

DIGITAL PLATFORMS COMPETITION REGULATORY CHALLENGES

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ABSTRACT: The massive reduction of costs due to efficient platform brokerage has allowed the “collaborative commons” to expand and evolve, and also to create new and very efficient markets: the so-called “sharing economy” and more broadly, the (digital) platform economy. However, bigger and more efficient sharing platforms also have some drawbacks, such as the concern that these powerful digital brokers could harm fair competition. Nevertheless, economic models centered in microeconomic consequences seem to support the idea that digital platforms have rarely inhibited the emergence of competitors, nor do they seem to be extracting predatory benefits by abusing their position to the detriment of consumers. This relative lack of risk, when we use an “only economic approach”, has pushed competition authorities across Europe to promote the new so-called collaborative business models, regardless of other potential risks: not only the competitive risks at a macroeconomic scale, but also the social ones. Both deserve greater and more careful analysis. In order to produce such an analysis, it would be necessary for the competition authorities to be institutionally reshaped and reinforced with different types of staff. Also, a more ambitious vision of the competitive issues, combining both economic and social issues, would be required.

KEYWORDS: digital economy, digital platforms, sharing economy, legal change, competition, two-sided markets, digital brokerage.

SUMMARY: I. Digital economy, platform brokerage and network externalities. 1. Digital economy and platform brokerage. 2. The question of scale in digitally brokered markets. 3. Network effects and platform brokerage. II. Natural monopolies and digital brokerage. 1. A revision of the natural monopoly conditions applied to digital brokerage. 2. A revision of the theoretical model of competition in platform markets and its actual effects. 3. Is the traditional approach of European competition authorities still valid for digitally brokered two-sided markets? III. Outlining a better approach to deal with the new risks of digital brokers’ anticompetitive behavior in two-sided markets. 1. The challenges faced by a new economic approach for competition regulation in the sharing economy. 2. Some conclusions about possible changes in the goals and institutional design of competition authorities. IV. List of PAPERS AND works mentioned in this paper.

RESUMEN: La gran reducción de costes consecuencia de la eficiente intermediación que facilitan las plataformas ha permitido por un lado que el llamado “procomún colaborativo” se expanda y evolucione, madurando, pero también que aparezcan mercados nuevos y muy eficientes: la llamada “economía colaborativa” y, más ampliamente, la economía de las plataformas (digitales). Ahora bien, las ventajas de estas plataformas de intercambio en términos de una mayor eficiencia conllevan necesariamente algunos inconvenientes, de entre los cuales destaca el

enorme poder que su posición central como intermediarios les puede conferir y la preocupación derivada de ello de que, dado su creciente poder como intermediarios digitales, puedan perjudicar la competencia. No obstante, los modelos económicos centrados en cuestiones microeconómicas parecen respaldar la idea de que las plataformas digitales rara vez han inhibido la aparición de competidores, así como tampoco tienen sencillo extraer beneficios predatorios abusando de su posición en detrimento de los consumidores. Esta relativa falta de riesgo a partir de análisis basados en el mero análisis de la eficiencia económica ha empujado a las autoridades de competencia de toda Europa a promover los nuevos modelos de negocio “colaborativo”, sin tener en cuenta otros riesgos potenciales: no sólo los competitivos a una escala macroeconómica, sino también los sociales. Ambos merecen un mayor y más cuidadoso análisis. Para realizar dicho análisis, sería necesario que las autoridades de la competencia se remodelaran institucionalmente y se reforzaran con distintos tipos de personal. Asimismo, sería necesaria una visión más ambiciosa de las cuestiones de competencia, que combine tanto las cuestiones económicas como las sociales.

PALABRAS CLAVE: economía digital, plataformas digitales, economía colaborativa, cambio legal y transformación tecnológica, competencia, two-sided markets, intermediación digital.

I. DIGITAL ECONOMY, PLATFORM BROKERAGE AND NETWORK EXTERNALITIES

1. Digital economy and platform brokerage

Many things have already been said about the so-called *platform economy* (sometimes also called “sharing economy”, especially when underlining the sharing dimension of the phenomenon and its social effects). Beyond enthusiasm and rhetoric, which are both fairly common around the subject - and not always free of subjective interests or biases-, we may be in a better position to focus on the fundamental changes produced by this kind of economic exchanges if we try to fully understand their implications from a legal and competitive perspective. Thus, we can define the platform economy/sharing economy, in very broad and general terms, as transactions that take profit of pre-existing resources that were not being used to the maximum degree because of the inherent difficulties in matching capacity (supply) and necessities (demand)¹. Some of these difficulties have been sorted out by new technological developments that have enhanced the access of both sides to any transaction to all the information available about possible counterparties through digital intermediation platforms².

We can focus our attention on different aspects of these changes. A lot has been written, for instance, about the true “collaborative” nature of the exchanges fueled by

¹ The so-called sharing economy is also said to be linked to the emergence of new social trends that are less anchored to an ownership mentality (BOTSMAN, Rachel & ROGERS, Roo (2010): *What's mine is yours: the rise of collaborative consumption*, New York, Harpers Collins Publishers, pp. 97-108).

² PARKER, Geoffrey G.; VAN ALSTYNE, Marshall W. & CHOUDAR, Sangeet Paul (2016): *Platform Revolution. How networked markets are transforming the economy and how to make them work for you*, New York, Norton & Company, pp. 16-33.

digital platforms, their positive cultural aspects³ and their capacity to trigger substantial transformations in the global economy from radically optimistic visions⁴. Praise has often been given to the supposed non-commercial approach involved⁵. Many supporters of the phenomena have explained the environmental advantages of replacing individual property ownership of some goods with common shared use⁶ to reduce idle capacity, pointing this out as a key feature of the sharing economy⁷. But, in the end, the critical factor that explains what we are seeing is that digital brokerage using Internet platforms, i.e. new market intermediation technology, is reshaping, in a far more effective way, how we exchange goods and services. Accurate digital brokers are allowing not only sharing activities in which non-professionals are involved, but also the emergence of new commercial activities that are explicitly focused on making profits that can only fit into the category of “collaborative” activities with difficulty⁸. Nevertheless, attempts to separate them from the non-economically-oriented activities or from the uses that merely try to reduce the idle capacity of pre-existing goods risk being not only difficult, but artificial. The boundaries are blurred, if they exist at all.

In fact, focusing the analysis on how new technology has enhanced platform brokerage in recent years, matching supply and demand with lower costs and better accuracy, is the better way to analyze the phenomenon from a legal perspective. This is because the fundamental changes that could trigger a different legal response are all closely related to this aspect of the economic transformation⁹, which is derived from the extension of the uses of the sharing economy and digital platforms’ activities¹⁰. If intermediation between suppliers and consumers are studied by themselves, regardless of the other aspects involved in the business, a clearer image of most of the legal problems we face in relation to the so-called platform economy appears. These problems are mostly the same, regardless of whether those activities are clearly professional, full-time and profit-oriented, or not. Focusing on the changes introduced by new technologies

³ AIGRAIN, Philippe (2012): *Sharing culture and the economy in the Internet age*, Amsterdam, Amsterdam University Press, pp. 27-43.

⁴ RIFKIN, Jeremy (2014): *Zero marginal cost society. The Internet of things, the collaborative commons, and the eclipse of capitalism*, New York, St. Martin’s Press, pp. 1-25.

⁵ BOTSAM & ROGERS (2010: 41-59).

⁶ RIFKIN (2014: 225-254).

⁷ BELK, Russell (2007): “Why not share rather than own?”, *The annals of the American Academy of Political and Social Science*, available on the internet at: <http://ann.sagepub.com/content/611/1/126> (last accessed on 27 September 2021).

⁸ As for “sharing for profit”, see DYAL-CHAND, Rashmi (2015): “Regulating Sharing: The Sharing Economy as an Alternative Capitalist System”, 90-2 *Tulane Law Review*, pp. 251-259.

⁹ EVANS, David S. & SCHMALENSEE, Richard (2016): *Matchmakers*, Boston, Harvard Business Review Press, pp. 19-20.

¹⁰ PARKER, VAN ALSTYNE & MARSHALL (2016: 16-33).

in platform brokerage will allow us to cover, from a competitive point of view, all the phenomena and the legal challenges posed by the leverage position gained by these new and powerful brokers, notwithstanding the actual links between the brokers and their clients. This means that for the purpose of an analysis of the competitive and legal challenges, the positions of intermediaries such as Google or Amazon, Uber or Airbnb, Blablacar or Craigslist will be quite comparable, as long as they act in similar terms as digital brokers. The key issue, from this perspective, will be the leverage capacity generated by their key position in two-sided markets. The types of clients or counterparties these platforms have can be professional and business-oriented, individuals who are trying to reduce idle capacity or communities promoting sharing values for ideological or environmental reasons. From a competitive perspective, this makes no essential difference.

