# Competition Law Issues in the Platform Economy

Edited by
PETER JUNG

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**Mohr Siebeck**

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# Competition Law Issues in the Platform Economy

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Edited by

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# Preface

The 38th conference of the German Society for Comparative Law from 29 September to 1 October 2022 in Tübingen was held under the general theme of "Digitalisation". With the exception of a presentation by Prof. Andreas Fuchs, this volume contains all of the papers presented at the working session of the Section for Comparative Commercial and Economic Law on the topic of "Competition Law Issues in the Platform Economy".

Internet platforms have revolutionised the distribution of goods and services. As traders, intermediaries and infrastructure operators, platforms dominate online trade in goods and services. Due to their great economic importance, competition law must increasingly deal with questions of the platform economy. In these two-sided markets, individual providers have gained such a strong market position, mostly due to network effects, path dependencies and the data control they exercise, that abuses or even the tipping of a competitive market into a monopoly market are threatening. Recent cases show that competition authorities and courts still have difficulties in dealing with such situations. For example, traditional supply- and demand-oriented methods of determining market power are reaching their limits because they do not sufficiently take into account network effects and the power of intermediation that are characteristic for platforms. As generally in a tight oligopoly, the phenomenon of conglomerate power or non-coordinated parallel behaviour might occur. Abuse control must pay particular attention to the use of portfolio and network advantages and has to fight against the obstruction of multihoming or a platform change. Merger control law must counteract the phenomenon of so-called killer acquisitions, already known from the pharmaceutical sector, if companies are only bought up in order to take their innovative technology off the market or to eliminate them as a growing competitor. Since the data provided by users form an important basis for data-driven marketing and services, there is a need under competition law for data access and data portability which, however, collides with the conflicting interests of trade secrecy and data protection. This raises the question, if lower requirements should be imposed on the abusiveness of a refusal of data access than it is the case with other so-called essential facilities. National and supranational legislators are trying to react to the new phenomenon, for example, by expanding the definition of market power or by imposing obligations for more transparency and fairness as in the P2B-Regulation.

The various problems and possible solutions will be addressed in the following topic-oriented comparative law presentations in English. I would like to thank the speakers for their participation in the conference and for the publication of their contributions in this volume. I am also indebted to *Esther Jundt*, *David Ballmer* and *Maria Schneider* for their assistance in preparing this book. Dr. Tizian Troxler supported me as secretary of the working group in preparing the conference, for which I would also like to thank him warmly.

Basel, January 2024 *Peter Jung*

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# From Two-Sided Networks to Digital Ecosystems: The Economics of Platform Markets

*Andreas Heinemann*

## I. Introduction

Competition law is based on the concept of relevant markets. Thinking in relevant markets is supposed to allow identification of the competitive relationships between undertakings. According to traditional concepts, "competitors" are firms that offer (or demand) products on the same relevant market. The goal of market definition is to find out if two or more firms are standing in a competitive relationship, or if they are active on different relevant markets. In this sense, according to the Market Definition Notice of the European Commission of 1997, the "main purpose of market definition is to identify in a systematic way the competitive constraints that the undertakings involved […] face".[1]

The traditional way of market analysis has come under pressure in the digital economy. The interrelationship between different economic activities is seen more clearly now. It is certainly true that also in traditional competition analysis, the interaction between complementary goods, between main and aftermarkets, as well as the bond between reader markets and advertising markets in the newspaper and media industry has always been recognized. In the digital economy, however, more recent concepts such as that of two-sided markets and of multi-sided platforms have sharpened the analytical toolbox. Now, a new construct has taken centre stage, and that is digital ecosystems. The Digital Markets Act (DMA)[2], providing for new rules for gatekeepers, prominently mentions the concept in Recital 3: "Some of these undertakings exercise control over whole platform ecosystems in the digital economy and are structurally extremely difficult to challenge or contest by existing or new market operators, irrespective of how innovative and efficient those market operators may be." Moreover, the EU General Court has ennobled this concept in its *Google Android* decision

[1] European Commission, Notice on the definition of relevant market for the purposes of Community competition law, OJ 1997 C 372/5, N. 2. The Market Definition Notice is currently under revision, see *infra* note 13.

