ANALYSIS OF THE PROCESSES OF DETERMINING THE VOLUME OF PRODUCTION AND CREATING A PRODUCTION PROGRAM AT SEWING ENTERPRISES

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Abstract. *In this article, the analysis of the indicators of the production program at the sewing enterprises, that is, the analysis of the results of the assortment width, novelty, and optimality coefficients, was presented.*

Keywords: *sewing enterprise, type of assortments, newness and breadth of assortment, production program, product price, assortment variability, work plan, product type, cost types.*

Introduction. Creating a production program in the case of assortment variability in sewing enterprises, digitalization of the processes of forming assortments with high efficiency is considered one of the most urgent issues. The production program provides a basis for determining the planned calculations of labor and wages, the amount of materials required for the planning period, and scientifically based plans for cost, profit and profitability. The work plan of the workshops, the level of utilization of the available production capacities depends on the production program. In the production program, the monthly volume of work is planned based on the duration of working hours, the number of working days, and the number of employees. The integrity of the enterprise's activity is explained by the correct formulation of the production program.

In the course of scientific research, the processes of forming an assortment and establishing a production program in the conditions of the enterprise were considered.

$$O_{pr} = K \times S \quad (1).$$

K- the number of sewing items produced, (pieces),

S - item price, (soum).

According to the results of tax calculations, it is necessary to determine the production volume in the production program. The production volume of the product is determined based on economic feasibility. When determining the production volume of the product, the break-even point of production should be identified by the company. The break-even point indicates at which coordinate the product's production volume and its monetary equivalent are balanced. When producing products in the specified assortment, the company covers all expenses related to production.

Analyzing the final stage of financial planning, determining the break-even point means calculating the production volume that equals the product's selling income to its production costs [1, 2, 3].

Research methods. The break-even point is expressed as a certain degree of utilizing the company's production capabilities, as well as the representation of the product's selling price (S),

the number of sold products (X), and the total amount of fixed production costs (I_{doim}) plus total variable costs ($I_{o'zg}$) multiplied by the number of sold products (X) in terms of production volume:

$$S \times X \; q \; I_{doim} + I_{o'zg} \times X$$

In this context, the break-even point is determined as the ratio between the constant production costs (I_{doim}) and the difference between the price (S) and the variable component ($I_{o'zg}$) of the product's selling price.

$$X \; q \; I_{doim} / (S - I_{o'zg})$$

Showing the break-even point in a graphical form is also in line with the objective, as it allows determining the critical production volume (break-even point) at which the company starts making a profit. To construct the graph, both fixed and variable costs, as well as the sales volume, need to be known. The break-even point is represented in the graph as a schematic, illustrating the impact of production volume, selling price, and the product's cost on profitability. It can take the following form.

Results. At the stage of the formation of the production program, it is necessary to keep in mind the minimum yield in the production of a certain type of assortment. The enterprise ensures continuity of its activities by setting the minimum production yield by each type of assortment. The profit zone determines the economic income of the enterprise from the manufactured products. During the study, the daily production of 3 sewing items and sewing-knitwear Enterprises was calculated. According to the results of the analize, men's suit pants are produced 170 pieces per shift, children's clothing-1200 pieces (Figure 1.).

