DOI: 10.17117/na.2015.11.03.072

<http://ucom.ru/doc/na.2015.11.03.072.pdf>

Поступила (Received): 24.11.2015

**Гетманова Э.Ф., Прохоров В.Т.,
Дмитриенко Н.А., Рева Д.В., Зверев С.М.
Исследование и анализ обеспечения устойчивого
финансового положения обувным предприятиям
расположенных в регионах ЮФО и СКФО (сообщение 1)**

**Getmanova A.F., Prokhorov V.T., Dmitrienko N.A., Reva D.V.
Research and analysis of the financial situation of sustainable
footwear enterprises located in the regions of the Southern Federal
District and the North Caucasian Federal District (1 message)**

В сообщении 1 приведены расчеты точки безубыточности на примере мужской обуви, это необходимо для выявления при производстве какого количества обуви предприятие будет получать прибыль и просчитать при каком выпуске будет убыток, тем самым мы можем контролировать какую обувь необходимо производить и в каком количестве

The report 1 show the break-even point calculations on the example of men's shoes, it is necessary to detect the production of a number of footwear, the company will make a profit and to calculate at which the issue will be a loss, thus we can control what kind of shoes you need to produce and in what quantities

Ключевые слова: точка безубыточности, ассортимент, финансовое положение предприятий

Key words: break-even point, range, financial position of enterprises

Гетманова Элина Федоровна

Аспирант

Донской государственный технический университет

г. Шахты-500, ул. Шевченко, 147

Getmanova Alina Fedorovna

Graduate

Don state technical university

Shakhty-500, Shevchenko st., 147

Прохоров Владимир Тимофеевич

Доктор технических наук, профессор

Донской государственный технический университет

г. Шахты-500, ул. Шевченко, 147

Prohorov Vladimir Timofeevich

Doctor of Engineering Sciences, Professor

Don state technical university

Shakhty-500, Shevchenko st., 147

Дмитриенко Надежда Алексеевна

Кандидат педагогических наук, доцент

Донской государственный технический университет

г. Шахты-500, ул. Шевченко, 147

Dmitrienko Nadezhda Alekseevna

Candidate of Pedagogic Sciences, Associate Professor

Don state technical university

Shakhty-500, Shevchenko st., 147

Рева Дарья Валерьевна

Аспирант

Донской государственный технический университет

г. Шахты-500, ул. Шевченко, 147

Reva Daria Valerievna

Graduate

Don state technical university

Shakhty-500, Shevchenko st., 147

Зверев Сергей Михайлович

Доктор технических наук, профессор

Донской государственный технический университет

г. Шахты-500, ул. Шевченко, 147

Zverev Sergey Mihalovich

Doctor of Engineering Sciences, Professor

Don state technical university

Shakhty-500, Shevchenko st., 147

In the era of globalization, sustainable competitive advantages often have local character. Standard factors of production, information technology are easily accessible for a lot of people. However, the competitive advantages of a higher order is still geographically limited, because the regions have their own situations, affecting the level of economic growth, especially outside the region with specific factors of production. Such attributes are interrelated and complementary. That is why the competitive success is the result of a unique combination of socio-economic environment in the region and a competitive advantage of industries. Regional differences are very important and often essential for competitive advantages of any business enterprises.

As for a shoe enterprise it strives for a strong position in the market, where pricing is a key to the success of the chosen strategy. Price is a tool to stimulate demand and at the same time is a major factor for a long-term profitability.

Maximizing profits it can be reached if possible with the help of optimal combination of sales volume and prices of manufactured productivity. Increasing sales volume leads to saturation of the market and a fall in effective demand for the products. At some point we need to sell a large number of shoes up to lower the price.

When developing a pricing strategy we address the objectives associated with both profit, sales and competition. Price determines the profitability of all activities, not only by setting the level of income, but also through the sales of fixing the conditions to achieve return of all costs. Assigned commodity price can directly determine the level of demand and therefore the elasticity of demand. If we have too high or low price, it could undermine the success of the production.

In this connection it is necessary to carry out the analysis of break-even.

Let us consider the different ratio of sales volumes and prices of manufactured products. Price reductions may occur when the enterprise uses a system of discounts in order to increase sales volumes. This event leads to increasing revenue from the sale and obtaining additional profits. However, the scope of income is not unlimited – when a certain volume of production is continued its expansion becomes uneconomical. At some point, the positive effect of increasing the volume of sales is lower than the negative impact of price reduction.

The formula to determine the break-even point is:

$$B_{кр} = \frac{З_{пост}}{Ц - З_{пер}^{лу}}, \quad (1)$$

$З_{пост}$ - post – total fixed costs; $Ц$ – selling price per unit of output; $З_{пер}^{лу}$ - Variable costs per unit of output.

Drawing up the list of technological operations must adhere to the following: prior to surgery should not obstruct the implementation of subsequent operations; after each operation number of unattached structural parts should be reduced as much as possible; the list of technological operations must comply with the scheme of work-piece assembly of shoe uppers and shoe assembly.

