Market Power in the Context of Globalization

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Definition: Market power is a multidisciplinary concept, bringing together aspects from law and economics, which are necessary to be understood in order to assess market situations with a global dimension. Globalization is an economic and social phenomenon which comes together with enhanced market power for global actors. Factors influencing or limiting market power, such as corporate social responsibility, are important to understand in order to assess market power situations. According to European Union Law, the concept of market power is reflected in abuse of dominance, which is an anti-competitive behavior prohibited in the Common Market of the EU, as defined in Article—102 of the Treaty on the Functioning of the EU. An interdisciplinary approach based on elements of law and economics is thus necessary when assessing market power of global actors.

Keywords: market power; globalization; oligopoly; moral hazard; indicators for market power; corporate social responsibility; abuse of market power

1. The Concept of Market Power

Market power is a dynamic concept with a development influenced by perspectives from law and economics, based on which the assessment of market situations occurs. This aspect is of growing importance due to the fact that nowadays market actors are global players. In global markets with an oligopoly structure, as most of the markets nowadays are, market power becomes an extremely important issue. Global actors do have market power. The question of whether they abuse this market power is relevant due to its effects on consumers and as well on the structure of the market. Competition law, or antitrust law as it is known in the United States of America, addresses major issues of multinational market actors. In this perspective, dealing with this topic is interesting and useful at the same time. This aspect is validated by the fact that market power is also approached by EU Competition Law and by US Antitrust Law, as due to globalization, there are domino effects between economies and between the interactions of global acting companies. Globalization is an economic phenomenon that can be defined as an integration of economies and even of societies worldwide [1].

Assessed in a multidisciplinary manner, market power is ambivalent. On the one hand, gaining market power validates the fact that a company is competitive and that it is an important actor in its sector. On the other hand, it opens the question of whether an abuse of dominance is likely to occur. Exactly this type of anti-competitive conduct is severely sanctioned by EU Competition Law, which is very strict when assessing abuse of dominance. This aspect is reflected in the practice of the European Commission and in the case-law of the Court of Justice of the EU. Unlike for Article 101 from the Treaty on the Functioning of the EU referring to cartels and other anti-competitive agreements, for which some exceptions and exemptions from applying competition law provisions are provided, for Article 102 from the Treaty on the Functioning of the EU, no exceptions are tolerated. Abuse of dominance cannot find any justification and is not acceptable in the view of EU Competition Law. The US Antitrust Law approach does not encourage abuse of market power either, but it states that this is also a market issue which will be eventually regulated by the market itself. What is not tolerated in any circumstances by the US Antitrust Law
are cartels, which are worse than abuse of market power, as is reflected in US Antitrust Law. Given this international and comparative perspective, an assessment of the concept of market power in the context of globalization and of enhanced digitalization is important when dealing with market power situations. This is the objective of the present entry paper.

The context of digitalization might generate a change of paradigm in the assessment of market power, which is analyzed in the present paper. This change of paradigm is reflected in the new dimension of market power and its evaluation. The developments regarding the measurement of market power are assessed, considering the transition from well-established views based on market share to new perspectives of market power in the digital global environment and in the era of delocalization. The financial sector with relevant case studies is being considered as it is a sector where moral hazard occurred, triggering changes at global level, such as the financial crisis in 2008–2009. Linked with the idea of market power, the principle “too big to fail” proved at that time to be false. In order to avoid similar situations, an ethics-based approach has been put in place. Corporate social responsibility became a value that gains increasing importance and that has to be considered by actors with market power. Rating agencies might as well have a role in this assessment. These aspects reflect the developments of the concept of market power and how the perception of influencing factors has changed over time.

The current state of research reveals the concept of market power and its dimensions. According to the studied literature, the economic view defines market power as the ability to set a price “above short-run marginal costs” [2]. This definition, though, is not very useful for policy formulation or for a legal interpretation according to EU Competition Law. Regarding pricing matters, companies focus not on “short-run marginal costs”, as knowing these costs is quite difficult, so that they rather focus on average costs, which are easier to be determined. Market power is reflected in the fact that a company is able to raise prices above the level that would exist in a competitive environment. This way, the company having market power increases its profit [2]. According to Bishop & Walker, three elements define market power. By increasing prices, the company is ready to renounce at some output.

