

# MICROECONOMIC ANALYSIS IN COMPETITION POLICY

Paul Prisecaru<sup>1</sup>

## Abstract

This paper presents some of the most important microeconomic tools used in assessing antitrust and merger cases by the competition authorities. By explaining the way that microeconomic concepts like “market power”, “critical loss” or “price elasticity of demand” are used by the modern competition policy, the microeconomics scholar can get a practical perspective on the way that these concepts fit into the more general concept of “competition policy”. Extensive economic research has shown what are the market forces and economic factors that determine how cartels, which are at the core of antitrust policy, are established and sustained over time. One of the most important of these factors is the markets exposure to innovation, especially disruptive innovation. In these markets, the paradox, from a competition policy perspective, can be considered the fact that collusion is one of the least important concerns, due to the specific elements that determine the nature of competition. Instead, the main anticompetitive risk in the markets exposed to intensive innovation is unilateral conduct by which dominant incumbents can exclude competitors.

**Keywords:** *antitrust, market power, critical loss, cartels, price elasticity of demand, disruptive innovation.*

**J.E.L. Classification:** *D430; K210; L400; L100; L130.*

## Introduction

In this article I will present the principles and economic models used in the analysis of anticompetitive practices by competition authorities and the main challenges in this area. In the last half century, the role of microeconomic analysis has increased substantially in antitrust, especially due to the growing influence of the Chicago School of economics and the development of industrial organization. These two factors have resulted in a remodeling of the instruments used by the competition authorities and have led to a new interpretation of the different behaviors of companies in the market, which is called "effects-based approach." Moreover, microeconomic analysis brought to the fore the concepts used in the past only in academia, such as "elasticity of demand" (used in the definition of relevant markets) or "market power" (used in determining the existence of dominant positions).

### 1. Market power concept

Market power is a key concept used in the analysis of anticompetitive practices, but it should be noted that the mere possession of market power is not a violation of antitrust law. In cases where it is established the existence of market power, it is subsequently taken into question the company's behavior to determine the existence of a possible anti-competitive practice. Thus, in many antitrust cases targeting abuses of dominant position, the element determined with microeconomic theory tools is the existence of market power.

#### 1.1. Definitions of market power

Microeconomic theory divides economic agents into companies that can not influence the price (*price-takers*) and companies that can do this, which are firms with

---

<sup>1</sup> Deputy director within Competition Council, Ph.D. Student in economics in the National Institute for Economics, Romanian Academy

market power. This distinction is based on the demand curve on the market taken into consideration. In case it is a single company that sells a single product, we may define  $P$  as the price the firm receives for its product,  $X$  represents the production of company and  $X(P)$  is the demand curve as the firm perceives it, with  $X'(P) \leq 0$ . If necessary we may use inverted demand curve under the form  $P(X)$ . A firm that does not have control over the price will be  $P(X) = P$  regardless from  $X$ , on a range of relevant changes of company's production. On the other hand, a company with market power can determine increases or decreases in prices through changes in its production:  $P'(X) < 0$  in the same range of relevant variation. Such a firm has "technical market power" if it is faced with a downward demand curve and not horizontal.

### 1.2. Practical aspects of the concept of "market power"

In practice, almost all companies have a degree of technical market power. Even if the notion of perfect competitive markets is extremely useful for theoretical constructions, real markets deviate more or less from this ideal model. An important reason why this phenomenon happens most of the time, is that the marginal cost is less than the average cost, particularly for the products with high fixed costs and without production capacity constraints. In such cases, prices must exceed marginal costs for companies to remain viable ones in the long-term [1]. Although theoretically the society may dispose that all prices are equal to marginal cost and where it is necessary to subsidize the industries, such a level of regulation is regarded as unfeasible, and in most economic sectors the free market system is better than other systems, as it is based exclusively on the interaction between supply and demand. Antitrust law only serves to ensure a maximum level of competition in these markets. Given the quasi-ubiquity of certain levels of market power, the impossibility of their total elimination and inevitable cost of intervention through antitrust instruments, the mere fact that a firm has market power is not a significant fact in itself. However, the technical concept of market power from microeconomics has the important advantage that fits to precise measurements, which makes anti-competitive practices that lead to an increase in this power to be identified. Standard measure of technical market power of firms is based on the difference between practice prices and marginal cost. In the theory of monopoly prices, the company sets prices to maximize its profits.

