Mechanism of Financial Results Management for the Industrial Enterprise

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Abstract

Research is devoted to the analysis of the mechanism of management of financial results which makes set of the administrative decisions providing achievement of a maximum of profit. Relevance of this problem is confirmed by data the expert according to whom many Russian enterprises due to the lack of the adjusted control system of finance annually lose not less than 10% of the income. Therefore decisions which essence is reduced to creation of the effective mechanism of management of financial results have to become the most important problem of management of finance of the enterprise. It is proved that the mechanism of management of financial results has to coordinate price and assortment policy with policy of minimization of variables and constant expenses on the basis of studying of opportunities of advance of production for the market. It is revealed that effective managements of financial results of the industrial enterprises has to combine marketing, the prices and policy of the range with measures for decrease in expenses. The maximum size of profit or minimization of losses that can be reached as a result of imitating experiment on the offered models considering all set of factors has to become criterion function of such mechanism of management.

Keywords: financial result, industrial enterprise, mathematical modeling, management mechanism, profit, prime cost

1. Introduction

Regardless of the type of economic activity financial results are formed as the difference between revenues and expenses from operations of production and product realization, purchase and sale of certain items of current and non-current assets, securities, which is reflected in the corresponding accounting standards (Borodin, 2007). Positive financial result (profit) is a source of welfare improvement of capital owners and self-financing enterprise development. Then it is natural desire of the enterprise to maximize its profit in given economic conditions. And approaches to solving this problem may be different. One of them is an implementation of general and specific functions of profit management, where the most commonly used is such a function as analysis and planning (Borodin, 2006; Borodin & Shash &

Goloshchapova, 2013). Another approach to the management of profit generation is based on the use of interconnection of costs, sales and profit volume, mechanisms of operational and financial leverages (Bogatin & Shvandar, 1998; Miller & Viosca, 1967). Application of the letter approach requires as a part of the production costs distinguishing of fixed and variable costs, that in varying degree depend on the volume of production. This relation substantiated first time by J. M. Clark served as a basis of the "direct costing" system (1926). Its application simplifies the calculation, accounting and planning of financial results, since only direct variable costs are to be calculated, while indirect ones have to be covered by gross marginal profit. However, the problematic issue remains the accuracy of cost division into fixed and variable parts. Different methods to distinguish fixed and variable costs are proposed (Bliznuk, 2002; Borodin & Shash & Goloshchapova, 2013; Kerimov, 2001; Sheremet & Negashev, 2003). But they have calculated nature and therefore should be used for domestic economic performance, for example, to assess the prospects for the organization development. Despite a sufficient number of publications devoted to specific issues of profit management, many questions remain open, in particular, a complex representation of the management of the financial results by a set of mechanisms. And the purpose of this article is to substantiate the principles of formation of the mechanism of management of financial operating results using mathematical modeling methods.

2. Method

The financial result, as a difference between revenues and expenses across the different activities of an industrial enterprise, can be increased by maximizing revenues and minimizing costs, primarily from operating activities, which tend to take 80 - 90% of the overall structure of revenues and expenses. In its turn as a part of operating expenditures and revenues of industrial enterprise the greatest share occupies net income, which is understood in terms of income statement as revenue from sales of products, services, and cost of goods sold.

Naturally, that the basis of the mechanism of management of financial results is compiled by a set of management solutions that help to achieve maximum profit. Then the objective function for the case of wide range production can be written as follows:

$$\Pi = \sum_{i=1}^{m} p_i\, q_i - (a + \sum_{i=1}^{m} b_i\, q_i\,) \;\to \max \qquad (1)$$

where *a* – fixed costs as a part of cost of goods sold, administrative and distribution costs;

p – price;

q – volume of sales;

b_i - variable production costs per unit *i.*

The literature offers a variety of methods for dividing the costs into fixed and variable. For example, the method of the highest and lowest point, "stretched string", least squares, regression analysis of a sufficient number of observations (Bliznuk, 2002; Sheremet & Negashev, 2003). Disadvantages of each of them are the use of historical data. More accurate, although more time-consuming is the calculation approach, when as a part of the costs of goods sold, administrative and distribution expenses of the planning period are distinguished variable costs per unit of sales in volume and value terms. The remaining costs that refer to the expenses of the planning period are fixed and are covered by the gross profit.

