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**TWO-SIDED MARKETS IN THE EU COMPETITION LAW AND  
THE POTENTIAL MEASURES TO PROTECT COMPETITION THEREIN**

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## **Abstract**

Competition law is one of the indispensable branches of law in terms of the successful operation of the market economy. Given today's developments, it is clear that one of the areas that this successful process management should be paid attention to is the two-sided markets. EU Competition Law rules for classic, one-sided markets can be inadequate in two-sided markets. Therefore, the aim of this dissertation is to analyse the main concept of two-sided markets and determine the main competition law issues in this market to appropriate potential measures in accordance with its importance for the European Union. The dissertation evaluates the main problematic issues of two-sided markets in terms of competition, antitrust analysis and mergers and after that show ways for the possible solutions for these problems. It is concluded that main different characteristics of two-sided markets should be understood and with solutions which are appropriate for these differences should be approached to the problems in two-sided market. To improve the existing measures and to provide the competitors which are in the two-sided markets with satisfactory protection by EU Competition Law, some suggestions are made.

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## Table of Abbreviations

CLES	Centre for Law, Economics and Society
EC	European Community
ECJ	European Court of Justice
EU	European Union
L	Level
n	Number of Footnote
NBER	The National Bureau of Economic Research
NCAs	National Competition Authorities
No	Number
OECD	Organisation for Economic Co-operation and Development
OJ	Official Journal of the European Communities
SSNIP	Small but Significant Non-Transitory Increase in Price
TFEU	Treaty on the Functioning of the European Union
Vol	Volume

## **Introduction**

Existing legislation and regulation for the governance of trade emerged from archetypal marketplaces and conventional forums of buying and selling. Consequently, such laws pertained to relationships between normative buyers and sellers as legal parties to contracts of sale. However, modern trade and commerce is on a previously unprecedented scale, with intense speed enabled by modern communication technologies that have eliminated traditional logistical barriers of time and place, and often leaving national, regional and international law lagging behind the realities of modern markets. It means that even the situation has changed a bit now and much smaller areas are considered to be the market, the existing problems are increasing. Because it is almost impossible to control the relationships existing in the market through only one channel as buyer and seller.

As a result of developing technology and different needs emerging in the society, platforms that bring together companies or customers which are interested in different products or services in different markets have begun to appear in global trade, most obviously online trade platforms that examine the demands of the two parties involved and enable them to meet each other in an appropriate venue.<sup>1</sup> With the emergence of multiple platforms that work on the same purpose, the presence of new markets with such platforms has been recognised, called "Two-Sided Markets".

As a new concept in legal literature of the European Union (EU) Competition Law, there has been much discussion of the definition of two-sided markets. Although there is no precise legal definition, the generally accepted features of two-sided markets are the existence of two customer groups on both sides of the market, indirect network effects and the existence of a platform.<sup>2</sup> Two-sided markets differ from one-sided markets in these parameters, however all of the applications that enable the examination of competition law were devised on the basis of one-sided markets. The evaluation of two-sided markets using

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<sup>1</sup> David S. Evans, "The Antitrust Economics of Multi-Sided Platform Markets", (2003), Vol. 20 Issue 2, *Yale Journal on Regulation*, p.332.

<sup>2</sup> Richard Whish, David Bailey, *Competition Law*, (8<sup>th</sup> Edition, Oxford University Press, Oxford, 2015), pp.11-12.

tools intended for one-sided ones can cloud competition examinations due to the different basic features of these market types.

The majority of two-sided markets operate with different economic principles<sup>3</sup>, so competition analyses considered appropriate for one-sided markets cannot be transposed unthinkingly to unfamiliar scenarios. Essentially, competition problems do not depend on whether undertakings operate in one-sided or two-sided markets, and the points that could be problematic in terms of competition are the same in both types of markets. However, the possible consequences of policies on two-sided markets are far more comprehensive and critical than in classic (i.e. one-sided) markets.<sup>4</sup> Therefore, considering the prevalence and importance of two-sided markets in the economy of the EU, it is clearly necessary to discuss what measures can be taken to protect these markets.

However, the need to be considered differently due to the structural characteristics of two-sided markets makes the intervention of competition authorities difficult. Therefore, it is necessary to carry out thorough research to clearly identify the problems in this area and to propose solutions to these problems.

For all these reasons, the main aim of this dissertation is to recognise the main concepts of two-sided markets and understand their importance for EU Competition Law, after which existing competition law problems therein can be determined, and appropriate measures devised accordingly.

There are three main chapters in the dissertation to reach these aims. The first chapter focuses on the general concept of two-sided markets. Firstly, the definite definition problem is analysed and the definition is given after the detailed analysis of the three main features of two-sided markets. At the end of this chapter the fundamental differences between one-sided and two-sided markets and the general importance and future effects of two-sided markets in terms of EU Competition Law are discussed.

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<sup>3</sup> Bruno Jullien, "Price Skewness and Competition in Multi-Sided Markets", (2006), No.504, *IDEI Working Paper*, p.5.

<sup>4</sup> E. Glen Weyl, *The Price Theory of Two-Sided Markets*, (research at the United States Department of Justice Antitrust Division Economic Analysis Group, 2006), p.44.

The second chapter identifies the main problems of two-sided markets by analysing competition, antitrust behaviours and mergers in two-sided markets. The most important part is the antitrust analysis, which pertains to the most crucial problems.

The third chapter mainly focuses on the protection methods of two-sided markets. In terms of understanding the indispensability of these measures, the necessity for protection in the two-sided markets is discussed. Following that, the potential solutions for the problematic areas of two-sided markets are examined, such as market definition, market power, pricing and price discrimination, and anti-competitive agreements.

In the doctrine, there are a lot of different studies which interested in two-sided markets. But in most of them, the general topic which covers any problems of two-sided markets is approached from the economic side. For this reason, platform models and effective pricing theories are emphasized in these papers. In this dissertation, main aim focuses on the analysis from competition perspective. For this reason, issues of economic analysis and modelling are excluded from the scope of this study in order evaluate existing two-sided markets in the EU within the context of EU Competition Law.

## **1 The Concept of “Two-Sided Markets” in EU Competition Law**

Articles 101 and 102 of the Treaty on the Functioning of the European Union (TFEU)<sup>5</sup> prohibit agreements between two or more legal persons to prevent, restrict or distort competition and provide an area of law whereby competitors who have a dominant market position cannot use this advantage unfairly. The European Community (EC) provides in articles 5 and 6 of the EC Regulation 1/2003<sup>6</sup> that the National Competition Authorities (The NCA) and National Courts can also apply Articles 101 and 102 of the TFEU for the same aims.

When all authorised institutions decide in accordance with article 101 and 102 of the TFEU, they should be careful about the market and its function first, understanding its power, externalities and all the other features necessary to inform their decisions.<sup>7</sup> This is because the interpretation of competition is conditional on such factors, and a violation may vary depending on the particular market circumstances involved.

The importance of two-sided markets, which are quite common in modern economies, is considerable and increasing day by day. Many important sectors of the new economic regulatory centre that the world is following are two-sided; nevertheless, the concept of the two-sided market has not been considered until recently in competition economics and competition law debates in the EU. To prevent a breach of competition in the two-sided markets, it is firstly necessary to understand what the two-sided market concept means in order to realise whether (and in what ways) it will change competition law reviews or in what way it will affect competition.

To achieve this aim, this chapter firstly analyses the concept of two-sided market and the debatable definitions formulated by experts, as well as exploring the main features of such markets. At the end of the first section the concept of platform is explained so that the concept of two-sided market can be clarified and an operational definition devised.

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<sup>5</sup> Consolidated Version of the Treaty on the Functioning of the European Union, [26.10.2012], Official Journal of the European Communities, C 326/47.

<sup>6</sup> Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty (Text with EEA relevance), [4.1.2003], Official Journal of the European Communities, L 1/1.

<sup>7</sup> Rupperecht Podszun, “The Arbitrariness of Market Definition and an Evolutionary Concept of Markets”, (2016), Vol.61 No.1, *The Antitrust Bulletin* 2016, p.123.

With the help of this background information, the second section investigates the differences between two-sided and classic (one-sided) markets in order to clarify the distinction between them. Finally, section three analyses the main effects and importance of two-sided markets in terms of EU competition law at the end of this chapter.

## **1.1 Conceptual Framework for Two-Sided Markets**

Two-sided markets bring together two different groups of customers who cannot normally meet together, creating a common value through this platform.<sup>8</sup> Two different customer groups influence each other through indirect network externalities. Some illustrative examples of two-sided markets (with two parties located on the platform as different customer groups) include TV, with viewers on one side and advertisers on the other; newspapers, including readers and advertisers; and online search engines, including searchers and advertisers.<sup>9</sup>

To understand the effects of different customer groups, platforms inside the market and all externalities, the main features and main differences of two-sided markets are shown in this chapter.

### **1.1.1 Definition Dilemma of Two-Sided Markets**

There are multiple legal actors in two-sided markets and as it will be explained detailly in the next sections, platforms are also involved in such markets as a legal actor in intermediary party position. This situation has raised controversy in terms of defining the market. The definition of two-sided markets is very debatable in that the definition can be limiting on the legal value of the practice of platform in two-sided markets. According to different views, it is necessary to limit the different features of the platforms.

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<sup>8</sup> Organisation for Economic Co-Operation and Development (OECD), [2009], *Policy Roundtables/Two-Sided Markets*, p.23.

<sup>9</sup> For further examples of two-sided markets please see Jean-Charles Rochet, Jean Tirole, "Platform Competition in Two-Sided Markets", (2003), Vol.1, *Journal of the European Economic Association*.

For this reason, different definitions can be found in the doctrine which include different restrictions for platforms in terms of different aims and way of protection. For example, Jay Pil Choi defines it as "indirect network effects or inter-group network externalities that arise through improved opportunities to trade with the other side of the market".<sup>10</sup> Richard Epstein says that "Two-sided markets are generally defined as markets in which the value attributed to the goods and services received by parties on one side of an exchange depends not only on the intrinsic properties of those items, but also on the number of parties located on the other side,"<sup>11</sup> and Rochet and Tirole describe two-sided markets as "Markets in which one or several platforms enable interactions between end-users and try to get the two (or multiple) sides 'on board' by appropriately charging each side."<sup>12</sup>

In all definitions, the fundamental principle to prove the existence of two-sided market is to bring the two different sides together at a common point. Although this is the main objective, it is not enough in itself to establish the definition of the two-sided markets. When the definition is left as it is, the problem of qualifying a lot of other markets as two-sided may arise. For example, any market could be construed as two-sided, because it is instituted by bringing buyers and sellers together in an exchange.<sup>13</sup> Such general definitions are irrelevant to solving problems related to the protection of competition in markets.

Although it is a newly introduced concept in competition law, there are many different examples that can be encountered in two-sided markets. For this reason, in order to prevent the misrepresentation of different markets as two-sided, it is first of all necessary to make a definition that can be applicable to every situation. However, since two-sided markets can lead to different conclusions depending on sectors, it is not possible to provide a clear definition covering each sector.

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<sup>10</sup> Jay Pil Choi, "Tying in Two-Sided Markets with Multihoming", (2010), Vol. LVIII, *The Journal of Industrial Economics*, p.608.

<sup>11</sup> Richard A. Epstein, "The Regulation of Interchange Fees: Australian Fine-Tuning Gone Awry," (2005), *Columbia Business Law Review*, p.551.

<sup>12</sup> Jean-Charles Rochet, Jean Tirole, "Two-sided Markets: a Progress Report", (2006), Vol.37 No.3, *RAND Journal of Economics*, p.645.

<sup>13</sup> *Ibid*, p.646.

