

What are digital platforms? An overview of definitions, typologies, economics, and legal challenges arising from the platform economy in EU.

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Abstract

Digitalisation is defining new eras for various economic sectors and human activities. It consists of all interventions to bring what is analogue in the digital dimension. Digitalization sector is the main enabler of the platform economy, which takes the form of the creation of a data (or digital) layer on top of the physical world, providing a parallel virtual map of the world. Digitalisation, embodied by digital platforms, brings efficiency by reducing information asymmetry, transaction costs, search costs, and by empowering new services or large scale of coordinated networks. However, digital platforms raise new regulatory challenges such as, for instance, the need for open data, ensuring a balanced relationship between the platforms and their users, inappropriate existing legal framework for new services, etc. In this light, this paper aims to provide a comprehensive introduction in the dimension of digital platforms by analysing their definitions, typologies, economics, and legal challenges arising from the platform economy in EU. Thus, it provides an examination of the intersection between digital platforms, economics, and law.

Keywords: Digitalisation; digital platforms; data; collaborative economy; legal challenges.

Summary: Introduction. – 1. Defining online intermediaries. – 1.1. Typologies of digital platforms. – 2. The economics of online platforms. – 3. The rise of the Collaborative Economy. – 3.1 Main characteristics of the Collaborative Economy. – 4. Legal challenges arising from the platform economy in the internal market. – 4.1 Defining the legal status of collaborative platform in the internal market: intermediaries or real service providers? – 4.2 Exploring regulatory interventions targeting digital platforms. – Conclusions.

Introduction.

The application layer of the internet is increasingly dominated by the Over-the-Top Operators (OTT), namely online platforms such as Google, Amazon, and Facebook.¹ The ongoing digitization of all aspects of business and life gives rise to so-called online platforms. They play an increasingly important role in today's economy by serving as intermediaries between consumers and suppliers. They provide digital infrastructures, collect, assess, facilitate information exchange, aggregate supply and demand, provide trust, etc.² Following the path of companies such as Apple and Amazon, more and more firms are trying to become not just product purveyors but also platform provider, facilitating direct connection between customers and other groups. Products produce³ a single revenue stream, while platforms can generate many.⁴ Economists have generally referred to some of them as “multisided platforms” which create value by bringing two or more different types of economic agents together and facilitating interactions between them that make all agents

¹ Telecom operators use also to call them as the OTTs, the Over-the-Top operators, which rely on their infrastructure to generate value.

² See section 3. in Murati E, *What are digital platforms? An overview of definitions, typologies, economics, and legal challenges arising from the platform economy in EU*, in EJPLT, Issue. 1/2021.

³ In a product business model, firms create value by developing differentiated products for specific customer needs, and they capture value by charging money for those items.

⁴ In a platform business model, firms create value primarily by connecting users and third parties, and they capture value by charging fees for access to the platform. Platform models bring a shift in emphasis—from meeting specific customer needs to encouraging mass-market adoption in order to maximize the number of interactions and benefit from network effects. Whether or not the leap from product to platform works is an immensely important question. The appeal of such a move is understandable. Products produce a single revenue stream, while platforms—which we define as intermediaries that connect two or more distinct groups of users and enable their direct interaction—can generate many. Indeed, a large number of the world's most valuable companies by market capitalization in 2015 were platform companies, including five of the top 10 (Apple, Microsoft, Google, Amazon, and Facebook). Although some of those companies started with platforms, many started with products: Amazon launched as a retailer in 1994 and six years later introduced Amazon Marketplace; Google began with a search engine in the mid-1990s and then introduced search advertising in 2000; and Apple created the iPod in 2001 but didn't move toward a platform until it developed the iTunes Store in 2003 and the App Store in 2008. In these terms, see Feng Zhu and Nathan Furr (April 2016). ‘Products to Platforms: Making the Leap’ available at <https://hbr.org/2016/04/products-to-platforms-making-the-leap> accessed 22 May 2020.

better off.⁵ Likewise, the European Commission⁶ has clarified that digital platforms operates in two (or multi)-sided markets,⁷ they benefit from 'network effects' and they play a key role as organisers of new markets by facilitating new business ventures.

Digitalization sector is the main enabler of online platforms, which takes the form of the creation of a data layer on top of the physical world. Sensors extract data from the physical world (from computers, from smartphones, from Internet of Things sensors, etc.) and a parallel virtual map of the world is constructed. Artificial intelligence (AI) makes it possible to automate the management of the large amount of data extracted from reality.⁸ They concentrate the data extracted from the physical world, they have AI capabilities to manage such data and to extract value from it, and they are in the position to create and curate new multi-sided markets and to make new network effects possible. Platforms create new market opportunities, by bringing new entrants and enrolling a 'new workforce' (the car driver, the house owner, etc.) or mobilizing 'new' capital often has a disruptive effect on existing markets and operators, be it the tax companies, the hotels, the financial institutions, the traditional distributor of goods or content.⁹ In essence, their business model consists of facilitating interaction between different user groups (be it buyers and sellers, or potential customers and advertisers). They are, therefore, said to operate in multisided markets, where every user group represents a 'side'.¹⁰

Centralization within the physical and application (or platform) layer can make the operators 'choke points' or 'bottlenecks', where online access can easily be closed down. Accordingly, there is a risk that platforms—like ISPs—start acting like monopolists in their respective layers, e.g., by abusing their market power to exclude competitors or exploit consumers. There is thus a growing consensus that some form of regulation is required to keep the internet open and competitive.¹¹ Indeed, disruption has become a buzzword to designate this new phenomenon. It has an economic meaning when it refers to the challenge new online platforms present for incumbents. But the term 'disruptions' is also associated with the challenge those entrants pose to the

⁵ See David S. Evans Richard Schmalensee (2014) 'The antitrust analysis of multi-sided platform businesses', in Roger d. Blair and D. Daniel Sokol, *The Oxford handbook of international Antitrust economics* (Oxford Press) p. 405

⁶ Communication of the European Commission, Online Platforms and the Digital Single Market, Opportunities and Challenges for Europe COM (2016) 288 final, 2.

⁷ 'Online platform' refers to a business model operating in two (or multi)-sided markets, which uses the Internet to enable interactions between two or more distinct but interdependent groups of users in order to generate value for all of the groups. In these terms see, EU Commission (2015) Regulatory environment for platforms, online intermediaries, data and cloud computing and the collaborative economy, <http://ec.europa.eu/digital-agenda/en/news/public-consultation-regulatory-environment-platforms-online-intermediaries-data-and-cloud> [24-11-2015]

⁸ Montero J.J, 2019, Regulating Transport Platforms: The Case of Carpooling in Europe, p. 2, in Finger M. & Audoin M, 2019, *The Governance of Smart Transportation Systems*, Springer International Publishing

⁹ See Altain Strowel and Wouter Vergote, 'Digital platforms: to regulate or not to regulate? p.4 in Bram Devoolder (ed) 'The Platform economy unravelling the legal status of online intermediaries' (Intersentia 2018)

¹⁰ Jean-Charles Rochet and Jean Tirole, 'Platform competition in two-sided markets' (2003) 1 Journal of the European Economic Association 990.

¹¹ See Bostoen F, 'Regulating online platforms lessons from 100 years of telecommunications regulation, p. 3, working paper.

existing law. Indeed, digital platforms generate many legal disputes, especially when they operate at the margin of existing laws (i.e., labour law in the case of Uber, copyright law, competition and data in the case Google/Alphabet, data protection in the case of Facebook, etc.) Three of the high-profile cases before the European Court of Justice (ECJ) are about the liability regime (or legal status) that applies to *Uber Spain (2017)*, *Airbnb Ireland (2019)*¹² and *Star Taxi App (2020)*.

Acknowledging the state of affairs described above, the main aim of this paper is to broadly assess the main characteristics of online platforms (Section 2) and to articulate some views on the economics of digital platforms (Section 3). Among the categories of various digital platforms, we further explore the rise of the collaborative economy in the EU internal market.

This choice is mainly justified due to the legal challenges arising from it which have been already, somehow, addressed from the ECJ (Section 5.1). However, it is important to underline from the outset that each category of digital platforms (Section 2.1) pones its specific legal challenges in relation to its the market operation (i.e., music, news, app stores, streaming, food delivery, transport, accommodation, etc). In this light, section 5.2 analyses, additionally, the attempt of EU and national regulators to provide a legal framework for digital platforms. Finally, this research has been conducted mainly under the perspective of the business to platform relationship (P2B). The consumer to platform relationship (C2P) is also worth of interests both in terms of recent legal case developments regarding data protection, consumer protection, hate speech, fake news, etc, and the EU goal to enhance consumer protection through the “New Deal for Consumers” initiative aimed at strengthening enforcement of EU consumer law in light of a growing risk of EU-wide infringements.¹³

1. Defining online intermediaries.

The diversity of online platforms in terms of activity, sector, business model, and size are striking. Platforms range from small websites with a local reach to worldwide companies generating billions of revenues. They offer varied services such as Internet search engines (Google, Yahoo), online marketplaces (eBay, Booking, Amazon), video-sharing platforms (e.g., YouTube), music and video platforms (e.g., Spotify, Netflix), social networks (e.g., Facebook, Twitter), collaborative economy platforms (Airbnb, Uber, BlaBlaCar, Ulule, Crowdcube), online gaming (Steam), etc. Finding a common definition for all of them is quit challenging. Several legal definitions of digital platforms have been proposed or even codified in the law. Internet intermediaries has been defined by the Organization for Economic Co-operation and Development (OECD) as entities that “bring together or facilitate transactions between third

¹² See Murati E, (September 2020), *Airbnb and Uber: two sides of the same coin* (September 2020) available at: <http://www.medialaws.eu/airbnb-and-uber-two-sides-of-the-same-coin/> accessed 20 October 2020.

¹³ Accordingly, was adopted the new Directive on better enforcement and modernisation of EU consumer protection by the European Parliament and the Council on 27 November 2019. See Review of EU consumer law - New Deal for Consumers https://ec.europa.eu/info/law/law-topic/consumers/review-eu-consumer-law-new-deal-consumers_en

parties on the Internet. They give access to, host, transmit and index content, products and services originated by third parties on the Internet or provide Internet-based services to third parties".¹⁴ Nowadays, the notion of "intermediary" is increasingly replaced in common parlance by the more palatable term of "platform" which evokes a role that goes beyond one of mere messenger or connector, and extends to the provision of a shared space defined by the applications within which users can carry out their activities and generate value.¹⁵

Academics argue that platform economy requires a workable definition.¹⁶ It should be affirmed at the outset that there is no general understanding of what an online platform is, especially since it can cover a great variety of different and unrelated fields. The Communication from EU Commission on online platforms¹⁷ is instructive in this respect, insofar as it refrains from offering legally sound definitions. Instead, it lists some common features: a) they have the ability to create and shape new markets, to challenge traditional ones, and to organise new forms of participation or conducting business based on collecting, processing, and editing large amounts of data; b) they operate in multi-sided markets, but with varying degrees of control over direct interactions between groups of users; c) they benefit from 'network effects', where, broadly speaking, the value of the service increases with the number of users; c) they often rely on information and communications technologies to reach their users, instantly and effortlessly; d) they play a key role in digital value creation, notably by capturing significant value (including through data accumulation), facilitating new business ventures, and creating new strategic dependencies."

Accordingly, considering those elements, at least two opposite schemes can be identified.¹⁸ On one side, digital platforms can embody an extremely passive attitude, thereby limiting themselves to behave in a non-interventionist manner and acting solely as a mere virtual (non) marketplace for the match between demand and supply, as in the early days of couch-surfing or in the more modern car-pooling of BlaBlaCar. On the other, digital platforms can be highly engaged, thereby influencing not only the performances of their providers but also the relation they establish with users. For instance, through a complex algorithm, Uber is able to push drivers towards more profitable zones, e.g., shopping centres, railway stations, touristic areas, and to impose differentiated fares during peak time; this practice is known as surging. However, this scheme is fluid too because platforms has always the capacity and the flexibility to change their conditions in any given time as a reaction to

¹⁴ See OECD (2010) *The economic and social role of Internet intermediaries* p. 9, <https://www.oecd.org/internet/ieconomy/44949023.pdf> Accessed June 2020

¹⁵ Belli L, Erdso D., (2017) "Platform regulations: how platforms are regulated and how they regulate us", p. 27, <http://bibliotecadigital.fgv.br/dspace/handle/10438/19402> Accessed May 2019

¹⁶ See Altain Strowel and Wouter Vergote, 'Digital platforms: to regulate or not to regulate?' p. 13, in Bram Deveolder (ed) 'The Platform economy unravelling the legal status of online intermediaries', (Intersentia 2018)

¹⁷ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions. Online Platforms and the Digital Single Market. Opportunities and Challenges for Europe, COM (2016) 0288 final,

¹⁸ See Inglese M, *Regulating the Collaborative Economy in the European Union Digital Single Market*, p.12 (Springer 2019)

external factors. For example, recently the Californian legislators approved a landmark bill that requires companies like Uber and Lyft to treat contract workers as employees, if a company exerts control over how they perform their tasks or if their work is part of a company's regular business.¹⁹ Accordingly, and in order to avoid compliance with the new law, Uber is giving drivers now more control over their rides and making fares more transparent — which could mean passengers find that some types of trips get rejected more frequently.²⁰

Digital platforms have been defined either broadly or narrowly. A broad definition has been proposed by German Monopolies Commission according to which “platforms are all Internet business providing direct interaction between two or more distinct groups of users that are connected by indirect network effects”.²¹ Later on, the White Paper on Digital Platforms published in March 2017 by the German Ministry of Economic Affairs and Energy defines platforms as “Internet-based forums for digital interaction and transaction”.²² Similarly the French Conseil National du Numérique (CNNum) defines a platform as “a service that provides an intermediary function in the access of information, goods or services that are usually provided by third parties”.²³

On the other side, a paradigmatic example of a narrow definition is to be found in Art. 2 of Discussion Draft of a Directive on Online Intermediaries Platforms, according to which digital platforms “means an information society service accessible through the internet or by similar digital means which enables customers to conclude contracts with suppliers of goods, services or digital content. This does not include services which only identify relevant suppliers and which direct customers to those suppliers’ websites or contact details”.²⁴ Likewise the European Commission has defined online platform as “an undertaking operating in two (or multi)-sided markets, which uses the Internet to enable interactions between two or more distinct but interdependent groups of users so as to generate value for at least one of the groups. Certain platforms also qualify as Intermediary service providers.”²⁵ The later definition had been criticized as far as that there are firms with a technical basis for delivering content to end users that are not multi-sided but that can

¹⁹ See Kate Conger and Noam Scheiber (Sept. 11, 2019) California Bill Makes App-Based Companies Treat Workers as Employees, <https://www.nytimes.com/2019/09/11/technology/california-gig-economy-bill.html> accessed 21 January 2020

²⁰ See Carolin Sayd (Jan. 8, 2020) Uber makes major changes to California rides as gig-work law takes effect, <https://www.sfchronicle.com/business/article/Uber-makes-major-changes-to-California-rides-as-14957326.php> accessed 21 January 2020

²¹ BKartA, B6-113/15, Working Paper – *The Market Power of Platforms and Networks*, June 2016, p. 2

²² White Paper on Digital Platforms, (2017). *Digital regulatory policy for growth, innovation, competition and participation*, <https://www.bmw.de/Redaktion/EN/Publikationen/white-paper.html> Accessed August 2019, pg.21.

