COMPETITION LAW IN DIGITAL ERA – HOW TO DEFINE THE RELEVANT MARKET?

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Abstract: *Competition law serves as an important tool for regulation of undertakings. In order to conduct a competition law analysis, one must first define the relevant market. However, this task is becoming more intricate in today's digital era, especially in relation to so-called zero-price markets. These markets are characterised as markets where users of products or services do not pay for the use, at least they do not pay by money. This paper asks how to define relevant market in such case. Three methods of relevant market definition are presented, namely qualitative analysis, SSNIP test and SSNDQ test. The paper briefly explores positive and negative elements of these tests and compares the findings with the European Commission's 2019 report. It leads to the answer that qualitative method might have certain advantages in this regard.*

Keywords: *Zero-Price markets, United Brands, Qualitative Method, Characteristics Bases Method, SSNIP Test, SSNDQ Test, Digital Era Competition Policy.*

1. INTRODUCTION

Competition law serves as an important regulatory tool. It may deal with economic issues and at times even with other legal and social issues (Mazúr & Patakyová, 2019). Compliance with this field of law is on the top of the list for many companies, especially those companies which are multi-national or have substantial turnover. The reason for this is simple – fines for non-compliance with competition law may rise to hundreds of thousands of euros, even millions in some cases.

Within EU law, competition law covers several different practices. First, it covers agreements between undertakings, regulated by Article 101 Treaty on Functioning of the European Union ("**TFEU**"). Such agreement may take place between two (or more) undertakings on the same level of production. These agreements, often referred to as cartels, include agreements on sell price (price cartels), market share agreements, or cartels within tendering procedures (bid rigging). Article 101 TFEU also covers agreements between undertakings on different types of production, e.g. an agreement between a producer and a distributor. These agreements are named as vertical agreements. Second, Article 102 TFEU prohibits abuse of dominant position, such as refusal to supply, or trading on discriminatory conditions. Third, EU competition law covers mergers which are regulated by Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings. Every merger or acquisition, meeting the criteria stated therein shall be cleared by the European Commission before it takes place. Fourthly, EU law also regulates state aid which is provided by member states of the EU to undertakings.

All these practices, the first three in particular, are dependent on the definition of relevant market. As put by Pike (2017) "a traditional starting point for framing an analysis of the competitive effects

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of a merger, an action or an agreement is to define the relevant market(s)" (p.5). The definition of the relevant market determines, whether an agreement will meet *de minimis* limits, whether an agreement will be exempted by general block exemptions regulations, whether an undertaking will be in a dominant position, or, to substantial extent, whether a merger will be allowed.

This core-stone of any EU competition law analysis have been put under test. Digital economy, with many of its specialities, leads to the difficulties in application of traditional methods of relevant market definition. Some scholars call for introduction of a new method, which would be more suitable for digital markets, zero-price markets in particular.

Thus, the paper aims to explore the following question: how to define the relevant market in zero-price circumstances and which of the three analysed methods seems to be the most suitable one? In order to answer the question, the paper presents two traditional methods for relevant market definition, qualitative method and SSNIP test, supplemented by outlining of one relatively new method, SSNDQ test. This goes without saying that there exist also other methods, such as "multi-layered approach" (Periera Neto & Lancieri, 2020, p. 55). Each of these methods will be assessed from the perspective of whether the method meets the needs of digital market, zero-price markets in particular. As the scope of this paper is limited, there is no room for an exhaustive analysis. Therefore, the paper presents an outline of the assessment. Such findings are compared with a report published by European Commission in 2019 focusing on application of competition law in digital era.

Therefore, the paper is organised as follows. First, zero price markets are briefly presented. Second, each of the three methods of relevant market definitions are outlined and their pros and cons are pointed out. Third, the findings will be compared with emerging trends, namely a study published by European Commission in 2019. Last but not least, concluding remarks will be presented in the conclusion.

2. ZERO-PRICE MARKETS

Zero-price markets are those markets in which we cannot find any direct financial transaction between a seller or a service provider and a customer. A common example of zero-price markets are social networks. Common users do not pay for using of social networks, such as Facebook, Twitter, or Instagram. This goes without saying that certain users pay for certain transactions, mainly advertisers.

However, the absence of financial transaction does not mean that these markets are completely free. As pointed out by Newman (2015), buyer-seller exchanges are similar to those in traditional markets, as "firms find it profitable to exchange zero-price products to customers in exchange for their attention or information" (p. 174). Attention, as a form of currency, is based on the fact that providers of zero-price products compete vividly for users to use them (Newman, 2015, p. 176). In theory, users may use indefinite number of social networks at once, however, they will scarcely do so, as they have only limited amount of time to spare. There are even suggestions that multi-homing decreases advertisers' willingness-to-pay (Liu, 2020). Therefore, if users bring money to social networks by creating a space to advertise, the more users are on the social network, the more profitable that social network is.