To complete this first part, it would be useful to do a quick recap of a few of the facts related to some of the economic effects produced by technology in recent years. Digital platforms have enhanced brokerage at an incredible but steady pace -which also means, almost certainly, that we will see even more improvements in the coming years¹¹. The emergence of important economies of scale, the reduction of waste, better pricing precision, more dynamic information about the market, among other things, are only some of the effects that we can already take for granted¹². Better brokers are not only able to determine where you can find what you need -or where you can find buyers for the goods or services you offer- but also to do it very quickly, immediately matching supply and demand, and allowing both parties to the exchange to do it by themselves with consumer-friendly interfaces. These digital intermediation platforms, once they have been developed, can also be offered at no cost at all to their users/clients/counterparts if web-placed publicity covers the costs, or at least, at a very reduced price (excluding the cost of the hardware or device you must use and the cost of the connection to the Internet). The massive reduction of costs due to efficient platform brokerage may affect, little by little, almost any market: that is how the so-called “collaborative commons” could lead us to a “near zero marginal cost society”¹³, according with some views, while others see in the reduction of marginal costs and the scale of foreseeable profits a path paved with big competition issues because of the very structure and scale allowed by the

¹¹ ZURIMENDI ISLA, Aitor (2020): “Naturaleza jurídica de las plataformas digitales”, *Revista General de Derecho de los Sectores Regulados*, nº 6.

¹² LOBEL, Orly (2016): “The Law of the Platform”, 16-212 San Diego Legal Studies Paper, *Minnesota Law Review*, pp. 14-20.

¹³ RIFKIN (2014: 69-87).

platform economy¹⁴ (for the moment, the analysis of most scholars and competition authorities has considered, though, that the very fact of producing “losers” in market competition because of this scale and efficiency issues does not mean that we can identify legal objections from a classic Competition Law analysis¹⁵).

2. The question of scale in digitally brokered markets

Digital brokerage creates a new scale for exchanges of goods and services. A scale that is, in some markets, e.g. the provision of digital services, potentially global. But even in goods markets, these platforms, which are associated with better distribution, can expand the scale to a point unknown to date, allowing producers or retailers to reach consumers at any corner of the world. In those fields, though, the digital platform intermediates in a way that is not very different from the position of traditional retailers. Nevertheless, because it is able to reduce costs for both sides -suppliers and demanders- through better brokerage service, the digital broker, or the sharing economy platform, will have extensive opportunities to generate business.

We already know that, even in markets or exchanges where it is not possible to go global, e.g. services that must be provided or conducted in person, better brokerage also increases the size of the market and enhances transactions. That is the reason why the so-called platform economy has evolved in so many areas, from personal exchanges aimed at reducing waste and using idle capacity to the emergence of new professional markets. As long as brokerage is made better -and the network bigger, thus reducing transaction and information costs¹⁶, new market niches will appear. This evolution is hardly avoidable. It has been seen in every economy field because the network exchange in question has evolved, increased in size and then matured. For instance, the use of idle capacity in automobile mobility has matured from car-sharing pools that have allowed users to save money by optimizing the use of their cars to a market in which better brokerage technology allows even more efficient matches, thus promoting the emergence of professional brokers. They display cutting edge technology that allows them to expand their networks, creating efficiency that they can then translate to consumers. As the markets mature and the demand consolidates, a wide range of suppliers are established, including professionals that are not “sharing” idle capacity, but instead are offering services that take advantage of the enhanced matched capacity of the broker to create a

¹⁴ ZALE, Kellen (2018): “Scale and the Sharing Economy”, Davidson, Finck & Infranca (eds.), *The Law of the Sharing Economy*; Cambridge, Cambridge University Press, pp. 45-50.

¹⁵ DUNNE, Niamh (2018): “Competition Law in the Sharing Economy”, Davidson, Finck & Infranca (eds.), *The Law of the Sharing Economy*; Cambridge, Cambridge University Press, pp. 104-107.

¹⁶ EVANS & SCHMALENSEE (2016: 65-66).

business offering the requested services. This evolution has been the same -or very similar- in every market, from the well-know examples of car mobility¹⁷ markets and peer-to-peer accommodations -especially short-stay rental markets¹⁸-, in which the enhancement of digital brokerage has led to a mature market to almost any other market today, thus generating an increasingly market share for the so-called “gig-economy” in many services markets, with very special features directly connected to this business-architecture (e.g. in relation to the organization of work within these companies¹⁹).

There is a similar pattern in the emergence of new market niches and the inevitable consolidation of business-oriented brokerage platforms in those markets, coping with the exchange market with the non-professional actors that were at the origins of the sharing economy. Naturally, similar patterns lead to risks that are also very much alike, which thus produces comparable legal challenges. The economic maturity of those markets then forces our legal system to react, establishing some rules; however, this reaction is not always necessary where the sharing economy has not yet reached such a stage. First, tax issues have arisen in those market niches, but they may be circumvented when the exchanges are still made at a more reduced scale. Once they have grown, governments must tax sharing activities, although they could try to make it easier²⁰. The maturity of the market, i.e. its own development, also makes another big difference:

¹⁷ DOMÉNECH PASCUAL, Gabriel (2015): “La regulación de la economía colaborativa (El caso “Uber contra el taxi””, 175-176 *CEFLEGAL*, pp. 61-104, with an exhaustive analysis of the complete literatura on the subject. Lately, see also on this same topic GONZÁLEZ CABRERA, Inmaculada (2020): “Taxis y VTCS/PHVS (*Private Hire Vehicles*) en España en el Reino Unido. Una visión crítica de las regulaciones desarrolladas en las áreas metropolitanas de Barcelona y de Londres”, *Revista General de Derecho de los Sectores Regulados*, nº 5. On the regulative reaction across different countries, NOGUELLOU, Rozen & RENDERS, David,(eds) (2018): *Uber & Taxis. Comparative Law Studies*, Brussels, Bruylant. See also my take on the issue and its conflict with traditional Spanish public service regulation at BOIX PALOP, Andrés, (2017): “La ordenación del transporte urbano colaborativo”, Boix, De la Encarnación & Doménech (eds.), *La regulación del transporte colaborativo*, Aranzadi - Thomson Reuters, pp. 119-152. More recently, see the recapitulation by MITCHELL, Matthew D. & KOOPMAN, Christopher (2018): “Taxis, Taxis and Governance in the Vehicle-For-Hire Industry”, Davidson, Finck & Infranca (eds.), *The Law of the Sharing Economy*; Cambridge, Cambridge University Press, pp. 78-90.

¹⁸ DE LA ENCARNACIÓN VALCÁRCEL, Ana María (2016): “El alojamiento colaborativo. Viviendas de uso turístico y plataformas virtuales” 5 *REALA (Revista de Estudios de la Administración Local y Autonómica)*, available on the internet at: <http://revistasonline.inap.es/index.php?journal=REALA&page=article&op=view&path%5B%5D=10350> (last accessed on 1 October 2021). See also my take on the issue at BOIX PALOP, Andrés, (2018): “Estrategias regulatorias para la resolución de los conflictos de intereses generados por la proliferación del alojamiento de corta duración con intermediación digital” in De la Encarnación (dir.) *La regulación del alojamiento colaborativo*, Aranzadi - Thomson Reuters, pp. 261-293.

¹⁹ VALLAS, Steven & SCHOR, Juliet B. (2020): “What Do Platforms Do? Understanding the Gig Economy”, *Annual Review of Sociology*, 46, pp. 273-294, available on the internet at: <https://doi.org/10.1146/annurev-soc-121919-054857> (last accessed on 1 October 2021).

²⁰ WOSSKOW, Debbie (2015): *Unlocking the sharing economy. An independent review. Report to UK Business Minister*, 2015, available on the internet at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/378291/bis-14-1227-unlocking-the-sharing-economy-an-independent-review.pdf (last accessed on 1 October 2021).

When there are substantially more exchanges, the social risks that could be ignored until that stage should finally be taken into account. In fact, scale also matters in that sense, because substantial social risks appear only when the sharing activity reaches a certain scale. It is only after this tipping point has been reached when new regulations appear: as a reaction, for instance, to annoyances to neighbors arising from a well-developed short-term rental market²¹, soaring prices for accommodation²², environmental effects²³, etc.

When we analyze the initial response of the different regulatory bodies across Europe, we can see that these concerns are indeed present. However, the main interest of the agencies in continental Europe has been, at least initially, how to deal with big disruptions in some previously regulated markets. This has been the case at the OECD level²⁴, as well as in countries like Germany²⁵, Spain²⁶, and France²⁷, among others. Only after

²¹ DE LA ENCARNACIÓN VALCÁRCEL (2016).

²² Soaring prices for accommodation, derived from the restriction of the supply of long-term rental offers due to the increasing profit that digital brokers have helped to extract by reducing transaction costs for short-term or vacation rentals, has been identified as a negative consequence of the success of the sharing economy in cities like New York or Berlin. The latter is even considering a total ban on the activity in order to preserve the traditional rental market for the disposal of the inhabitants of the city. On the so-called “Zweckentfremdungsverbot”, see “Wie viel Airbnb geht noch? Darf ich mein Gästezimmer in Berlin noch bei Airbnb anbieten? Darf ich meine Wohnung vermieten, wenn ich im Urlaub bin? Und was genau ist eigentlich Zweckentfremdung?”, available on the internet at *Die Zeit* from April the 28th <http://www.zeit.de/entdecken/reisen/2016-04/airbnb-berlin-gesetz-ferienwohnungen> (last accessed on 27 November 2020).