To increase a net profit is possible in several ways: raise a price at a fixed volume of sales, increase production at a fixed price or reduce the price while increasing the volume of production (sales). These trends are analyzed during the formation of the pricing policy of the enterprise. It is convenient to consider the example of the formula to determine the critical volume of sales:

$$q_{cr} = {}^{a}\!/\!{(p-b)} \qquad (2)$$

With an increase in price and reduction of fixed and unit variable costs the critical sales volume decreases. Accordingly, the area of commercial security expands and a further increase in earnings depends on the ability of the enterprise to implement competitive advantages for the promotion of products on the market.

When implemented the policy of price increase, with the rise in price above the limits of demand sensitivity the sales volume starts falling. The possible intermediate solution is to slightly increase price and sales volume. In all cases, the constraints are the size of the market, the level of competition and production facilities for each product. If there is spare capacity, it may be on the contrary economically feasible to decrease prices and increase production. And the higher the share of fixed costs in cost structure, as the calculations show (Table. 1), the more feasible may be the realization of this event.

Savings of fixed and variable costs should supplement Marketing and distribution policy. However, depending on the elasticity of demand the impact of the factors can be different. For example, with the unitary- or inelastic demand it is

feasible to increase prices up to certain limits that substantiated by calculations. Cost saving is less important factor.

With elastic demand a price increase leads to a significant decrease in sales volume and loss of net income. Therefore, cost savings policy becomes economically viable.

Table 1. Determination of Sales Volume to Provide Desired Level of Profitability at Lower Prices

Indicators	The share of fixed costs in the prime cost, %		
	80	60	40
Prime cost, ths. RUR.	1 000	1 000	1 000
Price at the rate of profitability 25% (p)	1 250	1 250	1 250
Fixed costs, RUR/unit	800	600	400
Variable costs, RUR/unit (b)	200	400	600
Initial sales volume, units	1 000	1 000	1 000
Fixed costs, RUR (a)	800 000	600 000	400 000
Price after reduction, RUR/unit	1 000	1 000	1 000
The volume of sales, ensuring the profitability of 25%	1333,3	1500	2000

If it is possible to establish in the future a quantitative relationship between sales volume and price, the problem reduces to the determination of the volume of sales at which the profit reaches the maximum value. As a limitation acts a production capacity for this type of product. This problem was solved by various authors, such as (Bogatin & Shvandar, 1998; Savinkin, 2004; Shirobokov & Yanovsky & Yanovskaya, 2004). It is known in microeconomics. However, its practical implementation is difficult, because in the future it is necessary to have the interdependence of prices and volumes. In a competitive market the cost of collection and processing of data can exceed the effect of optimization.

A particular case of the profit maximization problem is a digressive nature of variable costs. Then by the production of a single product a target function takes the following form:

$\Pi = pq - (a+bq) \rightarrow \max$ or $\Pi = (p-b)q - a \rightarrow \max$ (3)

Break-even is achieved by sales volume calculated by the formula:

$$q_{\text{кр}} = {a}/{(p + b)} \qquad (4)$$

Consequently, the digressive nature of variable costs increases the power of the operational leverage which implies the increase in growth rates of positive financial result or the decrease of the negative financial result. Despite being rare, this case can be faced in economic practice of industrial enterprises.

Under the condition of progressive tendency in variable costs change the following imitation model can be used in order to determine the highest profit value:

$$\Pi_i = pI_p qI_q - aI_a - bI_b qI_q \rightarrow \max \quad (5)$$

where I_P, I_q, I_a, I_b – indexes of change of corresponding parameters in the planning period relating to the good of type i. Depending from market situation, competition intensity, opportunities to reduce fixed and variable costs the combination of parameters for profit maximization is identified.

3. Results

For enterprises that produce a wide product range a significant number of denominations could form this product range having (themselves) different financial and marketing significance. Therefore, there is always the task of identifying the optimal product range and product and service assortment which in practice implies joint activity of many enterprise experts, but, in the first place, experts in marketing and financial analysts, heads of sales department [5, 10].