The other currency paid by users on zero-price markets is information costs, as put by Newman (2015, p. 165), or simply data, as put by, for instance, Cooper and Mason, (2013, p. 1130), Körber (2018, p. 4),

or Colangelo and Maggiolino (2018, p. 13). Social networks, and other providers on zero-price markets, benefit largely from data disclosed to them by users. For instance, data may be acquired from users "to assist advertisers to better target them with behavioural ads" (Stucke & Grunes, 2016, p. 37). Although, as stressed by Botta and Wiedemann (2018), these users "benefit from data disclosure, too, since they can enjoy personalised and better services" (p.22). Data leads us to the problematic of big data, which has been a hot topic of discussion among scholars for several years.

Big data has commonly been characterised by four Vs: the volume of data; the velocity at which data is collected, used and disseminated; the variety of information aggregated; and finally, the value of data (Ezrachi & Stucke, 2016, p. 15).

Big data have significant impact on how business is done in digital markets, zero-price markets in particular, as there is a high incentive to use this type of currency which is harvested from users and monetised in some manner. Naturally, there are regulations applicable to gathering and processing of personal data, especially Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), however, many users are not aware of the extent of the data being harvested, they do not make rational choices in this regard and they are very diverse as to their privacy preferences and privacy behaviour (Kerber, 2016, p. 859).

There are other distinctive features of zero-price markets. For instance, they are often also multi-sided markets (Kerber, 2016, p. 860). In these markets, or platforms, network effects apply to great extent; as put by Lianos (2019) "the platform is a match-maker" (p. 72). Direct network effects are easily understandable on the example of telephone – the more persons have telephone, the more persons one can call (Stucke & Grunes, 2016, p. 162). Indirect network effects occur when the benefit of group A (on one side of the platform, e.g. advertisers) depend on the number of group B (on the other side of the platform, e.g. active users of the platform) (Preta, 2018, p. 4).

Moreover, zero-price markets are not easy to enter. This may come as surprise, due to the fact that basically anyone can create a new Facebook. Typically, barriers to entry are, for instance, legal barriers, economies of scale, control of an essential facility, superior technology, access to international capital market, sales network, brand image, costs and network effects (Whish & Bailey, 2012). Due to the presence of strong network effects, multi-side platforms, included zero-price markets, may be difficult to enter; this may be supported by presence of data qua entry barrier (Stucke & Grunes, 2016, pp. 158, 162)

3. RELEVANT MARKET DEFINITION - QUALITATIVE METHOD

Relevant market definition is a tool to identify and define the boundaries of competition between undertakings. It is defined from the product perspective, geographical perspective and, when needed, also from time perspective (Craig & De Búrca, 2011, p.1012).

The objective of defining a market in both its product and geographic dimension is to identify those actual competitors of the undertakings involved that are capable of constraining those undertakings' behaviour and of preventing them from behaving independently of effective competitive pressure. It is from this perspective that the market definition makes it possible inter alia to calculate market shares that would convey meaningful information regarding market

power for the purposes of assessing dominance or for the purposes of applying Article [101 TFEU] *(Commission, 1997, para 2).*

Three elements are usually assessed when market definition is at stake: demand substitution, supply substitution and potential competition. Although all these elements are significant, due to the limited scope of this paper, we will focus mainly on the demand substitution, which is considered to be the most important element (Whish & Bailey, 2012, p. 31).

What is named as qualitative method in this paper is basically the relevant market definition based on distinctive characteristics of products and territories. It was properly described in the case of the European Court of Justice 27/76 United Brands Company and United Brands Continental BV v Commission of the European Communities ("**United Brand case**"). The question was whether bananas are a separate product market, or whether they belong to fresh fruit market. In this regard, the Court of Justice ruled that bananas dispose of certain characteristics which are not present to similar extent in any other fruit, namely appearance, taste, softness, seedlessness, easy handling, a constant level of production and satisfying the needs of very young, old and sick. Similarly, the geographic market was assessed from the perspective of its homogeneousness. The differences in the conditions of competition between the relevant geographic market and the rest of the EU (ECC at that time) were analysed, such as customs duty or import agreements (a common organization of the agricultural market in bananas was not established at that time). The outcome was that three member states were excluded from the relevant geographic market and the rest of members states formed the relevant geographic market.

Advantages of this qualitative analysis are various. First, the method is available also for such markets where hard data is not available. Second, it is often forgotten that competition law analysis is not done only by the Commission, but also by undertakings themselves, especially when they are planning to adopt a practice which might be problematic where they assessed as dominant undertaking. These undertakings may not have personal and time capacity to gather enough data for the SSNIP test discuss below. Three, certain disadvantages of the SSNIP test may be prevented by this test. An example of this is cellophane fallacy (Whish & Bailey, 2012, p. 32). Four, in order to apply the method, there is no unavoidable need to have price transactions being held on the market. On the other hand, disadvantages of this method are numerous. First, the test is quite subjective, as the interchangeability of products or homogeneousness of territories depend on the criteria which are chosen or users which are asked. Second, due to this subjectivity, it may be difficult to establish which definition of the relevant market is the correct one.