²³ The environmental issue, in general terms, is considered to be an advantage of the sharing economy, because it allows a better use of pre-existing idle capacity. It could be otherwise, though, if increased efficiency in car-sharing induces more people to use cars instead of mass transportation. It is not clear, for example, if Uber is creating more traffic in cities like New York: “Is Uber Making NYC Rush-Hour Traffic Worse?”, available on the internet at *Five Thirty Eight*: <http://fivethirtyeight.com/features/is-uber-making-nyc-rush-hour-traffic-worse> (last accessed on 27 September 2016). See also “Uber isn’t making New York City traffic any worse” available on the internet at *Business Insider*: <http://www.businessinsider.com/uber-not-making-nyc-traffic-worse-2016-1> (last accessed on 27 September 2016). But, in the end, it has been considered that some restrictions are wise enough in order to limit congestion and address environmental issues. See BOIX PALOP, Andrés (2020a): “The Challenges of Urban Mobility and the New Urban Agenda”, *Law and the New Urban Agenda*, New York, Routledge; BOIX PALOP, Andrés (2020b): “Local Leadership and Its Limits in the Deployment of Sustainable Mobility Policies”, Finck, Lamping, Moscon & Richter (eds.), *Smart Urban Mobility*, Berlin, Springer, pp. 81-98.

²⁴ OECD (2010): *The economic and social role of Internet intermediaries*, available on the internet at: <https://www.oecd.org/internet/ieconomy/44949023.pdf> (last accessed on 1 October 2020).

²⁵ BUNDESKARTELLAMT (2010): *Competition in the “New Economy”. The Internet, the new driving force*, available on the internet at: http://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussions_Hintergrundpapiere/Competition%20in%20the%20New%20Economy.pdf?__blob=publicationFile&v=2 (last accessed on 1 October 2020).

²⁶ CNMC - Comisión Nacional de los Mercados y la Competencia (2016): *Estudio sobre los nuevos modelos de prestación de servicios y la economía colaborativa. Resultados preliminares*, available on the internet at: <https://sites.google.com/site/rprelim/> (last accessed on 1 October 2020).

²⁷ BERBEZIEUX, Philippe & HERODY, Camille (2016): *Rapport au Premier Ministre sur l’Économie Collaborative*, Paris, La Documentation Française, available on the internet at:

those first effects more or less settled, analyzed and regulated, our authorities began to realize that other issues may require also their attention and some regulation: the effects on job-markets and workers' precariousness that the so-called gig economy may induce²⁸, the analysis of possible risks and biases affecting individuals due to the extensive and pervasive use of personal data and algorithms to take advantage of this huge amount of raw personal information after its conversion in market profiles²⁹ and, finally, competition implications that may go further strict market efficiency (as we will develop later).

To sum it up, bigger and more efficient platforms favor matches, thus facilitating transactions and creating networks that evolve and improve even more. As we can see, the entire process has features of a typical virtuous cycle... as well as some drawbacks that require new and better regulation beyond a certain point³⁰. One of these major drawbacks is the concern posed by these powerful digital brokers and hegemonic platforms in terms of competition.

3. Network effects and platform brokerage

From the standpoint of network effects, the economic transformation associated with better brokerage is not negligible, nor are its implications for competition:

- Better brokerage not only allows networks to appear where they did not previously exist because the transaction costs were so high that it was impossible, but also, for the same reasons, i.e. the reduction of costs and the time, money and

<http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/164000100.pdf> (last accessed on 1 October 2020).

²⁸ GRAHAM, Mark & ANWAR, Mohammad Amir Niamh (2018): "Two models for a Fairer Sharing Economy", Davidson, Finck & Infranca (eds.), *The Law of the Sharing Economy*; Cambridge, Cambridge University Press, pp. 328-340; VALLAS & SCHOR (2020).

²⁹ SCHOENBAUM, Naomi (2018): "Intimacy and Equality in the Sharing Economy", Davidson, Finck & Infranca (eds.), *The Law of the Sharing Economy*; Cambridge, Cambridge University Press, pp. 459-470. On how to prevent those risks and the insufficiencies of a mere Data Protection approach as the commonly deployed within the European Union, see SORIANO ARNANZ, Alba (2021a): *Data protection for the prevention of algorithmic discrimination. Protecting from discrimination and other harms caused by algorithms through privacy in the EU and US: possibilities shortcomings and proposals*, Cizur Menor, Aranzadi-Thomson Reuters. Also, on data gathering and biases, SORIANO ARNANZ, Alba (2021b): "Decisiones automatizadas y discriminación: aproximación y propuestas generales", *Revista General de Derecho Administrativo*, nº 56; SORIANO ARNANZ, Alba (2021c): "Decisiones automatizadas: problemas y soluciones jurídicas. Más allá de la protección de datos", *Teoría y Método. Revista de Derecho Público*, Vol. 3(2021) available on the internet at: https://doi.org/10.37417/RPD/vol_3_2021_535 (last accessed on 30 October 2021). Regarding to the new European proposal about a new legal framework for the use of AI in Europe, see SORIANO ARNANZ, Alba (2021d): "La propuesta de reglamento de inteligencia artificial de la UE y los sistemas de alto riesgo", *Revista General de Derecho de los Sectores Regulados*, nº 8.

³⁰ RANCHORDÁS, Sofia (2015): "Innovation experimentalism in the age of the sharing economy", 19:4 *Lewis & Clark Law Review*, pp. 871-924.

skills involved, it improves and expands the pre-existing networks. As any network appears, expands, or improves, more and more items, capacities, goods, or services will be offered, thus making the network even more attractive and competitive. This result, in economic terms, is essentially the same for business-oriented platforms that it is for any social network with no interest other than matching particular offers: the efficiency of the network will be increased as it attracts more users, and users will be attracted by better brokerage, thus making it even more efficient. Where the network externalities are well known and extensively documented³¹, efficient platform brokerage is only a powerful catalyst of it³².

- This effect will reduce costs even further, simply because the bigger a network is, the lower the users' effort will be to find better matches. There are clear economies of scale and associated network effects that are enhanced by the fact that digital brokerage in two-sided markets allows the enhancement of economies of scale on both the supply and demand sides³³.

- Of course, as has been repeatedly explained by all the apologists of the digital economy, the more complete a network is, the better it will optimize idle capacity³⁴. The key issue here, as has been noted, is the density of the network. The denser the network is, the more the connections will become actual transactions³⁵. This effect is the same for every network, whether it is business-oriented or not. The only difference is that the reduction in the waste of capacity and the optimization of idle surpluses will be translated into better services and exchanges for participants in the networks that are not business-oriented, while professional brokers will intend to extract it as a benefit of their activity. This benefit could reduce the net outcome for their counterparties: the participants in both sides of the brokered market. That is precisely the main reason why professional brokers, in order to survive, must offer more efficient brokerage than the online exchange platforms created and maintained by users or communities with no intention of making money, thus reducing the potential benefit. The network effects in digitally-brokered

³¹ ECONOMIDES, Nicholas (1996): "The Economics of Networks", 14 *International Journal of Industrial Organization*, pp. 673-699.

³² EISENMANN, Thomas; PARKER, Geoffrey & VAN ALSTYNE, Marshall W. (2006): "Strategies for Two- Sided Markets", 84-10 *Harvard Business Review*, available on the internet at: <http://www.hbs.edu/faculty/Pages/item.aspx?num=22459> (last accessed on 6 October 2021).

³³ PARKER, VAN ALSTYNE & CHOUDAR (2016: 106-115).

³⁴ PARKER, VAN ALSTYNE & CHOUDAR (2016: 108-115).

³⁵ MOAZED, Alex & JOHNSON, Nicholas L. (2016): *Modern monopolies. What it takes to dominate the 21st-Century Economy*, New York, St. Martin's Press, p. 171.

two-sided markets are, for this reason, at least according to mainstream economic doctrine, somewhat difficult to transform into benefits derived by an abuse of a dominant position³⁶. We will return to this point later, because if the actual evolution of the digital economy and the two-sided markets confirms this preliminary idea, then the regulatory strategies, from a competition point of view, should take it into account and thus should be different than the traditional ones (we may focus not only in problems in terms of market efficiency and consumer well-being, as the European Competition authorities and traditional analysis tend to do³⁷, but covering also other considerations beyond the dominant competition more economic approach that may include social costs and other effects).

The scale effects in platform markets are now being studied -sometimes in a broader and more generic manner, otherwise, market by market- by several researchers in almost every country³⁸. Surprisingly, concerns related to the competitive position of the new brokers and the various sharing platforms that have emerged have been given less attention in spite of the fact that, as explained, the scale and network effects are key issues in the construction of this new market niche. They could indeed result in competitive risks that should be addressed by our legal systems. Having established how the sharing economy naturally evolves towards very competitive two-sided markets, we need to understand how important scale is for the brokers and how the sum of all these factors leads to huge network effects, as these are the most obvious risks to competition in this evolution.

We already know that regulators tend to react only when those markets have reached maturity and have acquired the size and scale that could create social risks or affect the traditional regulation of some markets. Competition concerns arise only subsequently, following a familiar pattern: the analysis of whether the new hegemon that is the result of the big network effects in two-sided markets could be deemed to be a competitive risk. We will assess the actual risk in the sharing economy of having natural monopolies as a consequence of the features of digital brokerage. In our opinion, that kind of competitive risk has been, for the moment, overstated by regulatory agencies, while other anticompetitive results of the growing power of digital brokers may have been neglected.