[2] Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector (Digital Markets Act), OJ L 265/1.

by including it in the keywords at the beginning of the judgment.[3] Finally, the German term of "Undertakings of Paramount Significance for Competition Across Markets", inserted into § 19a of the German Act Against Restraints of Competition (GWB) by the 10th reform of the Competition Act of 2021,[4] is obviously inspired by the idea of digital ecosystems.[5]

The concept of digital ecosystems is a challenge to traditional market analysis. Finding new forms of competitive restraints raises the question whether the market definition has to be adapted. For a solid answer, the economics of platform markets has to be taken into consideration. In the following, we will therefore trace how the method of market analysis has been increasingly refined and what conclusions can be drawn from this for digital ecosystems.

## II. "Single-sided" Markets

Of course, there are no "single-sided" or "one-sided" markets since the essence of a market is to bring two sides together, i. e. sellers and buyers, to exchange any type of product (goods or services) or factor (labour or capital). The term is used here to mark the contrast with two-sided markets where one platform is used for two different activities with two different trading partners (see *infra* at paragraph IV.). A "single-sided" market in this sense is a "normal" market that is usually the starting point for market definition.

### *1. Traditional Market Definition and its Shortcomings*

It is generally recognized (although not completely undisputed[6]) that markets have to be defined in a product dimension,[7] in a geographic dimension and

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[3] General Court, 14.9.2022, T-604/18 – *Google and Alphabet/Commission (Google Android)*, ECLI:EU:T:2022:541. The importance of the new terminology may be illustrated by a comparison with the list of keywords in the groundbreaking *Microsoft* judgment of the same court that is restricted to traditional concepts like refusal to deal and tying, see Court of First Instance, 17.9.2007, T-201/04 – *Microsoft/Commission*, ECLI:EU:T:2007:289.

[4] Law from 18 January 2021, BGBl. 2021 I, 2.

[5] See the Draft Law of the German Federal Government, 19.10.2020, BT-Drucksache 19/23492, p. 73; Recommendation and Report of the Committee on Economic Affairs and Energy, 13.1.2021, BT-Drucksache 19/25868, p. 112 ff. Overview of the application to date and criticism by Jens-Uwe Franck/Martin Peitz, Market Definition and Three 19a Designations Under German Antitrust Law: Alphabet, Meta, and Amazon, Competition Policy International – Antitrust Chronicle: Defining Platform Markets, January 2023, Vol. 1(1), p. 38 ff.

[6] See for example the general criticism against market definition by *Louis Kaplow*, Why (Ever) Define Markets?, 124 Harvard Law Review 437 (2010); for further references on the dispensability of market definition see *Okan Yildiz/Rolf H. Weber*, Market Definition and Market Power in the Era of Blockchain, EuZ 2023, p. C1, C13 fn. 47.

[7] Unfortunately, this terminology is misleading. The use of the term "product" obstructs the view that there are relevant markets also for the factors of production, namely labour and

sometimes also in a time dimension. The main instruments for defining relevant markets are demand substitution, supply substitution and potential competition.[8] For determining demand substitution, the SSNIP test is recommended (*small but significant non-transitory increase in price*), i. e. the question if an increase in price of 5 to 10 % would be profitable. For this purpose, the increase in revenue that comes from the loyal customers has to be compared with the losses due to customers that switch to another product as a consequence of the price hike.[9]

This approach no longer makes sense when a pecuniary reward is renounced upon. In the digital economy, users often do not pay with money, but with attention or data, so that a test based on an increase in price does not work. For a long time, the phenomenon of products that are given "for free" has caused confusion. In German unfair competition law, for example, the distribution free of charge of advertising bulletins or giveaway newspapers was viewed with suspicion in former times. It is only recently that the interaction between different markets, in particular with the advertising markets, has been perceived more clearly, so that a more positive view has been taken.[10]