This existential need and the resultant situation that arises are clearly due to the nature of the market, revealing the dilemma regarding the definition of two-sided markets. In this case, it can be possible to create a definition by specifying the characteristics that will not change for each sector. For this reason, the following subsection presents the main features of two-sided markets in terms of EU Competition Law, and at the end of this section a general definition is determined.

### **1.1.2 Main Features of Two-Sided Markets**

It is assumed that there are basically three main features of two-sided markets which are very complex to define clearly. The following subsections present and discuss these main features which can be listed as the existence of two customer groups with different demand structures on both sides of the market, the existence of indirect networks effects across groups and the existence of an agent/platform that provides inter-group relationships.<sup>14</sup>

#### **1.1.2.1 The Existence of Two Customer Groups with Different Demand Structures on Both Sides of The Market**

The first fundamental feature is existing two customer groups who are connected with the same platform and who are provided goods and services by this platform.<sup>15</sup> There should be a benefit expectation between these two groups with a bearing on the relationship between them. Procurement and exchange of products or services, or the existence of such transactions between two customer groups of the platform, may prove the relationship between them.

For example, the linkage between two customer groups on the platform of academic publishing; on one side, there are readers and on the other side there are academic authors, with a clearly determined linkage between them in terms of writing and reading academic articles.

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<sup>14</sup> Evans (n 1), p.331.

<sup>15</sup> OECD (n 8), p.29.

### **1.1.2.2 The Existence of Indirect Networks Effects Across Two Sides of the Market**

The second fundamental feature of two-sided markets is indirect effects inside the relations of the groups. If the demands of different customer groups are related to each other in the two-sided markets, this situation can be expressed as indirect network effect in the context of competition law. Network effect is a very common topic for classic, one-sided markets but it has some differences as manifest in two-sided markets.<sup>16</sup>

In general, network externalities occur when the value of a consumer for a product changes depending on the number of other consumers who buy the same product. To be clear, network externalities are the increase in the number of consumers who use the same product or service and the parallel consumer benefit at the same time in a particular market.<sup>17</sup>

However, network externalities are not just direct effects. This situation differs in two-sided markets from classic markets. A specific type of network externalities, indirect network externality, is important not in the change in the demand and benefit of people on one side of the market depending on the number of people in the same group; rather it is the change that occurs due to the increase in the demand for complementary products for those on the other side of the market.<sup>18</sup> Thus, when there are indirect network externalities, a business strategy that stimulates demand on one side of the market will stimulate demand on the other.<sup>19</sup>

For this situation, online two-sided markets can be given as an example. Sellers and buyers are coming together on the same online platform, and when the platform starts to be seen as having some online opportunities by buyers, sellers from the other side of the platform will start to be willing to join this platform directly. It means that on the other

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<sup>16</sup> Marks Armstrong, Julian Wright, "Two-Sided Markets, Competitive Bottlenecks and Exclusive Contracts", (2005), Vol.32 Issue 2, *Economic Theory*, p.364.

<sup>17</sup> Ibid, p.367.

<sup>18</sup> Roberto Roson, "Two-sided markets: A tentative survey", (2005), Vol.4 Issue 2, *Review of Network Economics*, p.142.

<sup>19</sup> Janusz A. Ordover, "Comments on Evans&Schmalensee's 'The Industrial Organizations of Market with Two-Sided Platforms' ", (2007), Vol.3 No.1, *Competition Policy International*, p.183.

side of the platform an increase of demand for service (amenable to sellers) would be seen.<sup>20</sup>

As a result, for indirect customer externality in two-sided markets, if the number of customers on the one side is huge, it would be advantageous for customers on the other side, because in this way the platform becomes more valuable, thus increasing the value of participation for both customer groups.<sup>21</sup>

### **1.1.2.3 The Existence of an Agent/Platform that Provides Inter-Group Relationships**

The last main feature of two-sided markets is existence of any platforms in which two different groups can come together. In two-sided markets, besides the existence of different customer groups, the existence of another third party is in question too. This party brings them together to uncover the interaction between customer groups. This third party that allows transactions to take place that would otherwise not be possible is defined as a “platform” in competition law literature, and such institutions can be “virtual” or “real”.<sup>22</sup> The platform is essentially an intermediary party which facilitates the bringing together of different groups of customers (from the platform perspective – i.e. buyers and sellers) who need and interact with each other in the same market, offering them an environment in which virtual or real encounters (i.e. transactions) can take place; naturally the platform itself is expected to derive benefit from this exchange,<sup>23</sup> as well as the contracting parties using the platform.<sup>24</sup>

Platforms arise when there is a benefit of bringing the two sides together and when it is difficult to process without the intermediary because of the costs and some obstacles.

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<sup>20</sup> Shengli Li, Yipeng Liu, Subhajyoti Bandyopadhyay, “Network Effects in Online Two-Sided Market Platforms: A Research Note”, (2010), *Decision Support Systems* 49, p.248.

<sup>21</sup> Roson (n 18), p.150.

<sup>22</sup> David S. Evans, Richard Schmalensee, “The Industrial Organization of Markets with Two-Sided Platforms”, (2005), Working Paper 11603, *NBER Working Paper Series*, pp.2-3.

<sup>23</sup> In order for the platform to be economically viable, it is necessary for the interactions of different parties to provide benefits that should exceed the cost of this emerging platform. The platform can bear the cost with the help of membership and usage fees charged from both sides.

<sup>24</sup> Jean-Charles Rochet, Jean Tirole, “Platform Competition in Two-Sided Markets”, (2003), Vol.1, *Journal of the European Economic Association*, pp.991-994.; Evans (n 1), p.332.

Platforms requests link two groups that are related to each other and have indirect network effects between them. Because of this indirect network effect between the parties, the mediation role of platform increases the benefit derived from the transaction by the parties.

When the positive effects of platforms are discussed, it can be shown that there are some differences between interactive relations whereby the benefits of platforms can be divided into target-oriented and economy-oriented, according to which platform types can be categorised.

#### **1.1.2.3.1 Target-Oriented Platforms**

Target-oriented platforms generally comprise three types,<sup>25</sup> as explained below.

*Market-maker platforms* function to create or develop a market. This platform creates a new market for sellers and buyers, such as e-Bay and Amazon, which are not linked to a single brand on the internet. Different sellers and buyers can come to these websites (i.e. platforms) and become a potential parties in sales agreements. The purchasing power of the large number of consumers coming to these platforms and the diversity of the sellers affects the market positively, attracting both buyers and sellers, creating markets with exponentially higher power than would be possible in traditional transaction formats (e.g. malls); consequently, these have revolutionized business itself since the 1990s.<sup>26</sup>

*Audience-maker platforms* aim to sell the desired message which would be delivered to the targeted customer group. In this market advertisers and audiences come together. An example of such markets is monthly magazines, whose content is targeted to particular interest groups (i.e. consumers), thus advertisers disseminate messages about their products or services to their audiences efficiently through such magazines. Audiences may prefer monthly magazines where more advertisements are available, offering a wider range

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<sup>25</sup> Evans (n 1), p.334.

<sup>26</sup> Ibid, p.334.

of news about products and services, while reducing the cover price for the anchor content.<sup>27</sup>

*Demand-coordinator platforms* are mainly distinguished by not featuring any transaction, product or message to be sold; the platform merely mediates the coordination of two different demands of parties, such as card payment platforms. The platform here only meets the requirements of the parties; through the platform, card holders can shop by their card, and card vendors get their fees. However, the platform works to make the platform more usable by offering different services to card holders and vendors.<sup>28</sup>

### **1.1.2.3.2 Economy-Oriented Platforms**

Economy-oriented platforms are of two main types.<sup>29</sup>

*Monopoly platforms* are like an operator to be dynamic on the off chance that he/she visits, or shows in no less than one business reasonable. Clearly the quantity of dynamic operators in each market depends contrarily on the item's cost and decidedly on the normal size of the pertinent system in the other market. The arrangement of dynamic specialists in one market is characterized by those consumers who appreciate a positive surplus when purchasing the item.<sup>30</sup>

*Duopoly competition with single-homing platforms* affirm that two stages exist that contend in costs. In any case, it is assumed that dynamic operators are not permitted to belittle two stages, i.e. they need to "single-home".<sup>31</sup>

As a result, platforms are at the forefront of areas where competition is most effective in two-sided markets and their main aims are facilitating each member of the group to reach each other and interact, increase the number of participants and reduce transaction costs.<sup>32</sup>

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<sup>27</sup> Ibid, p.335.

<sup>28</sup> Ibid, p.335.

<sup>29</sup> Mark Armstrong, "Competition in Two-Sided Markets", (2006), Vol.37 No.3, *RAND Journal of Economics*, p.671.

<sup>30</sup> Jean J. Gabszewicz, Xavier Y. Wauthy, "Two-Sided Markets and Price Competition with Multi-homing", (2005), <[https://www.fep.up.pt/conferences/earie2005/cd\\_rom/Session%20VI/VI.F/gabsz-wauthy.pdf](https://www.fep.up.pt/conferences/earie2005/cd_rom/Session%20VI/VI.F/gabsz-wauthy.pdf)> Accessed 24 July 2017, p.4.

<sup>31</sup> Ibid, p.6.

<sup>32</sup> David S. Evans, Michael D. Noel, "The Analysis of Mergers That Involve Multisided Platform Businesses", (2008), Vol.3 No.4, *Journal of Competition Law & Economics*, pp.665-666.

Nevertheless, since two-sided markets are subject to indirect network effects, they tend to scale economies, and therefore natural monopolies or high concentrations are likely to occur. However, product differentiation and multi-homing as a natural result of product differentiation increases competition in two-sided markets. For this reason, the concept of multi-homing access is examined in the next subsection.

#### **1.1.2.3.3 Multi-Homing**

It may be possible to use multiple platforms for customers (especially end users) in markets, and customers cannot be prevented from being members of more than one platform. The situation in which customers have multiple memberships from different platforms is known as multi-homing.<sup>33</sup> In the two-sided markets, it is possible to see multi-homing on either one or both sides of the platform. Where platforms are not interconnected or incompatible, multi-homing may be necessary to get more benefits from the relevant market.

In addition to being a positive option for customers, multi-homing can affect the price structure and price level of two-sided markets; even the possibility of multi-homing can affect prices, in the case of a two-sided market where there is a single-homing.<sup>34</sup> For example, a two-sided market with platforms that make auctions on the internet can be considered. If potential buyers and product sellers can reach each other through single-homing, it will be difficult to talk about the possibility of competition for the price of the products. On the assumption that there is multi-homing, however, when a platform drops commissions, the parties may tend to reject other platform or platforms that are costlier.<sup>35</sup>

#### **1.1.2.4 General Evaluation of Main Features of Two-Sided Markets**

The existence of two-sided markets can be accepted with the existence of the three basic characteristics detailed above. Two-sided markets can be described as those having

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<sup>33</sup> OECD (n 8), p.33.

<sup>34</sup> Evans (n 1), p.346.

<sup>35</sup> OECD (n 8), p.33.

platforms with aims such as increasing the number of participants in the market, reducing transaction costs and facilitating each member of the group, who are different users are in the same or similar business, and who are able to influence each other through indirect network effects, to reach each other and interact.

The main problem of features of two-sided markets at this point is the continuity of the undertakings operating therein. Because, first of all, as explained in the indirect networks effects across two sides of the market subsection, the benefit of the customers' needs to be balanced through the demand which occurs in the market, with the help of the platform that is in the market. The increase in one side of the customer group as a natural result of positive network externals will directly affect the other side group as well. From another point of view, if there is not a highly developed group of customers on one side of the market, it will be a group on the other side at the same level.<sup>36</sup>

A platform should have a strong buyer group to attract buyers to join the platform, and a buyer group that has a high purchasing power and a lot of participants to impress sellers.<sup>37</sup> Therefore it is very difficult to convince both sides of the platform to join the it. Providing free services to one or both parties for a certain period of time is the most common solution to kick-start such platforms, which is highly advantageous in online businesses where overhead operational costs are of negligible importance.<sup>38</sup>

As a result, it can be said that existence of two customer groups, indirect network effect across these groups and a platform which provides inter-group relations are the main effective features that define two-sided markets. In order to understand the extent to which existing competition law measures for one-sided markets will be effective on two-sided markets, the next section shows the fundamental differences between these two markets and the need for new measures.