³⁶ WEYL, E. Glen (2010): "A Price Theory of Multi-sided Platforms", 100(4): *American Economic Review*, pp. 1642-1672.

³⁷ SCHMIDTCHEN, Dieter; ALBERT, Max & VOIGT, Stefan (2007): "The More Economic Approach to European Competition Law", 24 *Conferences on new Political Economy*, Tübingen, Mohr Siebeck; DUNNE (2018).

³⁸ MILLER, Stephen R. (2015): "First principles for regulating the sharing economy", 53 *Harvard Journal of Legislation*, pp. 171-202.

Assessments of the risks of the sharing economy by scholars thus far, notwithstanding how rich and complete they could have been³⁹, have also tended to overlook this problem. At least until recent times⁴⁰.

II. NATURAL MONOPOLIES AND DIGITAL BROKERAGE

1. A revision of the natural monopoly conditions applied to digital brokerage

The main disruptions that could be caused, in competitive terms, by the new and more efficient digital brokers are, as we have seen, closely associated with the benefits derived from the network effects that were explained above. If it is true that more efficiency leads to a better and bigger network, leading to even more efficiency and thus creating a virtuous circle, then we can expect that some, if not all, of the traditional concerns raised by natural monopolies⁴¹ can also play an important role in dealing with the competitive risks in the sharing economy⁴².

Natural monopolies appear, without being established by a legal system, in certain kinds of markets with special characteristics that have been well identified and studied for years. It is common knowledge that the main factors that could lead to natural monopolies are economies of scale, sunk costs and network effects⁴³. Internet platforms are an obvious example of businesses in which the network effect is huge, as explained above. It is worth remembering that the efficiency of the brokerage is closely linked to the extension of the network⁴⁴. This network effect also leads to important economies of scale, as has been shown by the activity and consolidation of any of the major digital brokers, not only in the so-called “sharing economy” (Uber, Airbnb, etc.), but also in other fields with the same economic structure (Google or even Amazon are also digital brokers in two-sided markets). Growth is considered to be essential in those markets, to the point that most of these companies -and also their investors- prefer to use their revenue to invest in new developments or acquisitions of competitors in an attempt to consolidate a

³⁹ DYAL-CHAND (2015: 241-309), DUNNE (2018).

⁴⁰ Lastly, some of the ideas that we will cover in this work have emerged, even though still with a certain shyness, at the 2019 Report of the UNITED KINGDOM COMPETITION EXPERT PANEL (2019): *Unlocking digital competition*, available on the internet at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf (last accessed on 20 October 2021).

⁴¹ POSNER, Richard A. (1968): “Natural Monopoly and Its Regulation”, 21 *Stanford Law Review*, pp. 548-643.

⁴² PARKER, VAN ALSTYNE & CHOUDAR (2016: 204-212).

⁴³ WOLF, Dieter (1999) “La réforme des services publics en Allemagne”, Jean-Marie Chevalier and Ivar Ekeland and Marie-Anne Frison-Roche (eds.), *L’idée de service public est-elle encore soutenable?*, Paris, P.U.F., pp. 11-20.

⁴⁴ PARKER, VAN ALSTYNE & CHOUDAR (2016: 204-212).

position of dominance in the market, rather than to generate and cash actual profits (at least, in the first years of the race towards a dominant position as the platform of reference in each market)⁴⁵. So, on the one hand, we have the first sign indicating that we may have a competition issue here⁴⁶. And it is a non-negligible one.

On the other hand, though, the sunk costs are extremely low in digital brokerage⁴⁷ - almost everything any company needs to create such a platform could be reused or sold, with perhaps the only exception being the specific software development- and the cost of the technology and investment required to enter those markets is shrinking year by year at a steady rate -as it has been also the case throughout the telecommunications market⁴⁸. In fact, digital brokerage markets are closely related to the telecommunications markets, and compared to them, are even more protected from sunk costs, as the infrastructure investment required is lower for digital brokers. Interestingly, more than a decade ago, European Union authorities considered that the telecommunications market was the natural monopoly through which technology had most transformed the conditions of competition more intensively, thus allowing market conditions in which the trend towards monopoly was not granted, precisely because of the importance of new technology⁴⁹. This trend has only accelerated in past years. In fact, it seems that when it becomes sufficiently advanced, technology could cause the whole theory of natural monopoly to be questioned⁵⁰. It may be that the supposed “natural” trend towards “monopoly” in some cases may only be a temporary situation that will disappear as soon as the technology is sufficiently advanced.

This is perhaps the reason that explains why the typical features of natural monopoly markets, such as the “first pass the post” or “winner takes it all” effects, do not necessarily

⁴⁵ Most prominent companies in the so-called *sharing economy* markets are not making money for the moment, with the prominent example of Uber, as it was the case for years for other Internet hegemony such as Amazon. See about this strategy EVANS & SCHMALENSEE (2016: 69-83).

⁴⁶ BADEN-FULLER, Charles & HAEFLIGER, Stefan (2013): “Business Models and Technological Innovation”, 46-6 *Long Range Planning*, pp. 419-426.

⁴⁷ ROCHET, Jean-Charles & TIROLE, Jean (2003): “Platform Competition in Two-Sided Markets”, 1-4 *Journal of the European Economic Association*, pp. 990-1029, available on the internet at: <http://www.rchss.sinica.edu.tw/cibs/pdf/RochetTirole3.pdf> (for the pages indicated in the footnotes, we use the version published online by IDEI, Toulouse).

⁴⁸ SRINAGESH, Padmanabhan (1998): “Internet Cost Structures and Interconnection Agreements”, McKnight and Bailey (eds.), *Internet Economics*, Cambridge, The MIT Press, pp. 121-154. See also PROSSER, Tony (2005): *The Limits of Competition Law*, Oxford, Oxford University Press, pp. 177-186.

⁴⁹ European Commission Green Paper of 21 May 2003 on services of general interest.

⁵⁰ DILORENZO, Thomas J. (1996): “The Myth of Natural Monopoly”, 9 (2) *The Review of Austrian Economics* (1996), available on the internet at: <https://mises.org/library/myth-natural-monopoly-0> (last accessed on 6 October 2020).

apply to the digital brokerage markets⁵¹. In fact, in any of the so-called sharing markets in question, we can hardly find companies that were market-leaders in those markets before the current hegemony appeared. Google, Amazon, Facebook, and even Uber and Airbnb were not the first companies to offer digital brokerage services in their respective fields, but they succeeded by displaying better technology than the previous actors in the market⁵², thus proving that competition and even the substitution of previous hegemony is not only feasible but quite common in digital markets. All of these companies had the capacity to improve the efficiency of the brokerage through better search or matching algorithms, improved software, user-friendly interfaces, etc; market innovations that led to more efficiency and a translation of those gains to the public; and they were rewarded by consumers accordingly. The key element that was always present and that explains the hegemony of each company is commonly said to have been innovation and the capacity to display and offer cutting-edge technology that mastered the multifaceted network effects and transferred those gains in efficiency to consumers⁵³. That is the reason why apparent monopolies can be found in the Internet brokerage markets, but they are always at risk of being replaced by others because of technological change and innovation. This shows how, in competition terms, the importance and effects of monopolies have changed in technological markets⁵⁴. For plausible competitors, the costs of entering those markets are not prohibitive, and the possibility of making profits, even in very small specialized market niches, guarantees a diversity of possible new entrants in spite of the effects of the “long tail”⁵⁵. Consequently, competition is at least possible in digital brokered markets, and therefore, innovation could mean that a new company with a better brokerage system could shift consumer trends and compete efficiently. As we will see next, economic models support the idea that the monopoly concern should not be the most dangerous outcome of the growing importance of digitally brokered platforms, at

⁵¹ HUOTARI, Pontus; JÄRVI, Kati; KORTELAJINEN, Samuli & HUHTAMÄKI, Jukka (2016): “Winner does not take all: Selective attention and local bias in platform-based markets”, *Technological Forecasting and Social Change*.

⁵² DE LEON, Ignacio (2016), “Competition Policies in the Internet-based industries: Do we need to reboot the debate?”, *Latin American and Caribbean Competition Forum*, available on the internet at: [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/LACF\(2016\)26&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/LACF(2016)26&docLanguage=En) (last accessed on 1 October 2020).

⁵³ EVANS & SCHMALENSEE (2016: 22-30).

⁵⁴ THÉPOT, Florence (2012): “Market Power in Online Search and Social Networking: a Matter of Two-Sided Markets”, *4/2012 CLES Working Paper Series University College London* (2012), available on the internet at: <http://www.ssrn.com/abstract=2307009> (last accessed on 1 October 2020).

⁵⁵ ANDERSON, Chris (2006): *The Long Tail: Why the Future of Business Is Selling Less of More*, New York, Hyperion.

least in terms of strict economic efficiency and its transfer to consumers, which has been the focus of competition authorities and regulators for decades.

