THE SENSE AND PURPOSE OF LIMITED PRICE IN THE PAST AND NOWADAYS.

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There is an analysis of sense and purpose of limit price, started from planning economy till today in the article. A new approach of limit price's calculation is suggested.

Without doubt we can say, that on the way of overcoming the crisis, Ukraine has to support innovation development. This is not possible without essential renovation of techniques and technologies of producing. The main role in this process should be given to mechanical engineering branch of industry, as the most principal sphere of the scientific – technological progress investigation.

It is well known that mechanical engineering must initiate technical innovation. A lot legislative, financial and organization conditions has a great influence on this process.

It is important, that manufacturing of new production should be profitable for consumer as well as for its producer. Investigation into the new production process must be advantageous for enterprise, so it is necessary to calculate its efficacy together with prices for new production. Principal meaning in this process is given to limit price.

There were several ways of recognizing of sense and methods of calculation the limit price in planning economy.

A lot of offers, made by economists during for transformation our economy into the market one were not accepted, and the new suggestions, which we can call as "official" are still not worked out.

Thus, there is a necessity to consider the methodical approach, which have a strength in the planning economy, and to decide, what we can use today, what should be changed and why.

Let's try to make a short review of well known approaches to calculation of the limit price.

According to normative technique of the price formation for new production of manufacturing and technical purposes [1], the formula of limit price was:

$$P_L = P_U \cdot K, \tag{1}$$

where P_U - upper limit of price;

K - coefficient, which reflects the decreasing of producing costs, started from preparing of manufacturing and finishing by its serial producing. It takes on the level of 0,8.

It is theoretically hard to base such meaning of this coefficient, because limit price is not grounded by producing costs, but it should be limited it and also to be lower, then sale price.

In some recommendations for calculation of that coefficient, the next formula is used:

$$K = \frac{1 + \kappa_D (\gamma - 1)}{\gamma}, \tag{2}$$

where κ_D - coefficient, with help of which the difference between upper and lower bound of price was distributed (recommended level 0,3-0,5);

γ - ration of upper price limit to lower bound of it.

Some authors, for example, V. Galperin [2] were among supporters of unnatural abatement of limit price, thinking that it was possible to use it (limit price) for calculation of prime cost of capital investigations.

Koshuta and L. Rozenov [3] thought, that coefficient "K" should present the level of obsolescence (moral ageing) of new production during the period, started from receiving the technical documentation and finishing by serial manufacturing and using.

In out opinion, the sense of this problem is well considered by L. Mayzenberg [4]. He notes, that “limit prices calculation on one hand should be based on the compulsory cost, which is really necessary because of technical improvement of future model of new production. And on other hand the rate of possible moral ageing”[4, p.130].

Thus, the elaboration costs become the object of scientist’s research. This problem was grounded in the article of O.O.Orlov and E. G. Ryasnykh, named “The limit price and efficacy of social manufacturing”[5]. There is a formula of limit price, which was worked out by the authors:

$$P_L = P_U - \frac{\frac{C_e}{\mathrm{N} \cdot \mathrm{t_P}}}{\mathrm{E_H} + A}, \qquad (3)$$

N - the volume of producing by plan;

$\mathrm{C_e}$ - elaboration costs;

$\mathrm{t_P}$ - the period of discharging the elaboration costs ;

E_H - coefficient of efficacy of capital investigations in minimum;

A-amortization quota.

As we can see, the economists were in an active searching of ways of solving the problem of grounded price formation at all, including the limit price formation. But the external conditions and formation of market economy demand the reconsideration of normative technique of limit price making. Indubitably, elaboration costs should be in the structure of limit price. D.Dolan tells: “If the companies knew beforehand the real level of elaboration costs, they would probably dicede not to manufacture the new production even for attraction of new customers. Some of the companies would have

no chance to discharge this costs, without even realizing this."[6, p.178]

Moreover, the purpose of limit price in market economy must have another function – it has to set measure to the sale price. As the rule, the sale price should be higher or be equal to the limit price.

