of the relationship between benefits and costs and effective management of costs are important in Uzbekistan as well as in other countries. However, the lack of local theoretical and practical research for organizing CVP-analysis and introducing it into the practice of enterprises in Uzbekistan increases the demand for studying international experiences.

In the main activities of economic entities, it is carried out on the basis of calculations related to increasing profits and production of new products, optimization of costs and the volume of product sales. Analytical calculations are based on past data and experience. Although the economic analysis carried out in enterprises cannot replace accurate data, it is very useful in finding answers to questions about various management decisions and their consequences (Pardayevich, K.B. 2023) . The model that sheds light on these aspects of enterprise operational activity analysis is called “Cost-Volume-Profit” (CVP-analysis) analysis. CVP analysis is primarily aimed at evaluating the impact of operational activities on the financial results of the

enterprise. The reason we focus on output and product sales is that while the resources and labor costs involved in producing a product are generally fairly certain, the price of the product and the demand for the product are variable. In general, in the development of CVP-analysis in Uzbekistan, it is possible to use the methods used in international research on economic sectors. For example, a study of the costs and benefits of fisheries in Nordic countries found that there are large economic costs in these countries and their economic impact is often underestimated (Skonhoft, A. & Kourantidou, M. 2021). Nevertheless, the potential of such collaborative efforts at preventive levels for example (ie, through information sharing, biosecurity planning) as well as management levels (ie, as demonstrated through economic models assessing gains from cooperation), can have significant benefits and examples of that are available globally and regionally, including in parts of the Nordic countries (Kaiser, B.A., & Kourantidou, M. 2021)

CVP-analysis includes the following:

- determination of the break-even point - the amount of product production that covers the costs incurred by the enterprise;
- determination of the minimum (break-even) size of the produced product and its sale;
- determination of the optimal volume of production and its realization in order to obtain the expected amount of profit in the future;
- determining the rate of expenses to be carried out in accordance with the specified volumes;
- control over actual expenses according to the standard of planned expenses;
- to study and assess the compatibility of overrun costs, overproduced product volume, undersold product volume in terms of cost-volume-profit;
- to carry out analytical works to eliminate identified shortcomings.

in operational activities is to achieve the implementation of costs in accordance with the set optimal volume. In general, the study of compatibility in the growth of cost, volume, profit (revenue) indicators is the main direction and goal of CVP-analysis (Pardayevich, Q.B. 2023).

In the research conducted by the authors I. Choriyev (Klichev, B.P., & Choriev, I.X. 2021) and M. Tulayev (Pardayevich, K.B., & Salamovich, T.M. 2021), the tool that drives and motivates the activities of economic entities today is the benefit achieved at the end of the activity (put forward the opinion that it is considered profit). In the market economy, self-interest, achieving the highest benefit, the ultimate goal of all enterprises, is recognized as the main criterion for evaluating their activities. In addition, the profit achieved in the current period is, in a philosophical sense, a reward

for patience, and it is a motivation for future activities and actions. Achieving positive financial results depends on the correct alignment of cost-volume-profit growth.

Research Methodology

In the research work, the data of Ohangaronsement JSC, the leading enterprise in the field of cement production in the Republic of Uzbekistan, was used.
Methods such as absolute and relative indicators, data grouping, logical analysis, and comparative analysis were used in the research process.

Materials and Results

When organizing a CVP-analysis in operational activities, the relationship between changes in costs compared to the previous period, changes in the volume of products compared to the previous period and changes in profits compared to the previous period is studied. Based on the various situations of this dependence, the current situation is assessed and economic analysis is carried out.

1. In the CVP-analysis, if the following relationship between cost-volume-profit occurs, this growth is considered intensive growth:

$$P_1 / P_0 > V_1 / V_0 > C_1 / C_0$$

In CVP-analysis, intensive growth of “cost-volume-profit” is the most optimal situatione in business entities. Because, in this case, the increase in profit is achieved in relation to the volume of the product, and the volume of the product is increased in relation to the costs. In intensive growth, efficiency indicators are in a positive state, both in terms of costs and in terms of product volume.

Table 1 Organization of CVP analysis in different relationships of “Cost-Volume-Profit” indicators

T/R	Relations between "Cost-Volume- Profit".	Organization of CVP analysis
1.	$P_1 / P_0 > V_1 / V_0 > C_1 / C_0$	There is no need to organize economic analysis, the company should try to maintain this relationship in the future.
2.	$P_1 / P_0 = V_1 / V_0 = C_1 / C_0$	We can organize analytical work to ensure the efficiency of the enterprise. The main focus is on cost optimization.
3.	If any relationship other than 1- and 2- dependencies occurs	Organization of economic analysis is very necessary. Because in such cases, efficiency indicators tend to decrease.