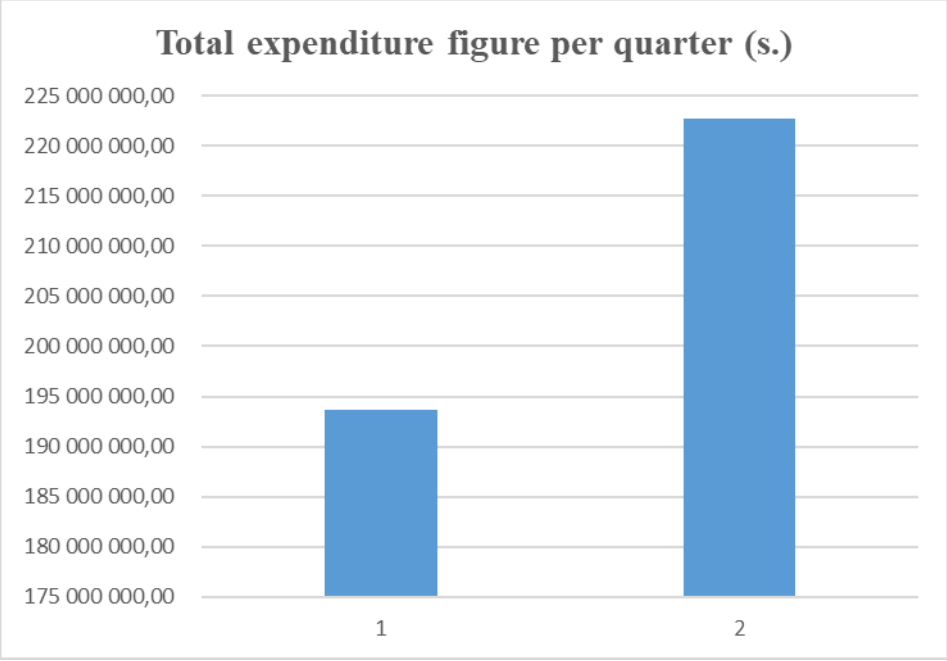

Figure 1. Total cost estimates per quarter at the enterprise

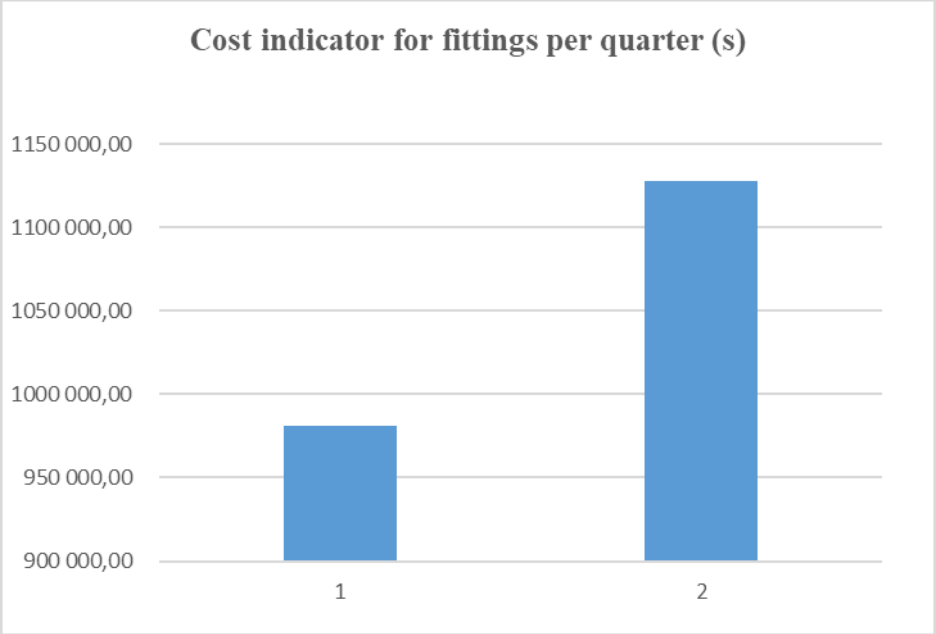

Figure 2. The cost of fittings per quarter at the enterprise is estimated.

The width of the assortment is the number of group and subgroups of the product. To find the width coefficient, the following formula is used

$$K_{sh} = W_{Sd} * 100\% / W_{Sb} \quad (2).$$

In this:

K_{sh} – width factor.

S_d - true width.

S_b - basic width (standard, price list, according to the catalog).

$K_{sh} = W_{Sd} * 100\% / W_{Sb} = 28*100/32 = 87,5\%$

According to the results of the review, the width coefficient was 87.5%, which indicates that khaki – 87.5% of the existing assortment is produced at the enterprise.

The completeness of the assortment is the number of varieties of the group of goods. Completeness characterizes the number of types, varieties and names of a group of goods [4,5,6]. Completeness indicators are calculated based on the real and base indicator, that is, the ratio of the real completeness indicator to the base, by the:

$$Kp = P_d \setminus P_b * 100\% \quad (3).$$

K_p - coefficient of completeness;

P_d - completeness is real;

P_b - basic completeness;

$Kp = 9\setminus 15*100\% = 60\%$

Based on the calculations, it can be concluded that the range of men's T-shirts is incomplete [7,8].

Newness (updating) of the assortment is the ability of a set of goods to satisfy changing needs in exchange for new goods. Newness coefficient is the ratio of the number of new goods in the total list to the total number of goods.

The novelty coefficient is calculated according to the formula:

$$K_n = N*100/ S_D \quad (4).$$

K_n - innovation coefficient;

N - news;

S_D - actual width;

$K_n = N*100/ S_D = 66*100/150 = 44\%$.

Since the innovation coefficient should be at least 20%, the needs of consumers will be satisfied as a result of the production of new goods.

Optimum assortment. The coefficient of optimality of the assortment is determined using the following formula:

$$K_{op} = Ye_p*100/Z \quad (5).$$

Ye_p – utility effect of product consumption by the buyer (soum);

Z – costs related to the design, production and delivery of sewing products to the consumer (soums).

According to the calculation results, the optimality coefficient:

$K_{op} = 98*100/224 = 43,7\%$. constitutes.

Conclusions. The production program provides a basis for determining the planned calculations of labor and wages, the amount of materials required for the planning period, and scientifically based plans for cost, profit and profitability. The work plan of shops in a sewing enterprise, the level of utilization of available production capacity depends on the production program. The indicators of the production program in sewing enterprises were analyzed on the example of enterprise assortments. The width, novelty, and optimality coefficients of the manufactured assortment were determined.

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