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<sup>36</sup> This has been called a "Chicken and Egg Problem" in theoretical analyses. For further information please see Bernard Caillaud, Bruno Jullien, "Chicken & Egg: Competition among Intermediation Service Providers", (2003), Vol.34 No.2, *RAND Journal of Economics*.

<sup>37</sup> Evans, Noel (n 32), p.668.

<sup>38</sup> Ibid, p.669.

## **1.2 Main Differences Between One-Sided and Two-Sided Markets**

Competition law has emerged in order to remove the problems that have arisen primarily in one-sided markets. Because the two-sided markets and problems that arise here are the results of the emerging technologies and the commercial relations between people and the countries, it is a concept which has come out long after the establishment of traditional one-sided markets, upon the latter of which all existing rules regarding market competition are based (i.e. on one-sided market thinking).

It is necessary to clarify the differences between single-sided and two-sided markets in order to understand the different competitive law practices that may arise in the latter. The main objective of this work is to understand the differences of markets and recognise the difficulties which occur there because of differences in applying competition law and to find appropriate solutions to these problems. In this section, the main differences between these two types of market are explained.

The first difference is about measuring of market power. Competition law is a legal discipline that works on competitive structure in the marketplace to be effective on protection this structure. General competition in the market is protected by some measures which were taken before the existence of anticompetitive behaviour that will harm the competitive structure of marketplace. If there are not any measures to prohibit some types of behaviours and one of them arises, at this time, market structure will be tried to be restored. Market power is one of the most important effects which can influence market structure and that is why the measuring of it is very crucial in terms of protection competition in the markets.

Market power is defined as the ability to determine the price higher than the competitive level, and it is accepted as very effective in damaging market structure from the competition law perspective. There are certain measures that can be put in place after the market is identified to measure market power. Demand elasticity, mark-ups over marginal costs and concentration measures can be used for this aim in one-sided markets, but it is very hard to say that these measures can also be used in two-sided markets, because the impact on the market power of the two-sided market is determined by the

extent to which buyers and sellers on the same platform can influence each other rather than the buy-sell relationship between the buyer and the seller as happened in classic one-sided markets.<sup>39</sup> In two-sided markets, the value cost increase does not simply rely upon the elasticity of demand and marginal cost.<sup>40</sup>

The second major difference arises in pricing on the market. In one-sided markets, only a single pricing normally occurs between sellers and buyers. With the help of effective external factors important data are obtained for market definition; conversely, in two-sided markets there are two major pricings, one between platform and seller and the other between platform and buyer. Here, it is not important to measure the difference between the prices determined between the sellers and the buyers in the same market when the market definition is made (as in one-sided markets). Only two different prices within the same platform are important to describe the market and their impacts on each other.<sup>41</sup>

The third difference is about competition relation inside the markets. Two-sided markets are influenced by two unmistakable sorts of competition.<sup>42</sup> The primary, which we call 'inside competition', happens between subjects inside a similar platform. The second sort of competition, which we call 'outside competition', happens between the platforms themselves as they contend as far as getting the purchasers and venders to utilise their stage. In contrast, in the one-sided markets there is only one sort of competition which occurs between sellers of the same market.<sup>43</sup>

The last crucial difference between one-sided and two-sided markets is about externalities. In one-sided markets, externalities cannot be effective in creating a relationship between main parties of relation. In contrast, externalities are the main reason to need for two parties of main relation to come together with the help of the platforms.<sup>44</sup> In monetary terms, there is a two-sided market if two gatherings of purchasers are

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<sup>39</sup> Alexei Alexandrov, George Deltas, Daniel F. Spulber, "Antitrust and Competition in Two-Sided Markets", (2011), Vol.7 No.4, *Journal of Competition Law & Economics*, p.775.

<sup>40</sup> Marc Rysman, "The Economics of Two-Sided Markets", (2009), Vol.23 No.3, *Journal of Electronic Perspectives*, p.130.

<sup>41</sup> Alexandrov, Deltas, Spulber (n 39), p.776.

<sup>42</sup> Rysman (n 40), p.130.

<sup>43</sup> Li, Liu, Bandyopadhyay (n 20), p.245.

<sup>44</sup> Florence Thepot, "Market Power in Online Search and Social-Networking: A Matter of Two-Sided Markets", (2012), CLES Working Paper Series 4/2012, *Centre for Law, Economics and Society (CLES)*, < <https://www.ucl.ac.uk/cles/research-paper-series/research-papers/cles-4-2012> > Accessed 20 July 2017, p.5.

connected by an externality, and on the off-chance that they cannot disguise it on a respective premise because of high exchange costs.<sup>45</sup>

As a result, it can be said that the main differences between these markets lie in market power, pricing on the market and competition relation inside the market. The following section explores the importance and potential effect of two-sided markets in EU Competition Law.

### **1.3 Current Importance and Future Effects of Two-Sided Markets in EU Competition Law**

Two-sided markets are integral part of the new global economy, particularly in major web-based modern industries developed in recent years that are of immense economic importance. For example, online card payment systems have essentially created a whole new world of market possibilities, in which two-sided market structure has been incredibly significant. Especially considering the transactions between the buyers and the sellers, online payments are seen as a solution of high infrastructure costs.<sup>46</sup>

Two-sided markets will continue to increase in importance in the coming years due to ongoing technological developments: Over the years volume of internet-based transactions is bound to increase and major part of such volume is likely to be executed through two-sided market. Many of the most influential global firms are already firmly entrenched in two-sided markets and this will continue in different sectors and with new participants.

As a result of all this chapter, it can be said that two-sided markets are indispensable for EU Competition Law now and there are visible differences from classic, one-sided markets. For this reason, the next chapter examines the effects of these differences on competition law practices will be examined.

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<sup>45</sup> David S. Evans, Richard Schmalensee, "Markets with Two-Sided Platforms", (2008), Issue 1, *Competition Law and Policy*, p.674.

<sup>46</sup> Europe Economics Chancery House, *What does the Theory of Two-Sided Markets Tell Us About Competition in the Interbank and the Card Payment Systems?*, (2016), <[http://www.europe-economics.com/userfiles/library/Twosided markets in payment systems.pdf](http://www.europe-economics.com/userfiles/library/Twosided%20markets%20in%20payment%20systems.pdf)> Accessed 24 August 2017, p.8.

## **2 Main Problematic Issues in Two-Sided Markets in Terms of EU Competition Law**

Policy makers who work on the protection of competition against antitrust, competition and merger problems in the market should initially focus on the latent competition scenarios in order to consequently define and identify problems in terms of antitrust behaviours in the market in question: they should define the market details first and then measure the market power, evaluate pricing strategy, reveal price discrimination and finally focus on anticompetitive relations. After all these, evaluating mergers to achieve more fair results is always necessary.

In two-sided markets, the basic antitrust, competition and mergers analysis should be extended. To understand this extension and analyse fundamental competition problems in two-sided markets, this chapter examines the competition level and antitrust behaviours in two-sided markets; market definition problems that arise in two-sided markets; issues of two-sided market power; pricing strategies and price discrimination; and anticompetitive relations between competitors and mergers in two-sided markets.

### **2.1 Competition in Two-Sided Markets**

In two-sided markets, competition has two different channels that include two different relations in terms of the position of platform with buyers and sellers.<sup>47</sup> Competitors in these markets can deal with a coordination problem that can arise due to different benefits and network effects of two different consumer group platforms.<sup>48</sup> For example, when firms decide on a price policy or strategy that can affect their competition position in the market

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<sup>47</sup> Two different relations in the two-sided markets can be effective on three different points. In the first place, the individual costs charged on each side of the market do not track expenses or requests on that side of the market. The way that advantages and expenses emerge together in various sides of the market suggests that there is no important financial connection amongst advantages and expenses on each side of the market considered alone. Second, one cannot discuss the individual costs in separation. Any adjustment or cost on one side of the market will essentially influence the level and relationship of costs on all the other sides. Third, items in two-sided markets will most likely be unable to appear unless firms in those business sectors get all sides on board.

<sup>48</sup> Evans (n 1), p.355.

for one side of platform, they should take into consideration the other side of the platform and consider the consequence that the other side will encounter from the change.<sup>49</sup>

Competition in two-sided markets is not confined to either the virtual world or neighbourhood markets, and antitrust investigations ought not to stereotype competition as a mainly Internet-related system impact.<sup>50</sup>

Another important point in terms of competition in two-sided markets is that restrictions on one side of the market have a direct impact on the other.<sup>51</sup> With competition between a virtual mediator and nearby merchants, bottlenecks on one side of the market additionally influence results on the opposite side. Consequently, antitrust arrangement must consider potential bottlenecks on both sides of two-sided markets.<sup>52</sup>

All these competition conditions in two-sided markets are vital effects of antitrust situations therein. The next section presents antitrust analysis of two-sided markets.

## **2.2 Antitrust Analysis in Two-Sided Markets**

As explained in the first chapter, two-sided markets have serious differences from one-sided ones, due to which, certain differences arise in antitrust analysis too. The differences that arise in this market offer the opportunity to be present in different types of anticompetitive behaviour for competitors.<sup>53</sup>

The first point that needs to be made in order to understand antitrust practices is the limits of the market, because the parties try to include applications that will give an advantage to each other within these boundaries. For this reason, the first subsection explains the market definition in detail, then market power, pricing strategies and price discrimination and anticompetitive agreements are discussed in terms of antitrust analysis.

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<sup>49</sup> Daniel F. Spulber, "Solving the Circular Conundrum: Communication and Coordination in Two-Sided Networks", (2010), Vol.104 No.2, *Northwestern University Law Review*, p.539.

<sup>50</sup> Alexandrov, Deltas, Spulber (n 39), p.779.

<sup>51</sup> Ibid, p.780.

<sup>52</sup> Ibid, p.780.

<sup>53</sup> Gönenç Gürkaynak, Öznur İnanılır, Sinan Diniz, Ayşe Gizem Yaşar, "Multisided Markets and the Challenge of Incorporating Multisided Considerations into Competition Law Analysis", (2016), Vol 5, *Journal of Antitrust Enforcement*, p.108.

### **2.2.1 Defining the Market in terms of Antitrust Analysis in Two-Sided Markets**

Behaviours of the undertakings against each other in the market can create some important effects as free decision making, justice on the market and entry or exit to the market. For that reason, EU Competition Law evaluates the general situation inside the markets in the EU based on the movements of undertakings against each other in the same market. Depending on this assessment, competition authorities attempt to prevent abuse of the undertakings which has a dominant position in the market;<sup>54</sup> undertaking mergers;<sup>55</sup> or forming cartels.<sup>56</sup>

In order to achieve these goals successfully, the relevant market needs to be defined correctly. Because the identification of the market is an important factor in the evaluation of competition in every way, it can only be possible with the correct definition of the relevant market to determine where the actions taken will have an effect (i.e. which dimension will create the dominant position or affect it). The misrepresentation of the market definition is so important that competition authorities can make a decision to refuse to negotiate the subject without getting into the details of the controversial issue.<sup>57</sup>

For situations of abuse of dominance, market definition decides if a firm has enough market power to take part in anticompetitive behaviour, and whether that behaviour increments or keeps up its market power. For merger cases, market definition distinguishes the undertakings that could oblige conceivable cost increments by the consolidating parties, and in this manner, decides if the combining gatherings will build their market power.<sup>58</sup>

To sum up, it can be said that market definition is not an objective, but instead a contribution to the examination of conceivable anticompetitive impacts. For lawful reasons, market definition is and will keep on being a critical piece of antitrust practice.