Profits are given by  $\pi = PX(P) - C(X(P))$ , where  $C(X)$  is the cost function of the company. Differentiating depending on the price we get the standard expression governing the price policy of a company that produces a single product:

$$\frac{P - MC}{P} = \frac{1}{|\varepsilon_F|},$$

where  $MC$  is the marginal cost of the company,  $C'(X)$ , and

$$\varepsilon_F \equiv \frac{dX}{dP} \frac{P}{X}$$

is the elasticity of demand facing the firm, meaning "firm specific demand elasticity" [2].

The left side of the formula that describes the pricing policy of a company with a single product actually represents the percentage difference between price and marginal cost, called Lerner Index, which represents a natural means of measuring technical market power:

$$m \equiv \frac{P - MC}{P}.$$

## 2. Elasticity of demand and hypothetical monopolist test - microeconomic tools for defining relevant markets

In the antitrust area, there are several elasticity types which have applicability in defining the relevant markets, of which the most important ones are price elasticity of demand and cross elasticity of demand (Tiffin's coefficient).

**2.1. Price elasticity of demand** measures the proportional change in demand for a good or service as a result of a proportional variation in the price. A high elasticity of demand indicates that a small change in price leads to a much larger proportional change in the quantity demanded in the market. In this case, companies in the market can not increase profits through price increases because consumers will respond by lowering the amount consumed in a too large extent to make the price increase profitable.

**2.2. Cross elasticity of demand** measures the proportional change in demand for a good or service in relation to the proportional change in the price of another good or service. A high cross elasticity between two goods or services indicates that the two have a high degree of substitutability. For example, if the price of product X increases leading to an increased demand for product Y, cross elasticity is positive and the two products are in the same relevant market. Also, if the price for product X increases and demand for product Y decreases, the elasticity is negative and the two products are considered complementary (e.g.: gasoline price increases lead to lower demand for cars with high fuel consumption).

In many cases that involve market power, cross elasticity can provide misleading results because the prices can be raised to a level where demand is relatively sensitive to price (the limit of what consumers are willing to pay) and this makes other products or services seem interchangeable. Another problem may occur when there are differences between the elasticity of X unto Y as compared to the elasticity of Y unto X. In this case it is advisable to define the relevant market different from the usual one, depending on the order in which cross elasticity is measured.

### **2.3. Hypothetical monopolist test**

Another model widely used in the analysis of relevant markets is the so-called "SSNIP test [3]" or "hypothetical monopolist test". This method refers to sending some questionnaires to the customers of firms in the market in which they were asked how they would proceed if one company would sell goods or services in question in the relevant geographic area and would require a permanent and small increase but significant of prices. More precisely, consumers or customers of firms are asked whether, starting from current prices deemed competitive, a hypothetical increase of these prices by a percentage between 5 and 10% for more than one year would result in switching the supplier of products or services. Responses to this question indicate the degree of demand substitutability and the degree of supply substitutability, i.e. if consumers would switch to competing companies and / or if new competitors enter the market.

Hypothetical price increase is only relevant in the context of economic exercise of identifying market borders, rather than relying on this process for assessing market power. In applying this test one should not use a very broad statistical basis (geographical area or group of consumers) and the main reference indicator should be the end consumer.

In the EU, the percentage of the price hypothetical increase is between 5 and 10%, depending on the sector, whereas in the United States it is generally 5% but there are used more conditions in which this price increase takes place, such as:

- Statistical evidence about consumers who have changed or consider switching the supplier due to relative price increases;
- Evidence about suppliers who base their business decisions on the possibility that a large proportion of consumers consider product substitution in response to relative changes in price or other competitive variables;
- Influence of downstream competition;
- Timing and costs of product substitution.

The conditions listed above are not an exhaustive list and they may undergo changes or additions depending on the specific economic sector in question.

Hypothetical monopolist test is subject to an error margin occurrence, especially in complex markets where consumers do not have a homogeneous behavior in the use of that product and when linking products with joint costs is widely used or the price structure is not transparent.

As it is shown in the next figure, "critical loss" is really the answer to the question: how many customers should change the supplier of goods and / or geographical area to make a price increase (in this case by 10%) unprofitable? If the rectangle marked "-" representing the loss of sales volume is higher than the rectangle marked "+" representing the gain due to the price increases, then it can be considered to have been reached "critical loss" and the considered company does not have significant market power.