According to the objective the rational output structure is determined using the following method. First, marketing service (by monitoring) identifies products and services that are the most attractive in the market and that are much in demand during the report period. The estimate of the demand change and competition prospects is done in the segments where a company is presented and where it is going to compete.

Economic planning and financial departments analyze the output structure in previous years and the structure proposed by the marketing department. Then the final version of sales budget is formulated by all relevant departments. It is necessary for technical experts to participate in the examination because the decision about volume increase can be made in regard of any product. However, if this growth is limited by the existing productive capacity, then, in the pursuit of

volume increase, the quality reduction of the product may arise due to the breach of technological and organizational requirements. Moreover, the depreciation rate will grow because the equipment will be exploited beyond its nominal productivity.

The responsibility of economic planning and financial departments for denominations and product range optimization involves the following:

1) the marginal sales volume is determined on every product based on the report period data and is compared with actual output. Thus, unprofitable products are identified. However, it is not appropriate to give recommendations on their writing off from production process without having consulted the marketing department. It could be these products that are much in demand but produce unsatisfactory results;

2) the product classification is done based on the price coefficient value. With reference to products with low price coefficient and product figures less than marginal ones the decision is made about the appropriateness of their production in the future; on products enjoying stable demand, the possibility of price coefficient increase is identified. Usual procedures are held: price increase, or variable costs reduction, or increase in sales volume with price decrease at the same time. It is vital to consider the price elasticity type of the demand while explaining the appropriateness.

3) the profit in three different alternatives of output structure is calculated with the formula:

$$\Pi = \sum_{i=1}^{n} [q_{\phi i}(p_i - b_i)] - a \qquad (6)$$

where $q_{\phi i}$ - is the actual sales volume of the type i product.

The optimization of the output structure can be performed with the formula proposed by Osipova L.V., Sinyaeva I. M. (1997). Using previously recognized indexes the formula looks as the following:

$$\Pi = V_{pn}^{\text{кр}} \left[\sum_{i=1}^{m} (\frac{p_i - b_i}{p_i}) \, Y_i \right] - A \rightarrow \max \qquad (7)$$

where $V_{pn}^{\text{кр}}$ - is the marginal sales volume (profitability margin), thousands rubles;

Y - the proportion of product of type i in the total output.

This is the criterion of the imitation modeling problem. Introducing the range of figures, being given by the marketing and sales services, financial analysts and economists and finding the profitability margin as the initial value, it is necessary to calculate the objective function with different price values, marginal fixed and variable costs and output structure by using a computer program. Problem restrictions are market and productive capacities of any product output.

The creation of the optimal product range of the enterprise based on the criterion of maximum total profit can be done by implementing a marginal approach and imitation model. The methodology involves the following steps:

- based on the report period data the marginal sales volume of each product is determined that allows to identify unprofitable commodities.
- the price coefficient is calculated on each type of products (or on aggregated similar groups) that demonstrates the marginal profit proportion in the price. In order to make an estimation standard calculations of variable costs should exist in the enterprise.
- products are classified by their price coefficient value and the opportunities of sales volume increase of the top products are identified;
- computer imitation experiment is held using the formula (5) and the combination of parameters are identified on each type of products that give the highest level of profit. The restriction is the conformity between the sales volume and the productive capacity.

If as a result some of the products that are much in demand in the market are unprofitable, the cost-saving program is elaborated. Whereas if the product is characterized by the high price coefficient and is much in demand in the market but the productive capacity is insufficient, the program (investment project) of its increase is developed.

The marginal sales volume is traditionally considered in the decision-making theory regarding profit management and is calculated with the formula (2). Nevertheless, if the equation (1) is considered in the event of one commodity production and its left and right parts are divided by sales volume then we get the formula of marginal profit:

$$\Pi = p - \left(b + \frac{a}{q} \right) \qquad (8)$$

Calculations in the formula (8), based on simulated data, demonstrate that with the growth of sales volume beyond the marginal one, the growth rates of marginal financial result decrease, which reflects the reduction of fixed cost savings, though, by absolute measure the financial result goes up because the operational leverage influences it within certain bounds.

The field of commercial security calculated with the specific parameters, enlarges moderately and insufficiently. The increase of fixed costs in the prime cost structure, for instance, half as much again with other invariable parameters, results in marginal sales volume increase. However, with sales volume increase savings on fixed costs rise and the

growth rate of financial result correspondingly increases.