4. SSNIP TEST

A method which may be described as more quantitative is the method named as SSNIP test. The test uses a question whether customers of the undertaking at stake switch to readily available substitutes or to suppliers located elsewhere in response to a hypothetical small (in the range 5 % to 10 %) but permanent relative price increase in the products and areas being considered (Commission, 1997, para 17). If this small but significant non-transitory increase in price (SSNIP) leads to so many switches to make the price increase unprofitable, additional substitutes and territories are added to the relevant market and the SSNIP test is repeated, until the increase is profitable.

The advantages of the SSNIP test are clear. First and foremost, data are supposed to be objective, meaning that the test should lead to undisputable definition of relevant market. Second, it may be

used for certain types of zero-price markets, if the zero price is only one element of the total price of transactions on multi-sided markets; zero price in one market does not prevent the definition of the price on the interrelated market (Pike, 2017, p. 7). Third, to apply the SSNIP on multi-sided markets is tricky, but not always inappropriate (Lianos, 2019, pp. 73-75).

To mention but few disadvantages, it is fairly difficult to obtain relevant data. Next, interpretation of the same data by two persons does not have to be the same, which takes away the objectivity factor of the test. This is related to other factors which must be taken into account, such as network effects, which may deform the profitability concept within the SSNIP test (Pike, 2017, p. 8). Furthermore, to perform such test requires substantial personal, time and material resources. Last but not least, this test is possible only in price markets and, therefore, will not be usually open for zero-price markets (or the zero-side of the multi-sided markets). The workability of the test in multi-sided markets is generally problematic (Pereira Neto & Lancieri, 2020, p. 13).

5. SSNDQ TEST

In order to eliminate the last disadvantage of the SSNIP test, there is another test which may be employed. Instead of measuring increase in price, the SSNDQ test measures small, but significant non-transitory decrease in quality. This test is not brand new. It was suggested more than 25 years ago by Hartman, Teece, Mirchelle and Jorde (1993). Although the decrease in quality may be just as noticeable for consumers as increase in price, its measurement is far more complicated (OECD, 2013, p. 12).

There are several plus sides of the SSNDQ test. First, it may be employed in markets where SSNIP test is not available, such as zero-price markets. Moreover, it may work also for markets where there is a price available, yet it is a competitive price. These are, for instance, regulated markets where prices are regulated and the competition is diverted to quality and marketing (OECD, 2013, p. 157). Second, the lack of objectivity in some cases may be balanced by taking into account several measurable elements (Stucke & Grunes, 2016, p. 118).

Naturally, there are flaws of the test too. First, without well-accepted quantifiable measures of quality, the test is useless (Stucke and Grunes, 2016, p. 117). Second, there is still need for fairly large amount of data. Workability of the test is challenged in practice (Pike, 2017, p. 7). Third, even if data are available, the decrease in quality may be still subjective. For instance, is development of a social network regarding its functionality an increase of quality (due to adoption of new functionalities), or is it rather a decrease (due to higher complexity of the application)? Fourth, in order for the test to function, the consumers must be able to notice the decrease and act accordingly. This is not always feasible, as the decrease in quality may be subtle (Stucke & Grunes, 2016, p. 120). An example may be changing of privacy terms or other terms and conditions. Fifth, under the prism of behavioural theories, will users change their behaviour even if they sense the decrease in quality?

6. FUTURE RESEARCH DIRECTIONS

The few reflections presented above are definitely not exhaustive. To list a complete list of particular methods' pros and cons is well beyond the scope of this paper. However, what may be done is to assess these reflections in light of the Commission's report competition policy for the digital era (2019). The Commission's report (2019) well acknowledges that, in multi-side mar-

kets, such as digital markets, not all benefits are reflected in prices and certain side of may be non-paying, or paying in a non-monetary for of consideration (pp. 43-44). Regarding the SSNIP test and SSNDQ test, both of them are seen as unsuitable for a simple reason – they are not fit for multi-sided markets. In particular, one cannot have a proper model of increasing of price on one side and decreasing it on the other (Commission, 2019, p. 45). Further, regarding the SSNDQ test, the Commission agrees that it is difficult to apply in practice (Commission, 2019, p. 45).