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<sup>54</sup> Article 102 of TFEU

<sup>55</sup> Council Regulation (EC) No 139/2004 of 20 January 2004 on the Control of Concentrations Between Undertakings [2004], Official Journal of the European Communities, L 24.

<sup>56</sup> Article 101 and 102 of TFEU.

<sup>57</sup> Lapo Filistrucchi, "A SSNIP Test for Two-sided Markets: The Case of Media", (2008), Working Paper No 08-34, *The Networks, Electronic Commerce, and Telecommunications ("NET") Institute*, p.2.

<sup>58</sup> OECD (n 8), p.35.

In one-sided markets, the small but significant and non-transitory increase in price (SSNIP) test established in 1982 can be used to define the relevant market.<sup>59</sup> According to the SSNIP test, if a small but significant non-temporary increase in the price of a hypothetical monopoly product is not profitable due to substitute products, in these situations, substitute products and the products produced by the firm will be included in the same product market.<sup>60</sup> It can be said that the SSNIP test determines whether the substitutability of the two products is reason enough to include them in the same relevant product market.<sup>61</sup>

The SSNIP test is implemented for market identification and there is no problem with the safety of the outcome.<sup>62</sup> The main problem is that this test is used in one-sided market where the price for a single product or service is at the centre. A company in a two-sided market offers goods or services to two different groups of customers who are affected by each other's preferences. The fee for these two customer groups is also at the centre of the market. For this reason, practicing traditional market definition tools devised for one-sided markets without amending anything inherently poses a problem for the justice of competition law in two-sided markets.<sup>63</sup>

Due to indirect networks effects existing in two-sided markets, a price increase on one side of the market will not only mean a decrease in demand from that side but also a decrease in demand on the other side due to a demand decrease on the side where the price was increased. When the SSNIP test, which works on one-sided markets, is applied to a two-sided market, the platform will ignore the price it applies to the non-price-tested side and the feedback effect.<sup>64</sup>

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<sup>59</sup> Øystein Daljord, Lars Sørgard, Øyvind Thomassen, "The SSNIP Test and Market Definition with the Aggregate Diversion Ratio: A Reply to Katz and Shapiro", (2007), Vol.4 No.2, *Journal of Competition Law & Economics*, p.263.

<sup>60</sup> Ibid, p.264.

<sup>61</sup> Filistrucchi (n 57), p.5.

<sup>62</sup> Alison Jones, Brenda Sufrin, *EU Competition Law - Text, Cases and Materials*, (6th edition, Oxford University Press, Oxford, 2016), p.62.

<sup>63</sup> Evans, Schamalansee (n 45), pp.688-689.; Filistrucchi (n 57), pp.9-10.

<sup>64</sup> In doctrine, there is a view that the SSNIP test, which is applied to one-sided markets, can also be applied directly to two-sided markets. For example, in one case, a party suggest to the commission that the SSNIP test in a two-sided market should be applied separately for both sides of the market. But this request was rejected by the commission. For more information please see Case COMP/34579, COMP/36518, COMP/38580 *MasterCard Europe S.p.r.l., MasterCard Incorporated and MasterCard International Incorporated*, [2007], Commission Decision Official Journal of European Union.

In short, the application of the one-sided SSNIP test on a two-sided market will lead to the determination of the relevant market to include only one side of the platform, so that the main points of profit maximization and strategic interaction will be out of the market definition.<sup>65</sup> The use of the SSNIP test without regard to the two-sided market feature will lead to a narrower definition of the market than the real one. Besides this, antitrust behaviours revealed by competitors in the market would not be recognized and the real market power of some undertakings would look larger than the real situation.

In order to understand more clearly the effects of market power on competition law, the concept of market power is explained in detail in the next subsection.

### **2.2.2 Measuring Market Power in terms of Antitrust Analysis in Two-Sided Markets**

Measuring market power is not easy even in one-sided markets, and it is much more complex in two-sided markets; however, it is very important for different situations to find a way to protect competition. For example, in the case of abuse of the dominant position in the market and analysis of mergers in terms of anticompetitive behaviour, the situation is based on two themes: the identification of the relevant market and the demonstration of the power of the market in this relevant market. It is necessary to measure the market power in order to protect the competition in the two-sided markets (after defining the market completely).<sup>66</sup>

Market power can be defined as the ability to influence product price and quantity perceptibly in the market.<sup>67</sup> In EU Competition Law, this term can be stated as market dominance, because of economic reasoning, and to show important effect of this term on competition law.<sup>68</sup>

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<sup>65</sup> Evans, Schmalensee (n 45), p.689.

<sup>66</sup> OECD (n 8), p.14.

<sup>67</sup> James V. Koch, *Industrial Organization and Prices*, (2<sup>nd</sup> Edition, Prentice-Hall Int Inc, London, 1980), p.62.

<sup>68</sup> Josef Drexler, "The Relationship Between the Legal Exclusivity and Economic Market Power Links and Limits" in Inge Govaere, Hanns Ullrich (eds), *Intellectual Property, Market Power and the Public Interest*, (1<sup>st</sup> edition, P.I.E. Peter Lang, Brussels, 2008), Chapter 1, p.15.

Theoretically, all undertakings aspire and operate to monopolize (i.e. to achieve 100% market dominance and thus maximum profitability). Because with the help of monopolisation the undertaking will gain so much power on the market. For example, a firm with a monopoly can determine product-related variables (e.g. price, quantity etc.) relatively easily. With the application of competition law, the concept of 'market power' intersects at this point. Companies that want to determine such variables as being more profitable from the competitive situation may occasionally exhibit disruptive, diminutive or extinctive behaviour.

In essence, the concepts of dominance and market power are separate concepts in the EU Competition Law. The concept of 'market power' focuses on a single undertaking. However, the number of undertakings in the concept of 'dominant position' is not considered. An undertaking with as much market power as a competent person may be in a dominant position, or a few undertakings may have similar strength without coming together or coming together.

Market dominance is a position but market power is a criterion; from this point of view, the dominant position is one that is expressed by market power. It is possible and necessary to measure qualitative (e.g. patent, vertical integration, concession agreements) and quantitative (market share, turnover, profit margin etc.) criteria as to how much market power each undertaking has.

Generally, antitrust authorities which are responsible for the fairness of competition in terms of competitors in the EU markets, prefer to monitor the market shares of undertakings of an industry as an important measure of the market's competitiveness.<sup>69</sup> At this time, EU competition authorities can use price/ cost margin<sup>70</sup> besides market shares as tools to measure market power in classic, one-sided markets.<sup>71</sup>

Market share concerns the level of an industry or market's aggregate deals earned by a specific organization over a predetermined era. The condition of an overall industry is

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<sup>69</sup> Hideo Konishi, Çağlar Yurtseven, "Market Share Regulations", (2014), *Japan and the World Economy*, p.36.

<sup>70</sup> It can be called as "The Lerner index of market power" in some sources.

<sup>71</sup> David S. Evans, Richard Schmalensee, "The Antitrust Analysis of Multisided Platform Businesses", (2012), Working Paper 623, *Chicago Institute for Law and Economics*, pp.19-20.

ascertained by taking the organization's deals over the period and separating it by the aggregate offers of the business over a similar period. This metric is utilized to give a general index by which to measure an undertaking's performance and behaviour in connection to its market and its rivals.<sup>72</sup>

In two-sided markets, measuring market share cannot be undertaken by any obvious route.<sup>73</sup> Because there are two different shares which come from two different sides' their own market, in the same platform both should be calculated separately, but when the situation comes to combine them together to find the general effect of this platform on the two-sided market which they are in, the analysis would not show the exact effects. Because there is a different interaction between both sides of the platform and finding a suitable common ground to determine the effect of them on the market is very hard and when sides are calculated separately, this interaction could not be calculated truly.<sup>74</sup>

The price-cost margin is regarded as a sign of market power in one-sided markets. A large difference between the price and cost indicates that there is a large difference between the price of the firm and the competitive price.<sup>75</sup> For this term, it should be said again that it cannot be effective in two-sided markets to measure market power truly. Because there are two separate costs in both sides of platform that are independent of each other. However, the prices collected on one side of the platform do not always depend on the costs incurred on this side of the market.<sup>76</sup>

In short, for all these reasons, the market share and price/cost margin used to calculate the market power, which is a very important concept to protect competition in the market, seems to be unable to produce very accurate results for measuring market power in two-sided markets, yet market power can precipitate antitrust situations.

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<sup>72</sup> Lee G. Cooper, Masao Nakanishi, *Market-Share Analysis*, (3<sup>rd</sup> edition, Kluwer Academic Publishers, London, 1993), pp.17-20.

<sup>73</sup> Ibid, p.19.

<sup>74</sup> Gürkaynak, İnanılır, Diniz, Yaşar (n 53), p.110; see also Evans, Schmalensee (n 71), p.20.

<sup>75</sup> Roger J. Best, *Market-Based Management Strategies for Growing Customer Value and Profitability*, (6<sup>th</sup> Edition, Pearson Education, New Jersey, 2013), p.294.

<sup>76</sup> Gürkaynak, İnanılır, Diniz, Yaşar (n 53), p.110.

### **2.2.3 Pricing Strategies and Price Discrimination in terms of Antitrust Analysis in Two-Sided Markets**

Another important point in examining the antitrust behaviour of firms in two-sided markets is pricing strategies which are applied by them inside the market. Therefore, in this subsection, undertakings' general pricing strategies and their effects on two-sided markets are examined.

In one-sided markets where there is no intervention by a particular competition authority, the price of a good or service is freely determined by buyers and sellers in line with market conditions.<sup>77</sup> Optimal price is formed at the point where supply and demand amounts are equal to each other depending on the result of supply and demand in the market. The change of supply and demand in the market causes the price to re-occur accordingly.

It is not possible to talk about a single supply and demand balance in two-sided markets. Supply and demand balances of two different sides of the platform are in relation to each other therein. That is why the basic principle of pricing in two-sided markets is to take into account that the prices on both sides of the market are interdependent and it is a problem for both sides of the platform.<sup>78</sup> The price on one side of the market should not be determined without taking into consideration the effects that will arise for both sides.

As explained in the first chapter, there may be a problem with the price (the "chicken-egg problem" described previously) at the entrance stage of the market. Besides this, another important problem will arise after the entrance of undertakings to the market. Because pricing strategies are crucial to strengthen and maintain market positions in terms of platforms, undertakings who are in a dominant position in the market can choose to use

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<sup>77</sup> Pinar Akman, Luke Garrod, "When Are Excessive Prices Unfair?", (2010), Vol.10 No.4, *ESRC Centre for Competition Policy University of East Anglia CCP Working Paper*, p.7; Best (n 75), pp.315-320.

<sup>78</sup> Aaron Schif, "Basic Pricing Principles in Two-Sided Markets: Some Simple Models", (2007), *Institute of Economic Research Hitotsubashi University*, <<https://poseidon01.ssrn.com/delivery.php?ID=488007067005083120091100086070086110058022049054058085108020090027104015025088114018122027044107111060037064097090073090107117006036025010060120120077030076070119025054007078001127101120116121114069006020066112029103117116070001031121072093117097073&EXT=pdf>> Accessed 2 August 2017, pp.20-21.

it on price as well. It may be possible to apply different prices to specific consumer groups on platforms in order to maximize profits.<sup>79</sup>

This situation is known as price discrimination, and it is one sign of antitrust practices in EU Competition Law.<sup>80</sup> The necessity of detecting and preventing this situation is obvious, but it would not be correct to say that it requires a big difference from one-sided markets for detection.<sup>81</sup> It should be useful to consider it here since it is one of the basic competition law problems in two-sided markets.