Also in Germany, the concept of relevant markets has been applied too narrowly in this context. The opinion was widespread that a relevant market only exists if there is a monetary return. The digital economy with its many "free" online services could not be adequately assessed in this way. Convincingly, the 9th reform of the German Competition Act from 2017 brought in § 18 (2a) GWB the following clarification: "The assumption of a market shall not be invalidated by the fact that a good or service is provided free of charge."[11]

Although it therefore seems clear today that the absence of a monetary remuneration does not exclude the existence of a relevant market in the competition law sense, the question has to be asked how exactly we shall define the relevant market, if the basic concept, i. e. the SSNIP test, does not work any longer since no price exists that we could hypothetically increase.[12] In these cases, the European Commission uses e. g. the following criteria: product functionalities,

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capital. Thinking in "product" markets is one of the reasons for the long-standing neglect of labour markets in competition law, see *Andreas Heinemann,* Kartellrecht auf Arbeitsmärkten, WuW 2020, 371, 379, 381 f. The terminology in the German language is more open: The main term here is "sachlich relevanter Markt" which includes products and factors of production.

[8] Market Definition Notice (note 1), N. 13 ff.

[9] Market Definition Notice (note 1), N. 17. Certain shortcomings of the traditional methodology have been revealed such as the *cellophane fallacy*, see the groundbreaking article of *Donald F. Turner*, Antitrust Policy and the Cellophane Case, 70 Harvard Law Review 281 (1956); more recently *Thomas B. Nachbar*, Qualitative Market Definition, 109 Virginia Law Review 373, 384 ff. (2023).

[10] BGH GRUR 2004, 602 – *20 Minuten Köln*.

[11] Law from 1 June 2017, BGBl. 2017 I, 1416.

[12] But see attempts to adapt the SSNIP test to the particularities of two-sided markets by considering not only the price level, but also the price structure among the different market sides, for example by *Ralf Dewenter/Ulrich Heimeshoff/Franziska Löw*, Market Definition of

intended use, substitutability according to industry views, market barriers and switching costs.[13] Moreover, it has been suggested to expand the SSNIP test to a "SSNDQ"-test *(small but significant non-transitory decrease in quality)* for these cases.[14] According to this test, the question has to be asked if it would be profitable for a firm to forego investment and thus reduce quality, or if in this case so many customers would switch to competing services that the loss of revenues, for example from advertising, would be greater than the cost savings. In this case, both services belong to the same relevant market.

In the *Google Android* case, the SSNDQ test was used by the European Commission and by the General Court.[15] The question was asked if a deterioration in the quality of *Android* would cause a sufficient proportion of users to switch to other mobile operating systems. According to the findings of the European Commission, confirmed by the General Court, users are not sufficiently sensitive to a deterioration in the quality of the *Android* operating system. Thus, the SSNDQ test has been important for the conclusion that non-licensable mobile operating systems, such as *Apple's*, are not part of the same relevant market as licensable mobile operating systems, such as *Android's*.[16] Meanwhile, the European Commission has added the SSNDQ test to the standard toolbox of market definition: The test has been included in the Draft Market Definition Notice.[17]

### *2. Interaction between Markets*

The preceding remarks show that it is possible to adapt the traditional methodology of defining relevant markets to the challenges of the digital economy. However, other problems arise. For example, the turnover thresholds in merger control fail if no turnover is generated. Or regarding the abuse of a dominant position, prices of zero (or even negative prices) must not automatically be considered predatory pricing because they may make sense in a digital, multi-

Platform Markets, Helmut Schmidt University Hamburg, Department of Economics, Working Paper No. 176, March 2017.