The next element to consider when assessing market power is the fact that the price increase must have an increase in profitability as a consequence. After the price raise, demand is likely to fall, according to the demand curve that slopes downwards. In order to predict the fall, a company may use the indicator of price elasticity of demand, which is the percentage change in sales divided by the percentage change in price [2]:

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\text{Price elasticity of demand} = \frac{\text{Percentage change in sales}}{\text{Percentage change in price}}
\]

By using this indicator, the company with market power will predict which would be the response of consumers to a given percentage increase in price and it might calculate if the price increase will have consequences on profitability or not. The indicator that is relevant for market power is, according to the studied literature, the own-price elasticity and not the cross-price elasticity. The cross-price elasticity shows the response to a change in the price of some other product, which is a substitute offered by competitors [2]. It is less relevant as an indicator for market power than the own-price elasticity. The elasticity of demand might be analyzed with econometric methods, by means of the multiple regression analysis [2].

It is important to mention in this context that real elasticity of demand for the products of oligopolists depends not only on changes in own prices, but also on the reaction of competitors to changes in prices or output volumes of the firm that initiated the changes. It also depends on many other factors: geographic accessibility (transport costs), climatic conditions, and others.

The third element illustrating market power is the fact that the price increase is above the price that would exist in a competitive environment. The economic literature uses in this comparison the short-run marginal cost as a benchmark or as a comparative
parameter. If this situation is just singular, it represents only an isolated, episodical behavior of the company and it does not necessarily indicate market power. In order to indicate market power, the situation should occur on a constant basis. This would indeed indicate market power [2] as it indicates that the company with market power simply ignores its competitors, and it has the market power to do so. The correct assessment of market power would therefore be on a dynamic basis, considering the dynamics of the company and of its behavior.

2. Assessment of Market Power Situations from a Law and Economics Perspective

2.1 Models: Market Power—Law and Economics Paradigm, Change of Paradigm and New Approaches

Both law and economics try to find equilibrium solutions and to use them in formulating efficient policy measures. Such policy measures are the measures of competition policy, which find an expression in EU Competition Law. The studied literature identifies the fact that both law and economics cooperate or should cooperate in order to generate an optimal framework for economic agents, for economy, and for society. Law and economics do not only study individuals or firms and their economic decisions, they also study their interactions and their behavior, given the resources they have. The paradigms expressing these correlations are the Walrasian model and the neo-Walrasian approach, identifying these interactions of these two field in our society [3]. The importance of defining anticompetitive behavior, such as anticompetitive pricing is reflected in these models. The Law and Economics Paradigm stating the interactions between the two fields is reflected in the studied literature [3–5]. A model analyzed in the literature, which is relevant for the concept of market power, is the Structure-Conduct-Performance Paradigm. This economic model used in competition policy analysis states that the structure of the market determines the conduct of the companies and their performance, reflected in their profitability [2]. This model is illustrated in Figure 1: Visual representation of the Structure-Conduct-Performance Paradigm:

![Figure 1. Visual representation of the Structure-Conduct-Performance Paradigm: Source: Own representation.](image)

In the literature, Carlton and Perloff as well as Stigler refer to the importance of barriers to entry in the context of market power. Barriers to entry are reflected in costs for firms that want to enter an industry and which the companies already established in that industry do not have to bear [6,7].

Economy in the context of globalization has an oligopolistic structure. Models which explain the behavior of companies on an oligopolistic market are, for example, the Cournot model of oligopoly and the Bertrand model of oligopoly. The Cournot model of oligopoly states that each firm decides its output in order to maximize its profit and the competition is on quantity. The alternative option is the Bertrand model of oligopoly, which states that the firm decides on the prices, not on the quantities brought on the market [2].
A further development of the Cournot model is the Stackelberg model, in which a firm is the leader of the market and other firms are followers. The competition is on quantity, as it is in the Cournot competition model [8]. This model applies in the energy sector for example. Another model is the Chamberlin Model, which applies to markets with imperfect competition, such as most of the markets are. It is the model of monopolistic competition, with many producers selling differentiated products. In this case branding can help to achieve differentiation from competitors and customer loyalty. The Chamberlin model focuses on average costs not on short marginal costs, as they are easier to be determined in practice and to be used in a mathematical calculation model [9].

The dominant firm price leadership is reflected in the Forheimer model. Due to the fact that in oligopolies there are few actors dominating the industry and they all wish to have as much profit as possible, the firms behave differently in the case of price increases or price decreases. This fact is due to the different elasticities of prices and is reflected in the model of the “broken demand curve” [10,11]. Leadership in prices is an aspect to be mentioned related to oligopoly markets and it is as well linked with the broken demand curve model [12]. Cartel agreements trying to fix prices are also an important element on oligopoly market structures, where the main actors try to maximize their profit [13]. Game theory developed the concept of focal point, meaning the solution people would find in case of no communication. This model might also explain some choices of consumers in oligopolistic markets where there is asymmetric access to information [14].