2. A revision of the theoretical model of competition in platform markets and its actual effects

Regulators and scholars have had problems in using the previous knowledge regarding competition matters when dealing with those activities, in part because tech companies do not follow the behavior of typical monopolies. Rochet and Tirole have theorized since 2003 about how the network effects will affect the kind of markets in which a digital broker is placed between the two sides of the market helping both suppliers and demanders to find better matches among themselves. They described them as “two-sided markets”, and they tried to understand why some of the trends in other network-based markets that led to a natural monopoly -and its inherent risks- did not seem to apply here. In their work on two-sided markets, they guessed that price allocation in that kind of market is highly affected by the crucial need for brokers to have both sides of the market in their platform⁵⁶. They cannot risk losing them, and that is perhaps why there is always a possibility of competition⁵⁷. The importance of the technological edge in maximizing efficiency⁵⁸, thus attracting both sides of the market, and the fact that better technology for accomplishing this could potentially be at the disposal of any possible competitor at a non-prohibitive cost, acts as barriers to the predatory tendencies that are the most dangerous outcome of monopoly situations. The threat of new entrants developing better technology or offering the same service at a lower price inhibits the temptation to take advantage of the possibility of the leverage given by their present domination of the market. Revisions made some years later regarding the evolution of those markets seem to have proven that the initial analysis was right: As far as we know, a possibility of competition always exists in two-sided markets when the critical lead depends on the efficiency of the brokerage in using technology⁵⁹.

⁵⁶ ROCHET & TIROLE (2003: 990-1029).

⁵⁷ PARKER, VAN ALSTYNE & MARSHALL (2016: 79-86).

⁵⁸ DEMARY, Vera (2015): “Competition in the sharing economy”, Paper 19/2015 *Institut der Deutschen Wirtschaft Köln Policy*, available on the internet at: http://scholar.google.es/scholar_url?url=https://www.iwkoeln.de/storage/asset/235443/storage/master/file/7255909/download/Sharing%2520Economy%2520Policy%2520Paper.pdf&hl=ca&sa=X&scisig=AAGBfm3Wn68Ulcwotmb8GcaKGbJZQgHMgg&nossl=1&oi=scholar&ved=0ahUKEwj9n (last accessed on 27 September 2020). See also MONTERO & FINGER (2021: 20-25).

⁵⁹ ROCHET, Jean-Charles & TIROLE, Jean (2006): “Two-Sided Markets: A progress report”, 37-3 *The RAND Journal of Economics*, pp. 645-667, available on the internet at: <https://www.jstor.org/stable/25046265?seq=1#page_scan_tab_contents> (last accessed on 1 October 2020); ARMSTRONG, Mark (2006): “Competition in two-sided markets”, 37-3 *RAND Journal of Economics*, pp. 668-691.

There are other elements to be noted that reinforce this idea. The fact that, as previously underlined, most of the current hegemony were not the first digital brokers in their respective markets is one of them. But there are still other empiric developments that point in the same direction. For instance, the low range of the benefits that these companies have been achieving, even after becoming dominant, despite working in huge markets and even after realizing impressive yearly turnovers, is nothing but surprising given the large volume of business in some of these markets once they have reached maturity⁶⁰. The threat created by emerging competitors, combined with the differences in digital broker markets that inhibit natural monopolies and reduce the possibility of abusing the leverage created by them as explained above, has consolidated a non-predatory trend in digital two-sided markets. Efficient brokers swiftly translate gains in efficiency to their counterparties -mostly to the demand side, i.e. consumers, by reducing prices or offering better services, rather than converting these gains in efficiency to improve their profit accounts for distribution to shareholders.

As a provisional conclusion, then, monopoly -or big hegemony- in digitally brokered two-sided markets does not seem to be an important competition risk in two of the most critical ways that monopolies used to be dangerous: they rarely inhibit *per se* the emergence of competitors, nor do they seem to extract predatory benefits by abusing their position, therefore linking to the limits of traditional Antitrust Law when confronting competition issues in the platform economy⁶¹.

3. Is the traditional approach of European competition authorities still valid for digitally brokered two-sided markets?

This particular assessment of the competitive risks in two-sided digital markets is not without consequences for the regulation of the digital economy, the so-called sharing economy and digital platforms. As we have already explained, perhaps not every two-sided market can be considered as an example of the platform economy, but the economic structure of the interactions and their actual effects are very similar. In most cases, the difference lies only in a question of size and maturity. That is why we consider that we should translate the reflections made *supra* on the monopoly concerns and the

⁶⁰ For instance, Amazon only recently, during the last decade, made benefits within the US (for instance, it made US\$ 100 billion in 2015, one of its best exercises, after an operating income of more than US\$ 2.200 billion, a very low rate for a hegemon with a position close to a monopoly in most markets) and still today, in 2021, despite having showed its biggest performance up to date, is losing money in such a important and mature market as Western Europe. Uber or AirBnB, meanwhile, are not making profits at all at the moment, because the markets in which they operate are not mature enough. See PARKER, VAN ALSTYNE & MARSHALL (2016: 224-227).

⁶¹ DUNNE (2018: 104-107).

network effects in digitally brokered two-sided markets to the entire analysis of the competition matters that arise in the digitally enhanced platform economy.

Given the traditional approach of the European Union competition regulation and its implementation by the European Union competition authorities, it is not surprising at all that regulators do not see many competition concerns in these new markets. They are unlikely to detect them, because their “competition only approach”, as the European model has been labeled⁶², or the “more economic approach” typical from US competition authorities⁶³, has not been designed to deal with market hegemony that behave in that way.

The European competition bodies -and its American counterparts- focus mainly on market structure questions like anti-trust issues, mergers, dominant position and so on, but only to control and eradicate situations that could present a risk to the actual possibility of new actors entering the market. They also deal with the predatory microeconomic effects that a dominant position in a market could create. Given the fact that the dominant companies in two-sided markets, such as the digital brokers that channel most of the activity in the sharing economy, tend to display a variety of short-term price rebates that clearly benefit consumers in the short term, this approach is not easily able to detect other problems that may be involved in competition matters in the sharing economy. The actual issues are rarely related to using a dominant position to skim the market and extract unfair profits from consumers or to exclude competitors. Rather, they are related to taking advantage of the leverage that a dominant position can offer to successful digital brokers, not against competitors or new entrants, but against their suppliers. The economic structure of two-sided markets makes one side (suppliers) more vulnerable than the other (consumers). Because competition tradition has neglected the vulnerability of suppliers, especially when it is indirectly derived from technological issues, the toolkit at our disposal to address it falls short. There are also other possible macroeconomic effects, as well as some social effects, which are not directly related to competition, that it may be interesting to study jointly with them, because the way in which we use competition law does indeed always internalize some social values⁶⁴.

⁶² WIGGER, Angela (2008): *Competition for competitiveness: The Politics of the Transformation of the EU Competition Regime*, doctoral thesis available on the internet at: <<http://dare.uvu.vu.nl/handle/1871/15601>> (last accessed on 1 October 2020).

⁶³ SCHMIDTCHEN, ALBERT & VOIGT (2007). Recently, an extensive and thoughtful analysis of the “more economic approach”, with interesting conclusions and some considerations about its inherent limits that can complete Wigger’s study can be found at RODILLA MARTÍ, Carmen (2018): *Los Precios Excesivos por Explotación como Ilícito del Derecho de la Competencia*, Cizur Menor, Aranzadi - Thomson Reuters, pp. 65-86.

⁶⁴ PROSSER (2005: 24-25).

To date, the preliminary studies of the challenges posed by the sharing economy, not only the first analyses at the OECD level⁶⁵, but also the abovementioned works produced by several national agencies, have failed to develop this perspective. The European Union Communication on the Collaborative Economy⁶⁶ is a very good example of everything we are saying. The analytical papers include intensive studies on market access requirements, liability issues, the possible gains in growth and the labor markets derived from collaborative models of business. This has also generally been the trend for the national competition agencies. They have essentially overlooked any competitive effects produced by the very different technological structure of those markets. The first exceptions were the “Data and Competition Law” document, produced jointly by the French *Autorité de la Concurrence* and the German *Bundeskartellamt*, which at least analyzed -correctly, though still at a very incipient stage- data collection as a very important market power tool⁶⁷, and the European Commission Consultation Report of 2015, which at least identified some of the possible problems that will be exposed later - although there has been no competition development of them⁶⁸.

Broadly speaking, because the traditional “economic only approach” aims to prevent micro-economic problems and the unfair use of leverage against consumers or competitors, the possible negative outcome of the activities of these new hegemony in relation to their counterparties has not, to date, been taken into account. This is a hardly new outcome. We have already seen a similar pattern in other two-sided markets. For instance, in a market in which at least some of most of the previously explained features of two-sided markets clearly apply, i.e. the search engines market -and all kinds of search-related features- the European Commission has finally taken some action against Google for some of its practices. Nevertheless, consumers, at least in the short term, could not have been displeased with the aggressive rebates that Google has induced and promoted for all kinds of services and goods for which it acts as a broker. Interestingly, however, the main element retained by the European Union competition authorities has

⁶⁵ OECD (2010).

⁶⁶ European Union Communication webpage on the Collaborative Economy. Available on the internet at: https://ec.europa.eu/growth/single-market/single-market-services/collaborative-economy_es (last accessed on 26 October 2021).

See also EUROPEAN COMMISSION (2016) COM 2016 356 final. *A European Agenda for the Collaborative Economy*. Available on internet at: <https://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-356-EN-F1-1.PDF> (last accessed on 27 September 2020).