[13] Draft Commission Notice on the definition of the relevant market for the purposes of Union competition law, 8.11.2022 https://ec.europa.eu/commission/presscorner/detail/en/ip_22_6528 (accessed 15 January 2024), N. 98.

[14] *Aleksandra Gebicka/Andreas Heinemann*, Social Media & Competition Law, 37 World Competition 149, 158 (2014).

[15] See General Court, 14.9.2022, T-604/18 – *Google and Alphabet/Commission (Google Android)*, ECLI:EU:T:2022:541, N. 172 ff. (under the heading "The SSNDQ test").

[16] Moreover, the General Court stressed that – due to the hypothetical character of the concept – the SSNDQ test does not require evidence that it is in the undertaking's interest to degrade the quality of its product. Nor is it required to define a precise quantitative standard of degradation of quality since an increase in price can be more easily quantified than a decrease in quality, see General Court – *Android*, N. 179 f.

[17] Draft Market Definition Notice (note 13), N. 32 fn. 47, N. 98.

sided context. While these problems may be solved (by new notification rules in merger control;[18] or by a deeper understanding of predatory strategies), one fundamental challenge remains: If the expectation towards market definition is to identify the competitive constraints that weigh on undertakings,[19] the risk is high that other constraints are overlooked once the definition of the relevant market has been completed. In this sense, the traditional method of defining relevant markets in competition law is criticized by economists. Some prefer the direct measurement of market power, for example by concepts like *Upward Pricing Pressure (UPP)* and *Critical Loss Analysis*.[20] The goal is to include into the analysis any factor that reduces or enlarges the capacity of firms to behave independently from other actors.

In fact, such a holistic approach would avoid the risk of losing sight of the overall context, which may arise when thinking in terms of markets is exercised too narrowly. However, this is countered by major disadvantages (and of course the fact that the law in its current shape is based on the delineation of relevant markets): Huge amounts of data are required for the direct measurement of market power. Moreover, economic models have to be used that are not a perfect reflection of the real world either. Therefore, it seems more adequate to stick to traditional thinking in relevant markets, but to systematically add insights into the interaction of these markets with other markets.

For this purpose, existing concepts can be built upon. An example is the relationship between primary and secondary markets, e. g. main products and spare parts or the *razor and blades* business model ("give 'em the razor; sell 'em the blades"). At its very end, the EU Market Definition Notice stresses that in this respect the application of the general principles of market definition "has to be undertaken with care". While the "method of defining markets in these cases is the same", "constraints on substitution imposed by conditions in the connected markets" have to be taken into account.[21]

This reminder may be generalized. Market definition is not an end in itself, but an instrument to describe competitive relationships. If this description is incomplete, the competitive restraints coming from outside the relevant market, have to be integrated into the analysis. Exactly in this sense, the Draft of a new Market Definition Notice makes a small but important change. According to

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[18] See for example the new policy of the European Commission with respect to the referral mechanism under Art. 22 of the EU Merger Regulation: European Commission, Guidance on the application of the referral mechanism set out in Art. 22 of the Merger Regulation to certain categories of cases, OJ 2021 C 113/1.

[19] *Supra* note 1.

[20] See *Miguel Sousa Ferro*, Market Definition in EU Competition Law, Cheltenham 2019, p. 332 ff., and the summary at p. 2: "Economists tend to see market definition as a necessary evil, an imperfect instrument to arrive at an end which would, ideally, be reached through methods of direct assessment of market power".

[21] Market Definition Notice (note 1), N. 56. The headline is "Additional Considerations".

this text, the "main purpose of market definition is to identify in a systematic way the *immediate* competitive constraints" upon undertakings.[22] Thus, it is highlighted that market definition does not give an exhaustive description of the competitive relationships but just an advanced sketch that has to be complemented by competitive constraints coming from somewhere else. Precisely in this sense, the Draft Market Definition Notice of the European Commission considerably extends its analysis about the interaction between relevant markets. For example, the reflections on connected markets with respect to primary and secondary markets, that are to be found in the final paragraph on "Additional Considerations" in the current Market Definition Notice, form an independent paragraph in the Draft Notice.[23] The analysis is more refined and takes into consideration a variety of factors. Thus, the competitive constraints are much better addressed.