Mathematically, a price increase is unprofitable if:

$$(p_1 - c_1)Q_1 < (p_0 - c_0)Q_0$$

where we have:

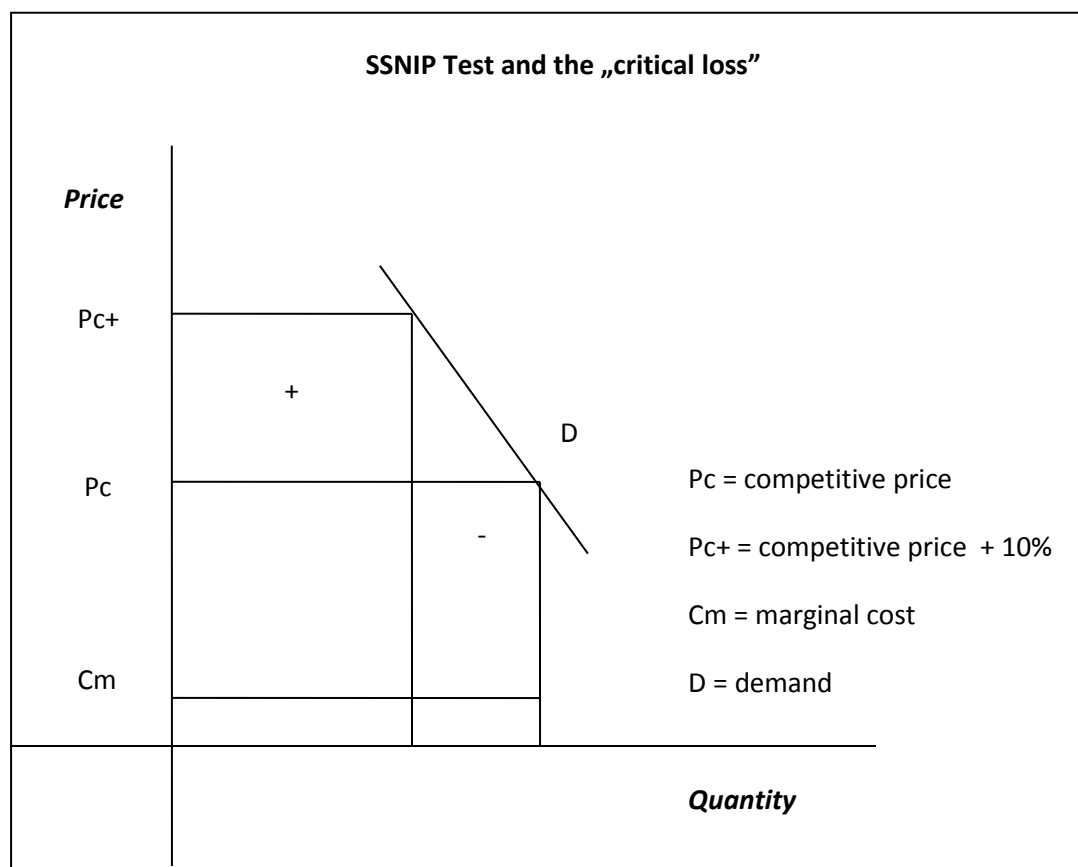
$p_0$  - Original price

$p_1$  - Increased Price

$c_1 = c_0$  - Unit variable cost

$Q_0$  - Quantity originally sold

$Q_1$  - Quantity sold after price increase



This relatively simple formula is used by competition authorities in most cases of horizontal mergers and abuse of dominant position. Also, for the purpose of identifying the relevant market borders the "critical loss" instrument may be applied in cases of cartels and concerted practices. One of the fundamental advantages of this type of analysis is the fact that

these basic principles are used in practice even by the companies that want to know whether a price increase is profitable or not.