²³ According to a 2015 report of the French Conseil National du Numérique, *Ambition numérique, Pour une politique française européenne de la transition numérique*, (June 2015) p. 49.

²⁴ The Discussion Draft of a Directive on Online Intermediary Platforms has been elaborated by the Research Group on the Law of Digital Services, a European network of legal scholars initiated by a group of researchers from the University of Osnabrück (Germany) and the Jagiellonian University Krakow (Poland). See, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2821590 *Research Group on the Law of Digital Services, Discussion Draft of a Directive on Online Intermediary Platforms, 5 (2016) Journal of European Consumer and Market Law 164-169 (Publishers: C.H.Beck, Nomos and Wolters Kluwer)*

²⁵ European Commission, “The regulatory environment for platforms, online intermediaries, data and cloud computing and the collaborative economy” (September 2015) p 4, accessed online https://ec.europa.eu/information_society/newsroom/image/document/2016-7/efads_13917.pdf Accessed 10 January 2020. Accessed 10 January 2020.;

nevertheless be considered to be digital platforms, for example, Netflix.²⁶

There are two specific examples of legal codification of online platforms definition. The first one is provided by the French Consumer Code (law²⁷ of 7 October 2016 on 'La République numérique') which uses a broad and dual definition of the operator of platforms. Articles L111-7 and L111-7-2 of the French Consumer Code apply to 'platform operators', which are defined as "any natural or legal person offering on a professional basis, on a monetary or non-monetary basis, an online communication service to the public based on: 1) the classification or referencing (listing or ranking), by means of computer algorithms, of contents, goods or services proposed or put online by third parties; or 2) The connection of several parties in order to sell a good, provide a service or exchange or share a content, a good or a service

It is interesting to see that the law opts for a platform definition based on its core functions, namely search and matching.²⁸ The first type of activity of may refer to two sub-types of activities: a) services provided to platform users that identify relevant suppliers and direct customers to those suppliers' websites or contact details (search engines); and b) services of a comparative nature provided to platform users to identify relevant suppliers, customers of other users (comparators). Otherwise, the second type of activity is about different types of intermediation. Since Article L. 111-7 of the Consumer Code uses the words "*mise en relation*", which translates into English as «connection», the platform can be seen as an intermediary, a representative, an agent or a broker.²⁹ Due to the reference to these two types of activities (infomediary and intermediary), the online platform definition is very broad and for that had been criticized as it risk encompassing too many situations where an intermediary intervenes, including in the old, non-digital economy.³⁰ However, the legislative choice of a broad definition in the new Article L.111-7 of the Consumer Code can be explained by the fact this new article imposes on platform operators only duties of trustworthiness and duties to inform consumers and other users of online platforms, but not other types of duties or liabilities. Moreover, the new articles of the French Consumer Code leave in

²⁶ Moreover, firms can make the strategic decision to move from a one-sided to a multi-sided platform and vice versa. See Pieter Nooren et al. "Should We Regulate Digital Platforms? A New Framework for Evaluating Policy Options" in *Policy & Internet* (2018) p. 267

²⁷ *Est qualifiée d'opérateur de plateforme en ligne toute personne physique ou morale proposant, à titre professionnel, de manière rémunérée ou non, un service de communication au public en ligne reposant sur: 1° Le classement ou le référencement, au moyen d'algorithmes informatiques, de contenus, de biens ou de services proposés ou mis en ligne par des tiers: 2° Ou la mise en relation de plusieurs parties en vue de la vente d'un bien, de la fourniture d'un service ou de l'échange ou du partage d'un contenu, d'un bien ou d'un service.* (Art. L. 111-7. – I Code de la consommation); LOI n° 2016-1321 du 7 Octobre 2016 pour une République numérique, <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000033202746&categorieLien=id> accessed 10 January 2020

²⁸ Further, the law obliges the online platform operator to offer the consumer faithful, clear and transparent information, especially regarding: a) the general terms and conditions of use of the intermediation service, and the methods of listing and ranking and delisting; b) the existence of a contractual relationship, a capitalistic link or direct remuneration that influences the listing or ranking. In other words, **what the law imposes is transparency**. On 29 September 2017, three decrees were adopted to specify these obligations. See Bostoen F, "Neutrality, fairness or freedom? Principles for platform regulation" in *IPR 2018 V.7* (1), p. 10

²⁹ See Juliette Sénéchal "Online Platforms under French Law" in U Blaurock (eds) *Plattformen* (Nomos 2018) p. 122

³⁰ See Altain Strowel and Wouter Vergote, 'Digital platforms: to regulate or not to regulate? p. 12 in Bram Devoolder (ed) 'The Platform economy unravelling the legal status of online intermediaries', (Intersentia 2018)

the shade the second facet of online platform operators, who sometimes have a very active role in the context of a relationship between a supplier and a customer.³¹

The second one is giving by the recent EU Regulation 2019/1150 on promoting fairness and transparency for business users of online intermediation services, also known as Business to Platform regulation (B2P). According to Art. 2 (2) online intermediation services means services which meet all of the following requirements: (a) they constitute information society services within the meaning of Article 1(1)(b) of Directive (EU) No 2015/1535 of the European Parliament and of the Council; (b) they allow business users to offer goods or services to consumers, with a view to facilitating the initiating of direct transactions between those business users and consumers, irrespective of where those transactions are ultimately concluded; (c) they are provided to business users on the basis of contractual relationships between, on the one hand, the provider of those services and, on the other hand, both those business users and the consumers to which those business users offer goods or services;

The provisions of this Regulation aim to address the dependency of many companies on certain online intermediaries' services and their exposure to potentially harmful practices such as unexplained change of terms and conditions without prior notice, delisting of goods and service, lack of transparency relating to the ranking of services, unclear conditions for access to, and use of, data collected by platforms. This definition aligns with EU Agenda aims on the collaborative economy, which does not indulge in defining the concept of online platforms as such. By contrast, it stipulates that, if they provide a service for remuneration, at a distance, by electronic means and upon individuals' request, according to the definition contained in Article 1(1) (a) of the Information Society Services Directive, they fall within the scope of application of the e-Commerce Directive.³² Almost all online platform self-considers themselves as an information society because of the benefits offered by the E-Commerce Directive. However, the self-declaration is not enough for

³¹ The Consumer Code consequently regulates platforms as regulators of two-sided markets, i.e. more as new intermediary bodies between the State and the public, than as intermediaries between two particular economic actors. This conceptual choice is supported by the system applied to platforms not only in Articles L. 111-7, II., L.111-7-1 and L.111-7-2, but also in the proposals of decrees implementing these articles and notified to the European Commission. As a result, the new French rules applicable to platforms can be seen more as a list of positive duties to inform, imposed on these new delegated "regulators", than as a list of pre-contractual bad practices (unfair commercial practices) or contractual bad practices (liability), which would be prohibited. Indeed, the duties to inform imposed on platform operators are a kind of duty of transparency concerning the functioning of the platform for the benefit of the public. This duty can be understood as a counterpart of the delegation given by the French State to the online platform operators to regulate two-sided or multi-sided markets. Moreover, there is neither explicit nor implicit articulation between the new Article L.111-7 and the pre-existing articles of the Consumer Code dedicated to unfair commercial practices or to liability. No more there is an articulation between Article L. 111-7 of the Consumer Code and the Articles of the French Civil Code devoted to the formation and non-performance of contract. Article L.111-7 is complemented by a modular service-based approach in Article L.111-7-2 of the French Consumer Code, which is related to the nature of the services provided by the platform operator. In addition to the broad definition of the previous article (search engine, comparator and/or intermediary), Article L.111-7-2 also regulates the online review system provided by websites. See Juliette Sénéchal "Online Platforms under French Law" in U Blaurock (eds) *Plattformen* (Nomos 2018) p. 120.

³² See European Commission, 'A European agenda for the collaborative economy', COM (2016) 356 final.

reducing the role of the platform to merely intermediary. Therefore, considering Uber, Airbnb and the Star Taxi App rulings of ECJ on unrevealing their real legal status, perhaps it is more appropriate to define online platforms as 'open infrastructure[s]' ³³ exercising, depending on their mode of functioning, a mere facilitator role or exerting a high level of control and influence over providers and users.³⁴

In a nutshell, it is important to consider the economic effects and the business model flexibility of platforms in order to provide a case specific definition of a given platform. Yet, their definition is as dynamic as the possibilities for tech companies to reinvent their business models in the digital economy.

1.1. Typologies of digital platforms.

While it is difficult to describe what platforms *are*, it is easier to describe what they *do*. Thus, to differentiate platforms, first, is suggested to focus on the item/service to which the platform offers access. The for-profit (versus social, cooperative, community-centred) objective is a pre-requisite for avoiding confusion within the 'collaborative economy'.³⁵ Second, the degree of control of the platform on the underlying transaction is also an important factor to identify the platforms of the collaborative economy from other commercial intermediaries offering a merely intermediation service (i.e., Google Search) or offering, in addition, an offline service (i.e., Uber). Third, it is also worth to make distinction according to the type of operators, whether they operate as business (B) or consumers (C).

One of the first and more comprehensive classification of online platforms has been offered by the OECD which uses six categories based on the kind of services consumers may use through online platforms: i) Internet access intermediaries, ii) hosting and data processing providers; iii) online e-commerce intermediaries; iv) search engines, v) portals; and vi) participative networked platforms.³⁶ The logic of this classification was also confirmed in EDRI's response to the European Commission's public consultation on online platforms in June 2015,³⁷ which stated that "it is not useful to have Airbnb, Google News and YouTube categorised as being the same type of business". Considering this, digital platforms have been categorized as it follows. (1) Digital platforms may be divided, depending on their primary function, in innovation and transaction platforms. The former consists of common technological building blocks that the owner and ecosystem partners can share to create new complementary products and services, such as smartphone apps

³³ See G. Smorto (2017) 'Critical assessment of European agenda for the collaborative economy. In depth analysis for the IMCO Committee' IP/A/IMCO/2016-10, PE 595.361, 13-14.; See also M Inglese, *Regulating the Collaborative Economy in the European Union Digital Single Market*, p.15 (Springer 2019)

³⁵ See Altain Strowel and Wouter Vergote, 'Digital platforms: to regulate or not to regulate? p. 11, in Bram Devoolder (ed) 'The Platform economy unravelling the legal status of online intermediaries', (Intersentia 2018)

³⁶ See OECD (2010), 'The economic and social role of Internet intermediaries', April p. 9, <https://www.oecd.org/internet/ieconomy/44949023.pdf> accessed 19 February 2020.

³⁷ See EDRI's answering guide to the European Commission's platform consultation, available at <https://edri.org/files/platforms.html> accessed 3 February 2020.

or digital content such as from Apple iTunes or Netflix. On the other hand, transaction platforms are largely intermediaries or online marketplaces that make it possible for people and organizations to share information or to buy, sell, or access a variety of goods and services. The more participants, functions, and digital content or services available through a transaction platform, the more useful it becomes.³⁸

(2) A second classification³⁹ of platforms (P) is based on the relationship with consumer (C) or businesses (B) and based on the transactional nature of the relationship, namely: a) Transaction based platform to consumer (P2C) platforms, such as Netflix or Spotify. These platforms utilise content licensed by right holders to platforms. Transactions (subscription) occur on the various sides of the platform, *i.e.*, between platform and right holders and between platform and its users; b) Non transaction based P2C platforms, such as Google news and other news aggregators or review services like Yelp. In these platforms, content is freely available online, with no P2B transaction. Hence, there is no transaction on either side of platform and advertisement is the main business model; c) Zero consumer value P2B services, such as promoted content on social media companies like Twitter. Here the transaction happens on the business side of platforms; d) Transaction based consumer or business to consumer (C2C & B2C) platforms. Examples of this type of platform include companies like Ebay, AirBnB and Uber. Here transactions (fee) take place between businesses and the platform, and between consumers and businesses (B2P & C2B transactions); e) Non-transaction-based consumer to consumer (C2C) platforms. These include UGC, blogging, micro-blogging; In view of this, it emerges that online platform operate in a wide range of market activities.⁴⁰

TYPE OF PLATFORMS	MAIN BUSINESS MODEL	EXAMPLE
Online marketplaces	Transaction fee	Amazon, eBay, Allegro, Booking.com
Collaborative or sharing economy platforms	Transaction fee	Uber, Airbnb, Taskrabbit, BlablaCar, <i>MaaS</i> (emphasis added)
Communication platforms	Advertisement, subscription	Skype, Whatsapp, Tinder
Social networks	Advertisement,	Facebook, LinkedIn,

³⁸ It is mostly the digital technology and scale that make these platforms unique and powerful in today's world. Google Search, Amazon Marketplace, the Facebook Social Network, Twitter, and Tencent's WeChat are examples of transaction platforms used by billions of people every day. Credit cards such as Mastercard, Visa, and American Express, as well as catalogues such as the Yellow Pages (think of this directory as bundled with the telephone), are transaction platforms that originated before the digital era. See Michael A. Cusumano et al, *The Business of Platform. Strategy in the Age of Digital Competition, Innovation and Power*. Harper Business, 2019, p. 55-57.