As we consider, limit price must be based on the lower bound of price:

$$P_L = P_{LB} + \frac{C_E}{\sum_{i=1}^{n} N_i} \cdot \quad (4)$$

The economic situation in Ukraine is rather unstable and, for receiving more exact level of limit price, it is better to use the future value of elaboration costs.

There are two main strategies of discharging the elaboration costs. According to the first of them, these costs are divided into the equal shears for all of new production producing. The second mean, that the elaboration costs are unequally divided. The last one includes two variants:

1) the most part of these costs discharges during the first years of producing;

2) the most part of these costs discharges during the last years of producing.

Let's show our technique on an example of mechanical engineering enterprise. The elaboration costs are 80 000 UAN; annual percentage rate is 15 %; the lower bound of price is 118 140 UAN; the volume of producing according to the plan is 40 units (5,10,8,9,8 correspondingly to the years) [7]. Another information is presented in the table 1

Table 1 – The information for limit price calculation.

Years	Elaboration costs					
	Equal dividing		Dividing with payments increasing		Dividing with payments decreasing	
	Cost level	Future value	Cost level	Future value	Cost level	Future value
1	1	1,15*16	9	10 350	25	28
2	1	1,322*16	11	14 540	20	26
3	1	1,52*16	15	22 800	18	27
4	1	1,749*16	22	38 480	12	20
5	1	2,011*16	23	46 250	5	10
T	8	124 030	80	132	80	11

It is suggested, that the period of discharges of elaboration costs, should be calculated this way [5, c. 31]:

$$t_{\delta} = \frac{N_1 t_0 + N_2 (t_0 - 1) + N_3 (t_0 - 2) + ... + N_n \left[t_0 - (n-1)\right]}{N_1 + N_2 + N_3 + ... + N_n}, \qquad (5)$$

N_1, N_2, N_3, N_n - volume of production correspondingly to the years;

n - the year of production;

t - the period of producing.

$$t_p = \frac{5 \cdot 5 + 10 \cdot 4 + 8 \cdot 3 + 9 \cdot 2 + 8 \cdot 1}{5 + 10 + 8 + 9 + 8} = 2{,}88 \cdot$$

Finally, according to different methods of calculation of elaboration costs discharges the limit price will be:

$$P_{L1} = 118140 + \frac{124030}{40 \cdot 2{,}88} = 119220 \; UAN$$

$$P_{L2} = 118140 + \frac{132420}{40 \cdot 2{,}88} = 119290 \; UAN$$

$$P_{L3} = 118140 + \frac{11360}{40 \cdot 2{,}88} = 119190\ UAN$$

And for comparison, the limit price by using the pure elaboration costs without influence of the time factor:

$$P_{L1} = 118140 + \frac{80000}{40 \cdot 2{,}88} = 118830\ UAN$$

As you can see, there are some differences in results that we have received. And these differences can make a great influence on the profit dimension, especially if the number of a new production is rather great, like in this case (more than ten). So we can say, that using the offered technique of limit price gives fuller information to about divergencing of elaboration costs to the executive management.

Literature:

1. Normative technique of price formation for new production of manufacturing and technical purposes. – M.1974, 29 p.
2. Galperin V. Limit price for new technique / V. Galperin – Planning economy. – 1974. - № 12. – P.64-68.
3. Koshuta A. Moral wear-out and price formation / A. Koshuta, L. Rozenov. – Questions of economy. – 1975. - № 9. – P.63.
4. Mayzenberg L. The problems of price formation in a socialistic society / L. Mayzenberg. – M. : 1976,- p.130.
5. Orlov O. Limit price and efficacy of social manufacturing / O.Orlov, E. Ryasnykh. – Economic science. – 1979. - №5. – P.27-33.
6. Deyly D. Effective price making as a basis competitively advantage / D. Deyly. – M. : 2004, 304 p.
7. Savchenko O. Groundation of price formation for new production of manufacturing and technical purposes / O. Savchenko. – Visnuk KNU. – 2008. – V.2. - № 6. – P.85-86.

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