One of the most contested conclusions resulting from the "critical loss" analysis refers to the fact that higher profit margins reduce the anticompetitive effects resulting from horizontal mergers. The argument behind this conclusion is that the size of profit margins in a market is directly proportional to the size of profits losses due to reduced sales as a result of rising prices. Thus, in markets with high profit margins it is needed a smaller "critical loss" for determining the unprofitable character of the price increases. According to O'Brien and Wickelgren (2003) this reasoning is inconsistent with economic theory, companies setting their margins in order to maximize profits. The more substitutable products for a company's product, the lower the profit margin will be in order to prevent the consumers from switching to competitors. On the other hand, as there are fewer substitutes, the higher the profit margin will be. Thus, when two or more competitors are merging, the competition level in the market is affected more when profit margins are higher than when they are lower and prices of newly created entity tend to grow more in the first case. Following the demonstration of O'Brien and Wickelgren (2003), Federal Trade Commission [4] from U.S. imposed a more careful application of microeconomic tools in merger cases generally and an analysis of "critical loss" especially.

### **3. Economic instruments used to predict the cartels emergence**

Theoretical literature on the emergence and operation of cartels focuses on the compliance by independent firms of agreements through which market competition is restricted. Since cartels [5] are illegal, such agreements are not subject of contracts and, as a consequence, they can only exist in a self-imposed form. The economists define the term "collusion" as: a self-imposed deal of cooperation. It should be noted that this definition does not imply that collusion or more precisely the concerted market behavior was made without a prior communication between the parties. Rather, it is emphasized the self-sustainability of the understanding, absolutely indispensable in the context of its illegally status. Even if there is no communication between the parties, or believed that, in most microeconomic models referring to cartels, recent researches in the field have projected a new light on the role of this factor.

In the following I will present the specific characteristics identified in the literature and confirmed by empirical analyzes, as being relevant to the study of cartels sustainability in a market. It should be mentioned that these features are not sufficient and necessary for the cartels sustainability, but directly affects the likelihood of emergence of this phenomenon and because of this fact they are essential elements in microeconomic analysis of the anticompetitive practices.

#### **3.1. Number of firms**

In general, economists expect the incidence of cartels and the number of market participants to be negatively correlated. Firstly, a large number of participants increases the likelihood that firms with different production costs[6] to coexist in the same market, this fact reducing the likelihood of cartels. Secondly, a large number of participants make it more difficult to monitor the compliance with the understanding. Finally, as the number is higher, the lower the market share held by each of the participants, making more tempting the deviation from cartel policy and the deterrent effect of any possible punishments the competitors may impose to be more reduced.

Of the Romanian economists that have demonstrated the importance of firms number for the competition level it is necessary to remember Iancu (1992), and Moșteanu (2000 and 2001). Due to the nature of the transition from state centralized economy to a market economy, the old state monopolies and oligopolies automatically become private ones

generating many problems to competition environment, this being anticipated by Iancu (1992). Thus, within the Romanian economy it became evidently the direct link between the number of firms and the degree of competition in the markets.

### **3.2. Market entry barriers**

If the barriers level to market is low, the current high prices will attract new competitors in the future, leading to a substantial reduction of future earnings from cartels and to mitigation of possible punishments for those who leave the cartel. In fact, as it is shown by Iancu (1992), in such a market, an additional pressure force acting on the participants, besides those performed by customers and competitors, is represented by what economists call the "potential competition". Thus, as it is shown in Grout and Sonderegger (2005) cartelization is difficult to sustain in markets with low barriers to entry, *regardless of the number of existing competitors*.

A similar reasoning applies currently to markets with high barriers, in which it is anticipated a significant reduction of them in the future. For example, let's assume the existence of a product protected by a patent to expire over a few years. Other companies in the industry know this and, unless the protected product production involves significant fixed costs, after the expiry of the patent, the market will become competitive. In a market where there is such a "potential competition", cartels can not be long-lived, being unsustainable or at least unstable.

### **3.3. Inventories and production capacity constraints**

The role of production capacity constraints on the feasibility of cartels is ambiguous. On the one hand, a company with a limited production capacity has a reduced interest to undermine its rivals and can not meet the additional demand generated by the fierce competition. On the other hand, limited production capacity makes less efficient its power to punish those who deviate from the cartel practices being known that the harshest penalty that companies may apply is to produce at full capacity.

Brock and Scheinkman (1985) provided a good illustration of this ambiguous effect. In a symmetric environment where all firms have the same production capacity constraints, these authors showed that there is a determining relationship between the size of production capacity owned by each firm and the cartel sustainability. When additional production capacity [7] is small enough, in the market is dominating the effect which induces the perception that penalties for non-observance of cartel are quite low. On the other hand, when the additional production capacity is large enough in the market the effect that makes the deviation from cartel practices to be inhibited is dominating. Thus, increasing the production capacity of market participants has the effect of increasing the cartel sustainability.