For example, the Model A was built in break-even point. The following illustration shows the construction of the break-even point leading to the forming not only

the volume of output, but it is necessary to produce and sell production in order to ensure the return costs incurred for its production and to guarantee the company to obtain the high TEC and the prevention of bankruptcy.

When assessing the impact of lower prices we need to change the breakeven point to further evaluate the effect of lowering prices to increasing sales volumes. In other words, the price increase can thus be an affect reducing sales volumes to get more profit per unit of output, resulting from the impact of the price factor as it will be blocked by the sum of losses from reduction in sales volumes. Conversely, the decline in prices caused by a decrease in the amount of the differences between revenues and variable costs per unit of output can be fully compensated by the profits from the sale of additional volume of products at lower prices.

When assessing the impact of lower prices on the need we are to change the breakeven point and further evaluate the effect of lowering prices to increase sales volumes. In other words, the price increase can thus affect the reduction in sales volumes that more profitable per unit of output, resulting from the impact of the price factor will be blocked by the sum of losses from reduction in sales volumes. Conversely, the decline in prices caused by a decrease in the amount of the difference between revenues and variable costs per unit of output can be fully compensated by the profits from the sale of additional volume of products at lower prices.

Men's shoes in a break-even point.

Thus, the calculated threshold values of products is given as domain of volume of production and sales, in which the break-even operation is provided by the company. Financial well-being and stability of the enterprise depends largely on the cash flow, providing to cover its liabilities. The lack of minimally adequate supply of funds may indicate financial difficulties. In turn, the excess funds could be a sign that the company is losing money. The cause of these losses may be associated with both inflation and the depreciation of money and loss of the possibility of a profitable distribution and generate additional income. In any case it is a cash flow analysis that will establish the real financial condition of the company.

To calculate the cash flow from operating activities it was developed by the software. This software is necessary for the sales manager or marketing, controlling the process of selling a particular model produced. As a result, using the proposed calculation we can obtain the net inflow from operating activities. The decrease in sales results in a reduction of cash flow and requires a reduction in the selling price of the product in order to increase sales. If this event does not lead to an increase in cash flow, it raises the question if it is possible to continue production of this model.

The algorithm for calculating the cash flow from operating activities is implemented with the help of the software Microsoft Excel, which can be installed at almost any workplaces of specialists.

For this calculation it is important differentiation of the data involved in the calculation. To calculate the cost of a particular model produced the original data are fixed and variable costs depending on the production equipment, the composition of the main and auxiliary materials, the number of employees and others. In the estimated Excel spreadsheet cells are highlighted where the data are entered. In the process of

monitoring the specific sales model, these data remain unchanged. For other model data are usually corrected.

The calculation also includes data that does not depend on the model and is entered into the design tables once. They are highlighted. Calculation formula is also highlighted, recalculate them performed automatically when you change the source data. The main source of data used in the monitoring process, is the selling price per unit of output and sales.

In implementing the activities about 60% of footwear businesses can generate little revenue. Basically, this income is achieved through the designing men's shoes as women's range volumes are supposed to observe losses. A further reduction in sales volumes lead to increased losses. To solve this problem we are to see prerequisite for the implementing footwear within the specified time period, as well as sales volume of at least 50%. If this happens, you need to attract borrowed funds to cover the costs and the subsequent production. Table 3 has the example winter children's shoes that shows the relationship of revenue, costs and volume of production. controlling which can analyze the financial results of the company and take timely decisions on the replacement range, which is not in demand, to more profitable.

Table 1. Impact implementation of the shoe in the financial condition enterprises on the example of winter children's shoes (Model A)

Indicators	The index value for different volumes of sales per month (%)						
	100	80	72	60	40	30	20
Volume of sales, steam	31020	24816	22334	18612	12408	9306	6204
Price of one pair, rub.	890,9	890,9	890,9	890,9	890,9	890,9	890,9
Proceeds from the sale, ths. Rub.	27635,72	22108,57	19897,36	16581,43	11054,28	8290,72	5527,14
Unit cost, ths. Rub.	795,41	795,41	795,41	795,41	795,41	795,41	795,41
The total cost, ths. Rub., Including	24673,63	21307,73	19897,36	18121,82	14845,93	13207,98	11570,03
Fixed costs, ths. Rub.	8294,13	8294,13	8294,13	8294,13	8294,13	8294,13	8294,13
Semi-variable costs, thous. Rub	16379,5	13013,6	11629,44	9827,69	6551,8	4913,85	327,59
Profit (+)	2962,09	800,84	-	-	-	-	-
Loss (-) from sales, ths. Rub.	-	-	0	-1540,39	-3791,93	-4917,26	-6042,89
Taxes, ths. Rub	592,418	160,168	-	-	-	-	-
Net Profit, ths. Rub.	2369,672	640,672	-	-	-	-	-

Figure 1. The range of children's shoes

Figure 2. The range of men's shoes

To select the optimum power developed software allows manufacturers to make the whole product range of shoes with the minimum, average and maximum cost that forms the basis for variation in the price niche, including through the progressive increasing the share of domestic components in the manufacture of leather products

with a significant reduction in the cost of its production on the basis of innovative process with a universal and multi-functional equipment. Criteria for the greatest impact on the cost of the finished product are one workers' productivity and unit costs are shown.