In EU Competition Law, antitrust behaviour because of pricing creates price discrimination in two different ways: predatory and excessive pricing.<sup>82</sup> Predatory pricing is a method applied to eliminate the actual and potential competitors of market in question or to deter entry to the market of the dominant undertaking by price reduction.<sup>83</sup> Another way for a dominant firm to abuse its dominance by using unfair price is determination higher price than the potential price according to market conditions, defined as an excessive price.<sup>84</sup>

In two-sided markets, the price structure is usually designed to bring both sides of the market together on a common platform, rather than the price of each side meeting the cost of that side. For this reason, general assumptions cannot be used in predatory pricing. For example, it cannot be said that there is an abuse of the dominant position if the price which decided by one side is under the cost of providing goods or services to that side, because indirect networks effect should be considered in two-sided markets.<sup>85</sup>

The situation is also same for excessive pricing. The general (i.e. one-market style) tests or assumptions cannot be applied here to find whether there is excessive pricing in the two-sided market in question. For example, it cannot be decided whether the market

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<sup>79</sup> OECD (n 8), p.31.

<sup>80</sup> Gürkaynak, İnanılır, Diniz, Yaşar (n 53), p.111.

<sup>81</sup> E. Glen Weyl, "A Price Theory of Multi-Sided Platforms", (2010), *American Economic Review*, p.1645.

<sup>82</sup> OECD (n 8), pp.37-39.

<sup>83</sup> Joanna Goyder, Albertina Albors-Llorens, *EC Competition Law*, (5<sup>th</sup> Edition, Oxford University Press, Oxford, 2009), p.319.

<sup>84</sup> Organisation for Economic Co-Operation and Development (OECD), [2011], *Policy Roundtables/Excessive Prices*, p.29.

<sup>85</sup> *Ibid*, p.38.

is using excessive pricing strategy based on the price-cost comparison only on the side where the prices are high.<sup>86</sup>

To sum up, it can be said that for pricing strategies, as in classic markets, two-sided markets also have some critical competition problems. Basically, pricing strategies that can be summarised as predatory and excessive pricing create antitrust behaviours for undertakings by creating discrimination between prices. Their prevention is important to protect competition in the market.

To finalise antitrust analysis in the two-sided markets, the next subsection analyses anticompetitive agreements and relationships that arise between different competitors in the same market.

#### **2.2.4 Anticompetitive Relations of Competitors in terms of Antitrust Analysis in Two-Sided Markets**

Although some of the welfare potential situations for markets are separated, it is generally forbidden for undertakings who serve in the same market in the framework of the general rules of EU Competition Law to enter into cooperative associations that will adversely affect undertakings who are not co-operative.<sup>87</sup>

The antitrust situations arising from the gathering of competitors in the same market are called cartels. Cartel activity is one form of anticompetitive agreement or connivance among multiple undertakings whereby they rig markets, fix prices and stifle genuine competition, which is why it is prohibited (with varying degrees of stringency) worldwide.<sup>88</sup> It can be seen that cartel activity creates very serious economic harms within particular industries and markets, and it can exert significant effects on the national, regional and global economy. That is why it is very it is very crucial issue protected by Articles 101 and 102 of the TFEU within the EU.

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<sup>86</sup> Ibid, p.39.

<sup>87</sup> Kirsty Middleton, Barry Rodger, Angus MacCulloch, Jonathan Galloway, *UK & EC Competition Law*, (2<sup>nd</sup> Edition, Oxford University Press, Oxford, 2009), p.325.

<sup>88</sup> Peter Whelan, "Legal Certainty and Cartel Criminalisation Within the EU Member States", (2012), Vol.71 No.3, *Cambridge Law Journal*, p.677.

For all these reasons, in both one-sided and two-sided markets, cartels are a threat to the protection of competition. However, in two-sided markets, both entering into such an agreement relationship and revealing it are much more difficult than one-sided markets.<sup>89</sup> A cartel that will only affect one side of the platform will not meet the aim which reaching in the market. For a cartel that covers both sides, a much bigger deal and the burden of following each other will emerge. In terms of the competition authorities, evidence relating to the cartel on one side of the platform will present difficulties in relation to the other. Although logically a relationship and interaction between the two sides of the platform is inevitable, substantiating such connections with legally valid evidence is highly problematic. Nevertheless, even the prospect of cartel formation is sufficient to take the cartel into account when antitrust testing is conducted on two-sided markets, and solutions must be devised for it.

As a result of this section, it can be seen that antitrust behaviour analysis also has great importance in two-sided markets and raises a lot of different problems that need to be addressed. The next section focuses on mergers in order to specify the key problematic issues in two-sided markets.

### **2.3 Mergers in Two-Sided Markets**

The last problem to be noticed in two-sided markets is a merger that will include one of the platforms from two-sided markets. According to commercial law, “mergers” can be described as entities established by the sale of shares of another entity that terminate the legal existence of the latter.<sup>90</sup>

The main macroeconomic concern about mergers is the reduction of market power (i.e. reduced competition), which is why in EU Competition Law mergers are prohibited if substantial reductions in competition are to be expected.<sup>91</sup> Even if a merger does not result in a reduction of competition, there may be various competition restrictions or non-

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<sup>89</sup> OECD (n 8), p.43.

<sup>90</sup> Roger J. Van den Bergh, Peter D. Camesasca, *European Competition Law and Economics: A Comparative Perspective*, (2<sup>nd</sup> Edition, Sweet & Maxwell, London, 2006), p.349.

<sup>91</sup> Ibid, p.350.

competition agreements between parties of this process at various stages. These agreements are often mandatory in the merger process. In accordance with the purpose of competition law, these agreements need to be avoided in order to protect competition.

The impacts that may arise from mergers in two-sided markets are much wider than in traditional mergers. The sides involved in such a merger are affected separately; consequently, it is necessary to investigate how both competitors and consumers will be affected by this and to investigate whether the resulting effect is contrary to general competition rules. Besides all these, the impact will also affect indirect network externalities, which will change the relationship between the two parties within the platform. This change will have a great impact on market power, especially regarding pricing, which will show all effects in terms of ensuring market power control or using the resulting advantage.<sup>92</sup>

For all these reasons, it is necessary to control mergers in order not to produce a possible antitrust situation, and the control of the agreements put forward for this purpose must also be strictly applied in two-sided markets.

As a result, it is clear that two-sided markets differ from one-sided markets and therefore have different and broader problems in terms of protecting competition over certain situations relating to competition situations and antitrust behaviours, in terms of market definition, market power, pricing and anticompetitive relations and merger investigation. In order to show proper solutions to all these problems in accordance with the structure of two-sided markets, potential measures are examined in the next chapter.

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<sup>92</sup> OECD (n 8), p.43.

### **3 The Ways to Protect Competition in Two-Sided Markets**

EU Competition Law is a major contributor in the core issues of competition within the scope of EU for the study of its inclusive markets, the inclusion of innovations and the increasing of rightful productivity. Competition law plays a more active role than other areas of law pertaining to business, especially when markets do not produce good results.<sup>93</sup>

Competition policy and actions of the EC are tied in with applying standards to companies and undertakings contending with each other appropriately. Aside from individual legal duties and conventional business expectations, fair competition is essential in the promotion of economic growth and poverty reduction. Helping markets function efficiently by removing unnecessary distortions to competition can lead to significant reforms of the business environment. All these can prove that it is very important to provide this fairness for both competitors and consumers in the market.

For consumers, with the help of the policy and the EC actions, there are more options on the market, prices are balanced and the quality of the goods or services is maintained. Fair competition in the market primarily enables market competitors to sell their products or services on a level playing field. In addition, through existing rules and actions, stable markets enable efficient production, enabling more value-added activities such as investing in sustainable development and corporate social responsibility activities.

In order to achieve such positive results, it is not enough to have only effective competition rules or specific constructive practices. Competition should be supported and all necessary solutions should be shown by the competent competition institutions in the EU to eliminate existing competition problems. In accordance with this, this chapter explores the main reasons for the necessity of the protection of the competition in two-sided markets, followed by potential solutions for the problems described in the previous chapter.

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<sup>93</sup> Nick Godfrey, "Why is Competition Important for Growth and Poverty Reduction?", (Global Forum VII on International Investment, London, 2008), p.3.

### **3.1 Why is the Protection of Competition Needed in Two-Sided Markets?**

The lack of competition, which can influence two main actors in one-sided markets, affects many more actors in the two-sided market. If it is considered that all current protection methods in EU Competition Law are not suitable for two-sided markets, the consequences of the shortcomings described in the second chapter prove once again the importance of protecting competition here. In this section, these consequences can be listed as not having fair prices in the market and the emergence of winner-take-all competition, explained below.

#### **3.1.1 Not Having Fair Prices in the Market**

When an additional product is produced in normal markets, it is reasonable to determine the product price as much as the marginal cost of this product. In two-sided markets, this is complicated because it is not possible to talk about a single product or service that deals with all actors therein.<sup>94</sup>

Platform providers play an active role in determining the price, and unfair pricing may arise if the indirect networks effects between the two sides are not considered in the required dimension. If this situation happens when a platform provider dominates the market, this will result in totally out-of-order pricing.<sup>95</sup> For this reason, protection against having unfair prices in the two-sided market first requires a strict competition policy and measures.

#### **3.1.2 The Emergence of Winner-Take-All Competition**

The recognition of the parties involved in a platform in two-sided markets by the consumers (e.g. the popularity of the platform in the market etc.) reveals greater effects compared to

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<sup>94</sup> Thomas Eisenmann, Geoffrey Parker, Marshall W. Van Alstyne, "Strategies for Two-Sided Markets", (2006), *Harvard Business Review*, p.3.

<sup>95</sup> David S. Evans, A. Jorge Padilla, "Excessive Prices: Using Economics to Define Administrable Legal Rules", (2005), Vol.1 No.1, *Journal of Competition Law and Economics*, p.98.

one-sided markets. As a natural consequence of two-sided markets, there is a possibility that more and more powerful actors come together therein.

This may put even greater pressure on the competitors who compete in the same market. If competition is not framed by rules and equal conditions for every competitor, the platform that holds stronger parties for this area dominates the market (due to market power, pricing strategies and other methods). This means that in such markets, if competition is not maintained, there will be a race which has started since the establishment of the market, and after a certain period, it is likely that this race will have only one winner.

As the platform which dominates the market continues to exist therein, other competitors could have to be eliminated.<sup>96</sup> In short, the possibility of winner-take-all competition in two-sided market is the second rationale for having strict competition policy and measures.

### **3.2 Potential Measures for Two-Sided Markets and Effects on EU Competition Law**

After all these detailed explanations, it is clear that competition policy should be dealt with differently in two-sided markets; however, this does not mean that two-sided markets are inclined to antitrust behaviour more than one-sided markets.<sup>97</sup> Legal applications based solely on one-sided markets cannot be transposed wholesale to two-sided markets. However, if similar efforts are made to solve the problems of two-sided markets as those made for their one-sided antecedents, there is no reason that such problems cannot be resolved.

This section firstly analyses interventions that can be taken for two-sided markets by the EC or NCAs, then suitable solutions for the existing problems explained in chapter 2 are presented.

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<sup>96</sup> Eisenmann, Parker, Alstyne (n 94), p.7.

<sup>97</sup> Jitendra Jain, *Two-Sided Markets and Their Relevance for Competition Policy*, (Der Grin Verlag Publiziert, Germany, 2006), Seminar Paper, p.16.