While Brock and Scheinkman consider production capacity constraints as exogenous factors, Davidson and Deneckere (1986) explicitly model the production capacity, considering that excess of production capacity is an essential element of cartels balance. This is primarily due to the need to punish deviations from the cartel's policy by threatening with the production at full capacity. In this framework, extra production capacities are even a prerequisite for supporting cartels.

Empirical findings have shown that the *formation of cartels* is often linked to the emergence of a production overcapacity, caused usually by a severe drop in demand. In the case of "petrochemical cartel" [8] this effect was evident: very steep decline in demand that preceeded the formation of the cartel generated a structural overcapacity of production throughout the European market. The problem was so severe that most producers were operating at a loss before the formation of the cartel, which resulted in a climate where business leaders have sought to meet to find solutions.

Asymmetries in terms of production capacity also play a role in this picture, encouraging cartelization when aggregate capacity is high and discouraging it when it is low. This finding has interesting implications for the analysis of how mergers affect the possibility of horizontal cartels. On the one hand, a horizontal merger reduces the number of competitors in the market, facilitating cartelization, and, on the other hand, asymmetries are greater in terms of production capacity, especially when are involved in the merger the largest firms in the market. If the aggregate production capacities are limited, the latter effect limits opportunities for cartelization, generating an entity that is extremely hard to discipline by others. The result of these observations is that each horizontal merger case must be analyzed individually, using microeconomic tools, not only to highlight the potential risks of creating or strengthening a dominant position on the market, but also to identify any positive effects by restricting the possibilities of cartelization .

### **3.4. Dynamics and demand stability**

In a known article Rotemberg and Saloner (1986) analyzed the response of production oligopolistic structures to significant fluctuations in demand. Adopting a simple vision, but illustrative, in connection with the business cycle, they assumed that demand level in the market is determined independently for each period, so that the anticipated level of future demand is independent of the present one. Thus, the anticipated cost of punishing deviation from cartel policy is different from the present state of the demand. However, the current level of demand affects short-term incentives to divert because a reduction in prices is more attractive when demand is high. When the economy is in good times, the temptation to reduce the price below the level set by the cartel and thus to gain market share is stronger than when the economy is in contraction, even if the expected opportunity cost due to the penalty for deviation is the same. **The conclusion is that when demand is high, the cartel stability is more difficult, according to microeconomic theory. According to the same reasoning, cartels are more stable in the periods of low demand.**

According to Haltinger and Harrington (1991), the assumption that demand is independent for each period is imprecise, more suitable for the analysis being the cyclical movement model of demand over time. They demonstrated that the most difficult point in the cycle for cartelizing the companies is when demand is at its highest level and there are expectations that it will decline sharply. Likewise, cartelization is more likely when demand is low and is expected to increase it. Antitrust jurisprudence supports these findings; many cases can be found where significant decreases in demand generated some market cartels.

Bagwell and Steiger (1997) extended the analysis to situations where demand is stochastic and persistent, demonstrating that the cartelization phenomenon may be sustained more easily when the anticipated period of economic growth is long enough and recession period is short enough. Furthermore, the analysis of both authors showed that the temporary demand shocks cause the instability of cartels, regardless of the stage of growth or downturn in the market.

One conclusion that one may draw from those presented above is: **demand volatility discourages cartelization.** Also, the **expectations of demand growth often feed the anti-competitive arrangements.** If the demand is stable at present, but it is expected to increase in the future, the opportunity cost of punishment for the deviation from cartel established policy is higher, discouraging companies to lower prices or increase production. That finding applies in markets with high entry barriers, in the other markets existing the possibility of an exogenous competition pressure where it is anticipated an increase in demand.

### **3.5. Frequency of interactions between firms and adjustments**

The frequent interactions between competitors, and also the frequent price adjustments facilitate the collusion between companies by shortening the reaction time to deviations from cartel policy. The greater is the period between deviation and punishment,

the more important is the market share of the company cutting prices or increasing the production and it enjoys the benefits of deviation.

Snyder (1996) states that the impact of frequency of interactions between competitors on cartelization phenomenon is even more important when there are large buyers in the market, because they may focus strategically the orders at certain times in order to reduce the frequency of interactions between sellers.

