

Trading Enterprise Cost Planning in the Light of Regional Market Features

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Abstract—The article presents the theoretical positions and the methodological approach for planning the costs of a trading enterprise, taking into account changes in the objective parameters of the external environment and the ambiguity of the reaction of the regional and local authorities. It is proposed to carry out variation calculations based on performance indicators of the enterprise in accordance with its internal documents and the forecast of the economic conjecture in the region and / or municipality in accordance with the documents of the strategic planning of the administrative-territorial unit. For forecasting purposes it is needed to perform variation calculations of sales revenue and the volume of investments in fixed assets. It is recommended to include elements of fixed costs without capital investments, with a possibility to change in the utilization rate of production capacity, in the costs of the current period that are not dependent on the changes of the production volume. In the structure of costs, which are associated with changes in demand, and mixed costs of the enterprise, the rate of changes of which is lower than the rate of changes in the volume of production (sales) of goods, capital investments should be taken into account separately. This makes calculations more complicated, but will allow more accurate forecast and cost planning.

Keywords—costs of a commercial/ trading enterprise; regional market; regional market conjuncture; types of costs

I. INTRODUCTION

Improving economic efficiency in the regions of Russia is highly dependent on the policies of the state authorities and their interaction with enterprises of various sectors and branches of the economy. Procurement of the consumers with high-quality goods by trade enterprises is the main importance for the economy of the regions [1]. At the same time, the economy of the region has an impact on the volume, structure and costs of the trade operations. The factors of macro- and meso-levels are essential for planning prices, volumes of production and sales of products, first of all - cyclical fluctuations of the economic situation on the scale of the global, national and regional economy [2]. This position is well known from scientific literature. But studies have established that under equal conditions of economic activity, the same socio-economic processes, and their perception and, accordingly, behavior on the market, significantly depends on the institutional status of the subjects [3].

II. DISCUSSION OF THE AMBIGUITY OF THE STATE REACTION ON ECONOMIC PROCESSES

The trends of the development of retail trade are significantly influenced by global trends. Thus, a change in the spatial organization of world industry characterizes the spatial redistribution of world industrial forces at the level of macroregions, and as a result, the strengthening of positions in the international trade of manufactured goods of China, India, Turkey, etc. Structural changes in global industry and trading are primarily affected by the location of production in the spatial organization of the world. Relatively underdeveloped countries became the main producers of goods due to active government intervention into economic processes, including in the sphere of trade.

A strong institution of state regulation is effective as well as market mechanisms. Currently there is a withdraw from the classical orientation of the “invisible hand” of the market, even in the USA. Theoretically, it is quite possible to assume the adequacy of the reaction of the authorities to changes in the global economic situation and to obtain, in the result, positive effects in the production and trading sectors. However, the problem is in the ambiguity of the reaction of the authorities to changes in the external and internal environment of administrative and territorial entities at various levels. Their actions can be no less stochastic than those of economic entities [4]. “Market failures” are complemented by instability and ambiguity in the economic behavior of the state authorities. Currently, there is no clear evidence that the actions of the state authorities level down the “market failures”. It is quite possible that market fluctuations could increase as a result of state authorities intervention. Hence there is a need for enterprises in the industrial and commercial sectors to forecast changes in economic processes and in activities of government bodies at the regional and municipal levels.

With the development of market relations, the possibilities of the traditional instrument of managing enterprises and their structures have practically exhausted themselves. The most significant issues were in planning and forecasting of the enterprise’s work flow for the long and medium term in the context of the socio-economic development of the regions and municipalities. Involvement

of the enterprises in regional socio-economic and institutional processes determines prospects of management decisions, which are aimed at reducing the level of typological and technological imbalance in regional markets.

III. METHODOLOGICAL APPROACH FOR COSTS PLANING OF TRADE ENTERPRISE TAKING INTO ACCOUNT THE FEATURES OF REGIONAL MARKETS

Today, there is no comprehensive, practically applied approach for solving this problem, which is associated with poor coordination of actions of enterprises with regional strategies, plans of territories development based on production processes forecasting, marketing, and analysis of the economic activities of enterprises. As a result, transaction costs arise due to the low level of forecasting of economic processes in the socio-economic environment of enterprises. There are no variation calculations, allowing quickly assessing the current situation and taking appropriate management decisions.

Difficulties appear for enterprises during the budget preparation and establishing a break-even limit. The main indicator that forms the financial result and determines the break-even point is the sale of goods in natural terms. But, applying this indicator does not allow to answer the question - what financial result the enterprise could expect, if at the production stage a portfolio of orders is not formed and the need of production capacities is not determined.

Therefore, for retailers, as well as for the manufacturing industries, sale of finished products is less important than the formation of orders portfolio in the medium and long term.

Therefore, the break-even threshold for retailers should be set during planning of the demand in the future, rather than sales of finished goods in the current period. At present, there is no comprehensive methodology for finding a break-even zone and achieving a positive financial result at the stage of production plan preparation in the face of changing demand.

In this regard, it is necessary to apply a methodical approach that ensures implementation of the following key provisions:

- cost division not into variables and fixed (this is a generally accepted approach to determining the break-even point), but into current and future ones;
- Implementation volume of demand in the planned period as a key indicator and not the sale of finished products.