### 3.2.1 Interventions as a General Solution

Markets are theoretically instituted to effect efficient resource allocation, providing goods and services where needed and enabling enterprise to flourish; however, they do not always function smoothly or effectively. Interventions by the EC or the NCAs may be necessary to remove situations that lead to relevant failures. Due to the scope of competition law, these interventions are mostly done by specific decisions or legal provisions.<sup>98</sup>

Specific interventions may still be needed for developing two-sided markets which have different characteristics from one-sided markets, but no basic rules are regulated. Two-sided markets should not be approached in the same way as one-sided markets, and a more rigorous assessment should be made based on more detailed assessment. A situation defined as a market failure in a one-sided market might not be accepted as such in a two-sided market. Fundamentally, there is only a one-way viewpoint in the case of the one-sided market, and even negative decisions taken for very basic situations can be interpreted positively in view of the network effect in the two-sided markets, while there is no network effect among the main actors in one-sided markets.<sup>99</sup> However, it is inevitable that certain interventions should be made through competent competition authorities at certain points as a result of the evaluation to be made.

As a result, to have a socially beneficial intervention in two-sided markets, there is a wider range of situations to be borne in mind, therefore it requires careful handling.<sup>100</sup> At this point, the biggest need for interventions arises from the fact that entry barriers have been abolished to provide a more competitive market in most market jurisdictions (i.e. at the national and regional levels). The next subsection discusses entry barriers and protection in two-sided markets.

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<sup>98</sup> Goyder, Albers-Llorens (n 83), p.19.

<sup>99</sup> To understand this situation, the following scenario provides an example. It is possible to estimate the excess pricing situation in one-sided markets with a general evaluation. However, even if there is excessive pricing on *one side* of the platform in two-sided markets, it cannot be said that there is excessive pricing in this market *per se*. The other side's effect on the pricing must also be evaluated in relation to the excessive price of the first side, based on which the decision can be concluded.

<sup>100</sup> Weyl (n 4), p.42.

### 3.2.1.1 Barriers to Entry in Two-Sided Markets

Markets and their regulation aim to achieve the optimum distribution of resources to meet needs; consumers seek the best value (i.e. relatively lowest price for relatively best quality), which is more likely to be provided in perfect competition markets.<sup>101</sup> However, this is essentially a theoretical idyll, and no real markets have ever been of utopian perfection.

One of the most important features of perfect competition markets is that the entrance and exit of the market is completely free theoretically enabling optimally efficient resource use.<sup>102</sup> One of the main objectives of EU Competition Law is to provide suitable environments in which competition can occur and work rightfully in the market.<sup>103</sup> For this reason, in the classic one-sided market, barriers to entry is accepted as a really huge competition problem, thus measures to detect and prevent market entry barriers are among the main responsibilities of the EC and other competition authorities.

It is possible to define the barriers to entry for general markets in EU Competition Law as any policy or practice that affects the normal process of trade in the market and behaviours of the new competitors who want to gain a place in the market, through tariffs, high start-up costs, non-tariff measures and other administrative practices.<sup>104</sup>

Entry barriers, which are substantive obstacles to the smooth operation of market competition for one-sided markets, differ slightly in two-sided markets, thus they were not examined as a problem in the Chapter 2. This section explains the details of entry barriers in terms of the two-sided markets and to identify a reasonable solution.

There are two different reasons why barriers to entry cannot be defined as a problem in terms of two-sided markets. On the one hand, it is not a problem because it does not appear to be a problem in itself; it emerges as a common result of the problems that are basically expressed. Market definition, market power and mergers are the

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<sup>101</sup> Goyder, Albors-Llorens (n 83), p.16.

<sup>102</sup> Doris Hildebrand, *Kluwer Law International Competition Law Series: The Role of Economic Analysis in the EC Competition Rules*, (3<sup>rd</sup> Edition, Wolters Kluwer Law & Business Press, The Netherlands, 2009), p.104.

<sup>103</sup> Jones, Sufirin (n 62), p.27.

<sup>104</sup> Best (n 75), pp.240-241.

fundamental problems which can cause entry barriers in two-sided markets.<sup>105</sup> Entry barriers are usually under the influence of companies dominating the market. Incumbent undertakings can raise their market prices by their own power, so that new competitors will be faced with high entry costs. The market definition also appears to be an important criterion for explaining this effect. In terms of market power, this criterion indicates how effective the incumbent undertakings will be in terms of creating an entry barrier. Because of this power and definition effect in the market, barriers can arise.<sup>106</sup> In the case of mergers, it can be said that there are obstacles to potential market entry to the extent that the dominant undertakings affect market behaviour.

On the other hand, barriers to entry do not cause negative impacts on two-sided markets in every situation. In one-sided markets, dominant firms or other actors in the market always seek to have less competitors; conversely, in some situations in two-sided markets parties may encourage more competitors. For example, malls are an important example of two-sided markets with a crucial place in national and global trade. According to the two-sided market concept, while the sides are the store owners and the customers, shopping centres are the platform. While the customers benefit from the many options in the shopping centre, the store owners benefit from having access to many different types of customers easily. At this point, the store owners are going to get what they are trying to achieve by having more competitors on the platform they are on. For this reason, even if the shop owner will sell the same product, the other store owners will not try to create any barriers for them, and they generally support this situation.<sup>107</sup>

For all these reasons, it would not be right to define entry barriers as a clear problem for two-sided markets. Nevertheless, it is inevitable that barriers to entry will exist more or less due to the fact that the two-sided markets are not considered to be perfect competition markets. There is no doubt that the entries should be facilitated or encouraged

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<sup>105</sup> Evans (n 1), p.362.

<sup>106</sup> Ibid, p.362.

<sup>107</sup> Serkan Dilek, Nurdan Çolakoğlu, "Barriers to Entry and Two-Sided Markets: A Research in a Shopping Mall in Istanbul", (2013), Vol.3 No.4, *Asian Economic and Financial Review*, p.544.

in order to ensure that competitiveness in goods and services markets can be established and activated even in two-sided markets.

If needed in two-sided markets, one of the most effective ways to prevent entry barriers which are planned to be created or to prompt new undertakings to enter the market can be through intervention by hand of competition authorities. This protection mechanism can be provided by certain rules to be put forward or by a specific case decision taken.

As a result, interventions can be a solution not only for entry to barriers but also for any other problems which arise in the market to solve them in a serious way. After this general solution, the possible solutions for the existing problems of the two-sided markets will be discussed in the next subsection.

### **3.2.2 Solutions for the Existing Problems of the Two-Sided Markets**

Each market in the EU has certain problems in terms of competition law contained in its specifications. The removal of these problems or the introduction of a measure that does not exceed the competitive edge of the market is one of the main objectives of EU Competition Law.<sup>108</sup> Merger investigation and antitrust behaviours, including market definition, market power, pricing and anticompetitive relations, are the main problems of two-sided markets; possible potential solutions for them are presented in the following subsections.

#### **3.2.2.1 The Problem of Market Definition**

The main problem about market definition arises from SSNIP test usages, which do not consider the main features of the two-sided markets, due to which antitrust behaviours revealed by competitors in the market would not be recognized, and the real market power of some undertakings would be overemphasized.

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<sup>108</sup> Jones, Sufirin (n 62), p.28.

In the SSNIP test, to find a real market definition for two-sided markets, the effect of any changes that occur in one side of the platform should be taken into account, not only for the side which has any changes but also for other side, because there is an indirect network effect between them.<sup>109</sup> Returning to the example of malls, shopping centres are the platform, and the sides are the store owners and the customers. Shopping centres have different pricing systems for both sides. Store owners pay overhead costs (i.e. rent etc.) while customers pay for goods and services from the stores. At this point, it is wrong to conduct the SSNIP testing on shop rentals only and to make an overall assessment according to the profit/loss analysis arising therefrom, when defining the market for malls as a separate market. Here, the profitability of shopping centres is not only dependent on the price of store rents, but also the number of customers arriving and their general expenditures in the shops.

It is not possible to put out a clear SSNIP test for two-sided markets because economists have not been able to draw a clear way to evaluate both sides with indirect network effects on each other.<sup>110</sup> If there is a clear presence of a two-sided market with three basic characteristics, as explained in chapter 1, it would be more appropriate to evaluate each market separately rather than to perform a direct test for market definition. The basic evaluation point should be that how seriously the parties have indirect network effects on each other.

If a very strong indirect network effect is not the issue, which means if the customer on one side of the market does not significantly affect the demand of the other, it is useful to have each party of these two-sided markets subject to the SSNIP test separately and reach a common result. However, if there is a strong indirect network effect, the SSNIP test should not be used. At this point, it is necessary to consider this effect so that the relevant product market can be correctly identified.

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<sup>109</sup> Lapo Filistrucchi, Damien Geradin, Eric van Damme, Pauline Affeldt, "Market Definition in Two-Sided Markets: Theory and Practice", (2013), No.9, *TILEC Discussion Paper*, < [http://static.esmt.org/publications/workingpapers/TILEC\\_DP%202013-009.pdf](http://static.esmt.org/publications/workingpapers/TILEC_DP%202013-009.pdf) > Accessed 17 August 2017, p.35.

<sup>110</sup> Thepot (n 44), p.18

It is necessary to avoid the narrow definition of the market here, because if the market is narrowly defined, the market power of the undertaking will be seen more than the real situation. This requires the broadest market definition to cover all areas where the activities of the two sides of the market have an effect on each other. At this point, focusing on the general purpose of the parties' relations with each other may be influential on the broad view of the market.

### **3.2.2.2 The Problem of Market Power**

The main problem about market power arises from the fact that, as in one-sided markets, the market share and price/cost margin can measure market power in two-sided markets. Market power is a very crucial criterion in the EU Competition Law. To be able to find a monopolization attempt that could mean a violation of competition laws, it should first be determined that the undertaking has a high market power.<sup>111</sup>

In two-sided markets, there is no significant relationship between the price on each side of the market and the cost of that side. For this reason, looking at the price/cost margin on only one side of the market, it would be wrong to arrive at the result as the platform has the market power.<sup>112</sup>

In the case of determining the market power in two-sided markets, the level of competition on both sides of the market needs to be considered.<sup>113</sup> For example, while competition on one side of the market is very intense, competition on the other side may not be very intense. Hence, even if the platform gains market power for one side of the market, the same situation may not be mentioned on the other. At this point, however, the indirect network effect between the parties should not be overlooked. The market power acquired on one side will certainly influence the other, and the profits which are

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<sup>111</sup> Barry J. Rodger, Angus MacCulloch, *Competition Law and Policy in the EU and UK*, (5<sup>th</sup> Edition, Routledge Publishing, New York, 2015), pp.99-101.

<sup>112</sup> Julian Wright, "One-Sided Logic in Two-Sided Markets", (2003), Vol.3 No.10, *Joint Center Working Paper*, <<https://poseidon01.ssrn.com/delivery.php?ID=279084110120110016016090109070083023026053048001058058104066071079069066003110099103098123002114119097112025123126033021029009099127073068031127069014078123041065024081096117102117083098030120002127104010095111025086064069076124118096101067114&EXT=pdf>> Accessed 21 August 2017, p.5.

<sup>113</sup> Evans, Schmalensee (n 71), p.31.

gained from the side having market power can be used on the other.<sup>114</sup> At this point, the best way to avoid using profitability which arises from market power on one side of the platform to skew markets against the spirit of fair competition is for EU competition authorities to determine certain penalties or sanctions.

If there is a clear presence of a two-sided market with the three basic characteristics explained in chapter 1, there should be two-step analysis for measuring market power. The first step should be calculating price/cost margin of the sides and the second step should be interpreting this in relation to competitors and general situations in the market. If the side of the platform that does not have market power has profitability above expectations when compared to competitors who do not have market power in that market, and this situation can affect the market, this practice should be avoided by applying appropriate sanctions.