The approach related to models is a dynamic one and needs to be adapted over time [15]. The Structure-Conduct-Performance Paradigm needs to be improved and it has been improved, as not only the structure determines the conduct of one company. Business ethics and corporate values may also determine the conduct of one company on the market. Corporate social responsibility is a new value in international companies, replacing the traditional market power concept and the orientation only towards profit maximization.

From a legal perspective, the concept of market power is defined in Article 102 of the Treaty on the Functioning of the EU which states that abuse of dominance is an anti-competitive behavior which is prohibited in the Common Market of the EU [16]. Unlike Article 101 of the same Treaty referring to anti-competitive agreements, no exemptions are permitted according to Article 2 of the Treaty on the Functioning of the EU. The assessment of abuse of dominance from a legal perspective comprises the definition of the relevant market with the two components product market and geographical market, the analysis of the market structure, and the analysis of the abusive conduct and of the related restrictions of competition [17].

2.2. Indicators of Market Power

In order to assess market power, an analysis of the dynamics of the company and of its business environment must be performed. There are features to analyze when assessing if a company has market power. Such elements could indicate the type of interactions in the sector and they are therefore relevant for the assessment of market power. The number of competitors in the sector is important for this assessment. If the market is an atomistic one with many suppliers offering many substitutes for one good, then the consumers have more alternatives and one supplier has not have much market power. The existence of market power is connected to the concentration of the market. One measure for concentration of markets are concentration ratios, showing the level of concentration on the respective market [2].

Another indicator trying to improve the concentration ratios is the Herfindahl-Hirschmann Index (HHI). Market power can be measured by using the HHI according to the studied literature [18]. This indicator considers all the companies in the industry, which is an improvement to the concentration ratios. The HHI is defined as the sum of the squared market shares of all firms on the market:

$$\text{Herfindahl – Hirschmann Index} \ HHI = \sum_{i=1}^{n} S_i^2$$
The values obtained are situated between 0 for a perfect atomistic market and 10,000 for a monopolist [2].

There are also some other indices used for assessing market power besides the HHI. An example is the Lind index. The level of market concentration is also assessed using the entropy index, the spread of the logarithms of market shares (dispersion index), and the Gini index [19].

When evaluating the market power of a firm, it is important to assess to what extent this firm might be able to set prices. This issue is reflected in the Lerner index, which is calculated as a difference between the price $P$ on the one hand and the marginal costs divided to the price $(MC/P)$ on the other hand. The index shows how much a firm is able to charge over its marginal costs. This type of behavior is an expression of market power [20].

In order to ensure monitoring of competition and market power in the specific sector of energy, another index used by the EU is the European Barrier Index, proposed by the European Commission for the European Retail Energy Market. It is based on a tool that permits scoring by means of eight indicators in order to compare performances of countries in this sector [21].

Technical indicators that were mainly used for the financial markets could also be used for monitoring market power in the context of competition issues. Such an indicator is the Integrated Single Electricity Market (ISEM) [22].

Other possible indicators of market power suggested by the European Central Bank are the concentration ratios, the markup, and the degree of economic dynamism [23].

The fact that there are more indices used for evaluating market power aspects reflects the difficulty to mention only one index as the most appropriate for assessing market power situations. Market power as an anti-competitive behavior is confirmed by the Court of Justice of the EU in the case United Brands [24]. The conduct of abuse of dominance as an anti-competitive behavior was confirmed by the case-law of the Court of Justice of the EU in the case Hoffmann-La Roche [25]. An indicator for market power which has been validated in the case-law of the Court of Justice of the EU is the market share. This fact was confirmed in the AKZO Case [26]. This case states that a market share of more than 50% indicates a dominant position. In the practice of the European Commission, the threshold for the market share indicating a dominant position is set at 40% [27–29]. In the case-law of the Court of Justice of EU there were cases of “super-dominance”, like Microsoft, with a market share of more than 90%. The development and expansion of Apple showed how quickly such a situation can change. This is why market shares must be assessed in their dynamics.

Market power also has a social impact. The effects of market power on the market but also on the consumers, so mainly on our society, are of high importance. If a company has market power, it might be able to set barriers to entry for potential competitors.