When comparing the possible solutions to a technical problem, innovations, technical improvements, and various ways are to improve the quality of products the best *ceteris paribus* is the option which requires a minimum of reduced expenditures.

Presented range of men's shoes (2), range of children's shoes (Fig. 3), the range of women's shoes (Figure 4).

Figure 3. The range of women's shoes

Table 2. Criteria for assessing the profitability of the production of basic types of shoes (men's shoes)

Kind of shoes	Release of covering the cost of production, couples		Profit from sales, thousand rubles	Loss from sales, thousand rubles
Men's footwear				
winter boots (model A)	100%	15752	2825,44	-
	80%	12601	2260,23	-
	60%	9451	1695,22	-
Spring shoes (Model B)	100%	15426	2730,7	-
	80%	12340,8	1727,51	-
	60%	9255,6	724,44	-
summer shoes (Model C)	100%	15512	1713, 77	-
	80%	12409	943,54	-
	60%	9307	123,47	-
autumn shoes (Model D)	100%	13433	2068,81	-
	80%	10746,4	1161,72	-
	60%	8059,8	254,64	-
Children's shoes				
Shoes Model A	100%	31020	2962,09	-
	80%	24816	800,84	-
Shoes Model B	100%	34 844	2068	-
	80%	27 875,2	104,54	-
Shoes Model C	100%	30810	1422	-
	80%	24648	-	-340,72
Shoes Model D	100%	26488	1537,63	-
	80%	21 190	-	-63,04

Kind of shoes	Release of covering the cost of production, couples		Profit from sales, thousand rubles	Loss from sales, thousand rubles
Women's shoes				
A model of summer shoes	100%	12656	1648,68	-
	80%	10125	739,69	-
	60%	7594	-	-169,31
autumn shoes model B	100%	11925	2490,13	-
	80%	9540	1329,09	-
	60%	7155	168,05	-
Winter Boots Model C	100%	10362	4508,29	-
	80%	8290	2913,36	-
	60%	6217	1317,64	-
spring shoes Model D	100%	14235	1790,91	-
	80%	11388	761,04	-
	60%	8541	-	-268,84

Analysis of the implementation of the shoes listed in table 2, confirms the fact that the best conditions are to the sale of men's shoes. Even producing the shoe in the amount of 60% will allow business workshops to compensate all the costs of its production. This can be explained by the desire of producers to increase the volume of production of men's shoes in the regions of the Southern Federal District and the North Caucasian Federal District, although it is necessary to link its capacity with the implementation, since the decline in demand to 80% of the issue volume can provoke losses for the company and it can lead them to bankruptcy. With regret, the failure of the state compensation to enterprises engaged in the production of children's footwear, due to low margins and high costs that require more careful monitoring of the market demand for the product range offered to customers, avoiding the implementation of at least 80% of its production volume. This can be explained by the fact that there are hardly any new businesses, which would like to concentrate on the organization of the production of children's footwear. Our paper suggests to pay more attention to the production of children's shoes to improve the situation we are to use innovative processes, filled with universal and multi-functional equipment, providing a significant reduction in the cost of its production, and by reducing the price to give it relevance and competitiveness without reducing the quality and by expanding the product range.

Separately, a special issue is the domestic market demands and designing competitive women's shoes. Today, domestic markets need to increase the product range in the women's shoes made by domestic producers. The demand is satisfied at the expense of imported shoes and offered "shuttle traders" who using re-saling products of low-quality footwear from abroad at a reduced price to an outmoded women's shoes and offer customers the articles of shoes which do not meet the quality, assortment, but the customers are forced to acquire them at lower prices in comparison with the prices for shoes of leading foreign companies.

Список используемых источников:

1. Prokhorov V.T., Aspen T.M., Kompanchenko E.V., Reva D.V., Mishin Y.D., Myaleshka E.N., Maltsev I.M., Duyun L.V., Volkova G.Y., Karabanov P.S., Dmitrienko T.A., Korablina S.Y., Yasheva G.A. *New opportunities SFD and North Caucasus Federal District on the formation of preferences of consumers of products manufactured at the enterprises of light industry: monograph.* Novocherkassk: YURGPU (NPI), 2015. 316 p.
2. Prokhorov V.T., Volkov G.Y., Duyun L.V., Korablina S.V., Aspen T.M., Rewa D.V. *The search for an effective impulse for the development of light industry in the regions of the Southern Federal District and the North Caucasian Federal District: monograph.* Voronezh: SGMP; Moscow: Science: Inform, 2015. 334 p.

© 2015, Гетманова Э.Ф., Прохоров В.Т.,
Дмитриенко Н.А., Рева Д.В., Зверев С.М.
*Исследование и анализ обеспечения устойчивого
финансового положения обувным предприятиям
расположенных в регионах ЮФО и СКФО
(сообщение 1)*

© 2015, Getmanova A.F., Prokhorov V.T.,
Dmitrienko N.A., Reva D.V.
*Research and analysis of the financial situation of
sustainable footwear enterprises located in the
regions of the Southern Federal District and the
North Caucasian Federal District (1 message)*