

The Reorganization Process in an Enterprise

Eva Pataki*, Andras Sagi **

* Subotica Tech - College of Applied Sciences, Subotica, Serbia

** Faculty of Economics, Subotica, Serbia

peva@vts.su.ac.rs

Abstract— The authors consider the possibilities of completing market enterprise strategy in two market situations in contemporary conditions of the existence of potential competitors on a perfect monopolistic market, and in the conditions of including elements of the so-called non-price competitions, i.e. the so-called “sales effort” in the model of the long-term balance in monopoly competition.

In the first part of the work, alternative strategies of monopolists in case of the appearance of potential competitors are considered: the Sylos model of optimal price to prevent the access of competitors to monopolistic markets and the model of Worcester hypothesis of independent profit maximization in monopoly. The second part presents the model modifications of the long-term profit maximization in the market of differentiated products, i.e. the markets of monopoly competition because of including the so-called promotion costs in the enterprise model of supply optimization.

Key words: potential competition, Sylos postulate, hypothesis of independent maximization, non-price competition, “sales efforts”

I. MARKET BEHAVIOR OF MONOPOLISTS IN POTENTIAL COMPETITION

In the previous considerations, we supposed that a monopolist has no competitor on market, i.e. he does not have to take care about them in defining market strategies. In this analysis, we include the existence of potential competitors on monopolistic market. Thus, we suppose that there are competitors who consider the possibilities to enter the production branch of monopolists. Potential competition can exert influence on the structural changes in the field of market, price, profit and output, and its effects are fully expressed in the long-term period. Inclusion of the long-term perspective can cause the changes of market structures because of possible competitors, and influence on the changes of strategies of monopolists, who, instead of their efforts to maximize profit in the short-term, pay attention to the long-term maximization.

Roy F. Harrod was the first to include potential competition in economic theory. In his economic doctrine, he differentiated two types of producers. The first type is the “snatchers” who try to seize maximal profit in the short-term, not caring about danger of potential competition because they will leave this field of production for a while. The second type of producers is

those who want to stay for long in that branch of production. They are “those who survive” (stickers); they form prices at the level of average costs, not pretending on income bigger than normal profit (monopolist extra profit). Therefore, they are not in danger of potential competitors.

Pricing based on average costs with monopolists, who want to stay permanently in the monopolized field, starts from the supposition: (1) the level of costs of old producers and the level of costs of potential competitors are the same and (2) potential competitors start from current profit, not thinking about the level of possible profit after entering the branch.

The basic factors that limit the entry of competitors in some production branch are:

- Differentiation of products

At some market segment, there are already formed preferences of consumers for commodities of some producers. These preferences act in the long period, partly because of habits, but also thanks to advertizing the brand of products and the firm. The system of control over distributive centers and forming commercial agencies contribute to this.

- Absolute cost advantages

It is attained by monopolization of some production technology and irreplaceable input, patent property, production secret, cheap capital resources, etc.

- Increasing additional income

In case of increasing additional income, potential competitors can make decision for the production of small volume, i.e. to produce in the sphere of suboptimal capacities. Then, the level of costs will be higher than the costs of current firms. Alternatively, they can decide for the risky move of production with optimal capacity use. Too big quantity of products can cause overproduction, drop in prices and stock of unsold goods. Consequences will be more expressed if optimal capacities give outputs that satisfy relatively big part of total market demand and the coefficient of elasticity is big.

The following classification of industrial branches is known, regarding to the degree of limitation (making difficult) of new competitors access.

An easy access of competitors to industrial branches means that no one of active or potential competitors can attain bigger advantage regarding costs. In such branches over the level of average costs, price that enables the appearance of competitors cannot be formed. The realized profit is at the level of average one.

Access limitation of competitors by efficiency reduction is the situation when several enterprises in the same branch have lower costs and realize economic (monopolist) profit, thus they prevent the entry of competitors by low prices. However, income attained in the long-term cannot always compensate the “sacrificed” short-term profit because entry into the branch is slow or the sum of expected additional profit is relatively small.

Limitation of competition without efficiency decrease, contrary to the previous case, makes monopolists easier to “sacrifice” part of the short-term profit on behalf of the long-term perspective.

The blocked competition exists in branches where price maximizing the short-term profit is not enough attractive for potential competitors.