### *3. Conclusion*

In the digital economy, the art of market definition has become even more complicated. The complexity of an increasingly interwoven economy is a challenge for market definition, or even for the concept of thinking in markets at large. Appropriate results can only be achieved if relevant markets are not interpreted as Leibnizian monads, but if the interaction between products is adequately reflected, be it on the level of the definition of the relevant market itself or when it comes to the overall analysis of competitive pressure. Here it is extremely important to avoid a reductionist approach and to always include the interaction between separate, but connected markets. The following remarks on network effects and multi-sided markets will fill these abstract insights with substance.

## III. Network Effects and other Features of the Digital Economy

The digital economy is characterized by a high rate of innovation (sustaining and disruptive[24]), extreme economies of scale and scope,[25] an increased need

[22] Draft Market Definition Notice (note 13), N. 5 (emphasis added).

[23] See Draft Market Definition Notice (note 13), paragraph 4.5 entitled "Market definition in the presence of after markets, bundles and digital ecosystems".

[24] This distinction was coined by *Joseph L. Bower/Clayton M. Christensen*, Disruptive Technologies: Catching the Wave, 73 Harvard Business Review 43 (1995): Sustaining innovation remains within the existing business model whereas disruptive innovation takes place outside the existing value network and creates something completely new. For the relationship with competition law see *Rolf H. Weber*, Disruptive Technologies and Competition Law, in: Klaus Mathis/Avishalom Tor, New Developments in Competition Law and Economics, Cham 2019, p. 223 ff.

for standardization in a context of numerous intellectual property rights, large amounts of data, and – above all – by strong network effects. Positive network effects arise when the benefit for each individual user increases the more participants use the network. A distinction has to be made between direct and indirect network effects. A direct network effect occurs when utility rises with other participants using the same product. The standard example is the telephone network: A single phone is useless; the value of each phone increases with the total number of phones in the network.[26] In the digital economy, an example would be social media: The individual utility of a social media network depends not only on one's own consumption, but also on the fact that others use the same network and can thus be easily reached.

Direct network effects take place within one group of users. Indirect network effects exist where the utility of one user group rises if the other user group gets bigger. One of many examples is the relationship between operating systems and software developers: The attractiveness of an (personal computer or smartphone) operating system for app developers grows with the number of users of that operating system. Conversely, the availability of numerous apps is a reason for choosing a particular operating system. Indirect network effects are of paramount importance for two- or multi-sided markets which will be looked at in the following chapters.

As far as the assessment of network effects is concerned, it must be underlined that they are first and foremost *positive* externalities. Efficiency is improved, and significant benefits are generated. There have been attempts to quantify the network effect. According to "Metcalfe's law", the value of a network is proportional to the square of the number of users ($n^2$). While this theorem is discussed controversially, there are empirical studies that confirm the magnitude of the estimation.[27]

On the other hand, in certain situations, network effects can be detrimental to competition. They may provide a first mover advantage since networks are more attractive the earlier they grow. Thus, "self-reinforcing feedback loops" are created. To take up the example of operating systems: Since app developers earn their money mainly by app downloads, operating systems with a large user base are more attractive for them. On the other hand, a mobile operating

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[25] The DMA (note 2, recital 2) uses the qualification "extreme" in the context of economies of scale since digital services often cause zero marginal costs.

[26] So, it was a considerable utility gain when *Alexander Graham Bell* on 10 March 1876 made his first phone call to his assistant in the next room saying: "Mr. Watson – Come here – I want to see you", see Library of Congress at https://www.loc.gov/item/today-in-history/march-10/ (accessed 15 January 2024).