³⁹ Ibid.; See also Joe. Mc, & Maryant F.P, (2017) *Fundamental Rights and Digital Platforms in the European Union: a Suggested Way Forward in Platform regulations: how platforms are regulated and how they regulate us*. The book is freely available at <http://bibliotecadigital.fgv.br/dspace/handle/10438/19402> pg. 100 ss. See also, Altain Strowel and Wouter Vergote, 'Digital platforms: to regulate or not to regulate? Cit. p. 9; Paul-jasper D, *Online platforms and how to regulate them: an eu overview*, policy paper no.227 14 june 2018, in Jacques Dolers Institute Berlin.; See Oxera, "Benefits of online platforms. Prepared for Google", October 2015, p. 16-19, <https://www.oxera.com/wp-content/uploads/2018/07/The-benefits-of-online-platforms-main-findings-October-2015.pdf.pdf> accessed 19 February 2020

⁴⁰ See Paul-jasper D, "Online platforms and how to regulate them: an EU overview" policy paper no. 227 14 June 2018, in Jacques Dolers Institute Berlin. p. 4

	subscription	Twitter
Search engines and specialised search tools	Advertisement	Google search, TripAdvisor
News aggregator	Advertisement	Google Mews
Music/video sharing platforms	Advertisement, subscription	Deezer, Netflix, Spotify, YouTube
App stores	Transaction fee	Google Play, Apple app stores
Payment system	Transaction fee	PayPal, ApplePay

Figure 1

(3) A third classification⁴¹ is based on the type of resources to which they grant access: 1) Access to information or content, such as general engines (i.e., Google, TripAdvisor). 2) Access to personal data, such as the social networks (i.e. Facebook). 3) Access to goods and/or to services offered by third parties such as online marketplaces (i.e., Amazon, Booking etc, or 'collaborative economy' platforms. (i.e., Airbnb, Uber, Blablacar etc). It is not completely clear whether the new 'collaborative economy' platforms should be treated differently from the already known online market. 3) Access to a workforce or to the expertise capabilities of people (Upwork). 4) Access to money or capital such as crowdfunding sites or payment systems (i.e., paypal). Finally, another categorization is based on network effects of the platforms.⁴² In a nutshell, platforms grant access to information, personal data, goods, services, workforce, intellectual capabilities, money, or capital. In the context of digital markets, depending on a platform's business model, users can be buyers of products or services, sellers, advertisers, software developers. The dividing line is, however, not always clear, and that is why the economics of platforms must be studied and understood.

2. The Economics of online platforms.

To understand digital platforms from an economic perspective, one must have some understanding of the concept of value creation on a platform, of the governance system used to orchestrate this value creation, and of the revenue model applied by the platform operator.⁴³ The value created on a platform comes in the form of communication, information, matching, and choice or diversity.⁴⁴ To facilitate value creation and innovation on the platform, the platform operator must install a governance system, reflected in the terms and conditions, comprising behavioural rules and incentives, filters for relevance,

⁴¹ See Altain Strowel and Wouter Vergote, 'Digital platforms: to regulate or not to regulate? p.10-11, in Bram Deveolder (ed) 'The Platform economy unravelling the legal status of online intermediaries', (Intersentia 2018)

⁴² There are four basic models for operating a digital platform: a) One-sided without network effects, i.e. Netflix; b) One-sided with direct network effects, i.e., WhatsApp; c) Two-sided with indirect network effects, i.e., Amazon, Youtube. NY Times; and d) Two-sided with indirect and direct network effects, i.e. Facebook, LinkedIn. See Olga Batura et al, "Online platforms and the digital single market. A response to the call for evidence by the House of Lord's internal market sub-committee" in e-Economics (2015) p. 3

⁴³ See EU Commission, (2017) *Business-to-Business relations in the online platform environment*, p. 7, available at <https://op.europa.eu/en/publication-detail/-/publication/04c75b09-4b2b-11e7-aea8-01aa75ed71a1/language-en> accessed 18 May 2020.

⁴⁴ Ibid. p. 7

and trust mechanisms (i.e., safe transactions).⁴⁵ Here platform act as regulators by setting up the rules through which their users interact⁴⁶ and, accordingly, the governance systems serve to avoid negative externalities on participants which reduce the value of the platform to its members.⁴⁷ Finally, a platform operator must (eventually) find a revenue model which allows to capture part of the value created on the platform, but which does not conflict with the governance mechanisms.⁴⁸

The platform-based companies Google, Apple, Facebook and Amazon have aggregated power at unprecedented speed and scale: their combined market capitalisation grew from \$430 billion in 2010 (roughly the GDP of Poland) to more than \$2300 billion in 2017 (roughly the GDP of India, the seventh largest economy in the world). These four 'GAFA platforms' sit at the core of what is becoming a platform society⁴⁹, in which a global, corporate infrastructure uses data and algorithms to organise social and economic interactions. In the world of platforms, rather than flowing in a straight line from producers to consumers, value may be created, changed, exchanged, and consumed in a variety of ways and places. The spread of the platform model into one industry after another is causing a series of revolutionary changes in almost every aspect of business. Platforms beat traditional firm because platforms scale more efficiently by eliminating gatekeepers, unlocking new sources of value creation/supply and by using data-based tools to create community feedback loops.⁵⁰ Unlike traditional businesses, platforms do not produce anything they do not have to invest directly in the production of the content, goods or service or capital to which they give accesses, instead they rely on the resources

⁴⁵ **Behavioural incentives** activate users to contribute to value creation and to act in line with the platforms' strategic objectives. Google, for example, offers free cloud storage in return for reviews of locations on Google Maps. **Filters** are **needed to increase relevance** of e.g. search results, suggestions, or advertisements. Failure to install proper filters may drive users away; e.g. by the end of the 1990s, people massively traded Yahoo for Google as the Google search algorithm was a much better filter. Similarly, **a lack of proper trust mechanisms** may drive users away. Trust should be defined as broadly as possible: trust that information is correct (no fake news, no sponsored search results), **trust that transactions are completed after payment, trust that personal information is not shared with third parties**, etc. Ibid. p. 8.

⁴⁶ See Jacques Crémer, Yves-Alexandre de Montjoye and Heike Schweitzer, *Competition Policy for the Digital Era*, available at <http://ec.europa.eu/competition/publications>, 60.

⁴⁷ Amazon's marketplace has a **seller code of conduct** that includes prohibitions against a variety of behaviours such as against trying to damage other sellers or improperly influencing consumer ratings. Google's search engine prohibits websites from many efforts to influence ranking unfairly or essentially gaming its algorithms. See Evans, David S., Vertical Restraints in a Digital World (March 24, 2020). Evans David S., Allan Fels, and Catherine Tucker, eds., *The Evolution of Antitrust in the Digital Era: Essays on Competition Policy* (Boston: Competition Policy International, 2020, Forthcoming). Available at SSRN: <https://ssrn.com/abstract=3551597> p. 10-11.

⁴⁸ See EU Commission, (2017) Business-to-Business relations in the online platform environment, p. 9, available at <https://op.europa.eu/en/publication-detail/-/publication/04c75b09-4b2b-11e7-aea8-01aa75ed71a1/language-en> accessed 18 May 2020.

⁴⁹ See Jan Konietzko et al, "Online Platforms and the Circular Economy" in N. Bocken et al. (eds.), *Innovation for Sustainability* (Springer 2019) p. 436

⁵⁰ For instance, in the traditional publishing industry, editors select a few books and authors from among the thousands offered to them and hope the ones they choose will prove to be popular. It's a time-consuming, labour intensive process based mainly on instinct and guesswork. By contrast, Amazon's Kindle platform allows anyone to publish a book, relying on real-time consumer feedback to determine which books will succeed and which will fail. The platform system can grow to scale more rapidly and efficiently because the traditional gatekeepers—editors—are replaced by market signals provided automatically by the entire community of readers. The elimination of gatekeepers also allows consumers greater freedom to select products that suit their needs. See G. Parker et al, *Platform Revolution: How Networked Markets Are Transforming the Economy—and How to Make Them Work for You*, W.W. Norton & Company 2016, p. 38-44

provided by third parties. In this accessibility-based model, the buzzword is 'access' rather than 'ownership'.⁵¹ Take the music sales industry as an example. The established value configuration (i.e., established innovation) in traditional music sales markets stems from the sale of music files (e.g., Apple iTunes). Conversely, Spotify challenges the aforementioned value configuration. Spotify's value configuration is based on streaming music instead of offering downloads. In this way, Spotify attempts to transform established music value configurations from music ownership to music as a service. From a business model perspective, both music value configurations compete for the same consumers who demand music consumption.⁵² This situation is reminiscent of the putting-out system (or "domestic system")⁵³ and the result is that access replaces ownership. In the words of Sofia Ranchordás, "[Y]ou are now what you can access, and not what you have."⁵⁴ However, the rapid growth in the number of online businesses has produced many benefits for consumers and firms as well. It gives consumers reduced search costs,⁵⁵ lower prices,⁵⁶ reduced information asymmetry (through rating systems, comparison tools) social benefits, easier access to a very wide variety of products and services⁵⁷ and attractive delivery conditions.⁵⁸ It gives firms⁵⁹ the chance of transaction cost reduction, market expansion and access to much more online shelf-space than

⁵¹ See Altain Strowel and Wouter Vergote, 'Digital platforms: to regulate or not to regulate?' p. 9 in Bram Develolder (ed) 'The Platform economy unravelling the legal status of online intermediaries', (Intersentia 2018)

⁵² See Erol Kazan, *Towards a Disruptive Digital Platform Model*, Copenhagen Business School (2018) p.1

⁵³ The sharing economy resembles the mercantile model. In this mode of production, which appeared in Europe in the sixteenth century before the manufacturer, farmers would make use of slack periods to perform domestic (often textile) work for merchants with whom they had a commercial relationship. The farmers worked from home, generally using their own tools. In the putting-out system, the merchant also provided the raw materials (the cloth) needed for the activity. This pre-capitalist framework is reflected in many characteristics of current work arrangements via platforms: the disappearance of a workspace managed by the employer, the independence of workers whose relationship with the business intermediary is not hierarchical but commercial, the difficulty of creating a form of collective representation or union, the difficulty of drawing a clear boundary between the domestic and professional spheres, the phenomenon of holding multiple jobs and secondary income activities (which recalls "slashers" – people who combine multiple careers) rather than pursue a single full-time activity, and finally individual self-organization (individuals determine their own level of engagement with the platform). See, *Aurélien Acquier 'Uberization Meets Organizational Theory. Platform Capitalism and the Rebirth of the Putting-Out System'* in Davidson et al, *The Cambridge Handbook of the law of the Sharing Economy*, (Cambridge University Press 2018) p. 19

⁵⁴ See Sofia Ranchordás, *Does Sharing Mean Caring? Regulating Innovation in the Sharing Economy*, 16 MINN. J.L. SCI. & TECH. 413, 416 (2015)

⁵⁵ Time saving result from research engines alone create a value of **EUR 140 billion** in the EU. See, Bruno Basalisco "Online Intermediaries: Impact on the EU Economy" (Copenhagen Economics 2015) p. 43 available at <https://www.copenhageneconomics.com/publications/publication/online-intermediaries-impact-on-the-eu-economy> accessed 26 February 2020

⁵⁶ Online marketplaces bring benefits to consumer through lower prices **for EUR 1.1 billion** per annum in Europe, or equivalently around EUR 50 per buyer in Europe. Ibid. p 35

⁵⁷ Free social networking services, wikis, generalised search services and comparison shopping generate a consumer surplus of EUR 22 billion. Ibid. p. 40

⁵⁸ For instance, lower prices due to an increase in supplier competition, which is driven by reduced barriers to entry, especially for small providers, increased transparency and easier supply across geographies. See, Oxera, "Benefits of online platforms. Prepared for Google", October 2015, p. 19-21, available at <https://www.oxera.com/wp-content/uploads/2018/07/The-benefits-of-online-platforms-main-findings-October-2015.pdf.pdf> accessed 19 February 2020

⁵⁹ See Bertin M, "An Economic Policy Perspective on Online Platforms" Institute for Prospective Technological Studies Digital Economy Working Paper 2016/05, pg. 9

any offline shop can offer.⁶⁰

The only estimate of the economic impact of online intermediaries in EU single market was published by Copenhagen Economics (2013)⁶¹ that estimated in total, intermediaries' activities in the EU contributed around € 430 billion to the GDP of the EU 27 in 2012. This is comprised of a direct GDP contribution of € 220 billion and a long-term indirect GDP contribution due to the productivity impact of intermediaries on other firms of €210 billion. This estimate incorporates e-commerce, and in addition the economic value of free services that cannot be captured in traditional GDP estimates, as latter is made at market cost. According to the study, the economic-wide contribution is equivalent to 1.6 % of EU GDP.⁶²

The first scholars to deal with platforms, respectively, D. Evans and R. Schmalensse, provide the following economic definition of platforms: 'a digital multi-sided platform has two or more groups of customers who need each other in some way but who cannot capture the value of their mutual attraction on their own and rely on a digital "catalyst" to facilitate value creating interactions between them'.⁶³ In other terms, a network orchestrator or a catalyst is a company that facilitate a network of users whose activities in turn create value for the company. This business model leverages a phenomenon known as network effects⁶⁴, which occur when the value of a good or service increase as the number of people using it increase.⁶⁵ Multi-sided platforms are not exclusive to the online world and also exist in the off-line world. A typical example of multi-sided market is newspapers and the media in general. A platform—the newspaper—allows the interaction between readers and

⁶⁰ A report estimates that 93% of SMEs using eBay engage in exporting, compared to only 26% of traditional companies which engage in e-commerce without using the services of online marketplaces. In the period 2010-2014 SMEs operating online have increased their cross-border sales in the EU four times faster than those without an online presence. See, Commission staff working document "Online Platforms, (Accompanying the document) Communication on Online Platforms and the Digital Single Market" {COM(2016) 288} p. 12

⁶¹ See Katrine Ellersgaard Nielsen et al "The impact of Online Intermediaries on the EU Economy" Copenhagen Economics (2013) available at <https://www.copenhageneconomics.com/dyn/resources/Publication/publicationPDF/6/226/0/The%20impact%20of%20online%20intermediaries%20-%20April%202013.pdf> accessed 26 February 2020

⁶² See Hosuk Lee-Makiyama and Rositsa Georgieva, "The Economic Impact of Online Intermediaries" in M. Taddeo, L. Floridi (eds.), *The Responsibilities of Online Service Providers* (Springer 2017) p. 329

⁶³ David Evans and Richard Schmalensse, "The Antitrust Analysis of Multi-sided Platform Businesses, National Bureau of Economic Research", Working Paper number 18783, (December 2012) p 7: http://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1482&context=law_and_economics (accessed 17 February 2020) See D. Evans and R. Schmalensse, *Matchmakers. The new economics of multisided platforms*, Harvard Business Review Press, 2016.; David Evans, *Platform Economics: Essays on Multiside Business*, CPI 2011, p. 30-31.