### **3.2.2.3 The Problem of Pricing and Price Discrimination**

The main problem about pricing and price discrimination exists among some antitrust behaviours because of pricing, which creates price discrimination that can escalate to excessive and predatory pricing.

In two-sided markets, there are some different factors in pricing strategies. Because of these factors, it would not be right to say that the price structure in a platform is determined so that the price of each side meets the cost of that side. The price structure is designed to bring both sides of the market together on a common platform. For that reason, factors such as demand elasticity of sides, the level of indirect network effects between sides of the platform, market power, the limit of market definition, multi-homing, competition inside the platform and the cost as indispensable are important in deciding on pricing.<sup>115</sup>

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<sup>114</sup> Ordovery (n 19), p.185.

<sup>115</sup> Jean-Charles Rochet, Jean Tirole, "Two-Sided Markets: An Overview", (2004), <<https://pdfs.semanticscholar.org/1181/ee3b92b2d6c1107a5c899bd94575b0099c32.pdf>> Accessed 14 August 2017, pp.32-34.

In addition to these factors, demand change on one side and reaction on the other side to this change will affect the profit of the undertaking, which will be reflected directly in price changes.<sup>116</sup> For indirect network effects, the factors can be explained as a power to decrease prices on one side of the platform and create an attractive environment for the customer on that side. All other factors can create upward or downward pressures on prices in a variety of situations. Thus, they reveal that the price is not only linked to cost.<sup>117</sup>

All these show that in the two-sided market, the price decision is given as a result of a complicated process. Pricing situations and price discrimination can turn into a strategy for preventing competitors from entering the market, or closing the market itself. The best way to determine whether the pricing is predatory or excessive is to implement the Akzo test,<sup>118</sup> described in the Case of Akzo.<sup>119</sup> In Akzo's test, both the intention of pricing and the effect that pricing has on it are important. Here, it is possible to assess whether a given price level will be competitive in terms of both intention and effect.<sup>120</sup> Akzo test determines whether a certain pricing structure will affect the market structure. Thus, with pricing, non-competitive strategies and behaviours that enterprises can put forward in the market can be avoided.

In two-sided markets, intentions are also important because it cannot be said that there is predatory or excessive pricing in every case. In normal markets, direct demand increases after price decreases. However, the increase in demand due to the decline of the price on one side in two-sided markets will cause the demand on the other side to increase because of indirect network effects.<sup>121</sup> Therefore, it is essential to clarify from which side of the platform the total profit increased and the intention of the change that effected this.

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<sup>116</sup> Ibid, p.34.

<sup>117</sup> Best (n 75), pp.292-300.

<sup>118</sup> Philip Lowe, "Introductory address to the Seminar 'Pros and Cons of Low Prices'", (2003), *EU Competition Practice on Predatory Pricing*, <[http://ec.europa.eu/competition/speeches/text/sp2003\\_066\\_en.pdf](http://ec.europa.eu/competition/speeches/text/sp2003_066_en.pdf)> Accessed 15 August 2017, p.3.

<sup>119</sup> Case C-62, *AKZO Chemie BV v Commission of the European Communities*, [1991], European Court Reports 1991 I-03359; For another decision in the same aspect, please see: Case T-83/91, *Tetra Pak International SA v Commission of the European Communities*, [1994], European Court Reports 1994 II-00755.

<sup>120</sup> Amelia Fletcher, "Predatory Pricing in Two-Sided Markets: A Brief Comment", (2007), Vol.3 No.1, *Competition Policy International*, p.223.

<sup>121</sup> Ibid, p.223.

The decision related to competition law should be given after determining such fundamentals.

#### **3.2.2.4 The Problem of Anticompetitive Agreements**

The main problem about anticompetitive agreements between two sides of platforms or different platforms in the same two-sided market is cartel activity. The most controversial issue regarding measures to be taken against cartels beyond the one-sided or two-sided market differentiations is whether cartel activity comprises a crime in itself; there is an ongoing debate within the EU about whether the tool of cartel offence should be included in its competition enforcement arsenal.

Obviously there is scope for legitimate cooperation, agreement and understanding between undertakings operating in the same market sector, which may result in reducing competition in those sectors;<sup>122</sup> however, where such activities comprise dedicated efforts designed and intended to prevent genuine competition and to leave consumers with no choice, they become a legal infringement.<sup>123</sup> Although some types of cartels can be accepted as a useful practice, one of the most effective examples of completely banned agreements are hard core cartels.<sup>124</sup>

Although cartels are considered intrinsically illegal in many national jurisdictions and in the EU *de jure*, determining what cartel activity is (beyond lawful cooperative arrangements between undertakings operating in the same market) remains a controversial issue for many countries and the EU, with legislative measures having potential to cause negative as well as positive impacts by restricting the scope of collaboration among firms. If cartel offence is introduced at the EU level, in terms of deterrence, raising awareness in society and increasing of the effect of leniency programs, the EU will be affected positively.<sup>125</sup> On the other hand, negative effects on the EU economy

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<sup>122</sup> Stefan E. Weishaar, *Cartel, Competition and Public Procurement: Law and Economic Approaches to Bid Rigging*, (1<sup>st</sup> Edition, Edward Elgar Publishing, Massachusetts, 2013), p.14.

<sup>123</sup> *Ibid*, p.27.

<sup>124</sup> Jones, Sufirin (n 62), p.663.

<sup>125</sup> Organisation for Economic Co-Operation and Development (OECD), [2005], *Hard Core Cartels: Third report on the implementation of the 1998 Council Recommendation*, pp.18-29.

include lower productivity and entrepreneurialism due to fear of prosecution for generally permissible activities, decreased revenue from fines, increased legal workload and human rights debates.<sup>126</sup> These situations are very influential even in one-sided markets, and this will be much more significant in two-sided markets where indirect network effects exist.

When all these effects are discussed together, it can be seen that cartel activity can affect market structure of two-sided markets badly. Because of that, the most critical issue should be the deterrence of cartel activity, which is why the EU should include cartel offence in its enforcement system to protect competition in the market.

### **3.2.2.5 The Problem of Mergers**

The main problem about mergers is that because of the effectiveness of merger situations on pricing and market power, the existence of more dominant competitors after mergers in the market. For two-sided markets, there is no special different measure except Articles 101 and 102 of TFEU and the EC Merger Regulation.<sup>127</sup> However, it should not be forgotten that the mergers of platforms affect much wider dimensions, because these platforms have two different sides and there is a special effect among them which can affect the whole market. For this reason, to have more competitive and fair decisions, the merger cases in the two-sided markets should be evaluated on a case-by-case basis, and the post-merger behaviour of the parties of the platform should be observed besides the behaviours of platforms.

On these grounds, it can be concluded that two-sided markets, due to their different characteristics, are a suitable area in which it is possible for uncompetitive outcomes to arise, contrary to the fundamental aims of EU competition law. It is clear that measures should be taken in certain problem areas of the two-sided market in order to create a more competitive and fairer environment in which there is a more uniform pricing and in which winner-take-all competition does not exist. Therefore, problems arising in areas of market

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<sup>126</sup> S.V. Belousova, "Economic Crimes: Trends and Ways to Overcome Them (With the Irkutsk Oblast as an Example)", (2016), Vol.58 Nos.7-9, *Problems of Economic Transition*, pp.776-780.

<sup>127</sup> Regulation 139/2004 (n 55)

definition, market power, pricing and price discrimination, anti-competitive agreements and mergers must be recognized, and decisions should be taken, by taking into account relevant measures.



## **Conclusion**

As a result of the examinations made in the study, it is obvious that the two-sided markets differ from classic, one-sided markets in terms of the existence of two customer groups with different demand structures on both sides of the market, the existence of indirect networks effects across groups and the existence of a platform that provides inter-group relationships.

Two-sided markets are an integral part of the new global economy, particularly in major web-based modern industries developed in recent years that are of immense economic importance or in payment/ online payment card systems and in myriad other areas. Due to this increased importance, these differences should be examined in detail and the protection of competition should be provided within these characteristics in accordance with Articles 101 and 102 of TFEU.

Policy makers who work on the protection of competition in two-sided markets should focus on competition, antitrust and mergers analysis. With the help of these analyses, the main problems of the two-sided markets can be described.

In terms of competition analysis, it can be said that the fundamental problem is some competitors' behaviours leading to antitrust behaviour in basic conditions. Competitors in these markets can deal with a coordination problem that can arise due to different benefits and network effects of two different consumer group platforms, which can cause some antitrust problem in terms of EU competition law. Because of that, to find a solution to the general competition problem, the focus should be antitrust and mergers analysis.

Antitrust analysis in the two-sided markets basically considers four points which can be listed as defining the market, measuring market power, pricing strategies and price discrimination and anticompetitive relations of competitors. It is necessary to define the market and understand its limits first to make an accurate antitrust analysis, because the parties try to include applications that will give an advantage to each other within these boundaries. Subsequently, market power, pricing strategies and price discrimination and

anticompetitive agreements should be examined to see the exact behaviours of undertakings.

Merger analysis is the last problematic issue in two-sided markets; here the point is to prevent the position of undertakings from obtaining unfair market power with potential mergers.

It is important to find solutions to the existing problems, and thus to determine the main differences which arise in the solution of the problems of two-sided markets in comparison to one-sided markets.

For this reason, the most important step is determining possible and lawful solutions for antitrust problems in the two-sided market. In the solution of the problem of market definition, it is necessary to avoid the narrow definition of the market. Therefore, the SSNIP test should not be used as is. The indirect network effects should be considered and then the market should be identified. For the market power problem, two-step test should be practiced, which includes calculating the price/cost margin of the sides and interpreting these results with the other competitors and general situations in the market.

For pricing, the Akzo test should be performed to understand the situation in the market in detail. To find a solution for anticompetitive agreements, the EU should include cartel offence in its enforcement system, to protect competition in the market. Event-based inspections of competition authorities should exist for the solution of the mergers problem and the post-merger movements of the platforms, and both sides should definitely be included in this inspection.

After all these antitrust and mergers problems have been solved, the main competition problems of the two-sided markets might disappear.

## **Bibliography**

### **Books**

Best, Roger J., *Market-Based Management Strategies for Growing Customer Value and Profitability*, (6th Edition, Pearson Education, New Jersey, 2013).

Cooper, Lee G., Nakanishi, Masao, *Market-Share Analysis*, (3<sup>rd</sup> edition, Kluwer Academic Publishers, London, 1993).

Goyder, Joanna, Albors-Llorens, Albertina, *EC Competition Law*, (5<sup>th</sup> Edition, Oxford University Press, Oxford, 2009).

Hildebrand, Doris, *Kluwer Law International Competition Law Series: The Role of Economic Analysis in the EC Competition Rules*, (3<sup>rd</sup> Edition, Wolters Kluwer Law & Business Press, The Netherlands, 2009).

Jones, Alison, Sufrin, Brenda, *EU Competition Law - Text, Cases and Materials*, (6<sup>th</sup> edition, Oxford University Press, Oxford, 2016).

Koch, James V., *Industrial Organization and Prices*, (2<sup>nd</sup> Edition, Prentice-Hall Int. Inc., London, 1980).

Middleton, Kirsty, Rodger, Barry, MacCulloch, Angus, Galloway, Jonathan, *UK & EC Competition Law*, (2<sup>nd</sup> Edition, Oxford University Press, Oxford, 2009).

Rodger, Barry J., MacCulloch, Angus, *Competition Law and Policy in the EU an UK*, (5<sup>th</sup> Edition, Routledge Publishing, New York, 2015).

Van den Bergh, Roger J., Camesasca, Peter D., *European Competition Law and Economics: A Comparative Perspective*, (2<sup>nd</sup> Edition, Sweet & Maxwell, London, 2006).