The cited classification points to those only monopolists, in branches where there is limitation of access of competitors with efficiency decrease, will be ready to renounce maximizing the short-term profit. Therefore, we should analyze the possibilities of the enterprise, considered in the end, in cases of existing danger of potential competition. We shall consider the so-called Sylos postulate (1989) and Worchester’s hypothesis of independent maximization.

- a) The Sylos model of optimal pricing of entry-prevention of competitors

The Sylos postulate starts from the evaluation of potential competitors that the firms already working will keep the level of outputs and after the entry of competitors. According to this, new competitors will be allowed only the interval of curve demand of the given branch for which the “old” firms are not interested. To illustrate the Sylos model, take Diagram 1. Let current producers produce output Q_1 at price P_1 . At potential competitors’ disposal is the space on the right from the balance combination of price and output of “old” producers. To illustrate this, draw a new vertical axis through the point A (the balance point of current firms). On the right of the new axis, the potential “life space” of new competitors will be found. The Diagram points to three alternatives.

In the first case, the competitor “newcomer” will include in the branch at price P_1 . The curve of market demand cuts LAC_1 of the new producer in space outside of output of current firms. Therefore, the monopolist expects income and after entry of new producers into the branch, as additional output, together with Q_1 enables pricing over average costs. The new P_2 price, therefore, is not attractive for a potential competitor so he will not enter this production branch. However, the price P_2

prevents the entry of competitors and it is called the price that prevents or refuses. Of course, and every other one, lower than P_2 will also refuse potential competitors. Of all prices, the optimal one will be that refuses potential competitors with minimal profit “sacrifice”. P_2 is, in this situation, an optimal limiting price.

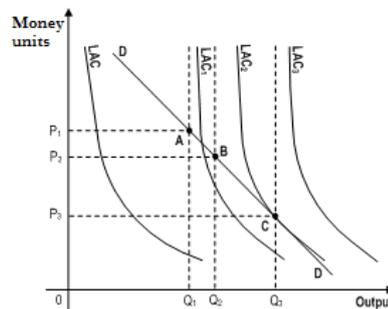


Diagram 1 Optimal pricing to prevent competitors

In the third case, the price P_3 is formed that also prevents efficiently the entry of potential competitors. Namely, competitors even now cannot account on price, which will enable bigger than normal profit. Regarding to the fact that the function LAC_1 does not cut or touch the demand curve, but it is over it, it is clear that the entry of competitors can be prevented by the price higher than P_3 . With price P_3 , current enterprises will sacrifice (unnecessarily) the high profit sum to dissuade competitors from entering the branch.

The Sylos postulate, in the described form, represents a simplified interpretation of refusing competitors and it does not pay attention to numerous circumstances (it will not be analyzed here) that allow different alternatives of behavior of current firms and potential competitors. Partly because of justified objections, partly for experience, the theory, instead of researching alternative decision and behavior of monopolists oriented to the refusal of competitors’ entry in the monopolized branch, considers the question to what measure and output is useful to the current producers to allow the entry of new firms in the sphere of production. Limiting price or refusing price, as we have seen, decreases the short-run profit, but at the same time, decreasing the number of active producers in the branch, it increases profit in the long run. Firms will apply lower price than the price that maximizes profit and allows the entry of competitors until the sum of expected future profit, by price limitation, does not become bigger than the “sacrificed” profit in the short-run. Such profit appears by decreasing monopolist prices at the level of limiting ones for competitors.

- a) Worchester’s hypothesis of independent profit maximization in monopoly

Worchester gives another approach to the problem of potential competitors’ entry into the monopolized branch (Kopanyi, 2007). In the starting case, the author cites that

one producer, and then more of them give the overall input.

Therefore, new competitors enter the given branch. The answer to the question ‘why and how long they will allow the entry of others into the given branch of production and the question of determining participation of individual firms in production, the cited theoretician cites in his hypothesis of “independent maximization”. The hypothesis is illustrated in Diagram 2. A simple explanation, marginal and average costs will be constant, and the function of market demand is linearly and dynamically unchanged.