⁶⁴ In the light of the increasing importance of digital markets, the concepts of "networks" and "multi-sided markets" were introduced into the German Competition Act emphasising the special role of network effects, see Section 18(3a) of the German Competition Act.; See also Bertin Martens, "An Economic Policy Perspective on Online Platforms", (2016) p. 3

⁶⁵ Kellen Zale, 'Scale and the sharing Economy' in Davidson et al, *The Cambridge Handbook of the law of the Sharing Economy*, (Cambridge University Press 2018) p. 40; This can be counter-intuitive, since with traditional business models the opposite can be true, and the value of an exclusive luxury car does not increase – and may actually decrease – if another one is produced (or bought by a neighbour). However, having more collectors (buyers and sellers) on eBay clearly increases the value of the overall platform since the sellers will add inventory and the buyers will provide liquidity to the platform and increase the number of transactions. Unlike traditional businesses, platforms often exhibit network effects, and these have profound competitive implications. See Laure Claire Reillier and Benoit Reillier, *Platform Strategy. How to Unlock the Power of Communities and Networks to Grow Your Business* (Routledge 2017) p. 35

advertisers.⁶⁶ Further, when people join networks (be it social networks or telecoms networks), all the other network users benefit since the network's reach – and therefore overall value – is increased. This is a positive externality since all network users are better off as a result. An externality occurs when individuals or firms are impacted, positively or negatively, by an economic transaction that is independent of them.⁶⁷ In the context of platform markets, these effects can apply to users who are on the same side (indirect) or on the other side (direct) of the market.

Direct network effects occur when the utility of a user depends on the decisions of other users and all these users belong to a group.⁶⁸ Direct network effect can be positive or negative. Typical examples of **positive direct network effects** are communication networks in which everyone can communicate with everyone.⁶⁹ Further, participants in a ride-sharing network like Uber benefit because the more people join the network, the more likely drivers will be able to find a passenger in need of rides. Instead, the platform benefit from networks effects as more individuals join a network, the more valuable the platform becomes as far as more commissions from each ride will be collected.⁷⁰ Indirectly, the public can benefit if the network may make it more feasible to achieve socially desirable activity that was previously difficult to coordinate (i.e., reduce congestions in case of carpooling apps). Otherwise, negative direct network effects occur when users suffer from increased participation from other users. This may be due to overloading of the platform. For example, traffic congestion for users of an internet service provider.

In contrast to positive direct network effects, the presence of **positive indirect network effects** describes a situation in which one type of economic agent (i.e., users) may value a product more if more of another group of economic agents uses that product as well. This is known as a positive indirect network effect.⁷¹ Positive indirect network effects are often found on e-commerce platforms. To link multiple market players and get the network

⁶⁶ The key to the success of a newspaper is indirect network effects. The wider the number of users in each side, the higher the benefit for the other side. On the one side, advertisers will be increasingly interested in the newspaper as it is more widely read. On the other side, readers will be increasingly interested in a newspaper if content is enriched with the revenue generated by a larger pool of advertisers. The platform, the newspaper, has a significant role as it defines the distribution of the benefits derived from the new interaction among all the players: the readers, the advertisers, and the platform itself. If the benefit in terms of higher advertising revenue is not shared with the readers in terms of higher expenditure in quality content (and a lower price for the newspaper), readers will not buy the newspaper. Montero J.J, 2019, *Regulating Transport Platforms: The Case of Carpooling in Europe*, p. 16, in Finger M. & Audoin M, 2019, *The Governance of Smart Transportation Systems*, Springer International Publishing

⁶⁷ See Laure Claire Reillier and Benoit Reillier, *Platform Strategy. How to Unlock the Power of Communities and Networks to Grow Your Business* (Routledge 2017) p. 31

⁶⁸ For an introduction to the economics of network effects, see Belleflamme, Paul and Martin Peitz (2018b), *Platforms and Network Effects*, in Luis Corchon and Marco Marini (eds.), *Handbook of Game Theory and Industrial Organization*, vol. II, Edward Elgar, 286–317.

⁶⁹ Here, the benefit of a user depends significantly on the participation decisions of other potential users. Examples include instant messaging apps like WhatsApp or Snapchat, and social networks like Facebook and LinkedIn CERRE Report, (May 2019), *Market definition and Market power in the platform economy*, p 13, available at <https://cerre.eu/publications/market-definition-and-market-power-platform-economy/> accessed 6 January 2020

⁷⁰ Kellen Zale, 'Scale and the sharing Economy' in Davidson et al, p, 41

⁷¹ It can arise because one type of economic agents (e.g. a buyer, a man, cardholder) wants to search for and transact with another type of economic agent (e.g., a seller, a woman, a merchant) and vice versa. See David Evans, *Platform Economics: Essays on Multiside Business*, CPI 2011, p. 56-57.

effects started, industry platforms all must solve a chicken-or-egg problem (more buyers will attract more sellers to the market, and vice versa). This means that one market side usually needs to come on board first and provide something that attracts another side.⁷² In an ordinary linear business model without network effects, the value of a business increases linearly with the number of clients. In a networked business, the value increases exponentially with the number of agents connected to the network. In a networked business, the value increases exponentially with the number of agents connected to the network. The task of the platform organizer is to attract as many users as possible on all sides.⁷³ If the two groups are mutually connected by cross-group external effects, there are positive indirect network effects on both sides of the market (i.e. Tinder, Amazon, eBay).⁷⁴ There are also **negative indirect network effects**: one type of economic agent on the network harms another type of agent. For instance, buyers often find advertisements disturbing. From the point of view of an advertiser, more advertising leads to fewer buyers, which is viewed negatively by the advertiser; from the point of view of a buyer, more buyers *ceteris paribus* lead to more advertising, which is judged negatively by the buyer.⁷⁵ The platform solves the externality problem between advertisers and consumers by using content to bribe people into viewing ads. Indirect network effects are the key aspect of multi-sided platforms. They are the source of the catalytic reaction—and much of the value—created by the platform. A key practical aspect of these indirect network effects is that they require that the platform “balance” the two sides to maximize the value of the platform to either side. The platform has zero value to either side if the other side is not on board.⁷⁶

Summarising: network effects are very important since they can represent a significant barrier to entry for competitors and therefore contribute to protecting a business. In certain circumstances, network effects may lead a platform to reach a ‘critical mass’, and even in some markets ‘tip’ to a ‘winner takes all’ natural equilibrium, where a single business ends up serving the entire market.⁷⁷ Network effects are not just about the number of platform participants, but about their propensity to interact on the platform as well. Inactive users contribute less to network effects on a platform than active ones that participate frequently.⁷⁸ On the basis of the benefits highlighted in the literature, the OECD defined the economic role of online platforms as

⁷² See Michael A. Cusumano et al, *The Business of Platform. Strategy in the Age of Digital Competition, Innovation and Power*. Harper Business, 2019, p. 52

⁷³ See Bertin M, “An Economic Policy Perspective on Online Platforms, p. 10

⁷⁴ See Demary, Vera and Rusche, Christian, “The economics of platforms” IW-Analysen, No. 12, German Economic Institute Cologne, p. 17.

⁷⁵ CERRE Report, (May 2019), *Market definition and Market power in the platform economy*, p 14, available at <https://cerre.eu/publications/market-definition-and-market-power-platform-economy/> accessible 6 January 2020

⁷⁶ See David Evans, *Platform Economics: Essays on Multiside Business*, p. 57, CPI 2011.

⁷⁷ Lundqvist B., Murati E. (2020) Collaborative Platforms and Data Pools for Smart Urban Societies and Mobility as a Service (MaaS) from a Competition Law Perspective. In: Finck M., Lamping M., Moscon V., Richter H. (eds) *Smart Urban Mobility*. MPI Studies on Intellectual Property and Competition Law, vol 29. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-662-61920-9_10

⁷⁸ See Laure Claire Reillier and Benoit Reillier, *Platform Strategy. How to Unlock the Power of Communities and Networks to Grow Your Business* (Routledge 2017) p. 35

follows:⁷⁹ 1) providing infrastructure; 2) collecting, organising, evaluating information; 3) facilitating social communication and information exchange; 4) aggregating supply and demand; 5) facilitating market processes; 6) providing trust.

3. The Rise of the Collaborative Economy.

The collaborative economy, as a sector of the online economy platform ecosystem, is a new triangular business model enabling the exchange of services and the common usage of goods among users registered on an online platform. The combination of technological evolution, urbanization, overpopulation, the financial crisis and the rise of unemployment have resulted in the rapid growth of the collaborative economy.⁸⁰ The most widely recognized collaborative economy companies are the “ride share” companies, such as Uber and Lyft, and renting platforms, such as Airbnb. Although sharing economy companies are relatively new, in 2013, the global collaborative economy market was valued at \$26 billion, and it is expected to grow to \$110 billion soon.⁸¹ While an estimate published in early 2016 posited that the growing sharing economy could reduce under-utilization of assets – i.e., labour, cars, energy finance, and accommodation – by up to €572 billion annually in Europe.⁸²

Promoters and makers of sharing economy claim to be transforming society and promoting some form of societal promise in their business model, such as improving access to products and services by disrupting the revenues of big business, building social ties, extending the lifespan of objects, encouraging recycling, etc. In response to these promises, two opposing visions clash among expert and academic observers.⁸³ On the one hand, “supporters” of the sharing economy describe the sharing economy as an opportunity for individual emancipation and environmental progress, in opposition to the hierarchical power of traditional economic institutions such as large firms – the heirs of the second industrial revolution.⁸⁴ On the other hand, opponents criticize the

⁷⁹ See OECD (2010), ‘The economic and social role of Internet intermediaries’, April, p. 15, <https://www.oecd.org/internet/ieconomy/44949023.pdf> accessed 19 February 2020

⁸⁰ Hatzopoulos V, *The collaborative economy and EU law* (Hart, Oxford 2018) p. 2-3; See Guodin P, “The Cost of Non-Europe in the Sharing Economy” p. 11-13, Study for European Parliamentary Research Service 2016.

⁸¹ See Brett Harris, “Uber, Lyft, and Regulating the Sharing Economy”, 41 Seattle U. L. REV. (2017), p. 271

⁸² See Pierre Guodin, “The Cost of Non-Europe in the Sharing Economy” Study for European Parliamentary Research Service 2016, p. 6

⁸³ Author’s conclusion is that the sharing economy creates opportunities for innovation that public actors should grasp in order to generate positive outcomes for society. They should politicize the future of the sharing economy, and use it as a tool to promote development, welfare, and well-being rather than an umpteenth version of capitalist power. Further, they suggest that much research needs to be done to understand what type of governance mechanisms and **legal statuses may help sustain, over the long term, the hybrid nature of such ventures as they grow.** See Acquier A, and Carbon V, ‘Sharing Economy and Social Innovation’ in Davidson et al, *The Cambridge Handbook of the law of the Sharing Economy*, (Cambridge University Press 2018) p. 51

⁸⁴ In reality, what is termed the sharing economy marketplace is controlled by multi-billion dollar corporations with profit-minded goals that have little to do with sharing. See Orly Lobel, ‘Coase and the platform economy, in Davidson et al, *The Cambridge Handbook of the law of the Sharing Economy*, (Cambridge University Press 2018) p. 67

sharing economy and the rise of peer-to-peer platforms for being a “low cost” access economy, based on business models that destabilize employment relations, promote a hidden neoliberal agenda, and undermine the very concepts of enterprise and salaried employment. Someone has coined the term “sharewashing,” in which platform companies, under the guise of the misleading term “sharing economy,” shift liability and risk onto employees and consumers.⁸⁵ Additionally, platforms are shaking up some fundamental tenets of the sociological tradition of organizational analysis, as relations of social and economic domination are no longer based on the cleavage between capital and labour.⁸⁶ It is true that platform economy encourages a greater level of consumption, it does change consumerism’s model by switching the ownership from hotel or cab owners to less institutionalized players. But it does not change the level of ownership required. If the platform economy does not transform consumers’ model from owning to borrowing—what is its social innovation?⁸⁷

This phenomenon is known by different labels: the sharing economy, the gig economy, the platform economy, the on-demand economy, the peer-to-peer (P2P) economy and even the Uberized economy. Each of these expressions catches a different, prominent feature of the topic which this book aims to analyse.⁸⁸ Each of these terms represents an aspect of the digital platform revolution, but none completely captures the entire scope of the paradigmatic shift in the ways we produce, consume, work, finance, and learn. This new economy dramatically extends the lifecycle of products, shortens time of use, and exponentially expands connectivity and access. Starting with the latter, the Uberized economy refers to the destructure of the value chain by new intermediaries which, through the use of digital technologies capture part of

⁸⁵ See Anthony Kalamar, (13 May 2013) Sharewashing Is the New Greenwashing, <https://www.opednews.com/articles/2/Sharewashing-is-the-New-Gr-by-Anthony-Kalamar-130513-834.html?p=2&f=Sharewashing-is-the-New-Gr-by-Anthony-Kalamar-130513-834.html> Accessed 20 February 2020; So who wins and who loses in the sharing economy? The winners are largely the proprietors of the new technologies and architects of the new service models that characterize the sharing economy.¹¹ However, consumers have often gained as well, to the extent that they are provided with goods and services at lower prices as well as greater choice and convenience. The losers are those whose interests are imbricated in long-established markets which have been destabilized by the advent of the sharing economy: participants in the supply chains that support those markets; consumers who, though benefiting from lower prices, are often unsuspectingly exposed to new risks;¹⁴ workers whose employment prospects in traditional enterprises have been radically diminished;¹⁵ and a new cohort of operatives enrolled in the legally ambiguous and economically risky work relationships that make possible the consumer choice and lower prices delivered by the sharing economy. Thus, the sharing economy presents problems in many markets, many domains of public policy, and many juridical field. See also Harry Arthurs “The False Promise of the Sharing Economy” in McKee Derek et al Law and the Sharing Economy: Regulating online market platforms, (2018) University of Ottawa Press, Ottawa p. 57

⁸⁶ Since 1865 when Marx theorized relations of domination in the capitalist regime, it has been accepted that conflicts concerning value production and value capture revolve around the distinction between capital holders on one side and labour providers (who exchange work for a salary) on the other.⁸⁶ Indeed, platform workers, whether Uber drivers or Airbnb hosts, possess (or at least provide) the capital needed to perform their activity. In the strange world of platform capitalism, workers are capitalists without power, exploited by the virtual managers (algorithms) of companies without employees. See, K. Marx, *Salaries, prixet plus value* (2010).