⁶⁷ AUTORITÉ DE LA CONCURRENCE & BUNDESKARTELLAMT (2016): *Competition Law and Data*. 10 May 2016. Available on the internet at: <http://www.autoritedelaconcurrence.fr/doc/reportcompetitionlawanddatafinal.pdf> (last accessed on 6 October 2020). See also PARKER, VAN ALSTYNE & MARSHALL (2016: 243-248).

⁶⁸ EUROPEAN COMMISSION (2015).

been a prejudice against Google's competitors, i.e. other search engines, mostly specialized ones⁶⁹. Analyses of the possible negative effects on the suppliers of services that could not risk refusing the use of the broker because of the risk of being excluded from the market are, for the moment, mostly non-existent⁷⁰. Also, macroeconomic effects, effects in other social and economic fields (as to labor relations or in the problems generated to other business or the social fabric), even though being more and more clear and an actual social and political issue⁷¹, continue to be out of the realm of the analysis made by Competition authorities. Not surprisingly, all the analyses of sharing economy issues that have been produced by different competition bodies across Europe -not only at the European Union level, but also in the different Member States- have also neglected this approach⁷².

In conclusion, due to the narrow conceptual view we have explained, competition authorities across Europe are, for the moment, limited to developing the virtues of the new collaborative business models, omitting some of their potential risks: not only the competitive risks, but also the social ones. Both deserve greater and more careful analyses. Further, such analyses should be done by the competition agencies, and in

⁶⁹ See the documents of the process on the official competition website of the European Union, available on the internet at: http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_39740 (last accessed on 27 September 2020). Lastly, The General Court of the European Union ruled on the 10th November 2021 (case T-612/17) in the case *Google Shopping* (Google and Alphabet v Commission) that, that, by favoring its own comparison shopping service on its general results pages through more favorable display and positioning, while relegating the results from competing comparison services in those pages by means of ranking algorithms, Google departed from competition on the merits", in a typical decision of that kind, focused in the possible harm to competitors derived from broker's privileged position (see General Court Press release on case T-612/17 at <https://curia.europa.eu/jcms/upload/docs/application/pdf/2021-11/cp210197en.pdf>, last accessed on 11 November 2021).

⁷⁰ CLEMONS, Eric K. & MADHANI, Nehal (2010): "Regulation of Digital Businesses with Natural Monopolies or Third Party Payment Business Models: Antitrust Lessons from the Analysis of Google", 27-3 *Journal of Management Information Systems*, pp. 43-80.

⁷¹ For instance, in the las US Presidential Election, Law scholar and Democratic candidate Elizabeth Warren lead a public fight on the necessity of further control of big tech, including the possibility of breaking up some of the biggest digital platforms because of their market power and its social and economic (in terms of competition) consequences. The position of Elizabeth Warren candidate bid can be seen at <https://2020.elizabethwarren.com/toolkit/break-up-big-tech> (last accessed on 30 September 2021). Lately, the Biden's Administration, after winning the election in 2020, seems to be given some steps in this direction, the most important one being the nomination of Jonathan Kanter as Justice Department's Antitrust Chief. Kanter is an outspoken critic of the huger market power of big digital platforms, thus making possible a change in the approach of the US Justice Department in Competition issues regarding digital markets and platform economy: <https://www.nytimes.com/2021/10/06/technology/biden-jonathan-kanter-big-tech.html> (last accessed on 30 September 2021).

⁷² See EUROPEAN COMMISSION (2015) and EUROPEAN COMMISSION (2016). The same omission can be found in the Spanish CNMC Report (2016) and in the French Report (2016). The previously cited Franco-German Report on Data Collection and Competition (2016) fails to see how essential this question is to the competitive dynamics in the sharing economy markets.

doing so, they need to work with a new conceptual framework and to use a range of legal and analytical tools richer than those currently available⁷³.

III. OUTLINING A BETTER APPROACH TO DEAL WITH THE NEW RISKS OF DIGITAL BROKERS' ANTICOMPETITIVE BEHAVIOR IN TWO-SIDED MARKETS

1. The challenges faced by a new economic approach for competition regulation in the sharing economy

The “economic-only approach” or the “more economic approach”, which both focus on micro-economic matters, tends to minimize the competitive conflicts that are produced by increased the dominance of some digital brokers in two-sided markets, which is often the case in the hegemon digital platforms when markets in which they operate, at last, mature (for instance, consider examples such as Uber or Airbnb, which are currently in control of their respective niches, a previously stage of the dominance currently held by Amazon or Google, which are now making profits and fighting competition using their huge market power). We can indeed accept that some of the traditional competitive issues are not a source of problems in these markets, because consumers can expect rebates that translate any efficiency gains obtained by the broker and because the possibility for competition may still be there. Nevertheless, the leverage capacity produced by the large network effects in the new dominant companies in the digital economy markets causes new (or not so new, but neglected in recent decades) risks to appear. Competition authorities and market regulators should focus (or refocus) on them. It is possible to identify at least four of them, following the aforementioned European Commission Consultation document⁷⁴: technological barriers, vertical integration⁷⁵, price fixing and other forms of leverage affecting the participants in the market.

- One of the main problems in terms of competition in digital brokerage markets or sharing economy markets is the fact that, because technology provides an edge and leverage, it could also be a possible entry barrier that could be misused to alter competition, for instance, by imposing some technological requisites (relating to networks, operating systems, etc.) on participants in the market. This may occur if these

⁷³ MONTERO & FINGER have explained the shortcomings of traditional competition regulatory approaches (2021: 236-239).

⁷⁴ EUROPEAN COMMISSION (2015). *Consultation on Regulatory environment for platforms, online intermediaries, data and computing and the collaborative industry*. Available on the internet at: <https://ec.europa.eu/digital-single-market/en/news/public-consultation-regulatory-environment-platforms-online-intermediaries-data-and-cloud> (last accessed on 27 September 2020).

⁷⁵ See RODILLA MARTÍ, Carmen (2021): “Los mercados de plataformas digitales: entre el Derecho de la Competencia y la Regulación”, *Revista General de Derecho de los Sectores Regulados*, nº 8 (specifically part II.2.1)

requisites are not strictly necessary, but instead are a way to discriminate against or exclude some actors from the market; brokers may view them as desirable in order to gain or retain leverage in the specific market⁷⁶. Regulation and the preemptive adoption of technology, as a competitive matter, have already been studied in other fields⁷⁷. The problem we face when confronted with those kinds of anticompetitive actions in a digital economy market is that traditional competition law is ill-suited to analyze it. The assessment of competitive risk derived from technological barriers requires a powerful and holistic understanding of the market in question, not only of the legal and economic elements, but also in terms of innovation⁷⁸. The required work needs an approach that combines legal, economic and technological knowledge, which is more complex than the current approach used by our competition authorities. This problem is not likely to disappear. The very essence of technological innovation in digital markets makes it difficult for public authorities, at any given time, to reach the level of expertise possessed by private actors.

It is therefore not easy to discriminate between genuine specifications aimed at ameliorating any actual platform, enhancing the user's experience or creating better brokerage and technological requisites with the hidden goal of distorting the market and empowering the broker. The only solution that our legal system has forged to face this challenge has been to increase the discretionary capacity of the competition authorities in assessing the markets and the competitive risks. The recent trend in the assessment of competition issues, not only digital platform markets, but in every technological market, has been to allow administrative bodies more room to maneuver⁷⁹. This solution may be a sensible one, given the risks and challenges posed by innovation and technological evolution, but it should be implemented with better procedural controls, guided by certain basic principles that should be legally and previously established as binding on the competition bodies. Without a previously detailed framework for how this discretionary

⁷⁶ As happened, for instance, in the conflict between Amazon and Harper Collins, which is explained by RAHMAN, K. Sabeel (2015): "Consumer prices are not the only concern raised by dominant companies", 4-05-2015 *Boston Review Forum*, available on the internet at: <http://bostonreview.net/forum/k-sabeel-rahman-curbing-new-corporate-power> (last accessed on 6 September 2021). On competition matters related to the control of platform access, see PARKER, VAN ALSTYNE & MARSHALL (2016: 240-241).

⁷⁷ RIORDAN, Michael H. (1992): "Regulation and preemptive technology adoption", 23-3 *The RAND Journal of Economics*, pp. 334-349.

⁷⁸ In this sense, the work of the AUTORITÉ DE LA CONCURRENCE & BUNDESKARTELLAMT (2016) is interesting, although it fails to offer a mature analysis of the question in relation to the technological barriers imposed by the platforms in two-sided markets.

⁷⁹ SCHWEITZER, Heike & PATEL, Kiran Klaus (2013): "EU Competition Law in Historical Context: Continuity and Change", Patel and Schweitzer (eds.), *The Historical Foundations of EU Competition Law*, Oxford, Oxford University Press.

power should be implemented by different staff profiles, this solution is a dangerous one and risks being inefficient⁸⁰.

