european social fund in the czech republic
EUROPEAN UNION
MINISTRY OF EDUCATION, YOUTH AND SPORTS
OP Education for Competitiveness
UNIVERSITY OF DEFENCE
INVESTMENTS IN EDUCATION DEVELOPMENT

Lesson plan

Course Name: Economics II

Supervisor: Prof. PhDr. KRČ Miroslav, CSc.

Lecturer: Ing. Martin Pop

Topic: Firm behavior and supply shaping, part IV.

Course Objectives:

The aim of the fourth lecture is to explain the basic oligopoly characteristics. To show the basic assumptions of each type of oligopoly and analyze individual models. The next goal is to clarify the causes of alternative theories of firm and to explain and characterize their individual models.

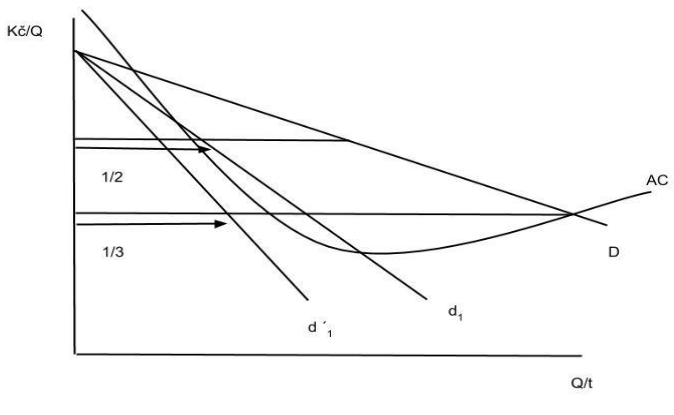
10. DECISION-MAKING FIRM IN IMPERFECT COMPETITION – OLIGOPOLY

10.1 Characteristics of Oligopoly

Oligopoly is a market structure characterized by a small number of firms and a relatively high degree of interdependence of their decisions.

Oligopolistic market structure assumes operation of only a few companies in the industry. Production of each of them is likely a significant market share and decisions of firms are dependent - each must consider the impact of their decisions on the behavior of other firms in the industry, respectively. predict their response to their own decisions. For these reasons, there are many models of oligopoly which differ mainly assumptions about the behavior of competing firms. These different models of oligopoly, however, agree on the following three assumptions:

1. small number of producers in the industry,
2. Nature of the manufactured product can be both homogeneous and differentiated,
3. Existence of a barriers to entry (economies of scale, product differentiation, costs, legal restrictions)



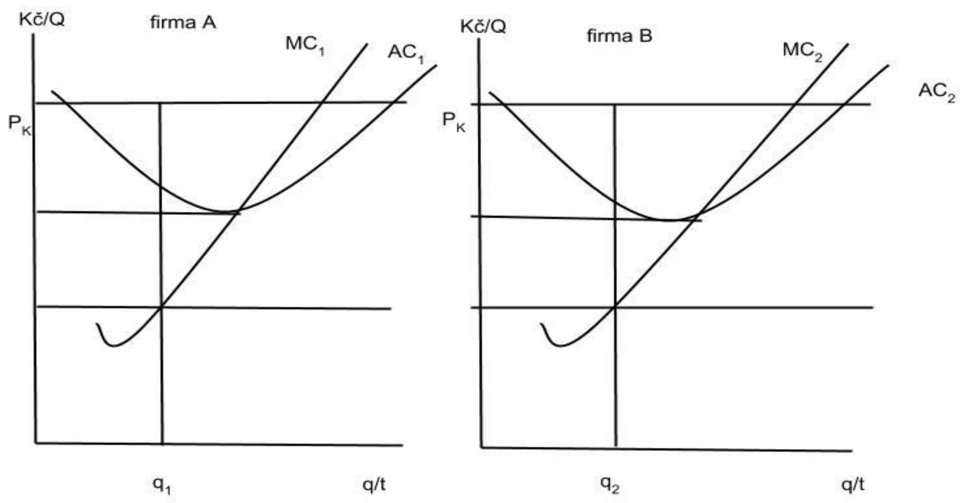
Sometimes companies can use as barriers to entry of other competitors **limit price**. The limit price is set at a lower level than the price at which the oligopolistic firms maximize profits.

10.2 Basis of Oligopoly Models

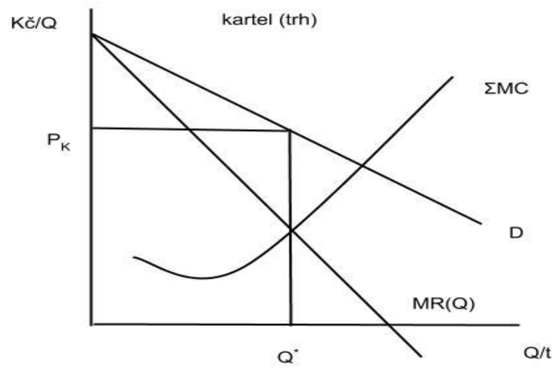
Most oligopoly models are based on the assumption that the output of the industry is quite homogeneous. Consumers then do not matter which manufacturer product they are buying. This does not correspond to reality. Companies are trying to differentiate their products.