It should be noted that while the communication between companies is easy, the importance of interactions between competitors for cartels stability is significantly reduced.

### **3.6. Market transparency**

The importance of market transparency in determining the competitive behavior was determined for the first time in microeconomic theory by Nobel Prize laureate in economics George Stigler, in 1964. Subsequently, important contributions were made by Green and Porter in 1984, and then by Abreu, Pierce and Stacchetti in 1986.

If we assume that firms can not monitor the conditions of demand, sales and prices of competitors and demand fluctuates randomly from one period to another, companies recording sales declines can not determine whether this phenomenon is due to a fluctuation in demand or to price reductions of rivals. Assuming that after a period of low sales the affected companies do not change the behavior in the market, whilst maintaining the cartel policy, this would completely eliminate the concept of punishment for deviation, creating a strong incentive for cartel members to reduce prices secretly. It results the fact that collusions resist only when the firms react to sale decreases by triggering of price wars. This argument ceases to be true when companies may communicate with each other and providing verifiable information about the sales. In such a situation, the participants in the cartel can check for possible deviations by examining the evidence from competition, this thing compensating the impossibility of direct observation of the demand evolution.

At any point in time, some firms may have lower costs and others higher costs, due to, for example, the changes in local business environment, labor relations from companies, inventory management, etc. In such situations, jointly maximizing the sharing of profits implies an inverse correlation between market shares and corporate costs. Because companies can not monitor their costs, an efficient allocation of market shares within a cartel can be achieved if they exchange information about costs. Thus, companies will have a major incentive to report higher than real costs.

In conclusion, unlike a situation where all relevant information is public, the absence of such information represents a constraint on cartels. Information asymmetries between competitors create an incentive to compete, but they may be removed by the communication between companies, which is facilitated by various means, such as employer associations.

### **3.7. Cost asymmetries and quality differences.**

Cost asymmetries and quality differences result in a higher level of competition hindering the cartels emergence. Firms with lower costs and/or producing higher quality goods are harder disciplined by their rivals because commercial damages that may be brought to them by a price war are relatively low. Thus, a firm in a cartel which has the advantage of quality should have a larger market share to offset the benefits that could be obtained from the deviation from the agreement. On the other hand, this would affect the motivations of lower quality producers to participate in the cartel. The same reasoning applies to cost differences.

An interesting result of these findings consists in determining the impact that innovation has on the cartels. Because the innovation process increases the asymmetry of costs and quality, cartel occurrence is less likely in the innovative markets.

### **3.8. Horizontal product differentiation**



A well recognized aspect in microeconomic theory is represented by the fact that price elasticity of demand decreases when products are differentiated horizontally. On the one hand, companies will have fewer incentives to deviate from the cartel policy as the extra market share they can earn is limited by consumer preferences. On the other hand, a low elasticity of demand makes possible punishments for deviation to be more difficult to apply, the damages caused by a price war between the cartel and deviating companies being quite limited. According to Raith (1996) and Symeonidis (2002) cartels hardly resist when the markets are not transparent and the products are horizontally differentiated, and when multiple companies sell a wide range of products the benefit resulted of the deviation from cartel policy is greater than the opportunity cost of supporting a punishment on the behalf of cartel side.

### **3.9. Multimarket contact**

According to Edwards (1955): "*When firms meet each other in several markets, many of these contacts may blunt competition's edge.*" Typically contact between the same companies in several markets leads to broadening of the scene they compete on. The effect of this is an ambiguous one: on the one hand one may increase the gains from deviating from the cartel; on the other hand one may increase the impact of possible punishments. In a perfectly symmetric situation these two forces may cancel each other, and the contact on several markets has a neutral effect on the cartels stability. In the cases where firms are not in similar situations, contacts in multiple markets will generally lead to an increased likelihood of cartels emergence.

For example, if there are cost asymmetries between which are negatively correlated across markets, it is likely an agreement between firms, in which each company would be allocated a dominant position in the market on which is more efficient. In such a scenario, the major part of the additional demand generated by the deviation from agreement will be achieved in the market on which the company reducing the prices has the highest costs, and at the same time, the bulk of the lost profits following a price war will come in the market with the lowest costs. The first effect leads to decrease of the gains, and the second effect leads to the increase of losses as a result of the deviation.