[27] *Xing-Zhou Zhang/Jing-Jie Liu/Zhi-Wei Xu*, Tencent and Facebook Data Validate Metcalfe's Law, 30 Journal of Computer Science and Technology 246 (2015).

system with many apps is more attractive for consumers. Both effects boost each other.[28] Eventually, markets "tip", the "winner takes it all", and the customers are "locked-in". The result is a natural monopoly.

However, this tendency is not inevitable. A careful analysis is necessary. The overuse of a network may cause congestion (e. g. with respect to customer support), and multi-homing and data portability may allow switching to other networks.[29] And there is always the possibility that disruptive innovation will wash away the established network. Hence, all circumstances of the individual network must be considered to get a sound picture of the market situation.

## IV. Two-sided Markets

As already mentioned in the introduction, the interconnection between certain markets, such as reader markets and advertising markets in the media sector, has always been recognized. But only thanks to the fundamental insights of *Jean-Charles Rochet* and *Jean Tirole* regarding the functioning of two-sided markets, the interrelations have been understood in a systematic way.[30]

### *1. Characteristics*

A two-sided market is a platform which connects two different user groups and provides to at least one of them positive network externalities.[31] Readers and

[28] For another illustrative example of a self-reinforcing feedback loop see OECD, Handbook on Competition Policy in the Digital Age, Paris 2022, p. 9: "if an online platform uses data generated by its users' activities to improve its service, it will be able to increase consumer value and thus demand. It may also sell data to third parties, or use the data to better target advertisers, thus improving its revenues. Because these revenues can be invested in further improvements in service quality, demand may rise even further. Thus, an initial user base can generate a self-reinforcing cycle of improvements that cause the user base to increase further, continuing the cycle".

[29] On the many aspects of data portability in the competition law context see OECD, Data Portability, Interoperability and Digital Platform Competition, OECD Competition Committee Discussion Paper, 2021 https://web-archive.oecd.org/2021-10-31/591383-data-portability-interoperability-and-digital-platform-competition-2021.pdf (accessed 15 January 2024).

[30] See the seminal article of *Jean-Charles Rochet/Jean Tirole*, Platform Competition in Two-Sided Markets, 1 Journal of the European Economic Association 990 (2003); this paper was first circulated in 2001. *Jean Tirole* was awarded the Nobel Memorial Prize in Economic Sciences in 2014 "for his analysis of market power and regulation" www.nobelprize.org/prizes/economic-sciences/2014/summary (accessed 15 January 2024). See also the collection of influential articles in Evans, David S., Platform Economics: Essays on Multi-Sided Businesses, Competition Policy International 2011; on the further development of the concept of two-sided markets see *Jørgen Veisdal*, A Definition of Platforms with Meaningful Policy Implications, Competition Policy International – Antitrust Chronicle: Defining Platform Markets, January 2023, Vol. 1(1), p. 46 ff.

[31] Other definitions exist which require *mutual* benefits between the two user groups.

advertisers are an example, as are many services on the internet that finance their activities by advertising. Moreover, sellers and buyers on online marketplaces are active on two-sided markets: Buyers benefit when there are more sellers and hence more choice and competition, and sellers benefit when there are more buyers because of the increase in sales opportunities. The examples show that the main mechanism of two-sided markets is *indirect* network effects:[32] The users do not necessarily receive direct value from having more participants on their own side of the market, but from the flourishing and thriving of the other market side.

These network effects are internalized by the platform. As the two sides are closely connected with each other it would not be adequate to look only at one side of the market. The platform has to take these effects into account when it makes pricing decisions. It has to strike the right balance in order to maximize the total value over both sides.[33] Often, therefore, one group does not have to pay (for example the consumers), in order to increase the total number of consumers on the one side of the market and thus the attractiveness for the other side.[34] This is often the case when the indirect network effect of group A on group B is bigger than vice versa. The typical example are markets that rely exclusively or predominantly on advertising revenue. Since the advertising revenue depends on the number of users of the platform, services to them will be provided for free in order to maximize income from the advertising side.