⁸⁷ In terms of such innovation, the distributional effect of the P2P is quite difficult to evaluate. On the one hand, by making some services more widely available at reduced prices, the P2P economy arguably promotes increased use of these services by lower-income consumers. See Erez Aloni, “Pluralizing the ‘Sharing’ Economy” (2016) 91:4 Wash L Rev 1397-1459. (1424)

⁸⁸ See Hatzopoulos V, *The collaborative economy and EU law*, p. 4-6. (Hart, Oxford 2018)

the value at the detriment of traditional operators.⁸⁹ The P2P economy is as an economic model where people (peers) exchange goods, services, space, and money with each other (C2C) via peer-to-peer platforms.⁹⁰ The on-demand economy considers that access to a service or to a good is requested solely when necessary; hence, the remuneration or the price for it is only paid for limited usage, while being neither fixed nor predetermined. To describe the emerging platform economy, some scholars have used the term “platform capitalism”, referring “to a set of organizations carrying out productive and for-profit activities through digital platforms that arrange transactions between providers and customers”.⁹¹ The platform economy recognizes that the mushrooming of online platforms as virtual marketplaces to match demand and supply amongst peers has been and will be the driving force of the platform economy itself.⁹² After all, while the P2P economy emphasizes the role of humans, the platform economy underlines the importance of algorithms and the Internet. The gig economy, in turn, draws attention to an economic system that uses online platforms to digitally connect workers, or “individual service-providers,” with consumers.⁹³ A typical example in this respect is the activity of food delivery.⁹⁴ However, the “gig” business model bypasses many of the regular responsibilities and costs of employment, leading to widespread legal ambiguity, which has resulted in challenges as to whether workers should in fact be classified as employee.⁹⁵ Finally, the sharing economy, perhaps the most famous expression, indicates a system whereby the involved actors behave differently: an online platform performs the passive role of the matcher of demand and supply while a service provider and a user exploit their respective, often idle, expertise or resources, such as a car ride, baby-sitting, translation, legal advice and household chores. The original idea behind it was not to earn additional income. Until a decade ago, in the golden age of couch-surfing and before the advent of the now-symbolic Uber and Airbnb, online

⁸⁹ See Altain Strowel and Wouter Vergote, ‘Digital platforms: to regulate or not to regulate? p. 4, in Bram Devolder (ed) ‘The Platform economy unravelling the legal status of online intermediaries’, (Intersentia 2018)

⁹⁰ The P2P economy model includes for-profit and non-profit platforms and peer-to-peer exchanges and business-to-peer exchanges. See, Erez Aloni “Pluralizing the sharing economy.” Wash Law Rev 91(4) 2016, p. 1410-1412.

⁹¹ Acquier, A. (2018). Uberization Meets Organizational Theory: Platform Capitalism and the Rebirth of the Putting-Out System. p.14, In N. Davidson, M. Finck, & J. Infranca (Eds.), *The Cambridge Handbook of the Law of the Sharing Economy* (Cambridge Law Handbooks, pp. 13-26). Cambridge: Cambridge University Press. doi:10.1017/9781108255882.002

⁹² See Bram Devolder *The Platform Economy. Unravelling the legal status of online intermediaries*, (Intersentia 2018) Busch C, et al “The rise of the platform economy: a new challenge for EU consumer law?” in EuCML, P. 3-10; See also Isabelle Daugareilh et al, “The platform economy and social law: Key issues in comparative perspective”, ETUI aisbl, Brussels 2019, p. 19.

⁹³ See Harris, B, “Uber, Lyft, and regulating the sharing economy” in Seattle University Law Review, (2017) 41, 269–285.

⁹⁴ See Alex J Wood et al, “Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy” in *Work, Employment and Society* 2019, Vol. 33(1) 56–75 . The gig economy consists both of work that is transacted via platforms but delivered locally and thus requires the worker to be physically present, and work that is transacted and delivered remotely via platforms. Local gig work includes food delivery, couriering, transport and manual labour. Remote gig work by contrast consists of the remote provision of a wide variety of digital services, ranging from data entry to software programming (see Table 1), via platforms such as Amazon Mechanical Turk (MTurk), Fiverr, Freelancer.com and Upwork.

⁹⁵ James Dugga et al, “Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM” in *Human Resource Management Journal* V. 30. (1) 2020 p. 115

platforms simply helped out to match demand and supply in a passive manner while exchanges were essentially limited. This scenario has now radically changed to the extent that online platforms have moved away from this pioneering attitude and evolved toward a true business model aimed at profit-seeking.⁹⁶

The economic exchange, in its most sophisticated form, can take place, on the one hand, through remuneration, and on the other hand, through so-called freemium mechanisms, whereby users agree to transfer their personal data to an online platform. This economic exchange, be it in a simple or in a sophisticated form, is often transnational and hence covered by the European Union (EU) internal market law. The strength and relevance of intermediary digital platforms has been into the loop of attention by ongoing efforts of the European Union towards a future legal framework for the collaborative economy, namely: the Communication from the Commission on “A Digital Single Market” (DSM Communication),⁹⁷ as well as on “A European Agenda for the collaborative economy”;⁹⁸ the Communication from the Commission on “Online Platforms and the Digital Single Market (Opportunities and Challenges for Europe)”;⁹⁹ Further, on 15 June 2017, the European Parliament passed a Resolution on a European Agenda for the collaborative economy.¹⁰⁰

While the EU Parliament¹⁰¹ used the term ‘sharing economy’, the Commission itself used the term ‘collaborative economy’. The Agenda adopts the following definition for the collaborative economy: “collaborative economy’ refers to business models where activities are facilitated by collaborative platforms that create an open marketplace for the temporary usage of goods or services often provided by private individuals’.¹⁰² The collaborative economy involves three categories of actors: (i) service providers who share assets, resources, time and/or skills — these can be private individuals offering services on an occasional basis (‘peers’) or service providers acting in their professional capacity (‘professional services providers’); (ii)

⁹⁶ The Internet has decisively contributed to the rapid growth of the collaborative economy, not only by prompting the creation of dedicated website functioning as virtual marketplaces but, more recently, through the availability of apps on everybody’s mobile phones. These apps thus work as intermediaries between service providers and users. See Inglese M, *Regulating the Collaborative Economy in the European Union Digital Single Market* (Springer 2019) P 8-9.

⁹⁷ A DSM is one in which the free movement of goods, persons, services and capital is ensured and where individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of consumer and personal data protection, irrespective of their nationality or place of residence. See, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions, “A Digital Single Market Strategy for Europe”, COM(2015) 192 final.;

⁹⁸ European Commission, ‘A European agenda for the collaborative economy’, COM (2016) 356 final.

⁹⁹ Communication from the Commission to the European Parliament, the Council, the European economic and social committee and the Committee of the Regions “Online Platforms and the Digital Single Market Opportunities and Challenges for Europe” COM(2016) 288 final.

¹⁰⁰ Press Releases, Sharing economy: Parliament calls for clear EU guidelines, <https://www.europarl.europa.eu/news/en/press-room/20170609IPR77014/sharing-economy-parliament-calls-for-clear-eu-guidelines>

¹⁰¹ Defined as “The use of digital platforms or portals to reduce the scale for viable hiring transactions or viable participation in consumer hiring markets (i.e. ‘sharing’ in the sense of hiring an asset) and thereby reduce the extent to which assets are under-utilised.” See, Pierre Guodin, “The Cost of Non-Europe in the Sharing Economy” Study for European Parliamentary Research Service 2016, p. 5

¹⁰² See European Commission, ‘A European agenda for the collaborative economy’, COM (2016) 356 final. p. 3-4

users of these; and (iii) intermediaries that connect — via an online platform — providers with users and that facilitate transactions between them. Collaborative economy transactions generally do not involve a change of ownership and can be carried out for profit or not-for-profit.

In its public consultation on online platforms the Commission's report highlighted the concerns and issues that impact collaborative economy development. Uncertainty over the rights and obligations of users was the most cited potential obstacle to the growth of the collaborative economy across all respondent groups. Additionally, all respondent groups voiced concerns about the insufficiently adapted regulatory framework. Fragmented markets, created by overly strict or unsuitable regulation favouring incumbents, were by far the most frequently mentioned barriers to the development of the collaborative economy. Uncertainty about the employment status, i.e., whether providers are self-employed or employees, was also mentioned. Moreover, a regulatory environment adapted to the collaborative economy and support for innovation and entrepreneurship were cited as desired actions. Most respondents considered European action promoting the collaborative economy necessary.¹⁰³ Indeed, the emergence of the sharing economy has taken European regulators by surprise. At present, uncertainty reigns not only with respect to *how* this phenomenon should be addressed but also *by whom* – whether the EU should issue regulations or leave this to the Member States.¹⁰⁴

Following the Commission's above definition of the collaborative economy, to Hatzopoulos the term collaborative economy encompass those *stricto sensu* collaborative economy platforms, which facilitated: a) access, as opposed to transfer of ownership; and b) the conclusion of transaction (contract) between two other parties (a triangular relationship); c) which parties are mostly- but not exclusively - peers, regardless of whether these are prosumers or service providers.¹⁰⁵ Therefore, according to him the term 'collaborative economy' is preferred over the others mentioned above for three main reasons. First, the collaborative economy is broader than the term 'sharing economy'. The collaborative economy refers to an economic model that focus on providing access to products and services through renting, trading or sharing instead of traditional ownership. The sharing economy is a subset of the collaborative economy that focuses solely on the outright sharing of assets. Thus, the more restricted term 'sharing economy' would exclude platforms, like Uber, which facilitate transportation services other than ridesharing per se. Second, the term collaborative economy is more ideologically neutral. Third, it is the official name adopted by the European Commission.¹⁰⁶

Likewise, according to Inglese, the expression 'collaborative economy' is

¹⁰³ See, Synopsis Report on the public consultation on the regulatory environment for platforms, online intermediaries and the collaborative economy, available at <https://ec.europa.eu/digital-single-market/en/news/full-report-results-public-consultation-regulatory-environment-platforms-online-intermediaries> accessed 13 February 2020

¹⁰⁴ There are no legal obstacles for the EU to regulate sharing economy platforms yet given the specific characteristics of the sharing economy, regulation at smaller scales will often be preferable. See, M Flick, "The Sharing Economy and the EU", in Davidson et al, *The Cambridge Handbook of the law of the Sharing Economy*, (Cambridge University Press 2018) p 261.

¹⁰⁵ Hatzopoulos V, *The collaborative economy and EU law* (Hart, Oxford 2018) p. 7

¹⁰⁶ Ibid, p. 4-5

preferred¹⁰⁷ over the others mentioned above because it implies that exchanges effectuated among peers and intermediated by online platforms can be carried out for free or against remuneration.¹⁰⁸ However, it is only when the latter condition is satisfied that EU fundamental economic freedoms come into play. Otherwise, the “Cambridge Handbook on the law of the sharing economy”¹⁰⁹ uses the term “sharing economy” because it is the most ubiquitous term for referring to a myriad of new mechanisms for facilitating the exchange of goods and services, often provided by individual, small-scale actors. The Handbook embraces a very broad conception of the “sharing economy,” including large for-profit firms like Airbnb, Uber, Lyft, Taskrabbit, and Upwork, as well as smaller, non-profit collaborative initiatives, including lending libraries, maker spaces, and fab labs, through which individuals can obtain temporary access to a particular resource. In this view, this research refers to the notions such as “the sharing economy,” “the platform economy,” and the “collaborative economy” as interchangeably.

3.1 Main characteristics of the Collaborative Economy.

3.1.1 Triadic Relationship and Platform Trust.

Some online and collaborative platforms, pursue their own commercial interests and, because of their multi-sidedness, they have to cater to both businesses as well as consumers.¹¹⁰ In the legal field, triangular commercial relations are not uncommon, nor is their widespread presence imputable solely to the advent of the Internet. Indeed, it suffices to recall the well-established figure of commercial agents, executing a business on behalf of a principal and concluding it with a third party.¹¹¹ However, what distinguishes the collaborative economy from any other sort of triangular legal relation is the

¹⁰⁷ Lacking remuneration, EU internal market law cannot be triggered. See Inglese M, *Regulating the Collaborative Economy in the European Union Digital Single Market*, p.11, (Springer 2019)

¹⁰⁸ See, Juliette Sénéchal: “The Diversity of the Services provided by Online Platforms and the Specificity of the Counter performance of these Services — A double Challenge for European and National Contract Law”, in *EuCML* (2016) p. 41.

¹⁰⁹ The phrase “sharing economy” has faced significant criticism. As numerous commentators have observed, highly visible and often controversial firms like Uber, Lyft, and Airbnb, which are often referred to as part of the sharing economy, do not, in fact, facilitate the gratuitous sharing of goods and services. Rather they facilitate commercial transactions between two parties: sellers or providers of goods and services and buyers or users. For this reason many prefer the term peer-to-peer, which suggests that, in most cases, the parties on either side of these exchanges are not professionals and that, in many cases, their activity is simply a side gig that makes use of the spare capacity of a resource they already own. But this description proves inaccurate for a significant number of providers, as some individuals work full time as a driver for Uber or Lyft or rent out multiple apartments on Airbnb. Others prefer the term platform economy, which focuses on the digital platforms and apps through which transactions are brokered. In many instances these platforms enable users to obtain goods and services “on demand.” But this term can also be under-inclusive, as it may fail to include those components of the broader sharing economy that do in fact reflect a traditional understanding of “sharing,” such as neighbourhood tool libraries, which also may not rely upon a digital platform to facilitate exchanges. Cognizant of these limitations the Handbook had preferred the above term. See Nestor M. Davidson et al *The Cambridge Handbook of the law of the Sharing Economy*, (Cambridge University Press 2018) p. 2-3

¹¹⁰ See Graef, I., Jeon, D-S., Rieder, B., van Hoboken, J., & Husovec, M. (2021). *Work stream on differentiated treatment*, Final report. European Commission., p. 11
<https://platformobservatory.eu/app/uploads/2020/07/03DifferentiatedTreatment.pdf>

¹¹¹ See Inglese M, *Regulating the Collaborative Economy in the European Union Digital Single Market* p. 12, (Springer 2019)

diriment role of online platform provider. Considering the asymmetric positions of those three parties, a collaborative economy triangle can be construed as follows. Online platform providers are situated at the apex, on the intuitive ground that, lacking their intermediary role, the collaborative economy cannot exist.¹¹² Platforms of the collaborative economy belong in the extended family of online platforms.¹¹³ However, what qualifies as an online platform, as it was discussed above, is hotly debated issue (Section 2 above). Otherwise, material providers (i.e., transport or accommodation providers, etc) and users represent the basis of, and maintain, a binary mutual relation between them, while, at the same time, addressing themselves to an online platform provider for different reasons (i.e., to seek redress in the case of wrongdoing perpetrated by providers). For a depth analyses of the other two parties, (i.e., service providers and users) within the EU law context this book is suggested for consultation.¹¹⁴ Regarding the user, it is worth underlining that the emergence of the collaborative economy has given birth of what is called a 'novel economic agent', characterized by 'decentralisation and de-professionalisation', hence giving rise to the concept of peer and/or prosumer, as a person combining production and consumption.¹¹⁵ In a nutshell, the key feature is that platforms allow the supply side (the suppliers) to meet the demand side (the customers), creating a triangular structure that is based on relations between (1) the platform and the supplier, (2) the platform and the consumer, and (3) the supplier and the customer. From a legal point of view, this triangular structure is the fundamental aspect of (some) digital and collaborative platforms.