10.3 Cartel

It represents so called Collusive oligopoly or Contract oligopoly when the industry is represented by a group of several companies acting as a monopoly with many companies. The aim of the cartel is to maximize the total profit of the industry. This can be expressed as the difference between total revenue and total total cost of all its members.

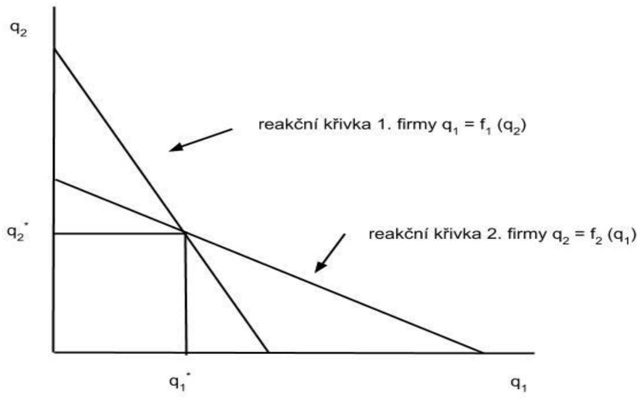


Optimal output



10.4 Cournot Model

Is based on the assumption that there are only two firms (duopoly) in the industry. These two companies produce a completely homogeneous product, have the same cost curve and know the market demand curve. There is the assumption that the first company (i) deciding on the size of its output considers the output of the competitive company (j) as the constant. Cournot model is static model.

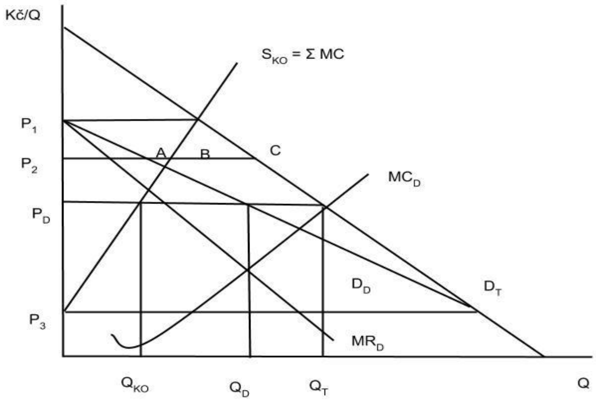


10.5 Stackelberg Oligopoly Model

Is using the same assumptions as the Cournot model with the exception of mutual responses of firms. The company, which manages to figure out how changes in output will respond to its competitor, will realize the benefits in the form of higher profits.

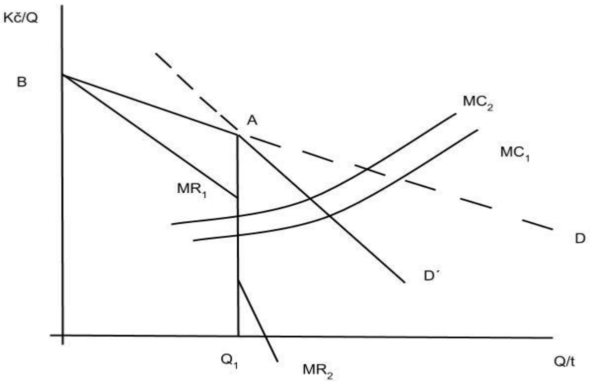
10.6 Oligopoly with the Price Leader

Price leadership can be characterized as a situation where one company in the industry taking an initiative to pricing and other companies take this price. A typical dominant firm is usually a company whose sole competitors are numerous smaller companies - a competitive edge. It is essential that the company from the competitive edge behave as perfectly competitive firms



10.8 Model with Cranked Demand Curve

The basic assumption of this model is that if one of the oligopoly companies reduces price, other companies reduce well. However, if one of the companies will raise prices, other firms will not follow this step. The result of this behavior is cranked demand curve composed of two parts: one part expresses the reaction of competitors on the price reduction and the second part no response to competitors' price increase.



10.9 Oligopoly Models Based on the Theory of Game

Economic can be divided into cooperative and uncooperative. Each game consists of three basic elements: a player, strategy and results.

11. ALTERNATIVE OBJECTIVES OF THE COMPANY

11.1 Causes of Origin

Approaches to the profit can be divided into three groups:

1. **Compensation and functional theories** – perceive profit as payment for businessman.
2. Monopoly theories - understand profit as a result of any benefits, privileged status, monopoly profit.
3. Technological and innovation theories - understand profit as a result of technical and technological improvements and innovation activities.