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2. If the following relationship between cost-volume-profit occurs in the CVP-analysis, this relationship is considered a proportional relationship:

$$P_1 / P_0 = V_1 / V_0 = C_1 / C_0$$

In the CVP-analysis, it is natural state or extensive dependence, to achieve a proportional dependence on cost-volume-profit in economic entities. Because, in this case, the increase or decrease of profits and costs will be proportional to the volume of the product. In this case, both cost and product efficiency indicators will remain unchanged. In the extensive relationship that occurs in CVP-analysis, although the efficiency indicators do not change, the increase in the volume of the product increases the costs and profits accordingly. Increasing profits is naturally in the interests of business entities.

3. In the CVP-analysis, any other relationship between "Cost-Volume-Profit" than the above intensive and extensive relationships indicates that the company's efficiency is decreasing, the existence of a problem and the need to carry out economic analysis. We can see in table 1 the need to organize a CVP-analysis and the directions of analytical work in different relationships of "Cost-Volume-Profit" indicators.

According to the data of Table 2, although the production and sales volume of Ohangaronsement JSC increased relatively steadily in 2020 compared to 2019, the fact that production costs increased by 111.6% and profit made up 78.5% is a negative situation.

Table 2 Changes in cost-volume-profit of cement products in 2019-2023 at Ohangaronsement JSC

Indicators	2019	2020	2021	2022	2023
Production volume, tn.	1603970	1620669	1332648	1671857	1936944
change compared to last year, %		101.1	82.2	125.4	115.8
Product sales volume, tn	1591265	1616548	1329652	1639594	1892685
change compared to last year, %		101.6	82.3	123.3	115.4
Production costs, mln. soum soum	541588	604457	534452	714560	812324
change compared to last year, %		111.6	88.4	133.7	113.7
Main operating profit, million soms	246534	193507	295803	145099	157030
change compared to last year, %		78.5	152.8	49.1	108.2

The cost-volume-profit change of cement products in 2019-2023 at Ohangaronsement JSC can also be observed in Figure 1.

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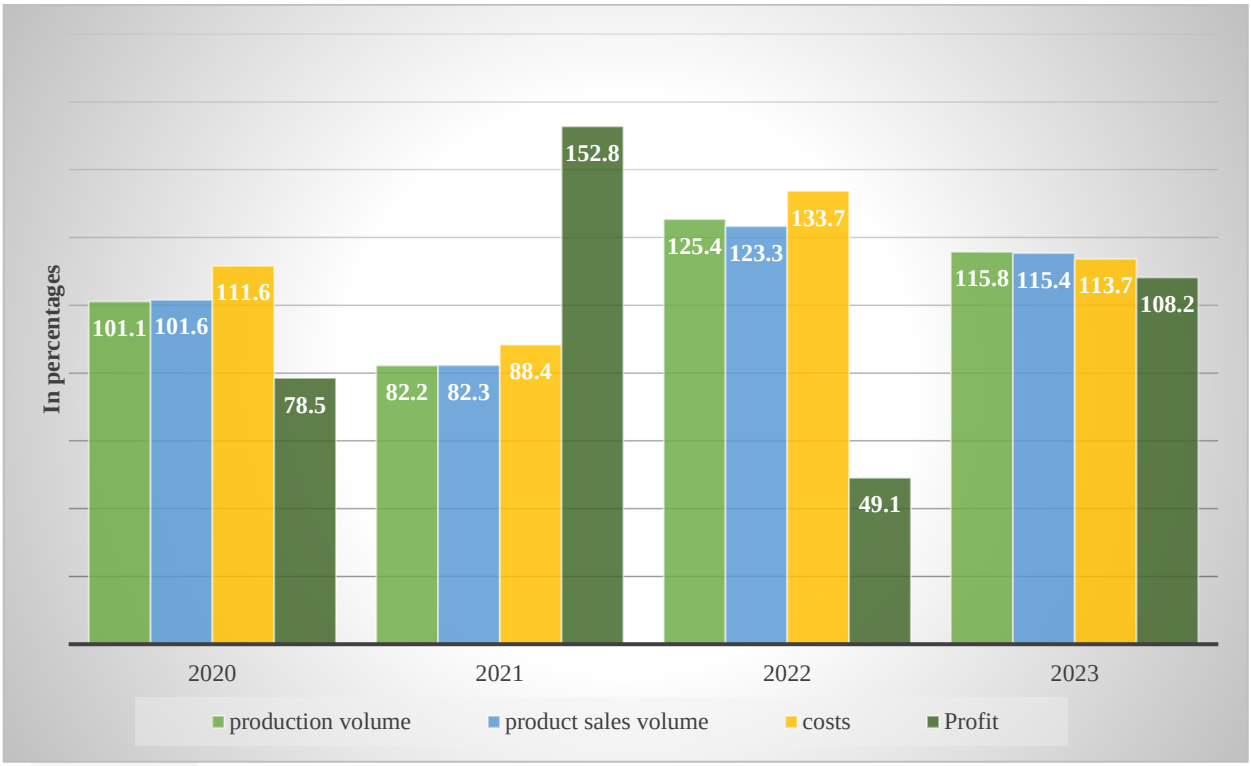

Figure 1. Changes in production, sales volume, expenses and profit at Ohangaronsement JSC.