It is slightly different for credit card schemes. In the typical Four-Party-System we distinguish issuing banks from acquiring banks. The issuing banks issue credit cards to customers. The acquiring banks connect the merchants to the respective credit card scheme. It is a typical two-sided market: Both user groups, cardholder and merchants, benefit from the widest possible distribution of the respective credit card. Cardholders pay a card-fee, and merchants pay a merchant service charge. Normally, the card-fee is low (sometimes even negative) in order to increase the popularity of the respective card. Compared to the

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However, this definition would exclude platforms where only one side benefits from the interaction (for example the advertising side) while the other side perceives this activity simply as a necessary evil.

[32] *Dewenter/Heimeshoff/Löw* (note 12), p. 2: "Two-sided or platform markets, are characterized by the existence of indirect network effects".

[33] See Draft Market Definition Notice (note 13), N. 94.

[34] This is the deeper reason for the insight, that the absence of a monetary remuneration should not exclude the assumption of a relevant market; see already *supra* II.1. and Draft Market Definition Notice (*supra* note 13), N. 97: "Zero monetary prices are an integral part of multi-sided platforms' business strategy, so the fact a product is supplied at a zero monetary price does not imply that there is no relevant market for that product". Thus, the assumption of a relevant market in the absence of a pecuniary remuneration is based not only on the fact that the other market side "pays" with attention and data, but also on the fact that the purpose of a zero price is to internalize positive network externalities.

card-fee, the merchant service fee is high and must cover, among other things, the interchange fees paid by the acquiring to the issuing bank.

### *2. Market Definition in Two-Sided Markets*

A central problem for the application of competition law to two-sided markets is the question if "a" two-sided market is composed of two relevant markets for each side of this structure, or if it constitutes just one relevant market.[35] Traditionally, competition authorities had the tendency to assume different relevant markets, for example for recipient markets and advertising markets in media contexts, or for issuing and acquiring activities in the payment cards cases. An exception has to be made for those jurisdictions that had difficulties with the finding of relevant markets in the absence of a monetary remuneration. As already noted, this view overlooks the fact that a remuneration can also consist in providing attention or revealing data and should not be followed.[36]

In economics, it has been suggested to draw a distinction between transaction platforms and non-transaction platforms. A transaction platform exists if the respective transaction is carried out on the platform, or can at least be observed by it. Online marketplaces and credit card systems are examples of such transaction platforms.[37] If, by contrast, the transaction takes place outside the platform and cannot be observed by it, it is a non-transaction platform. An example is advertising on media platforms if the platform gains no knowledge of whether a transaction takes place between the advertising industry and the user.

According to the proposal, a transaction platform constitutes a sole market, whereas separate markets should be supposed in the case of a non-transaction platform. The argument is that non-transaction platforms are not necessarily two-sided since the platform could also exist without one of the groups.[38] In *Ohio v. American Express*, the U.S. Supreme Court endorsed this proposal, thus creating a spectacular difference to the European Court of Justice. The U.S. Supreme Court confirmed the concept of two-sided markets, but came

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[35] Therefore, the use of the singular in the term "two-sided market" should not be understood in a competition law sense.

[36] See *supra* II.1.

[37] The U.S. Supreme Court uses a narrower definition: "The key feature of transaction platforms is that they cannot make a sale to one side of the platform without simultaneously making a sale to the other", US Supreme Court, Ohio et al. v. American Express Co. et al., 585 U.S. ___, 2. According to this definition, no transaction platform would exist if the platform can just observe the transaction but does not make it. Credit card systems, which are examined in more detail below, are transaction platforms according to either definition. Regarding this and other possibilities of characterizing platforms see *Sebastian Wismer/Arno Rasek*, Market definition in multi-sided markets, in: OECD, Rethinking Antitrust Tools for Multi-Sided Platforms, Paris 2018, p. 55, 57 ff.

[38] *Wismer/Rasek* (note 37), p. 58.

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