On the problems associated with profit maximization model also reacts theory assuming other objectives:

1. to **achieve a certain market share**.
2. to **survive in the long term**.
3. **Growth and expansion** of the company.

Among the major alternative theory of the firm include **managerial** and **behaviorist** theory of the firm.

11.2 Managerial Theory of the Firm

The main feature is the thesis that a company managed by managers may have other objectives than profit maximization.

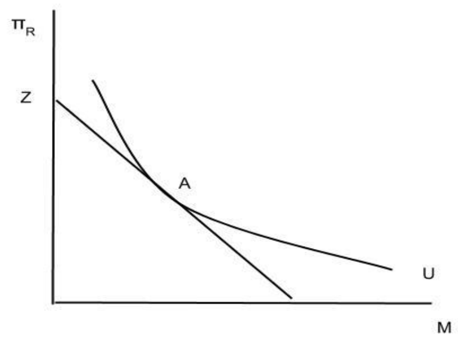
Owners of the company are the shareholders, but control is given to the managers.

Behaviorist theory of the firm are based on the fact that the goals of the company are the result of decision-making and negotiation processes between individuals and groups in the company.

11.2.1 Simple managerial model

The aim of the company controlled by managers is the utility maximization of managers. Benefit is for the manager given by his position in the company. The secondary benefits and revenues are for example a company car with a driver.

The main difference between a simple managerial model of profit maximization is greater freedom of choice is a combination of reporting income and secondary income and benefits of managers.



11.2.2 Baumol Model - Firm Maximizing Turnover

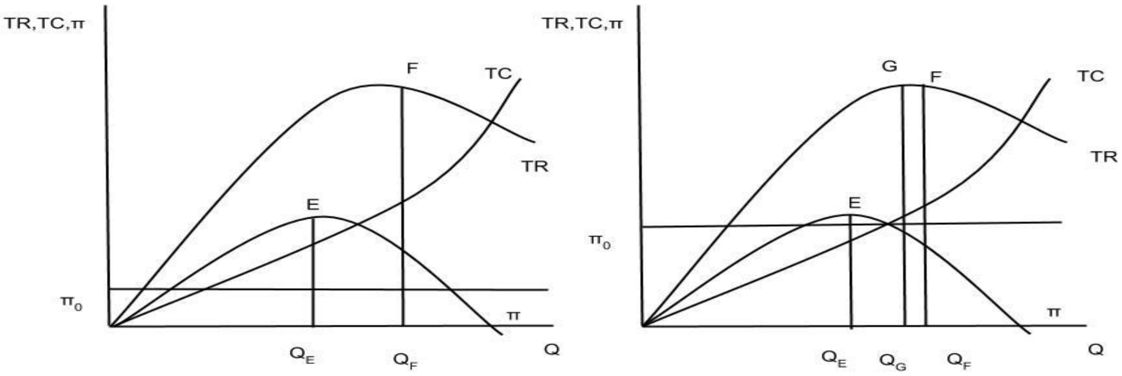
Is based on the assumption that the goal of managers is the sales maximization.

TR = P x Q

We expect an imperfect competition and the existence of barriers to entry into the industry. The most important feature of imperfect competition is the fact that demand is not perfectly elastic and price is therefore not an independent parameter. Turnover therefore does not always increase with the volume of production.

Managers are seeking to maximize turnover, but at the same time, not fall below a certain income level below the **minimum required profit**. The existence of the required minimum profit can be explained mainly by the fact that the owners of businesses require income (dividends).

Let us summarize the interpretation of Baumolov model: company maximizing turnover produces greater volume of production at a lower price than the profit-maximizing firm.



11.3 Another Alternative Theories of the Firm

Behaviorist theories of the firm

The common feature of all the behavioral approach is the fact that it is difficult to specify the goals of the large organizations. Individuals have different goals. Behaviorist theory leaves the premise that the goal of the company is only a matter of holders (top managers). The company is then ,,coalition" of individual interest groups. Company goal can then be changed as the objectives of the various groups and their relative power within the company.

Employee Model of the Company

The profit is distributed among all workers. For simplicity, we will assume that all employees share in the profits is the same. The aim is to maximize pensions to employees. Pensions have two components:

- Salary, the amount of which is determined by the labor market.

- Share of profit, which is determined by the amount of profit and number of employees.

Alternative theories of the firm are an important part of economic theory. Their importance lies in the fact that they provide an opportunity to analyze much wider range of problems associated with the theory of the firm than the traditional model

List of tasks for students:

1. **Charakterize the differences between monopolistic competition and oligopoly.**
2. **Explain the Cournot model.**
3. **Charakterize the Cartel.**
4. **Explain the Baumol model.**
5. **What alternative goals of the company do you know?**