Subsequently, as in any (online or offline) business setting, the presence of trust is a major precondition for successful transactions in the sharing economy. In placing people and human interactions at its core, the sharing economy (or better the platform provider seeks to mitigate our inherent stranger-danger bias by designing and facilitating trust-building capacities between strangers whose interactions are enabled through digital platforms.¹¹⁶ Trust has traditionally been portrayed as a dyadic relationship between a trustor and a trustee; yet, in many transactions associated with the sharing economy, at least three parties are involved: the (digital) platform provider, and a pair of peers acting on that platform. Based on the triadic

¹¹² See Sorensen MJ (2016) Private law perspectives on platform services. Eur Common Mark Law 5(1):15–19

¹¹³ See Hatzopoulos V, *The collaborative economy and EU law* (Hart, Oxford 2018) p. 9

¹¹⁴ See Inglese M, *Regulating the Collaborative Economy in the European Union Digital Single Market*, p.15-19, (Springer 2019)

¹¹⁵ See Smorto G (2017) 'Critical assessment of European agenda for the collaborative economy. In depth analysis for the IMCO Committee' IP/A/IMCO/2016-10, PE 595.361, P. 12; *Il consumatore, attualmente, è un soggetto «iper-connesso», che (ri)organizza la propria vita attorno alle applicazioni e agli apparecchi resi disponibili dagli operatori del mercato digitale. La «iper-connessione» consiste nell'uso della tecnologia come «protesi» dell'azione umana per raggiungere decisioni efficienti. Per cui, il consumatore oltre che iper-connesso è anche iper-efficiente, nei suoi consumi energetici come in quelli digitali, nel senso che adotta decisioni efficienti anche se queste non sarebbero «naturalmente» le sue.* See. Fabiana Di Porto "Dalla convergenza digitale-energia l'evoluzione della specie: il consumatore iper-connesso" in Mercato Concorrenza Regole (Fascicolo 1, Aprile 2016) p. 59-60

¹¹⁶ See Mareike Möhlmann and Andrea Geissinger "Trust in the Sharing Economy Platform-Mediated Peer Trust" in Davidson et al, *The Cambridge Handbook of the law of the Sharing Economy*, (Cambridge University Press 2018) p. 28

nature of platform-mediated peer trust, a distinction could be made between interpersonal and institutional trust.¹¹⁷ Sharing economy platforms constantly introduce new and innovative trust cues that support the trust-building process.¹¹⁸ Consequently, it can be argued that such trust cues are cumulative in nature: The more cues a sharing platform provides, the more likely it is that trust is produced. These cues are leveraged to establish trust in digital platforms in general, and in the sharing economy in particular:¹¹⁹ a) peer reputation, b) digitalized social capital; c) Provision of information, d) Escrow services; e) Certification and external validation; f) Insurance cover.

3.1.2 Collaborative Platform's Business Models.

Platform businesses may be defined as “businesses creating significant value through the acquisition and/or matching, interaction and connection of two or more customer groups to enable them to transact”.¹²⁰ Within the sharing economy, by mapping the value creation mechanisms and value distribution mechanisms four types of business model had been identified.¹²¹ The first business model is made by “Commoners” which create and provide free access to public goods by pooling resources and skills in order to make them available to as many people as possible and to spur the emergence of alternative and non-market values, such as open knowledge, free and open access, or do-it-yourself (DIY). Value is created by and for the community or the initiative's ecosystem. Typical example is Wikipedia. The second category is made of “Mission-driven platforms”, which intermediate between peers through a digital platform to support a societal cause. Like Commoners, they pursue a mission to transform society through the initiative by facilitating new practices of consumption, exchange, and relationships. The cause and values that initially motivated the founders constitute the purpose of the initiative, which grows along with the volume of resources that are shared through the platform.

¹¹⁷ **Interpersonal trust** lies at the core of trust in the sharing economy since it refers to relationships between peers acting on these platforms. The sharing platform provider is an enabler for interpersonal trust, while at the same time being dependent on being perceived as a trustworthy institution itself. As the sharing economy is based on human interactions, the interpersonal trust element is arguably more significant than in other online transactions, such as e-commerce. Sharing economy activities tend to be characterized by greater social interaction among peers, as when driving in a car together or spending the night in a host's apartment and having dinner together, than in the more impersonal transactions conducted on platforms such as eBay and Amazon. On the other hand, sharing economy platforms must also establish **institutional trust** as platforms engage in more traditional organization–customer relationships with participating peers. Ibid.

¹¹⁸ Trust in a platform provider or brand as an organization leads to trust in the peers with whom one is sharing, allowing spillover effects between different trust entities. In particular, such trust hierarchies may be evident at early stages of trust relationships, when users have little familiarity with a sharing economy service. We expect the process of trust transfer to apply as well to low levels of trust. Thus, trust can also be lost by the same mechanism. For instance, public scandals, such as those that have recently affected Uber, might affect the brand of a sharing economy platform, and, in turn, lower consumers' trust in the platform more generally. Ibid. p. 32-33

¹¹⁹ For instance, peer ratings offer opportunities to access digital social capital accumulated by other members of an online sharing platform. More recently, sharing economy platforms have implemented two-way ratings, or so-called simultaneous reviews, to deal with reciprocal peer review behaviour, which has been shown to result in inflated and non-credible review scores. Ibid, p. 34

¹²⁰ See Laure Claire Reillier and Benoit Reillier, *Platform Strategy. How to Unlock the Power of Communities and Networks to Grow Your Business* (Routledge 2017) p. 22

¹²¹ See Acquier, A., & Carbone, V. (2018). Sharing Economy and Social Innovation. p. 54-58, In N. Davidson, M. Finck, & J. Infranca (Eds.), *The Cambridge Handbook of the Law of the Sharing Economy* (Cambridge Law Handbooks, pp. 51-64). Cambridge: Cambridge University Press. doi:10.1017/9781108255882.005

Typical example is Couchsurfing. In the third category belongs, “shared infrastructure providers” which are for-profit initiatives that monetize access to a strategic proprietary resource. Operating on a membership fee or pay-per-use basis, shared infrastructure providers earn a profit and gain power from a proprietary infrastructure that individuals and professionals use to realize their projects. Typical example is ZipCar. The last business model and the most visible and controversial initiatives in the sharing economy are known as “Matchmakers”. These are for-profit commercial platforms that bring individuals together in networks so they can exchange goods or services on a peer-to-peer basis. In the field of personal transport or accommodation, examples include platforms such as Uber, Airbnb, and BlaBlaCar. The platform intermediates between peers and captures part of the value created to make a profit from this intermediation. In other terms, economic analyse could characterize the specificities of online platforms. For an in depth analyse of economics of collaborative economy these two books¹²² are recommended.

3.1.3 Matching and Management via Algorithms.

A key characteristic of online platforms is their capability to match a very large number of users in a market to facilitate an exchange. Platforms help users of different sides of the market (sellers, buyers, social media users, advertisers, software developers, etc.) to find what they are looking for. The more efficient the platform is in matching users; the more users will be attracted to the platform.¹²³ Matching in the digital context is facilitated by matching or search algorithms. This efficiency is gained thanks to aggregation and analyse of data, it follows that the input of large amount of data in platforms (algorithms) reduces the search cost for users and, therefore, improving better matching.¹²⁴ Usually, algorithms are presented as objective, neutral, even benevolent. However, numerous applications have shown that algorithms are not pure mathematics, infallible and neutral, but rather human opinions structured in mathematical form and often reflect the pre-understandings of those who design them, or the historical series taken as a reference. The fact is that blind faith in the algorithm is leading to a rather disturbing expansion of its domain, accompanied also by the first doubts about its actual impartiality. Uber and other ride-hailing apps uses algorithms and applied it to work, and that is not always a good thing. For Uber drivers, the workplace can feel like a world of constant surveillance, automated manipulation, and threats of “deactivation.”¹²⁵ In specific, the use of technology and algorithms as substitutes to direct managerial control creates power asymmetries between the platform and the worker (i.e., Uber’s driver) in the collaborative economy. Such algorithms may be used, as in the case with *Uber*, to assign work, in order to fix prices, in order to evaluate and control the worker performance on the basis of users’ rating, acceptance/cancellation rate.

¹²² Ming Hu, *Sharing Economy Making Supply Meet Demand* (Springer 2019); See also, Elena G. Popkova, Bruno S. Sergi, *Digital Economy: Complexity and Variety vs. Rationality* (Springer 2020).

¹²³ See Bertin M, “An Economic Policy Perspective on Online Platforms” Institute for Prospective Technological Studies Digital Economy Working Paper 2016/05, p. 20.

¹²⁴ See Hatzopoulos V, *The collaborative economy and EU law* P.12

¹²⁵ Alex Rosenblat (12 October 2018) *When Your Boss Is an Algorithm*, available <https://www.nytimes.com/2018/10/12/opinion/sunday/uber-driver-life.html> accessed 13 February 2020

The algorithms may be further used to perform a series of managerial and/o supervisory tasks as speeding up the work process, determining the timing and length of breaks, monitoring quality, ranking employees and more. The automatic “termination” of workers when their ratings fall below a certain level (4.6 out of 5 stars in the case of *Uber*) or “firing by algorithms” is the most extreme of manifestation of algocracy.¹²⁶ Management-by-algorithm, or algorithmic management, is commonplace within collaborative economy. Algorithmic management can be defined¹²⁷ as “a system of control where self-learning algorithms are given the responsibility for making and executing decisions affecting – *not exclusively* (emphasises added) - labour, thereby limiting human involvement and oversight of the labour process”. It replaces some of the tasks and processes that workers typically engage with by using algorithms that are developed by the very same individuals' data on the platform.

The autonomy resulting from algorithmic control can lead to overwork, sleep deprivation and exhaustion because of the weak structural power of workers vis-a-vis clients. This weak structural power is an outcome of platform-based rating and ranking systems enabling a form of control which can overcome the spatial and temporal barriers that non-proximity places on the effectiveness of direct labour process surveillance and supervision.¹²⁸ In a nutshell, most platforms heavily rely on automated algorithm-based decision-making to process transactions and data. Automated decision-making systems are efficient and often more impartial than human decision makers. But they can also perpetuate discrimination and deleteriously affect citizens. From a legal perspective protection, Art. 22 GDPR on automated individual decision-making, including profiling, plays a crucial role here to avoid undesired effects on citizen and businesses.¹²⁹

4. Legal challenges arising from the platform economy in the internal market.

According to a public consultation¹³⁰ carried out by the European Commission, the most commonly undesired practices experienced by businesses in their relationship with platforms were: (i) a platform applying unbalanced terms and conditions; (ii) a platform promoting its own services to the disadvantage of services provided by suppliers (self-preferencing); and (iii)

¹²⁶ See Hatzopoulos V, *The collaborative economy and EU law*, p-154-155; Algocracy means governance by computer algorithms, instead of bureaucratic rules of surveillance. It was used for the first time by Anesh A, *Virtual Migration. The Programming of Globalization*, (Duke University press 2006) p 5.

¹²⁷ See James Dugga et al, “Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM” in *Human Resource Management Journal* V. 30. (1) 2020 p. 119.