- Another aspect that may pose a challenge to older competition regimes is the existence of vertical integration, as we have already pointed out⁸¹. When two-sided platforms vertically integrate part of the offer of services that they are also channeling on behalf of other counterparties, potential conflicts arise. We have seen this, for instance, in the various services that Google has decided to offer in concurrence with some of its users. If this also happens in the sharing markets, the competition authorities will be forced to treat that fact in a different way, as has been signaled by the European Commission (2015). A reaction would be necessary, although it is not clear what it should be. We have seen some examples in recent years in some two-sided markets that are clearly business-oriented, for instance, to Google's or Amazon's practices⁸². To date, however, the regulatory initiatives have been very tentative and have lacked a clear course of action. Nevertheless, it seems that digital platforms, by definition, do not tend to be characterized by vertical integration. In fact, if they were, it would be complicated to continue to categorize them as "sharing platforms". Think, for example, about the recent evolution of Uber and its project to have its own self-driving cars in the near future. It may be complicated to categorize that merely as a "brokerage activity". Nevertheless, the way in which that market is labeled has only relative importance. The essential issue is the need to establish new regulations, which may require a decision about whether to impose some "neutrality" duties on brokers as a service obligation controlled by public officials⁸³. Using the broker as a semi-public regulator, or at least, as a private agent that collaborates with public regulation, may be even considered⁸⁴. The struggle to define and control the intelligent infrastructure that allows more efficient matching in two-sided

⁸⁰ There are also non-negligible issues in relation with the important access barriers (and their implications, beyond privacy, for competition) consequence of the consideration of personal data as a product that can be controlled and owned by platforms. Even though it is not possible to develop this specific problem, it has to be said that the consideration of data (and specifically the data used by digital platforms) as part of the "commons" is a possible regulative solution that will have very interesting consequences, not only in relation of users' rights but also flattening the field for new competitors thus allowing more and better competition. See CARBALLA SMICHOWSKI, Bruno (2016): "Data as a common in the sharing economy: a general policy proposal", *Document de travail du Centre d'Économie de l'Université de Paris Nord CNRS UMR n° 7234*, available on the internet at: <https://hal.archives-ouvertes.fr/hal-01386644/document> (last accessed on 30 September 2021).

⁸¹ See RODILLA MARTÍ (2021: part II.2.1).

⁸² PARKER, VAN ALSTYNE & MARSHALL (2016: 241-243).

⁸³ GATA, João E. (2015): "The Sharing Economy, Competition and Regulation", *CPI Europe Column*, available on the internet at: <https://www.competitionpolicyinternational.com/the-sharing-economy-competition-and-regulation/> (last accessed on 27 September 2021); RAHMAN (2015).

⁸⁴ DYAL-CHAND (2015: 285-288).

markets is an essential competitive element⁸⁵ and regulators should not be shy in participating⁸⁶.

- Digital platforms operating in two-sided markets enjoy a large amount of leverage against their counterparties, as has already been stated. They are precluded from using it for their own benefit because of competitive pressures from the outside. However, once they have gained a substantial presence in the market and can benefit from large network effects, they could always try to use it to introduce predatory conditions against at least one of their counterparties -the suppliers- in order to obtain better conditions that they could subsequently offer to the other counterparty- the consumers. The traditional analysis of the European model of competition, micro-economically and price-oriented, would not raise major concerns about that kind of demarche, considering it to be a perfect example of a well-functioning market⁸⁷. Nevertheless, the structure of digital platforms and the way in which the network effects appear could raise objections about whether it could be an anticompetitive action, at least in some cases, against the suppliers of offers in the platform. In fact, some of these questions have already created practical problems in some platforms, such as the price fixing by Booking or Uber. Uber's price fixing also involves other problems (see below), but the Booking case is very interesting. The platform has become so essential for suppliers of hostel accommodations that it used its leverage to fix prices, imposing pricing clauses that also affect the prices of rentals made outside the platform. The administrative and legal reaction across Europe stopped Booking from continuing those practices: For instance, the famous French *loi Macron* declared any clause of that type void and explicitly authorized hotels to set the prices they wanted for their hotel rooms in any case, even for online reservations made via digital platforms⁸⁸; competition authorities in Italy opened an inquiry that also forced Booking to change its policies⁸⁹.

Another consideration in relation with prizes and competition can be said in relation with the services offered at loss by digital platforms. In relation with prize fixation, a

⁸⁵ RIFKIN (2014: 193-205).

⁸⁶ PARKER, VAN ALSTYNE & MARSHALL (2016: 246-248).

⁸⁷ DUNNE (2018: 92-98); CHEN, Yiwei; HU, Ming & ZHOU, Yun (2019): "Pricing and Matching in the Sharing Economy", Hu (ed.), *Sharing Economy. Making Supply Meet Demand*, Cham Springer, pp. 137-164.

⁸⁸ MONTI, Giorgio (2015): "Competition Law and E-Commerce: Love-hate relationship?", *European University Institute*, available on the internet at: http://www.jean-monnet-coe.keio.ac.jp/references/giorgio_monti_04.pdf (last accessed on 27 September 2021).

⁸⁹ AUTORITÀ GARANTE DELLA CONCORRENZA E DEL MERCATO (2016): Commitments offered by Booking.com: closed the investigation in Italy, France and Sweden, available on the internet at:

<http://www.agcm.it/en/newsroom/press-releases/2207-commitments-offered-by-booking-com-closed-the-investigation-in-italy-france-and-sweden.html> (last accessed on 6 October 2016).

typical outcome of the efficiency-oriented “more economic approach” dominant in past decades has been the erosion of traditional regulations that, for in instance in some Member States as Spain and Belgium, prohibited the sales at loss because of competition concerns⁹⁰. The effects of such a permissive approach in digital markets are far from being optimal⁹¹. Offering services at loss, as a matter of fact, allow platform hegemony to create a big competitive burden in new actors or possible competitors. Even though the consumer may receive part of the benefits in the short term, the leverage that the permission of such practices gives to bigger platforms should induce regulators to rethink their take on this practice.

- In fact, this capacity to use leverage against their counterparties is at the core of some of the legal problems that certain sharing economy platforms have already experienced. For instance, firms such as Uber, once they have become the dominant broker in their market, and thus, enjoy large network effects in their favor, indeed have the capacity to impose a generous bundle of conditions, not only price-related, to anyone wanting to participate in the exchange of services made via the platform. As discussed above, this high degree of leverage will not be used against consumers because of the absence of the traditional conditions for a natural monopoly. This absence would make it dangerous for the current hegemon in a market in which competition is always possible to facilitate other brokers’ efforts to fill a space of inefficiency and to profit from it by making better offers and more efficient matches. Nevertheless, it would be a mistake to neglect the competition matters in the relationships between the broker and its supply side counterparties.

Interestingly, to date, the primary method used to solve this problem in markets in which the abuse of the leverage of the platform towards its supplier counterparties has been evident, as in the prominent Uber case, has been to reconstruct, in legal terms, the relationship between the platform and the suppliers as a labor law relationship. This has been, for instance, the answer given to this conflict by most of the European scholars, and, with some caveats, this has been the reasoning underlying in the initial case law in

⁹⁰ On 7 March 2013 the European Court of Justice of the European Union decided (Case-343/12) that the Belgian prohibition of selling at a loss did not comply with the Unfair Commercial Practices Directive: decision available on the internet at: <https://curia.europa.eu/juris/document/document.jsf?docid=135321&doclang=EN> (last accessed on 27 September 2021). Similarly, on 19 October 2017, in case C-295/16, the same Court of Justice of the European Union established that the Spanish regulation on sales at a loss is also contrary to EU law: decision available on the internet at: <https://curia.europa.eu/juris/document/document.jsf?text=&docid=195744&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=31609003> (last accessed on 27 September 2021).

⁹¹ RODILLA MARTÍ (2021: parts II.2.3 & III).

the United States⁹², as well as the core issue settled by the European Court of Justice at the Uber case⁹³. This solution, however, fails to solve the problem to its fullest extent. This is not only because there are reasons to conclude that the supposed labor law relationship between Uber and its drivers is, at least, a very special one -which is why some scholars have proposed the creation of a new special legal framework, even within the boundaries of labor law, to regulate this relationship⁹⁴-, but also because it will be complicated to apply this solution to every market in which the digital economy may evolve. For instance, it is hardly convincing to presume that the relationship between Airbnb and the owner of a flat is also a labor law relationship, even when the owner rents the flat on a permanent basis using the platform, as the European Court of Justice lately confirmed⁹⁵. The remedy of considering that the more protective approach of labor law should be applied in order to reduce some of the risks of leverage is only plausible when the relationship between the digital broker and its counterparties is not only profoundly imbalanced, but also more or less permanent, and when the suppliers are producing work, rather than providing goods, for instance... and in a way and with quality standards or an organization of the supply which is clearly decided by the platform. Of course, the problem with categorizing such a relationship as a labor one only increases when the counterpart is a professional or even a company. This is often the case in a bunch of sharing markets that have matured, or in common digital platforms markets, as we see, for instance, in the peer-to-peer accommodation rental market made via Airbnb. In those cases, it is clear that such imbalances between the actors and the protection of some of the counterparties (suppliers) should be granted by a new kind of economic regulation - which should include a broader conception of competition issues- rather than by labor law. As discussed above, the main competition problem posed by digital platforms may

⁹² BROWN, Grant E. (2015): "An Uber dilemma: Employees and Independent Contractors in the Sharing Economy" 75 Md. L. Rev. Endnotes.