Within the executive summary of the report, the Commission stated that, due to the unclear boundaries between market definition which are rapidly changing, presence of multi-sided platforms, "we should put less emphasis on analysis of market definition, and more emphasis on theories of harm and identification of anti-competitive strategies" (2019, pp. 3-4). However, what is not clear from the report is, how the currently indispensable position of the relevant market definition within the competition law analysis should be replaced. Therefore, it seems that market definition is not completely substitutable, however, the quantitative methods, i.e. the SSNIP test and SSNDQ test would be of more advisory nature and the qualitative analysis would probably become more and more dominant. There remains a room for further research whether this assumption will be proven.

7. CONCLUSION

The definition of the relevant market is the cornerstone of EU competition law analysis as we know it today. The quantitative methods for its definition, namely the SSNIP test and the SSNDQ test, face a challenge in this digital era. Together with the qualitative method, advantages and disadvantages were shortly outlined. The paper aimed to highlight that none of the method is perfect and that the strong sides of one method may be balanced by weak sides of another. These short finding were compared to what was established by the European Commission in its 2019 report. It seems that the Commission is well aware of the fact shortcomings regarding the relevant market definition and proposes to focus more on the theories of harm and indication of anti-competitive strategies. This may well be so, however, the need for market definition is not excluded. Therefore, what seems to be a feasible solution is to put more emphasis on the qualitative method of the relevant market definition, possibly backed-up by as many empirical and objective evidence as possible.

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REFERENCES

Botta, M. & Wiedemann, K. (2018). EU Competition Law Enforcement vis-à-vis Exploitative

Commission (1997). Commission Notice on the definition of relevant market for the purposes of Community competition law. *Official Journal of the European Communities 97/C* 372/03.

Conducts in the Data Economy Exploring the Terra Incognita. *Max Planck Institute for Innovation and Competition Research Paper, 18*(08), 1-89.

European Commission (2019). *Competition policy for the digital era*. Luxembourg, Luxembourg: Publications Office of the European Union.

Ezrachi, A., & Stucke, M. E. (2016). *Virtual competition. The Promise and Perils of the Algorithm-Driven Economy*. London, England: Harvard University Press.

Lianos, I. (2019). Competition Law for the Digital Era: A Complex Systems' Perspective. *CLES Research Paper Series 2019*(6), 1-162.

Newman, J.M. (2015). Antitrust in Zero-Price Markets: Foundations. *University of Pennsylvania Law* Review, 164, 149-206.

Pereira Neto, C. M. & Lancieri, F. M. (2020, January 28). Towards a layered approach to relevant markets in multi-sided transaction platforms. Retrieved April 1, 2020, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3408221.

Pike, C. (2017). Hearing on Rethinking the Use of Traditional Antitrust Enforcement Tools in Multi-sided Markets, *Organisation for Economic Co-operation and Development DAF/COMP/WD(2017)55*, 1-28.

Stucke, M. E., & Grunes, A. P. (2016). *Big Data and Competition Policy*. Oxford, United Kingdom: Oxford University Press.

ADDITIONAL READING

Colangelo, G. & Maggiolino, M. (2018). Data Accumulation and the Privacy-Antitrust Interface: Insights from the Facebook case for the EU and the U.S. *TTLF Working Papers, 31*, 1-43.

Cooper, J. C. & Mason, G. (2013). Privacy and Antitrust: Underpants Gnomes, the First Amendment, and Subjectivity. *George Mason Law Review, 20*(4), 1129-1146.

Craig, P., & De Búrca, G, (2011). *EU Law. Text, Cases and Materials*. Oxford, United Kingdom: Oxford University Press.

Hartman, R., Teece, D., Mitchell, W., & Thomas Jorde, (1993) Assessing Market Power in Regimes of Rapid Technological Change. *Industrial and Corporate Change 3*(2), 317-350

Kerber, W. (2016). Digital markets, data, and privacy: competition law, consumer law and data protection. *Journal of Intellectual Property Law & Practice, 11*(11), 856-866.

Körber, T. (2018, January 29). Is Knowledge (Market) Power? - On the Relationship Between Data Protection, ‚Data Power' and Competition Law. Retrieved April 1, 2020, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3112232.

Liu, Y.-H. (2020, January 17). The Impact of Consumer Multi-homing Behavior on Ad Prices: Evidence from an Online Marketplace. Retrieved April 1, 2020, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3492605.

Mazúr, J. & Patakyová, M.T. (2019). Regulatory Approaches to Facebook and Other Social Media Platforms: Towards Platforms Design Accountability. *Masaryk University Journal of Law and Technology, 13*(2), 219-241.

OECD (2013). The Role and Measurement of Quality in Competition Analysis. *Organisation for Economic Co-operation and Development DAF/COMP(2013)*17, 1-229.

Preta, A. (2018, October 25). Platform Competition in Online Digital Markets. Retrieved April 1, 2020, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3272839.

Whish, R., & Bailey, D. (2012). *Competition Law*. Oxford, United Kingdom: Oxford University Press.