In most of our globalized markets nowadays, markets have oligopolistic structures. Given this fact, market behavior is linked to oligopolistic interaction between market actors. Such interactions are studied by Game Theory, providing possible developments that might occur, such as the analysis of the Nash Equilibrium or the Prisoner’s Dilemma in order to explain the behavior of market actors on oligopolistic markets.

2.3. New Trends Influencing Market Power Situations

Corporate social responsibility as a corporate value might be considered a strength and might therefore contribute to ensuring a competitive advantage. It might help the company to delimitate from other competitors who do not have corporate social responsibility as a corporate value. Fairness as a social concept should play a role in the context of power and well in the context of market power situations [30]. A new mindset might therefore be created at company level. Awareness raising regarding corporate social responsibility is among the objectives of the present paper.

Market power might lead to moral hazard and such a situation should be avoided after the global financial crisis from 2008–2009.
Actors with market power oriented only towards profit maximization committed an abuse of their market power which resulted in a global crisis, the financial crisis in 2008–2009 with a domino effect worldwide. Some companies with great market power considered they were too big to fail, but these proved to be false. An example of such a company is the company Lehman Brothers, which collapsed due to the financial crisis. The financial crisis had bad effects on the economy in the US but also on the economies of EU Member States, as, due to globalization, the business environment is interconnected. In this context, the concept of moral hazard is relevant. Moral hazard in this context is reflected in the fact that institutions took high risks, not considering the fact that they will be accountable for those risks and that they have an important responsibility [31–33]. Moral hazard also appears as a consequence of information asymmetry [34].

In order to avoid that such a crisis occurs again, an approach based on ethics has been developed. At the same time, legal provisions for the banking sector were set up by the Basel II and Basel III Regulations [35]. Besides enforcing ethics as an important principle in the banking system, the most important element for keeping bank risks as low as possible is to ensure a strong regulatory framework regarding capital requirements [36]. By designing a better competition policy for the banking sector it would be possible to fill some gaps in the regulatory framework of this sector. Case studies in the Netherlands and Italy show an important proactive role of national competition authorities in shaping banking policies together with the national banks that have this competency. This cooperation ensures a better regulatory and competitive framework for the banking sector and it might help avoid such a crisis like the financial crisis from 2008–2009 [37]. For monitoring competition issues related to market power in the banking system, the Lerner index is used. This index shows an increasing trend for the EU in the banking sector until 2016 [38]. Monitoring the developments of the real commodity sector might be an important step in order to assess market power situations. According to the data provided by the World Bank it is obvious that on the European gas market, which is a typical oligopoly market, there was an increase of more than 50%. This shows the important influence of the current developments on markets with an oligopolistic structure [39]. Another aspect to be considered when assessing a change of paradigm regarding market power is the transition to the digital economy. In the context of the globalized digital economy, innovative technologies play an important role in achieving a competitive advantage [40–42]. Innovation is ensuring economic growth for global actors [43]. This new economy, the digital economy, is characterized by network effects. This kind of economy might permit concentration [44]. The development of platform economies as a new business model in our current global business environment has an important effect on the assessment of market power. Platforms that are the basis for platform economies may have a high degree of market power, as they dominate the digital market. Views regarding market power are different in the EU and in the US [45]. The tendency to sanction abuse of market power in this digital context is stronger in the EU than in the US, a perspective which is reflected in the legal provisions of EU Competition Law and of the US Antitrust Law. This situation should be assessed considering the fact that global players in the IT sector are American companies. The differences in the two types of jurisdictions are obvious as well in the fact that the EU has a supranational competition authority, which is the European Commission and which supervises cases of abuse of market power. The US Antitrust Law valuates more the Private Enforcement of Antitrust Law and does not consider it necessary to have a supranational competition authority, such as the European Commission for the EU, to monitor the sector. According to the US Antitrust Law, best monitoring is ensured by competitors. In this respect, there is a gap in the view of the EU Competition Law and of the US Antitrust Law. The aspect of abuse of dominance on digital markets is one of great importance in the context of globalization and digitalization.
3. Conclusions Regarding Market Power Situations in the Context of Globalization

Markets are nowadays, due to globalization, oligopolistic structures, with the related interaction between market actors in an oligopoly. This also applies to the financial and banking sector, where interactions are also very strong and must be considered. As a solution in order to avoid abuse of dominance, an ex-ante control could be reached by ensuring a proper regulatory framework, while an ex-post control is ensured by competition law. These two fields act together on a complementary basis, providing solutions for a more competitive environment.