In 2021, the reduction of production costs by a smaller percentage compared to the volume of production and sales of products and the sharp increase in profit are explained by the impact of the pandemic. The impact of the COVID-19 pandemic also affected the operations of Ohangaronsement JSC in 2022.

In particular, although the volume of production and sales of products increased by 123-125%, the increase in production costs by 133.7% and the decrease in the price of cement caused the company's profit to be 49.1% compared to 2020. In 2023 If the volume of production and sales of products in the company's activities increased by 115-116% compared to 2021, the increase of expenses by 113.7% means that the company has achieved a relative economy of expenses in relation to the volume of products.

If we look at the composition of the indicators presented in Table 2, the indicators of product production and product sales, production costs are related only to cement products, while the company's main activity profit is determined in relation to the products produced in general. Therefore, it is appropriate to determine the cost-volume-profit relationship in relation to the general indicators of the society.

In enterprises that produce products with a wide range and different units of measurement, it is possible to evaluate the efficiency of operational activity by studying the relationship between cost-volume-profit with indicators such as net income from product sales, cost of goods sold and profit of the main activity (Table 3).

Table 3 Changes in income-cost-profit in "Ohangaronsement" JSC in 2019-2023 (million soums)

Indicators	2019	20 20	202 1	202 2	202 3
Net income from product sales	689824	825706	920048	1012169	90953 9
change compared to last year, %		119.6	111.4	110	89.9
Cost of goods sold	380234	476160	478 300	601489	608691
change compared to last year, %		125.2	100.4	125.7	101.2
Main activity benefit	246534	193507	295803	145099	157030
change compared to last year, %		78.5	152.8	49.1	108.2

From the data of Table 3, we can see that the change of net income from product sales, cost and profit of the main activity at "Ohangaronsement" JSC in 2019-2023 was different over the years. Including:

1. In 2020: Cost (125.2%) > Revenue (119.6%) > Profit (78.5%)

In 2020, the net income from the sale of products in the company increased compared to 2019, but the higher increase in the cost compared to the income partially affected the decrease in the profit of the main activity. In this case, it is necessary to carry out analytical work on the cost items of the product cost and on the factors that have a negative effect on the profit.

2. In 2021: Profit (152.8%) > Revenue (111.4%) > Cost (100.4%)

In 2021, Ohangaronsement JSC achieved intensive growth in terms of net sales revenue, cost of goods sold, and operating profit. Of course, the fact that such an increase was achieved in the society is related to the decrease in the price of raw materials and the increase in the price of cement during the pandemic. In general, in all enterprises, it is very important to be able to provide such a level of growth in terms of income, profit and expenses, and it is the main goal of the analytical work to be carried out.

3. In 2022: Cost (125.7%) > Revenue (110.6%) > Profit (49.5%)

In 2022, the net income from the sale of products in the society increased compared to 2020, but after the pandemic, the increase in the price of resources in Uzbekistan caused a sharp increase in the cost of products compared to the income.

This situation, as well as the decrease in the price of cement products in 2022 compared to 2021, influenced the sharp decrease in the profit of the main activity compared to 2022. In "Ohangaronsement" JSC, this relationship between cost-volume-profit is considered a negative situation for the society, and the reasons for the sharp increase in the cost of products, the reasons for the decrease in income and profit, and the influence of factors should be studied in the analytical work.

4. In 2023: Profit (108.2%) > Cost (101.2%) > Revenue (89.9%)

In 2023, the net income from the sale of products in the company decreased compared to 2021, but as a result of not allowing a relative increase in the production cost of the products sold in the company and effective control over other types of expenses, an increase in the profit of the main activity was achieved. In "Ohangaronsement" JSC, this relationship between cost-volume-profit is a relatively negative situation for the society. Because in the coming years, if the company does not achieve an intensive increase in income relative to the cost, this situation may lead to a decrease in the operating profit of the company.

Conclusion

In the article, the levels of extensive and intensive growth were studied according to the relationship between cost-volume (revenue)-profit indicators in the organization of CVP-analysis in the main activities of enterprises. In addition, the relationship between the change of costs compared to the previous period (C_1/C_0), the change of the product volume compared to the previous period (V_1/V_0) and the change of profit compared to the previous period (P_1/P_0) it was shown that it is possible to evaluate the effectiveness of operational activity in the case of different growth levels of these indicators. In 2019-2022, the relationship between expenses, revenue from product sales, and main activity profit indicators was studied at Ohangaronsement JSC, and the situation when these indicators had different growth rates was evaluated. Based on this situation, it was shown that it is possible to determine the directions for the organization of operational activity analysis.

In short, production companies i the correct organization of the evaluation and analysis of the effectiveness of the main activity , the correct systematization of the indicators that determine the effectiveness of the operational activity, the application of the proposals developed for their identification and analysis, the determination of the optimal volume of product production, the determination of the current and future potential of the enterprise, and the implementation of the results of the research into practice implementation creates an opportunity to achieve positive financial results in enterprises.

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