The planning system, which needs streamlining and systematization, helps to solve this issue. During planning process, it is advisable to allocate costs into two types:

- current period costs;
- the costs associated with changes in the volume of demand in the planning period.

Therefore, the purpose of this costs classification is separation of their relevant part, that is, the costs depending on the future changes in the regional economic situation. The proposed classification is presented in "Table I".

TABLE I. CLASSIFICATION OF THE COSTS OF THE ENTERPRISE, DEPENDING ON THE CONDITIONS AND FUTURE CHANGES IN THE REGIONAL ECONOMY

Cost classification features	Cost groups	Goals/ tasks
Cost dynamics depending on demand changes	1. The costs associated with demand changes 2. The current period costs 3. Mixed	1. Changes in profits due to prices, costs and production volume changes. 2. Changes in the structure of goods output. 3. The optimal structure of the products output (production assortment). 4. Optimization of the production volume.
Assigning of the costs to a specific costing object	1. Direct 2. Indirect	1. Costs analysis in the planning period as a whole. 2. Minimizing the production cost of a certain type of goods. 3. Minimizing the costs of the enterprise as a whole.
The degree of control at the enterprise level	1. Adjustable 2. Arbitrary (partly regulated) 3. Not adjustable (little regulated)	1. Identifying the deviation size of "Plan-fact" and the factors causing it. 2. Definition of responsibility for deviations. 3. Determining the possibilities for financial maneuver. 4. Identification of reserves of the economy.

This enterprise costs classification on production and commercial activities allows to determine their influence in the complex process of interaction between an enterprise and a regional external environment, the elements of which have different vectors of influence on the total costs.

The mathematical description (model) of this process is presented using formulas 1-5:

$$F1 = b0, \quad (1)$$

Where F1 — current period costs, not dependent on changes in the volume of goods production;

$$b0 - \text{current period costs;}$$

$$F2 = a1 \times Q(x), \quad (2)$$

Where F2 — the costs associated with demand changes;

a1 is the proportional ratio of the costs associated with demand changes;

$Q(x)$ is the volume of production (sales) of goods;

$$F_3 = a_2 \times Q(x) + b_1 \quad (3)$$

where F_3 is the mixed costs of an enterprise, the rate of change of which is lower than the rate of change in the volume of production (sales) of goods;

A_2 – proportional ratio of the variable part, which is part of the mixed costs;

b_1 – costs, one part of which remains unchanged, and the other part increases in the result of production (sales) volume increase, due to growing demand.

The final model of costs calculation of an enterprise in condition of demand changes for the company's products, taking into account the forecasts presented in the strategic planning documents in the region and / or municipality, will be the following:

$$F = F_1 + F_2 + F_3 = b_0 + a_1 \times Q(x) + a_2 \times Q(x) + b_1 = b_0 + b_1 + (a_1 + a_2) \times Q(x) \quad (4)$$

In this case, the relevant part of the costs is described by the formula:

$$F = (a_1 + a_2) \times Q(x) \quad (5)$$

The model presented above is based on the well-known models for calculating the break-even point of enterprise activity [5].

However, in controversy, in our calculations it is necessary to pay attention to determining the degree of interdependence of the indicators a_1 , a_2 .

In addition, when calculating the break-even point of an enterprise in the classic variant, F_1 includes elements of fixed costs without capital investments, with a possible change in the production capacity utilization rate. In other words, this coefficient is taken a priori less than 1.0. In our case, F_1 can be different values: equal or close to one. Therefore, capital investments are included in the structure of F_2 and F_3 , which significantly complicates the procedure for planning and implementing plans of the company, focused on using the possibilities of changes in the socio-economic system of the region / municipality.

In this regard, determination of production capacity utilization rate is essential to adequately reflect in the model the capabilities of the enterprise to adjust its activities in the context of changing predictable demand in the region. We believe that it is necessary to calculate this rate as a proportion of 1 to the designed production capacity.

For planned calculations in the most rigorous planning conditions, it is assumed that the designed capacity of the enterprise is taken as 100% and fully provided with material and human resources. Depending on the volume of orders, contracts, the designed capacity may not be fully utilised. In this regard, the utilization rate of production capacity can range from zero to 1.0. In the simplest case, when the costs associated with changes in demand have a linear relationship (as in formulas 10-14), and the costs per unit of production remain constant, we can predict their size depending on the

workload of production capacity. To a certain extent, this provision corresponds to the theoretical position of V.P. Voronin [5].

However, in our case, to calculate the financial result and the break-even point, not only data regarding sales revenue of goods, works, services, but also data on the value and natural-material structure of fixed assets is needed.

IV. CONCLUSION

The generalization of the foregoing leads to the conclusion that, for the purposes of forecasting and planning, variation calculations of the proceeds from sales and the volume of investments in fixed assets are necessary, which make it possible to make management decisions promptly depending on the current situation on the market. In this regard, it is proposed to carry out variation calculations on the basis of indicators characterizing the results of a particular enterprise in accordance with its internal documents and region and / or municipality forecast (according to the documents of the strategic planning of the administrative-territorial unit).

When drawing up a variation options, the timing of interrelation between a commercial enterprise and its suppliers and customers is important, which determines the values of cost indicators, one part of which is fixed and the other part increases due to production (sales) volumes increase in the result of growing demand.

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