Market power per se is not a negative aspect, it is a normal development in a competitive environment. What is sanctioned, and this is obvious in the view of EU Competition Law, is the abuse of market power. In this context, a change of paradigm takes place and market power comes together with responsibility towards society, reflected in the concept of corporate social responsibility. Not only profit maximization matters, but the responsibility towards the society matters as well, especially for companies with market power. Increased market power might have negative macroeconomic effects, such as lower productivity and might also have negative effects on consumers in terms of supply [46]. The changes in productivity can be analyzed in detail by means of the production function in order to assess the elasticity of the production output [47]. Market power is an issue that might affect as well sellers and buyers [48].

Another change of paradigm in the assessment of market power abuse and of abuse of dominance is triggered by the transition to the digital economy. Aspects like abuse of dominance in the digital economy are of great importance and need further research. Data per se might in this context be a source of market power [49]. The use of information technology is present in all business sectors. Given this trend, companies providing information technology-based solutions might easily gain more market power and might achieve customer loyalty, which might also be reflected in more market power [50]. This idea is important to be considered for companies when shaping their strategy in order to delimitate from their competitors.

Managerial implications have to be considered given the new trends in the field of market power. Ethical aspects have to be integrated in the strategy of the company. Elements of digitalization and the supply of digital services might also have to be considered by managers when shaping the strategy of the company. The importance of these elements in ensuring market power or in delimitating from competitors could be very important. At the same time, managers of big companies must take into consideration in that what is permitted to small companies is not permitted to big companies in terms of expressing market power. In such a situation, ethics should be applied in order to limit a conduct expressing market power and to avoid abuse of dominance. Social responsibility aspects may be the key issue to sustainable growth of global actors [51]. The dynamics of markets with an oligopolistic structure which are of great relevance in the current context, such as the energy market, have to be considered [52].

The challenges related to the proposed economic definition of market power are given by the fact that it is difficult to figure out the concept of marginal cost, especially if you are not familiarized with economic concepts. Besides, it is difficult to know the marginal cost of a company, as it is a strategic and confidential information.

Usually, the number of competitors on the market and the concentration of the market are indicators for assessing market power. Sometimes, this element might not be of great relevance, for example in the IT-based new economy, where there are sectors with a rapid development. In such cases, it is possible to have a rapid development of one small company that does not appear to have market power, but due to its knowledge it becomes very powerful on the market. This is the case of start-ups with a very dynamic development. It was as well the case of WhatsApp, that was not identified by the European Commission to trigger market concentration when it was bought by Facebook. According to the market-share evaluation, the transaction did not seem to be with high risk, but it was due to the fact that a conglomerate of personal data to which Facebook had access was generated by
this transaction. In light of the newest developments regarding data protection, this aspect becomes an issue of market power needing more analysis in the future.

The use of concentration ratios as an indicator for market power has the deficiency that it does not offer a clear image of the relative size of a company. Especially in dynamic fields and due to digitalization and IT-progress, one small firm may have the capacity to grow rapidly and this aspect is not taken into consideration properly by the concentration ratios as indicators for market power.

The challenges and possible limitations related to the use of the HHI as an indicator of market power are given by the fact that it is difficult to know the market shares of all the companies in the sector, data which is necessary in order to calculate HHI.

Another possible limitation of using market shares as an indicator for market power is the fact that in the digital economy, the features of the market change rapidly, so that the image provided by the market share at a certain point in time is not relevant for a long time. The potential of companies must be evaluated in its dynamics, not in a static way. As the technological progress is fast, firms having a relatively small market share, like start-ups, might have an idea with a high potential and might therefore become powerful by using their knowledge. Especially in the digitized economy such situations are very likely to occur.

Regarding the aspects of corporate social responsibility as an element influencing corporate behavior and determining a change of paradigm, rating companies might have an important role in order to raise awareness regarding the importance of business ethics. They could highlight the importance of corporate social responsibility by considering this corporate value in their evaluations.

Future research directions will take into consideration the newest developments and research findings in the field, so that the present paper could be further developed and improved. As the field is very dynamic and of great relevance for the business environment, for consumers but as well for academia, further research will for sure be needed in this sector.

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References


36. Guudbrandottir, I.Y.; Olafsdottir, G.; Oddsson, G.V.; Stefansson, H.; Bogason, S.G. Operationalization of Interorganizational Fairness in Food Systems: From a Social Construct to Quantitative Indicators. *Agriculture 2021*, *11*, 36. [CrossRef]


44. Calvano, E.; Polo, M. Market power, competition and innovation in digital markets: A survey. Inf. Econ. Policy 2021, 54, 100853. [CrossRef]