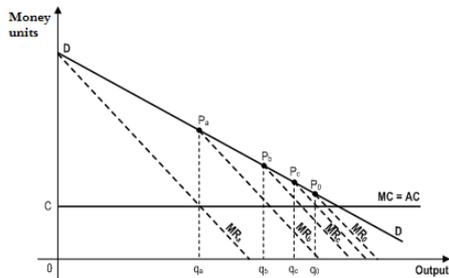


Diagram 2 Worcester's hypothesis of independent maximization

In the starting case, only one firm, the firm A produces and gains access to market. Regarding its monopoly position, it will form the price P_a , which will maximize profit. The high monopoly profit, after some time, will attract a new firm B, in the observed sphere of production. The producer A will accept the new one, without changing the volume of production. For the firm B, the market demand curve will be authoritative in the interval right to the point P_a and appropriate curve of the marginal income MR_b , and it will form price to maximize profit. It is obvious the price P_b , and the producer A will accept it. The same procedure repeats with the entry of producers C and D in the branch. The stimulus for the entry of new producers will exist until marginal income surpasses marginal cost. Such behavior is favorable for the first enterprise. First, because of the biggest participation on the market. However, if in agreement, this enterprise tries to keep its monopolistic price, it will be offered to accept output reduction, i.e. its market participation on behalf of the new firm. At the end, the enterprise A realizes the biggest profit.

The hypothesis of independent maximization is not applicable when the level of costs of some firms is essentially different, or additional income is decreasing. In essence, it represents the strategy of slowing down the entry of competitors into the branch. It is because, after entering every new firm, price and market participation of new participants decrease. The attraction of the given branch also decreases for potential competitors.

II. ELEMENTS OF NON-PRICE COMPETITION IN MONOPOLISTIC COMPETITION

In this point, we want to supplement the model of the long-term balance in monopolistic competition. We include essential dimensions in the analysis, the so-called non-price competition as the change of product quality,

deepening product differentiation, role of advertisement, promotion costs, as called by one word “best efforts offering” (Kopanyi, 2007).

Consider first the change of product quality. Contrary to the previous analysis, suppose that the firm coming on the market of monopolistic competition changes the quality of its products and competitors' prices and product quality are unchanged. This firm considers all the variations of product quality that can realize by the modification of product characteristics. After that, it calculates the amount of expected and probable maximal profits for every variation of quality, and then it selects the set of the best variations. However, in this case, Chamberlain's uniformity assumption is valid, more or less. Other enterprises, i.e. competitors act identically, every of them create, from its aspect, the most favorable product variations. Conditions of the long-term balance will not change. The curve of symmetry D' will cut the curve of asymmetry d' and the long-term of average costs LAC in their mutual tangent point. However, we must have in mind that development and change of product quality exert influence on both the position and the form of the curve of costs and demand. The appropriateness of assumption is in question if all the rivals can equally and successfully develop characteristics and quality of products and choose the most favorable variants, i.e. evaluate correctly the changes of requirements, taste and payment possibilities of consumers. The thorough analysis of characteristics of product quality, however, surpasses the frameworks of these considerations.

The wide range of product variation characterizes the industrial branches for which the conditions of monopoly competition are valid. One group of firms will try to satisfy the consumer layer with the bigger degree of price elasticity of demand, assortment offer of fewer qualitative and cheaper products. The other will try to satisfy the consumer layer with the “deep pocket” who want high quality products, and they are ready to pay more.

Besides pricing and quality changes, advertisement and other forms directed to the increase of sale volume play a leading role in profit maximization. They are also called the “best-efforts sale”. Expenses originated from this are advertisements and product announcement. It includes advantages given to buyers, sale on credit, present-products with bigger purchase, then, expenses for improving and keeping already formed presentation for business partners and buyers on the firm, etc.

To simplify this, let us start from the assumption that the firm has selected price and assortment of its products. The question of determining the optimality of promotion expenses for profit maximization is left to be solved (Diagram 3).