4. Discussion

At the same time it is essential to realize that the majority of markets are characterized by high levels of competition, the sale of every additional unit of product will take additional effort and can lead to sales costs increase, thus, reducing the effect of sales volume growth. Then the marginal cost will increase after a certain level of sales reached, while the financial result will fall. The similar situation arises when industrial units operate with permanent tempo, which results in the piling of finished commodities in the warehouse. If it is not sold, sales costs rise because of the overstocking and increase of the warehouse costs. Therefore, the financial result of operational activity decreases.

The mechanism of management of financial results has to coordinate price and product range policies with the policy of fixed and variable costs minimization on the basis of examining the opportunities of product promotion in the market. The objective function of the mechanism is the maximum value of the profit or costs minimization that can be achieved as a result of the imitation experiment based on the proposed models that consider the whole of factors.

5. Conclusions

The conclusion is drawn that the mechanism of management of financial results of activity of the industrial enterprise offered by authors will allow to solve a problem of increase of reliability and quality of financial planning and will promote formation of financial resources, sufficient for development, use of the financial instruments allowing to solve key problems of management of finance of the enterprise: solvency, liquidity, profitability and optimum ratio of own and loan sources of financing.

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Challenges of Albania towards the European Integration

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Abstract

This paper examines the role of European Union has in developing a real democracy. At present, our country faces various challenges while it aligns itself in the road of democratization and in European integration. In my opinion, the most important three are: 1-The need for a well-rounded and good intending political and administrative elite. 2-The need for truly independent government branches as described in the constitution. 3-The need for an independent civic society. The main objectives of this study are to: Define the concept of the Albanian democracy; to identify the key factors affecting the lack of democracy. This paper tries to discuss the present problems and challenges towards the process of democratization and European integration too. At the last is to propose possible strategic approach for democracy to develop the whole society towards the European Integration. The paper is based on different theories related to democracy and political parties. This paper analyzes the relation between Albania and European Union is progressing during the transition period, try to give an overview between their relation these years and takes into consideration the impact of others actors in society in building a real democracy such as are: cultural factors, political parties, civil society and especially the relation between the citizens and representatives of a state (political parties).

Keywords: democracy, political parties, civic society, independent institutions, democratic values, European integration

1. Introduction

Albania has been trying to successfully conclude the process of democratization, European integration ever since the collapse of the communist regime. A democratic system is a system that is build and runs based on a necessary set of values, which complement and need each other such as: justice, freedom, security, prosperity; as well as the clean build of a fully functioning democratic system with prevailing democratic values, balanced and independent governmental branches. Equally important, a strong, capable and true to itself civic society adds sturdiness to the fabric of democracy. At present, our country faces various challenges while it aligns itself in the road in European integration. In my opinion, the most important three are:

1. The need for well-rounded and good intending political and administrative elite.
2. The need for truly independent government branches as described in the constitution.
3. The need for an independent civic society.

Due to its isolating past, Albanian society has been suffering for unconditional tolerance and respect of basic democratic values. The absence of tolerance can be seen daily in our lives and it beams down from our politicians to the common people. Albanian society has been suffering for unconditional tolerance and respect of basic democratic values. The absence of tolerance can be seen daily in our lives and it beams down from our politicians to the common people. There are other challenges worthy of mentioning but, I believe that the three stated above are the most important ones. In conclusion, the road that leads to a sound democracy and European Integration is a very hard and complicate road. The integration process cannot be successful without the constructive involvement of all actors in our society. A democratic system can't be successful without democratic parties, political elites equipped with democratic culture, without independent institutions and a self-conscious civic society who takes part and reacts to cultural and system shaping phenomena. Democracy is not means but our common desired end. Democratic values can't be separated from the European countries. Member states of EU need to do a lot to protect the democratic values. It is necessary to create a safe environment for protecting the human rights, free and fair election, freedom and all values related to a democratic system. In this paper I will analyze my country, Albania which is the challenges of democratization towards the European Union

Unfortunately, tolerance to different ideas, thoughts, behaviors, political stands and morals has been low. Beneath the continuous freshly painted cosmetics, the issue of intolerance remains the same. Due to past and present examples,