Weishaar, Stefan E., *Cartel, Competition and Public Procurement: Law and Economic Approaches to Bid Rigging*, (1<sup>st</sup> Edition, Edward Elgar Publishing, Massachusetts, 2013).

Whish, Richard, Bailey, David, *Competition Law*, (8<sup>th</sup> Edition, Oxford University Press, Oxford, 2015).

### **Cases**

Case C-62, *AKZO Chemie BV v Commission of the European Communities*, [1991], European Court Reports 1991 I-03359.

Case COMP/34579, COMP/36518, COMP/38580 *MasterCard Europe S.p.r.l., MasterCard Incorporated and MasterCard International Incorporated*, [2007], Commission Decision Official Journal of European Union.

Case T-83/91, *Tetra Pak International SA v Commission of the European Communities*, [1994], European Court Reports 1994 II-00755.

### **Chapters in Edited Editions**

Drexl, Josef, "The Relationship Between the Legal Exclusivity and Economic Market Power Links and Limits" in Inge Govaere, Hanns Ullrich (eds), *Intellectual Property, Market Power and the Public Interest*, (1<sup>st</sup> edition, P.I.E. Peter Lang, Brussels, 2008), Chapter 1.

### **Journal Articles**

Alexandrov, Alexei, Deltas, George, Spulber, Daniel F., "Antitrust and Competition in Two-Sided Markets", (2011), Vol.7 No.4, *Journal of Competition Law & Economics*, pp.775-812.

- Armstrong, Mark, "Competition in Two-Sided Markets", (2006), Vol.37 No.3, *RAND Journal of Economics*, pp.668-691.
- Armstrong, Mark, Wright, Julian, "Two-Sided Markets, Competitive Bottlenecks and Exclusive Contracts", (2005), Vol.32 Issue 2, *Economic Theory*, pp.353-380.
- Belousova, S. V., "Economic Crimes: Trends and Ways to Overcome Them (With the Irkutsk Oblast as an Example)", (2016), Vol.58 Nos.7-9, *Problems of Economic Transition*, pp.776-793.
- Caillaud, Bernard, Jullien, Bruno, "Chicken & Egg: Competition among Intermediation Service Providers", (2003), Vol.34 No.2, *RAND Journal of Economics*, pp.309-328.
- Choi, Jay Pil, "Tying in Two-Sided Markets with Multihoming", (2010), Vol. LVIII, *The Journal of Industrial Economics*, pp.607-626.
- Daljord, Øystein, Sørgard, Lars, Thomassen, Øyvind, "The SSNIP Test and Market Definition with the Aggregate Diversion Ratio: A Reply to Katz and Shapiro", (2007), Vol.4 No.2, *Journal of Competition Law & Economics*, pp.263-270.
- Dilek, Serkan, Çolakoğlu, Nurdan, "Barriers to Entry and Two-Sided Markets: A Research in a Shopping Mall in Istanbul", (2013), Vol.3 No.4, *Asian Economic and Financial Review*, pp.542-552.
- Epstein, Richard A., "The Regulation of Interchange Fees: Australian Fine-Tuning Gone Awry," (2005), *Columbia Business Law Review*, pp.551-597.
- Evans, David S., "The Antitrust Economics of Multi-Sided Platform Markets", (2003), Vol. 20 Issue 2, *Yale Journal on Regulation*, pp.327-381.
- Evans, David S., Noel, Michael D., "The Analysis of Mergers That Involve Multisided Platform Businesses", (2008), Vol.3 No.4, *Journal of Competition Law & Economics*, pp.663-695.

- Evans, David S., Padilla, A. Jorge, "Excessive Prices: Using Economics to Define Administrable Legal Rules", (2005), Vol.1 No.1, *Journal of Competition Law and Economics*, pp.97-122.
- Evans, David S., Schmalensee, Richard, "Markets with Two-Sided Platforms", (2008), Issue 1, *Competition Law and Policy*, pp.667-693.
- Fletcher, Amelia, "Predatory Pricing in Two-Sided Markets: A Brief Comment", (2007), Vol.3 No.1, *Competition Policy International*, pp.221-224.
- Gürkaynak, Göneng, İnanılır, Öznur, Diniz, Sinan, Yaşar, Ayşe Gizem, "Multisided Markets and the Challenge of Incorporating Multisided Considerations into Competition Law Analysis", (2016), Vol 5, *Journal of Antitrust Enforcement*, pp.100-129.
- Konishi, Hideo, Yurtseven, Çağlar, "Market Share Regulations", (2014), *Japan and the World Economy*, pp.36-45.
- Li, Shengli, Liu, Yipeng, Bandyopadhyay, Subhajyoti, "Network Effects in Online Two-Sided Market Platforms: A Research Note", (2010), *Decision Support Systems* 49, pp.245-249.
- Ordovery, Janusz A., "Comments on Evans&Schmalensee's 'The Industrial Organizations of Market with Two-Sided Platforms' ", (2007), Vol.3 No.1, *Competition Policy International*, pp.181-189.
- Podszun, Rupprecht "The Arbitrariness of Market Definition and an Evolutionary Concept of Markets", (2016), Vol.61 No.1, *The Antitrust Bulletin* 2016, pp.121-132.
- Rochet, Jean-Charles, Tirole, Jean, "Platform Competition in Two-Sided Markets", (2003), Vol.1, *Journal of the European Economic Association*, pp.990-1029.
- Rochet, Jean-Charles, Tirole, Jean, "Two-sided Markets: A Progress Report", (2006), Vol.37 No.3, *RAND Journal of Economics*, pp.645-667.

Roson, Roberto, "Two-sided markets: A tentative survey", (2005), Vol.4 Issue 2, *Review of Network Economics*, pp.142-160.

Rysman, Marc, "The Economics of Two-Sided Markets", (2009), Vol.23 No.3, *Journal of Electronic Perspectives*, pp.125-143.

Spulber, Daniel F., "Solving the Circular Conundrum: Communication and Coordination in Two-Sided Networks", (2010), Vol.104 No.2, *Northwestern University Law Review*, pp.537-592.

Weyl, E. Glen, "A Price Theory of Multi-Sided Platforms", (2010), *American Economic Review*, pp.1642-1672.

Whelan, Peter, "Legal Certainty and Cartel Criminalisation Within the EU Member States", (2012), Vol.71 No.3, *Cambridge Law Journal*, pp.677-702.

## **Legislations**

Consolidated Version of the Treaty on the Functioning of the European Union, [26.10.2012], Official Journal of the European Communities, C 326/47.

Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty (Text with EEA relevance), [4.1.2003], Official Journal of the European Communities, L 1/1.

Council Regulation (EC) No 139/2004 of 20 January 2004 on the Control of Concentrations Between Undertakings [2004], Official Journal of the European Communities, L 24.

## **Speeches**

Godfrey, Nick, "Why is Competition Important for Growth and Poverty Reduction?", (Global Forum VII on International Investment, London, 2008).

Low, Philip, "Introductory address to the Seminar 'Pros and Cons of Low Prices'", (2003), EU Competition Practice on Predatory Pricing, <[http://ec.europa.eu/competition/speeches/text/sp2003\\_066\\_en.pdf](http://ec.europa.eu/competition/speeches/text/sp2003_066_en.pdf)> Accessed 15 August 2017.

### **Other Sources**

Akman, Pinar, Garrod, Luke, "When Are Excessive Prices Unfair?", (2010), Vol.10 No.4, *ESRC Centre for Competition Policy University of East Anglia CCP Working Paper*.

Eisenmann, Thomas, Parker, Geoffrey, Alstyne, Marshall W. Van, "Strategies for Two-Sided Markets", (2006), *Harvard Business Review*.

Europe Economics Chancery House, *What does the Theory of Two-Sided Markets Tell Us About Competition in the Interbank and the Card Payment Systems?*, (2016), <[http://www.europe-economics.com/userfiles/library/Two-sided\\_markets\\_in\\_payment\\_systems.pdf](http://www.europe-economics.com/userfiles/library/Two-sided_markets_in_payment_systems.pdf)> Accessed 24 August 2017.

Evans, David S., Schmalensee, Richard, "The Antitrust Analysis of Multisided Platform Businesses", (2012), Working Paper 623, *Chicago Institute for Law and Economics*.

Evans, David S., Schmalensee, Richard, "The Industrial Organization of Markets with Two-Sided Platforms", (2005), Working Paper 11603, *NBER Working Paper Series*.

Filistrucchi, Lapo, "A SSNIP Test for Two-sided Markets: The Case of Media", (2008), Working Paper No 08-34, *The Networks, Electronic Commerce, and Telecommunications ("NET") Institute*.

Filistrucchi, Lapo, Geradin, Damien, van Damme, Eric, Affeldt, Pauline, "Market Definition in Two-Sided Markets: Theory and Practice", (2013), No.9, *TILEC Discussion Paper*, <[http://static.esmt.org/publications/workingpapers/TILEC\\_DP%202013-009.pdf](http://static.esmt.org/publications/workingpapers/TILEC_DP%202013-009.pdf)> Accessed 17 August 2017.

Gabszewicz, Jean J., Wauthy, Xavier Y., "Two-Sided Markets and Price Competition with Multi-homing", (2005), <[https://www.fep.up.pt/conferences/earie2005/cd\\_rom/Session%20VI/VI.F/gabsz-wauthy.pdf](https://www.fep.up.pt/conferences/earie2005/cd_rom/Session%20VI/VI.F/gabsz-wauthy.pdf)> Accessed 24 July 2017.

Jitendra Jain, *Two-Sided Markets and Their Relevance for Competition Policy*, (Der Grin Verlag Publiziert, Germany, 2006), Seminar Paper.

Jullien, Bruno, "Price Skewness and Competition in Multi-Sided Markets", (2006), n. 504, *IDEI Working Paper*.

Organisation for Economic Co-Operation and Development (OECD), [2005], *Hard Core Cartels: Third report on the implementation of the 1998 Council Recommendation*.

Organisation for Economic Co-Operation and Development (OECD), [2009], *Policy Roundtables/Two-Sided Markets*.

Organisation for Economic Co-Operation and Development (OECD), [2011], *Policy Roundtables/Excessive Prices*.

Rochet, Jean-Charles, Tirole, Jean, "Two-Sided Markets: An Overview", (2004), <<https://pdfs.semanticscholar.org/1181/ee3b92b2d6c1107a5c899bd94575b0099c32.pdf>> Accessed 14 August 2017.

Schif, Aaron, "Basic Pricing Principles in Two-Sided Markets: Some Simple Models", (2007), *Institute of Economic Research Hitotsubashi University*, <<https://poseidon01.ssrn.com/delivery.php?ID=488007067005083120091100086070086110058022049054058085108020090027104015025088114018122027044107111060037064097090073090107117006036025010060120120077030076070119025054007078001127101120116121114069006020066112029103117116070001031121072093117097073&EXT=pdf>> Accessed 2 August 2017

Thepot, Florence, "Market Power in Online Search and Social-Networking: A Matter of Two-Sided Markets", (2012), CLES Working Paper Series 4/2012, Centre for Law, Economics and Society (CLES), < <https://www.ucl.ac.uk/cles/research-paper-series/research-papers/cles-4-2012>> Accessed 20 July 2017.

Weyl, E. Glen, *The Price Theory of Two-Sided Markets*, (research at the United States Department of Justice Antitrust Division Economic Analysis Group, 2006).

Wright, Julian, "One-Sided Logic in Two-Sided Markets", (2003), Vol.3 No.10, *Joint Center Working Paper*, <<https://poseidon01.ssrn.com/delivery.php?ID=279084110120110016016090109070083023026053048001058058104066071079069066003110099103098123002114119097112025123126033021029009099127073068031127069014078123041065024081096117102117083098030120002127104010095111025086064069076124118096101067114&EXT=pdf>> Accessed 21 August 2017.