⁹³ 20 December 2017 European Court of Justice Decision on Case C-434/15: decision available on the internet at: <https://curia.europa.eu/juris/document/document.jsf?text=&docid=198047&pageIndex=0&doclang=EN&mode=req&dir=&occ=first&part=1> (last accessed on 27 September 2021).

⁹⁴ TODOLÍ SIGNES, Adrián (2017): "El trabajador en la Uber economy: ni dependiente ni autónomo, sino todo lo contrario", *Trabajo y Derecho. Nueva Revista de Actualidad y Relaciones Laborales*, 25, 2017, pp. 43-60.

⁹⁵ 19 December 2019 European Court of Justice Decision on Case C-390/18: decision available on the internet at: <https://curia.europa.eu/juris/document/document.jsf?text=&docid=221791&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=31617179> (last accessed on 27 September 2021). See also MURATI, Enzo (2020): "Airbnb and Uber: two sides of the same coin", *Media Laws* 3/2020, available on the internet at: <https://www.medialaws.eu/rivista/airbnb-and-uber-two-sides-of-the-same-coin/> (last accessed on 27 September 2021); POYTON, David (2019): "What makes Uber and Airbnb different in the eyes of the EU -and why it matters", *The Conversation*, available on the internet at: <https://theconversation.com/what-makes-uber-and-airbnb-different-in-the-eyes-of-the-eu-and-why-it-matters-121708> (last accessed on 27 September 2021).

be more similar to the risks of a monopsony than to classical monopoly problems. In the current competition regulation, however, the central question is the market power that enables extractive or unfair consumer prices, which is clearly a too timid approach⁹⁶.

Finally, some traditional rules or limits in the action of our Competition agencies and bodies are to be widely rethought because this wide leverage of hegemon platforms combines badly with some of the traditional solutions of microeconomic and more economic approach tests. Thus, as it has already been indicated, traditional analysis about acquisitions and mergers that were typically restrictive about when it can be considered a “killer acquisition” will be, without doubts, reshaped to prohibit in the future more of these acquisitions when they may hinder innovation or competition in digital markets, as we already know for sure that they are being used to⁹⁷. Also, as already said, past controversies related to the admissibility of sales at loss, closed as well in America and in Europe with the same conclusion of accepting them as a competitive and positive tool as long as it transfers efficiency to consumers, will be certainly reopened. In both cases, we see how digital platform hegemon use both strategies to difficult or impede competition from new emergent actors, in a way that may not create microeconomic concerns due to the very particular structure of two-sided-markets but that clearly poses macroeconomic risks in terms of cementing a structural dominance of markets that may well hinder competition for years to come, thus freezing the market structure in fields where dynamism, innovation and effective competition are the only guarantees that economic theories about efficiency and its transfer to consumers and society actually happens.

2. Some conclusions about possible changes in the goals and institutional design of competition authorities

The aforementioned problems, as well as the verification that we have not succeeded in solving them with our traditional framework, demonstrates that our competition law must evolve to better confront the risks and challenges posed by the sharing economy. This new approach that our competition authorities must develop should take into

⁹⁶ RAHMAN (2015).

⁹⁷ CUNNINGHAM, Colleen; EDERER, Florian & MA, Song (2021): “Killer Acquisitions”, *Journal of Political Economy*, 129, 3/2021, available on the internet at: <https://doi.org/10.1086/712506> (last accessed on 30 September 2021); AFFELDT, Pauline & KESLER, Reinhold (2021): “Big Tech Acquisitions: Towards Empirical Evidence”, *Journal of European Competition Law & Practice*, Vol. 12, 6/2021, available on the internet at: <https://academic.oup.com/jeclap/article/12/6/471/6232342?login=true> (last accessed on 30 September 2021); CALVANO, Emilio & POLO, Michele (2021): “Market power, competition and innovation in digital markets: A survey”, *Information Economics and Policy*, Vol. 54, available on the internet at: <https://www.sciencedirect.com/science/article/pii/S0167624519301994> (last accessed on 30 September 2021).

account not only the micro-economic effects, but also the macro-economic ones. This may boost a trend that is now already emerging, in which the competition authorities coalesce with the market regulators -or even merge, as was the case in the Netherlands and Spain, in both cases in 2013- in order to accomplish this in a coherent way that may allow a better and easier way to introduce macroeconomic analysis and the effects to market structure within competition controls⁹⁸. This trend will accelerate in the coming years, thus forcing a reconsideration of how competition analyses are conducted. In fact, it is noteworthy that the studies that have already been produced by competition bodies in relation to the sharing economy have focused more on the social problems and opportunities posed by it than on strictly competition matters. Nevertheless, they do not seem to realize that by doing so they are changing the nature of its role and beginning a new kind of analysis that will have to be more comprehensive.

The role of law-makers has changed because of technological changes and the increased complexity of our societies. Law does not currently have the capacity to predetermine an ideal solution to any social conflict in a Weberian rationalist way; rather, it must accommodate complex societies in which there is the possibility of finding better solutions *ex post* because the technological edge in evaluating situations increases every day⁹⁹. In accordance with the reflections above, and in order to encompass this evolution, our competition authorities need to adopt a new approach toward their work that should legitimate their decisions, both from a democratic point of view and from economic efficiency results, in a far better way than the current scheme.

In order to close this work with some *lege ferenda* proposals, we consider that a better understanding of the competitive dynamics and the regulation of the sharing economy specifically, as well as of two-sided markets from a broader perspective, requires administrative bodies that must be designed to analyze competition matters not only from a micro-economic perspective, but also in broader terms (from a macro-economic, but also a social perspective). This is the only way for them to be able to effectively take into account and control the new forms of leverage in that area that are in the hands of the new economic actors. These new forms of leverage may never be used against consumers and may not even affect prices, yet they risk seriously distorting the markets. The procedures should thus be reshaped and replaced by new ones which need to attack these new distortions in a comprehensive way, better founded in economic terms and also more democratically controlled. That will not be enough if there is not a change in

⁹⁸ RUIZ PERIS, Juan Ignacio (2012): "La reforma institucional del Derecho de la competencia español", 13-12-2012 *Diario La Ley*.

⁹⁹ BOIX PALOP, Andrés (2007): "De McDonalds a Google. La ley ante la tercera revolución productiva", 1 *Teoría y Derecho*, pp. 124-146.

the way the staff is selected, broadening the range of the professionals and areas of expertise beyond that of lawyers and economists. Finally, in order to abandon the “economic only approach” and to integrate an economic and technological analysis into every discretionary decision taken, it would be a good idea to promote a process for the consolidation of competition agencies and market regulation authorities. Because the boundaries between competition and regulation are melting down, the general reshaping of competition control procedures that is needed will produce better results if the capacity for discretionary evaluation given to the authorities includes the ability to compile all the necessary information in the decision process.

This new competition approach in response to the consolidation of the sharing economy and the success of digital brokerage must take legal and economic risks into account within comprehensive analyses and must acknowledge that the effects of technology are far greater than they were previously. It is also essential to integrate the study of other social issues and their effects, as it is essential to do in the regulation of markets. It is not easy to produce such changes. Innovation and experimental regulation may be required until a satisfactory model is reached, particularly because the changes represented by the sharing economy are highly disruptive and innovative¹⁰⁰.

However, to date, our competition authorities have been inconsistent in broadening the scope of their analyses, which can be observed from an examination of the various documents produced so far¹⁰¹. They have indeed studied the social and political concerns, but they have done it in an unorganized way, and they have not connected these questions with the competition matters. The European Commission and the various competition bodies in the Member States, to date, have merely considered the platform economy as an opportunity to liberalize markets by loosening some regulations -as the old taxi norms-¹⁰² or as creating favorable circumstances to eliminate traditional bureaucratic burdens -such as those on vacation and tourist rentals¹⁰³-. The fact that the digital economy and their brokerage platforms operates in a sort of “permissionless” environment is generally considered to be positive, fostering innovation and competition by challenging the status quo operators. This is an idea that has received a great deal of

¹⁰⁰ RANCHORDÁS, Sofia (2015): “Does Sharing Mean Caring? Regulating Innovation in the Sharing Economy”, 16 *Minn. J.L. Sci. & Tech*, pp. 413-475.

¹⁰¹ Again, OECD (2010), European Commission (2016), Spanish CNMC (2016), French Rapport (2016).

¹⁰² LEIÑENA MENDIZÁBAL, Elena (2016): “Los nuevos sistemas de utilización compartida de vehículos (carpooling y carsharing): entre la economía colaborativa y la competencia desleal”, 296 *Revista de Derecho Mercantil*; BOIX PALOP (2020b).

¹⁰³ Cfr. DE LA ENCARNACIÓN VALCÁRCEL (2016), which explains the necessity for new regulations as a result of the success of the rental sharing markets.

attention and deserves more development¹⁰⁴. Even if this view is accurate, this analysis fails to comprehend the present situation to its fullest extent. A competition comprehensive macro-economic approach that considers all the effects of technology and how to reduce the new brokers' ability to use their power against their counterparties has not yet been developed. This is a sign of how far our competition legal and institutional system still is from being fully adapted to the regulatory necessities of the digital economy and lacks, to the date, the procedures to legitimate its regulation activity in this field not only from a democratic perspective but also in terms of actual economic efficiency.

IV. LIST OF PAPERS AND WORKS MENTIONED IN THIS PAPER

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