¹²⁸ See Alex J Wood et al, “Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy” in *Work, Employment and Society* 2019, Vol. 33(1) p. 70

¹²⁹ See Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679 available at file:///C:/Users/erion/Downloads/wp251rev01_enpdf.pdf accessed 6 January 2020

¹³⁰ European Commission (2016). Public consultation on the regulatory environment for platforms, online intermediaries and the collaborative economy. Synopsis Report. P. 9 Available at <https://ec.europa.eu/digital-single-market/en/news/results-public-consultation-regulatory-environment-platforms-online-intermediaries-data-and> accessed 27 February 2020

a platform refusing access to its services. When policymakers face innovation in the way people transact, exchange goods, and deliver services, they must decide whether and which legal rules apply. Some existing regulations lend themselves quite easily to direct application on the platform. Other regulations appear outdated.¹³¹ Online platforms can create and shape new markets, to challenge traditional ones, and to organise new forms of participation or conducting business based on collecting, processing, and editing large amounts of data.¹³² Thus, digital platforms obviously challenge the law, and this is a key feature and consequence of their operation.¹³³ Most platforms are challenging specific laws (market access,¹³⁴ data protection,¹³⁵ competition law,¹³⁶

¹³¹ When regulation is designed to address distributional concerns, such as equality and fairness goals, it is likely that some of the issues that pervaded offline exchanges will continue into platform relationships. The platform economy thereby offers a fresh opportunity to observe and analyze the fit between goals and actual outcomes of a range of existing laws. When laws do not promote social goals but instead protect incumbent industries against competition, the platform is clearly a welcome intervention and such anticompetitive laws should largely be deemed obsolete. Innovation should also be viewed as an opportunity to unpack, and rethink, traditional regulatory categories. See Lobel, O. (2018). Coase and the Platform Economy. p. 71, In N. Davidson, M. Finck, & J. Infranca (Eds.), *The Cambridge Handbook of the Law of the Sharing Economy* (Cambridge Law Handbooks, pp. 67-77). Cambridge: Cambridge University Press. doi:10.1017/9781108255882.006

¹³² Communication from the commission to the European Parliament, the Council, the European economic and social committee and the Committee of the Regions on "Online Platforms and the Digital Single Market Opportunities and Challenges for Europe", SWD(2016) 172 final P. 2

¹³³ See Altain Strowel and Wouter Vergote, 'Digital platforms: to regulate or not to regulate? p.2 in Bram Deveolder (ed) 'The Platform economy unravelling the legal status of online intermediaries', (Intersentia 2018)

¹³⁴ A key question for authorities and market operators alike is whether and if so to what extent, under existing EU law, collaborative platforms and service providers can be subject to market access requirements. These can include business authorisations, licensing obligations, or minimum quality standard requirements (e.g. the size of rooms or the type of cars, insurance or deposit obligations etc.). Under EU law, such requirements need to be justified and proportionate, taking account of the specificities of the business model and innovative services concerned, while not favouring one business model over the other. See, Communication from the commission to the European Parliament, the Council, the European economic and social committee and the Committee of the Regions on "A European agenda for the collaborative economy" (SWD (2016) 184 final). P.3

¹³⁵ *Le piattaforme dell'economia collaborativa basano il proprio successo imprenditoriale sulla raccolta di dati dei propri utenti, al fine di individuare le loro preferenze e offrire così un servizio personalizzato. Le pratiche commerciali delle piattaforme dell'economia collaborativa saranno profondamente influenzate sotto diversi aspetti dal GDPR. Novità quali il diritto alla portabilità dei dati potrebbero condurre le piattaforme a collaborare tra di loro, al fine di creare sistemi informatici all'insegna dell'interoperabilità, a vantaggio dell'utente che potrà quindi passare da un operatore all'altro senza ostacolo alcuno. La necessità del consenso preventivo dell'interessato al trattamento dei propri dati personali dovrebbe andare parimenti a beneficio dei consumatori. Permangono tuttavia numerose perplessità; non è infatti chiaro come sarà effettivamente garantita la portabilità dei dati, ove i gestori delle piattaforme rifiutassero di collaborare tra di loro, rivelando i propri sistemi e progetti.* See, Mirko Forti, "Le piattaforme online alla prova del Regolamento (UE) 2016/679. Quali tutele per la condivisione dei dati nell'economia collaborativa?" in *Rivista di Diritto dei Media* (2/2019) P. 15

¹³⁶ Platforms generate regulatory concerns because of their expanding market power. Many platform markets tend towards domination by one or very few players, thanks to, among other things, strong network effects and economies of scale advantages, and the exclusive access to vast amounts of consumer, business and transactional data. These data troves give them a constantly self-reinforcing knowledge edge with regards to market dynamics over competitors and regulators alike. See, See Paul-jasper D, "Online platforms and how to regulate them: an EU overview" policy paper no. 227 14 June 2018, in Jacques Dolers Institute Berlin. p. 4.

copyright, law,¹³⁷ antidiscrimination law,¹³⁸ licensing regimes,¹³⁹ etc.) and authorities¹⁴⁰ (competition authorities, data protection authorities, judiciary, etc.). In European Union legal context, the CJEU involvement, on the one hand, in the data protection field with rulings on the 'right to be forgotten'¹⁴¹ and the Schreem I¹⁴² and Schreem II¹⁴³ and, on the other hand, concerning the liability legal regime of Uber, Airbnb and Star Taxi App, suggest that there is concrete conflict going on between platforms and the current EU regulatory framework. Another example of this clash is the legal status classification issue faced by sharing economy workers globally. Facing traditional regulation, sharing economy companies and gig workers platforms often default to the argument

¹³⁷ The long-standing taxation principle of permanent establishment and physical presence creates loopholes when applied to digital business activities. A government's current taxing rights on corporate income are based on the physical presence of a firm in its jurisdiction. Companies that have only a significant digital presence in a country are free from taxation liability because of lack of legal nexus under the international rules. Facebook has over 2.3 billion monthly users spread over nearly every country, but it pays little or no tax in many countries where it does not have an office. Responding to the pressing call to update tax systems to address business activities in the digital economy, countries have begun to take measures unilaterally. Some countries have broadened the concept of permanent establishment and physical presence to justify taxation of corporate income following the significant economic presence proposal. *Saudi Arabia has established virtual service permanent establishment rules*. Israel has imposed a corporate tax on non-resident companies with a "significant digital presence." The United Kingdom announced a digital service tax in Finance Bill 2019/20, which becomes effective on April 20, 2020. The taxable income is the value of the advertising sales targeted at U.K. users and the commissions for a transaction with U.K. users. The European Commission has also proposed a 3 percent tax on digital businesses' portion of annual worldwide revenues attributable to European Union (EU) users. The EU's digital service tax proposes allocating revenue in proportion to how often an advertisement has appeared on users' devices and the number of users who conducted transactions on a digital business platform. See, Rong Chen "Policy and Regulatory Issues with Digital Businesses" in World Bank Group (Policy Research Working Paper n. 8948, July 2019) p. 9-12.

¹³⁸ Bilateral relationships directly concluded by the parties fall within the scope of those (antidiscrimination) Directives, excluding the triangular one that arises when a digital platform intervenes. They contemplate 'one sided' rather than 'two sided' markets. In particular, platforms face two legal situations: first of all, they may act solely as intermediaries and, secondly, they may add to their brokerage role a range of service components inherently linked to exercising decisive influence over them. If such services imply 'control' of providers, then the online platform in fact becomes "the provider" of the service at hand. In this case, there is no longer a 'two sided market' relationship. Consequently, European non-discrimination rules need to be applied as if there were just two contractual parties without the brokerage of the online platform. However, if the platform acts purely as the go between, for instance cases where Airbnb or Uber are involved, the matter unfolds differently. Indeed, the platform does not discriminate users; rather, suppliers discriminate customers or, vice versa, users discriminate themselves. See, Susana Navas Navarro 'Discrimination and Online Platforms in the Collaborative Economy' in EuCML 2019, p. 36

¹³⁹ See Derek McKee "Peer Platform Markets and Licensing Regimes" in McKee Derek et al *Law and the Sharing Economy: Regulating online market platforms*, (2018) University of Ottawa Press, Ottawa p.17

¹⁴⁰ See Altain Strowel and Wouter Vergote, 'Digital platforms: to regulate or not to regulate? p.2 in Bram Devoolder (ed) 'The Platform economy unravelling the legal status of online intermediaries', (Intersentia 2018)

¹⁴¹ CJEU, 13 May 2014, C-131/12 (Google Spain v AEPD and Marioa Costeja Gonzales).

¹⁴² CJEU, 6 October 2015, C-362/14 (Maximilian Schrems v Data protection Commissioner); Under the safe harbour regime, established by the ECD, 'information society service providers' performing mere conduit, caching and hosting are exempted from liability for third parties' unlawful conduct as long as they are in no way involved with the information transmitted, or, in the case of hosting services, do not have knowledge or awareness of the illegal activities and, if acquired, promptly act to stop them. The regime of 'conditional' liability was envisaged as one of the means necessary for the development of online services and the flourishing of the information society (p. 295). See, Montagnani, Maria Lillà and Trapova, Alina, "Safe Harbours in Deep Waters: A New Emerging Liability Regime for Internet Intermediaries in the Digital Single Market" (July 28, 2018). International Journal of Law and Information Technology, Volume 26, Issue 4, 1 December 2018, Pages 294-310. Available at SSRN: <https://ssrn.com/abstract=3221520> or <http://dx.doi.org/10.2139/ssrn.3221520>

¹⁴³ CJEU, 16 July 2020, C-311/18, Data Protection Commissioner v Facebook Ireland

that they are not employers because they are merely offering an online platform that connects workers—or independent entrepreneurs—to consumers.¹⁴⁴ For instance, in United Kingdom, the UK Employment Tribunal¹⁴⁵ (also upheld by the Employment Appeal Tribunal¹⁴⁶) and France’s Court of Cassation¹⁴⁷ reached the conclusion that Uber drivers qualify as workers. Subsequently, the discussion surrounding the collaborative economy triangle is permeated by the ambiguities regarding the nature of the transactions and the identities of the actors.¹⁴⁸ These uncertainties are counterweighted by two certainties. First, online platforms are in a predominant position, being placed at the apex of the collaborative economy triangle and, consequently, exercising decisive control over transactions, payment systems, rate-and-review mechanisms, etc.¹⁴⁹ Second, online platforms have become a matrix not only allowing the conclusion of the main service contract, but also performing part of the main service or, alternatively or cumulatively, performing services related to the main service that the provider does not know how to, is unable to or is unwilling to carry out.¹⁵⁰

4.1 Defining the Legal status of collaborative platforms in the internal market: intermediaries or real service providers?

Traditional EU regulation, which focus mainly on balancing the interest of two contracting parties, is now confronted with a triangular relationship between a platform, a supplier and a user. Legislators, judges and lawyers across the globe are struggling to determine the legal status of online intermediaries.¹⁵¹ In general, online platforms are not designed to provide their own accommodation or transport services, but to facilitate the contracting of services provided by third parties. However, the intermediation service provided by platforms is particularly powerful. Indeed, even the notion of internet intermediaries, defined by the OECD¹⁵² as entities that ‘bring together or facilitate transactions between third parties on the Internet’, is increasingly replaced in common parlance by the more palatable term of “platform”, which evokes a role that goes beyond one of mere messenger or connector, and

¹⁴⁴ Critics of this argument point out that the sharing economy companies still manage their workers as if they were employees in various ways, such as unilaterally setting rates for services; dictating how the services are provided; and screening, testing, training, evaluating, promoting, and disciplining the workers based on standards set by the companies. See Brett Harris, “Uber, Lyft, and Regulating the Sharing Economy”, 41 Seattle U. L. REV. (2017), p. 274.

¹⁴⁵ *Aslam et al., v. Uber BV et al*, No. ET/2202550/15, <https://www.judiciary.uk/wp-content/uploads/2016/10/aslam-and-farrar-v-uber-reasons-20161028.pdf>

¹⁴⁶ The Tribunal’s finding about drivers not being able to grow their own business or negotiate terms with passengers, impact the capacity for drivers to act on their own entrepreneurial spirit. See, *Aslam et al., v. Uber BV et al*, NO. UKEAT/0056/17DA, <https://www.employmentcasesupdate.co.uk/site.aspx?i=ed36468>;

¹⁴⁷ Judgment n° 374 of March 4, 2020, *UberBV V. A.X.* https://www.courdecassation.fr/IMG/20200304_arret_uber_english.pdf

¹⁴⁸ See M Inglese, *Regulating the Collaborative Economy in the European Union Digital Single Market* (Springer 2019) p. 20.

¹⁴⁹ This control may be quite limited and concerns data that users submit when creating an account or using a platform such as Facebook or Twitter.

¹⁵⁰ See J Sénéchal “Online Platforms under French Law” cit. p. 128-133

¹⁵¹ See preface, B. Deveolder (ed.), *The Platform economy unravelling the legal status of online intermediaries*, New York, 2018.

¹⁵² See OECD, *The economic and social role of Internet intermediaries*, at oecd.org, 9.

extends to the provision of a shared space defined by the applications within which users can carry out their activities and generate value. If online platforms were required to be pure intermediaries, Airbnb, BlaBlaCar, Amazon, Netflix or Facebook would not be considered online platforms.¹⁵³

In the specific context of the collaborative economy, platforms have become a matrix not only allowing the conclusion of the main service contract, but also performing part of the main service or, alternatively or cumulatively, performing services related to the main service that the provider does not know how to, is unable to or is unwilling to carry out.¹⁵⁴ For instance, companies such as Uber, Lyft, Airbnb, Aereo¹⁵⁵ have been running against existing regulations and the legal battles often turn on how to define the platform business.¹⁵⁶ Acting as an intermediary has several advantages¹⁵⁷ for the platform and it is usually expressed in the platform operator's terms of service. Nevertheless, it is doubtful whether such a declaration is sufficient for reducing the role of the platform to an intermediary. The EU Commission had underlined that whether an online platform also provides the underlying service has to be established on a case-by-case basis.¹⁵⁸ In short, one of the first regulatory challenge around online platforms is to define their legal status: mere facilitator, broker or supplier of integrated service? To put it in EU internal

¹⁵³ See Oxera, "Benefits of online platforms. Prepared for Google", October 2015, p. 14-5, <https://www.oxera.com/wp-content/uploads/2018/07/The-benefits-of-online-platforms-main-findings-October-2015.pdf.pdf> accessed 24 February 2020

¹⁵⁴ See Juliette Sénéchal "Online Platforms under French Law" in U Blaurock (eds) *Plattformen* (Nomos 2018) p. 128-133

¹⁵⁵ In a different field of consumption, media content, the Supreme Court ruled in 2014 that Aereo, a provider of online streaming technology, was an illegal service operating in violation of copyright law. Aereo sought to allow individuals to shift from ownership to access. It developed a bank of tiny antennas in each city in which it operated, which received local TV broadcast signals, much like old rabbit ears. Every time a subscriber wanted to watch or record a show, Aereo assigned an individual antenna to the subscriber. Aereo, viewed through the lens of the platform, was basically a **cloud-based intermediary**, enabling people to intercept what they were free to consume directly. Instead of consumers purchasing an enormous cable package and not watching seventy percent of the channels, and some of the preferred content is unavailable in their cable zone, Aereo provided a cheaper and more fine-tuned option. Moreover, Aereo helped to reduce the barriers to entry for small, independent broadcasters, who aired niche television content that broadcasters and cable companies ignored. The challenge was that, in reality, users who subscribed to Aereo could intercept the local television package of any city in which Aereo operated, regardless of the user's location. Unsurprisingly then, much like other incumbents challenged by the platform, the broadcasting networks opposed this new business model and claimed that it violated their rights to receive transmission fees under the Copyright Act. In 2014, the Supreme Court ruled against Aereo, finding that Aereo had violated copyrights held by the networks. **The point of contention was whether Aereo's business model constituted a "public performance" rather than merely enabling individual viewing**, and if so, Aereo would be legally required to obtain permission from the copyright owners of any programs it transmits. See Orly Lobel, "The Law of the Platform" *Minn. L. Rev.* 87 (2016), P 139-142

¹⁵⁶ Are these digital companies service providers or brokers of individualized exchanges? Should they be viewed as merely enabling intermediaries or robust corporate infrastructures? Ibid. 91

¹⁵⁷ The electronic intermediary service will benefit from the principle of freedom to provide services as guaranteed in EU legislation — Article 56 TFEU and Directives [2006/123] and [2000/31]; b) they cannot be held responsible for any ill-execution of the underlying contract (service) or for damage accruing therefrom under Art. 3 E-Commerce directive; and c) they can claim to be fully absolved from any liability, including for misrepresentation, offensive or illegal content, under Articles 13, 14, 15 of the E-Commerce Directive.