### **3.10. Common shareholding**

There are many cases where companies purchase the shares of their rivals as passive investments, to participate in the gained profit but not to the decision-making process. Mauleg (1992) and Glio and Spiegel (2003) studied these models of passive investment/joint shareholding and showed that they have two opposite effects on the likelihood of emergence of anticompetitive agreements. Firstly, common shareholding weakens the firm's incentives to compete, because they basically internalized some of the losses they cause by competition to the rivals on which they own stocks packages. Secondly, a stake in a rival company also decreases the motivation to punish the possible deviation from cartel policy.

Another important element to be taken into account in joint shareholding is that this factor facilitates communication, eliminating some of the information asymmetries and, thus generating a higher level of stability of a possible cartel.

### **3.11. Bargaining power of demand**

In microeconomic theory it is recognized that when buyers are large and have bargaining power, cartels resist more difficult because these buyers will use the power they hold strategically to generate price wars between vendors. For example, buyers can focus on large purchasing orders in certain periods to make the interaction between sellers less frequent, or refuse to buy at a time to introduce the suspicion that one of the cartel members has reduced prices. These effects of high bargaining power of buyers may be partly offset by a superior mechanism for communication between members of the cartel.

### **3.12. The importance of technological innovation**

An element that may be added to those already established in terms of influence on the probability of cartels emergence, is represented by the importance of technological innovation in the market, and closely related to the importance of innovation and the knowledge in the economy, as shown by Iancu (2006). According to Schumpeter (1942), technological innovation is the engine of development of capitalist society and the process of "creative destruction" removes the old technologies or business models leading to increasing of economy dynamics and generating an important pressure on the economic agents. Basically, due to the constant process of technological innovation, monopolies and oligopolies are under constant threat, but not on behalf of competitors using the same technology or business model, but on behalf of disruptive competitors.

American professor Clayton Christensen (2003) is the artisan of "disruptive innovation", a concept that fundamentally distinguishes from "sustaining innovation". The latter aims at obtaining clients from the upper levels of the market and represents a confrontation from which strong companies in the market emerge as winners. Disruptive innovation, in turn, creates new markets or brings products and services to groups of users at the lower level of already existing markets.

In this context, it is obvious that the effect of innovation on competition is one overwhelmingly positive, in the markets cartel emergence being less likely in innovative markets. These anticompetitive practices are discouraged primarily by the possibility to attract disruptive competitors, which generates a constant competitive pressure. Moreover, the cartels found in these markets by the competition authorities over time are virtually non-existent, which is partly explained by the specificity of these markets of the type "*the winner takes it all*" [9], due to which unilateral conduct is of greater concern than cartels.

### **Conclusions**

Looking at some key examples of microeconomic theory used in competition policy we may see that in this area, economics has an overwhelming influence on how the law is interpreted and applied, but there are areas where microeconomic concepts are ambiguous. Modern tools in antitrust policy largely target economic objectives like consumer welfare and economic efficiency.

One aspect on which the economic approach has failed to shed sufficient light is related to the core of competition policy: anti-cartel enforcement, specifically what are the economic conditions for cartel formation. Nevertheless, in most antitrust cases, economic theory dictates the long-term remedies, most of which are structural by nature. By contrast, legal solutions have an immediate character and impact, that is the punishment of corporations, but they can not represent appropriate remedies in the long term.

If a company with a significant market power is sanctioned, it may recover the loss by increasing the prices, and thus consumers will pay an indirect tax to the state. In such cases the economic solutions, of a structural nature, are likely to restore the equilibrium in the market.

In conclusion, we can say with reasonable certainty that economics is, at present, the most important component of the three dimensions of antitrust policy: investigation tools, objectives and solutions.

### **Notes**

[1] According to Chamberlain (1933) and Robinson (1933), firms in markets with low entry barriers but differentiated products have market power in from technical point of view.

[2] In fact, the elasticity of demand facing the company is endogenous because the cost varies with the price with the exception of the special case in which this is constant. Usually all formulations of microeconomics refer demand elasticity at the balanced price level.

[3] Small but Significant Non-transitory Increase in Prices.

[4] Federal Trade Commission is the second antitrust institution in USA

[5] In this context the cartel concept is used to define both agreements and concerted practices.