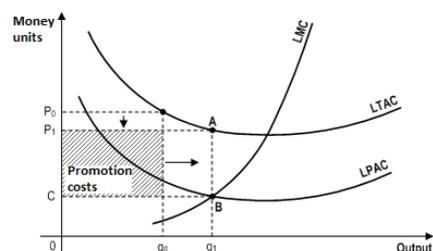


Diagram 3 Optimization with promotion maximization

In Diagram 3, the long-term curve of average costs, which includes only economic costs, is the market with LPAC. The long-term curve of total average costs, which also includes promotional expenses, is marked with LTAC. The appropriate function of the long-term marginal costs is presented by the curve LMC. The difference between the curve LTAC and LPAC shows the size of promotion costs per product unit. If the firm decides for the price P_0 , it could sell q_0 . With this combination, the firm will have losses because $LMC < LPAC$. On the other side, by increasing the sum of promotion costs, the firm can increase output and realize profit. It can attain it with the balance parameters q_1 and P_1 with which the equality $MR = P_1$ is valid. It is obvious that the appropriate output for profit maximization amounts to q_1 . Such output size will cause the equalization of marginal costs for the increase of production and sale with marginal income, i.e. the level of balance price P_1 .

The described method can be useful to the firm to determine the starting size of promotion expenses so that the size of realized profit will differ from the sum stated by this method. Namely, the Diagram was derived under supposition that the price is fixed. However, to sell as many products as possible at some price, as the result of promotion expenses, market demand must increase that will move the demand curve to the right, taking into account that every competitor, in the same way, increases his promotion expenses, the output of the observed firm can remain at the level q_0 . We keep thinking about including promotion expenses in the conditions of the long-term price balance (Diagram 4).

Diagram 4 illustrates the realization of the criterion of the long-term balance, but with some modification. The long-term function of average costs LPAC shows the formation of average costs including promotion expenses, with the condition that these expenses do not change themselves in the output function. The criterion of the long-term balance, connected with this curve, does not change itself. The new condition is valid, too, as in case without promotion costs that the curve of the symmetry D must cut the curve LPAC in the point of touch of the asymmetry curve and LPAC.

Suppose the possibility of changing promotion expenses. The curve of the long-term costs LTAC will now show the change of costs per product unit, including, of course, the change of average promotion expenses. The position of the curve LTAC, in the interval left from the balance output q_0 , will be under the position of the curve LPAC because the reduction of sale size also

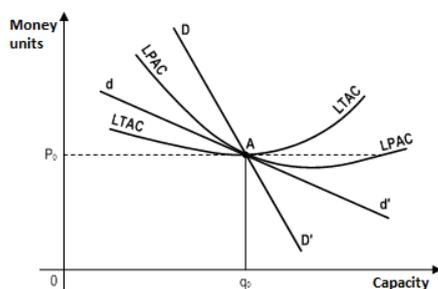


Diagram 4 The long-term optimization with promotion costs

reduces the sum of promotion expenses, i.e. the relation $LTAC < LPAC$ is valid. In the interval right from the balance output q_0 , promotion expenses will increase. It is logical, with the given price, increased sale causes the increased promotion expenses. Therefore, in the interval right from q_0 , the relation $LTAC > LPAC$ must be valid. The line drawn at the level of the fixed price must touch the curve LTAC in its minimum point.

Based on the cited, we can form an additional criterion of the long-term balance in monopoly competition with the requirement that price must overlap with the curve minimum of average costs combined with changeable promotion expenses. In such balance conditions, no one of real and potential competitors will be stimulated to change prices, quality or promotion product expenses. In addition, there will be a stimulus neither for entry into the given branch nor for leaving the market.

CONCLUSIONS

Summing up the results of considering the analyzed problems, the authors can draw the next two conclusions:

1. Including the assumption on the existence of potential competitors in the classical models of the long-term profit maximization in the conditions of a completely monopolized market can cause the changes of the market structure, as well as the introduction of a new strategy of monopolists. The new strategy, instead of the criterion of unconditional profit maximization in the short-term and the long-term, chooses the alternatives of "sacrificing" part of the short-term profit in order to prevent or slow down the entry of new competitors into the monopolist branch and profit increase in the long period.
2. Including elements of the so-called non-price competition through monopolistic costs in the model of the long-term profit maximization in the conditions of monopolistic competition supposes the formulation of the so-called supplementary criterion of the long-term price balance. Taking into consideration the supplementary condition, the balance price is formed at the level of minimum of the long-term curve of average costs increased for the sum of changeable promotion expenses. In such modified conditions, real and potential competitors will not be interested in further change of price, product quality or the sum of promotion expenses.

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