[6] The production costs may be different both from the point of view of level and in terms of the structure. In some cases, the structural differences are caused by the level differences. For example, in industries that traditionally have high fixed costs an innovation of a competitor can significantly increase the share of variable costs, giving him a significant competitive advantage.

[7] The additional capacity is defined as company possibility to overcome balance production.

[8] In this case, in 1989 the European Commission fined with an amount equivalent to \$ 50 million, 23 European petrochemical companies accused of price fixing.

[9] The winner takes it all - a concept used to describe a market in which one company manages to gain dominance and finally became a quasi-monopolist. Practically on these markets there is only an initial competition and then by winning this battle, the most powerful company generally manages to completely eliminate the opponents.

## References

- **Abreu, D., Pierce D. and Stacchetti E.**,1985, *Optimal Cartel Equilibria with Imperfect Monitoring*, Journal of Economic Theory , 39: 251-269.
- **Athey, S. and Bagwell K.**, 2001, *Optimal collusion with Private Information*, The Rand Journal of Economics , 32 (3): 428-465.
- **Bawell K. And Staiger R.**, 1997, *Multilateral Tariff Cooperation During the Formation of Free trade Area*, International Economic Review, vol.38(2), May
- **Brock, W. and Scheinkman J.**, 1985, *Price Setting Supergames with Capacity Constraints*, Review of Economic Studies , 52: 371-382.
- **Christensen, C and Raynor M**, 2003, *Innovation as a business solution*, Curtea Veche Publishing House-Harvard Business, 2010
- **Competition Council**, 2009, *Report of investigation to analyze the real estate market real estate transactions and related services*, Rapporteur: Paul Prisecaru, Bucharest, October .
- **Davidson C. and Deneckere R.**, 1986, *Long run competition in capacity, short run competition in price, and the Cournot model*, RAND Journal of Economics, vol.17, nr.3
- **Edwards, CD**, 1955, *Conglomerate Bigness as a Source of Power*, in Business Concentration and Price Policy , NBER Conference Report, Princeton, Princeton University Press.
- **Gilo, D. and Spiegel Y.**,2003, *Partial Cross Ownership and Tacit Collusion*, Unpublished Manuscript, Tel Aviv University.
- **Grout Paul and Sonderegger Silvia**, 2005 , *Predicting Cartels, Economic Discussion Paper*, A report prepared for the Office of Fair Trading, March
- **Haltiwanger, J. and Harrington, J.**,1991, *The Impact of Cyclical Demand Movements on Collusive Behaviour*, The Rand Journal of Economics , 22: 89-106.
- **Iancu, A.**, 2006, *Knowledge and Innovation. An Economic Approach*, Romanian Academy Publishing House, Bucharest.
- **Iancu, A.**,1992, *Treaty of Economics Vol III - Market, competition, monopoly*, Expert Publishing House, Bucharest.
- **Malueg, D.**,1992, *Collusive Behavior and Partial Ownership of Rivals*, International Journal of Industrial Organization , 10: 27-34.
- **Moșteanu, Tatiana**, 2000, *Competition. Theoretical and practical approach* , Economic Publishing House, Bucharest.
- **Moșteanu, Tatiana**, 2001, *Pricing, competitive balance and social welfare*, Economic Publishing House, Bucharest.
- **O'Brien, D. and Wickelgren, A.** ,2003,*A Critical Analysis of Critical Loss Analysis*, Federal Trade Commission - USA.
- **Raith, M.**,1996, *"Product differentiation, Uncertainty, and the Stability of Collusion"*, London School of Economics, STICERD Discussion Paper Series EI/16: 49.

- **Rotemberg, J. and Saloner G.**, 1989, *The Cyclical Behavior of Strategic Inventories*, The Quarterly Journal of Economics , 104 (1): 73-97.
- **Schumpeter, J.**, 1942, *Capitalism, Socialism and Democracy*, Harper Perennial Modern Classics, 2008.
- **Snyder, CM** ,1996, *A Dynamic Theory of Countervailing Power*, The Rand Journal of Economics , 27: 747-769.
- **Stigler, G.** 1964, *A Theory of Oligopoly*, Journal of Political Economy , 72: 4-61.
- **Symeonidis, G.**, 2002, *Cartel Stability with Multiproduct Firms*, International Journal of Industrial Organization , 20: 339-352.