¹⁵⁸ The key criteria to be considered are: a) the circumstance that the collaborative platform sets the final price to be paid by the user; b) the fact that the platform sets other key contractual terms; and c) the fact that the platform owns the key assets used to provide the underlying service. See European Commission, A European agenda for the collaborative economy, COM(2016) 356, 6.

market terms,¹⁵⁹ do online platforms provide an information society service and do they also supply an underlying service in the end?¹⁶⁰ If platforms do not provide a merely intermediation service, instead, they provide material services (i.e., transportation, accommodation etc) then, often is required a license and full liability for their provisions towards users.

Indeed, collaborative/sharing platforms such as BlaBlaCar, Uber, StarTaxi and Airbnb have been accused by incumbent market operators for unfair and/or anticompetitive behaviour in the underlying market, that is, to date, especially in the sectors of transport and accommodation. In specific, in the transport sector, there have three important judgments. In Spain, the BlaBlaCar platform, a ridesharing company connecting car owners with potential user for long distance journeys, has been held by the Madrid Commercial Tribunal to be a mere intermediary, not in competition with traditional coach and train service.¹⁶¹ In EU level the ECJ has, respectively, ruled in 2017 and in 2020 on UberPop and Star Taxi app. In UberPop¹⁶² the Court declared that an intermediation service such as UberPOP must be classified as “a service in the field of transport” within the meaning of EU law – thus not as an information society service.¹⁶³ While in the Star Taxi App, (2020)¹⁶⁴ according to the Court, a digital platform which displays available taxis but does not actively match a taxi and a passenger, does not set prices and does not manage payments is providing an information society service services regulated under Directive 2000/31 on electronic commerce.¹⁶⁵

The Court decides as in Airbnb judgment (2019, C-390/18 AHTOP v. Airbnb

¹⁵⁹ See M Inglese, *Regulating the Collaborative Economy in the European Union Digital Single Market* (Springer 2019) p. 20.

¹⁶⁰ Any discussion of the legal issues raised by digital platforms faces at the outset two main difficulties. The first is the lack of a clear and widely shared definition of what a digital platform is. The second is the stark heterogeneity of the issues involved, which are not limited to a single discipline, but lie at the interface of different branches of the legal system, like consumer law, competition law, administrative law, labor law, data protection, etc. Digital platforms have been defined either broadly or narrowly. See G. Resta, “Digital platforms under Italian Law” in U Blaurock (eds) *Plattformen* (Nomos 2018) p. 100; See K Sein “Legal problems of electronic platform economy – Estonian perspective” in U Blaurock (eds) *Plattformen* (Nomos 2018) p. 80;

¹⁶¹ The Commercial Court in Madrid decided that BlaBlaCar was only mediating in the provision of the carpooling service, and furthermore, that the underlying carpooling services mediated by BlaBlaCar are private services that can be provided with no license as the price is below EUR 0.19/km, the legal reference to reimburse expenses to civil servants when traveling with their own car; that is, the service is being provided with no profit. See, *Confesbus v Blablacar* SJM M 6/2017 (2 February 2017) ES:JMM: 2017:364.

¹⁶² Uber Spain was memorable for introducing a new test for determining whether an online platform provides an information society service caught by the *lex speciali* of the E-commerce Directive or whether it provides a composite service governed by general EU law on the freedom to provide services (or not, if the service relates to transport). Almost two years after Uber decision, the focus of the regulatory battle shifted towards short term rental platforms. See Finck M, “Distinguishing internet platforms from transport services”, 55 CMLR (2018) pp. 1619-1640.

¹⁶³ Case C-434/15, *Elite Taxi vs. Uber*, EU:C:2017:981.

¹⁶⁴ Start Taxi App, operates a smartphone application that puts taxi service users directly in touch with taxi drivers. The application makes it possible to run a search, and then displays a list of taxi drivers available for a journey. The customer is then free to choose a driver on that list. Star Taxi App does not forward bookings to taxi drivers and does not set the fare, which is paid directly to the driver at the end of the journey.

¹⁶⁵ Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (hereafter “E-Commerce Directive”).

Ireland)¹⁶⁶ but against the precedent in *Elite Taxi v UberPop*.¹⁶⁷ In specific, Uber Spain was memorable for introducing a new test for determining whether an online platform provides an information society service caught by the *lex specialis* of the E-Commerce Directive 2000/31 or whether it provides a composite service governed by general EU law on the freedom to provide services (or not, if the service relates to transport).¹⁶⁸ Unlike in *UberPop*, in *Airbnb* and *Star Taxi App*, the ECJ took a different view which will have some important implications on the debate of how to regulate platform economy in general.¹⁶⁹

In a nutshell, whether a collaborative platform also provides the underlying service will normally have to be established on a case-by-case basis. As established by the ECJ, several factual and legal criteria can play a role in this regard. The level of control or influence that the collaborative platform exerts over the provider of such services will generally be significant. Additionally, since the predominant arrangement underlying the EU legislation is the chain model of contracts, the triangle structure used by platforms does not make an easy fit. In other words, EU law does not provide a clear answer to the question about the platform's position within contractual relations, and what legal consequences follow from the platform's engagement into the process of concluding (and potentially performing) contracts between customers and suppliers. Therefore, when it comes to the possible scope of legislative intervention, there are three topics that would be relatively easy to introduce and would offer added value to the current legislative environment: (1) clarification of the platforms' status, (2) clarification of the users' status, and (3) regulating reputational systems. Clarification of the platforms' status could improve the transparency of the market and increase users' understanding when it comes to the position of the platform, which fits well with the rationale of the existing *acquis*. A further going legislative action, i.e., introducing the platform's liability, would require a more elaborate, fully fleshed out piece of legislation.¹⁷⁰ Indeed, the EU 2020 Proposal for Digital Services Act (DSA) -

¹⁶⁶ Similar to *Elite Taxi*, in *Airbnb Ireland*, an association of real estate brokers based in Paris challenged the fact that Airbnb advertises rental opportunities online without having been duly authorized to do so through a professional card. Its delivery is subject to the fact that an applicant has a demonstrable professional qualification, provide financial guarantees and have professional liability insurance. Of course, Airbnb and, above all, its hosts have none. Airbnb contests that these restrictions are not applicable to the extent that its activities fall within the scope of the E-Commerce Directive. Thus, following - or departing - from the *Uber* judgement, the CJEU was required to rule on whether Airbnb is a market maker not limited to matching demand and supply, but engaged in offering the underlying service as well. By its judgment of 19 December 2019, the Grand Chamber of the Court held that Airbnb's intermediation service is an information society service regulated under Directive 2000/31 on electronic commerce. See Murati E, (September 2020), *Airbnb and Uber: two sides of the same coin* (September 2020) available at: <http://www.medialaws.eu/airbnb-and-uber-two-sides-of-the-same-coin/> accessed 20 October 2020.

¹⁶⁷ See Curia press release <https://curia.europa.eu/jcms/upload/docs/application/pdf/2020-12/cp200149en.pdf> accessed 13 December 2020.

¹⁶⁸ See M. Finck, *Distinguishing internet platforms from transport services*, in CMLR, 55, 2018, 1619 ss

¹⁶⁹ See Murati E, (September 2020), *Airbnb and Uber: two sides of the same coin* (September 2020) available at: <http://www.medialaws.eu/airbnb-and-uber-two-sides-of-the-same-coin/> accessed 20 October 2020

¹⁷⁰ Clarification of the users' status to enhance the way in which platforms function would constitute a targeted, platform-focused action, and would not cause far-reaching changes to the structure of the existing EU regulation. Rules on reputational systems – introduced either as a self-standing act, or as a part of a larger agenda – would trigger an issue of fundamental importance for the digital market. See Aneta Wiewiórska-Domagalska "Online Platforms: How to Adapt Regulatory Framework to the Digital Age?" EU Parliament (2017) p. 9

amending Directive 2000/31/EC on e-commerce¹⁷¹ - intends to strengthen the EU single market and clarify digital services' responsibilities and liabilities. In combination to the ECJ suggested parameters, the DSA would provide legal certainty to platform providers and user of these on whether the platform is also offering the underlying service or not. An in-depth analysis of the DSA requires a separate research.

4.2 Exploring regulatory interventions targeted to digital platforms.

In addition to the DSA, on 15 December 2020, the EU Commission has also published a proposal for Digital Markets Act (DMA)¹⁷² which aims to tackle the economic power of large online platforms.¹⁷³ This section aim to provide a brief overview of the DMA and of the EU main reasons for proposing it. However, before adopting the DMA proposal, the EU initiative to regulate the platform economy can be dated with the adoption of Regulation (EU) 2019/1150¹⁷⁴ on "promoting fairness and transparency for business users of online intermediation services" (the P2B Regulation), which applies from July 2020 onwards. The increasing dependence of businesses on online platforms to sell their goods and services to consumers has allowed for several harmful trading practices against which no redress was possible. Accordingly, the Regulation aims to restore some balance in the P2B relationships to ensure a fair, predictable, sustainable and trusted online business environment within the internal market. It lays down rules to ensure that business users of digital platforms are granted appropriate transparency, fairness and effective redress possibilities (Art. 1). It addresses several problematic practices by online platforms (Amazon was amongst the main regulatory targets of the EU legislator¹⁷⁵) and search engines by focusing on high level transparency requirements. These requirements provide clear principles on implementing changes to terms and conditions (hereafter T&C), the grounds for suspension or termination of a platform, ranking parameters and any preferential treatment of a platform's own products or services, and access to personal and other data and the use of most favoured nation (MFN) clauses.

Subsequently, the DMA proposal follows the Communication *Shaping Europe's Digital Future*, which indicated that additional rules may be needed to ensure contestability, fairness and innovation and the possibility of market entry, as well as public interests that go beyond competition or economic considerations. The Proposal establishes *ex ante* rules to ensure that markets characterised by large platforms (i.e., Google, Amazon, Apple, etc) with

¹⁷¹ Proposal for a regulation of the European Parliament and of the Council on a single market for digital services (Digital Services Act) and amending directive 2000/31/EC com(2020) 825 final 2020/0361

¹⁷² Proposal for a regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act) Brussels, 15.12.2020; (2020) 842 final 2020/0374 (cod)

¹⁷³ See European initiatives to hobble u.s. tech companies (November 10, 2020) the digital services act, the digital markets act, and the new competition tool, accessed 12 December 2020.

¹⁷⁴ Regulation (EU) 2019/1150 of the European Parliament and of the Council on promoting fairness and transparency for business users of online intermediation services [2019] OJ L186/59.

¹⁷⁵ See Ducuing Charlotte, Dutkiewicz Lidia, Miadzwetskaya Yuliya (2020) TRUSTS *Trusted Secure Data Sharing Space*. D6.2 Legal and Ethical requirements, p. 59.

significant network effects (“gatekeepers”), remain fair and contestable.¹⁷⁶ The objective of the DMA is to address at EU level the most salient incidences of unfair practices and weak contestability in relation to so-called “core platform services” (Art. 2 (2)). To this end, the Proposal: a) establishes the conditions under which providers of core platform services should be designated as “gatekeepers” (Chapter II); b) sets out the practices of gatekeepers that limit contestability and that are unfair, laying down obligations that the designated gatekeepers should comply with, some of which are susceptible to further specification (Chapter III). For instance, in Art. 6 (d) prohibits self-preferencing practices (i.e., unfair treatment in rankings, differentiation in terms of access to data, etc). This rule is inspired by the decision of the European Commission in June 2017 to fine Google €2.42 billion for abusing its dominance in the market for online search by systematically giving prominent placement to its own comparison-shopping service compared to competing comparison-shopping services.¹⁷⁷ The concept has also featured in other pending proceedings,¹⁷⁸ being the most recent one the case of Spotify vs. Apple. Music streaming app Spotify, for example, has complained that it is being treated unfairly in comparison with Apple’s music app because of exorbitant commission fees, self-preferencing, restricted promotions, and limited integration with Apple’s broader ecosystem.¹⁷⁹ Indeed, in April 2021, the EU Commission has supported Spotify’s claim back in 2019 and has found that Apple has broken EU competition rules (Art. 102 TFEU) with its App Store policies;¹⁸⁰ (b) provides rules for carrying out market investigations (Chapter IV); c) and contains provisions concerning the implementation and enforcement of this Regulation (Chapter V). For further exploration of the DMA, this work suggests some excellent scholars and report which have already published

¹⁷⁶ See EDPS, (10 February 2021) *Opinion 2/2021 on the Proposal for a Digital Markets Act*.

¹⁷⁷ European Commission, decision of June 27, 2017, Case AT.39740.; See Press release (27 June 2017) Antitrust: Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service, available at https://ec.europa.eu/commission/presscorner/detail/en/IP_17_1784 accessed 13 May 2021.

¹⁷⁸ Among others, at European level see Cases AT.39740 Google Search (Shopping), June 27, 2017; AT.40462 Amazon, July 17, 2019; at national level see: (i) *Italian cases A528—Amazon: investigation launched on possible abuse of a dominant position in online marketplaces and logistic services* (Press release, April 16, 2019) <https://en.agcm.it/en/media/press-releases/2019/4/Amazon-investigation-launched-on-possible-abuse-of-a-dominant-position-in-online-marketplaces-and-logistic-services>; A529—*Google: investigation launched against Google for alleged abuse of a dominant position* (Press release, May 17, 2019) <https://en.agcm.it/en/media/pressreleases/2019/5/ICA-investigation-launched-against-Google-for-alleged-abuse-of-a-dominant-position>; (ii) *Dutch Apple case* (see ACM press release, ACM launches investigation into abuse of dominance by Apple in its App Store, available at <https://www.acm.nl/en/publications/acm-launches-investigation-abuse-dominance-apple-its-app-store>).

¹⁷⁹ See For a discussion, see Friso Bostoen, ‘Spotify lodges antitrust complaint against Apple: it’s “time to play fair” in the music streaming industry’ CoRe Blog (24 April 2019) www.lexxion.eu/en/coreblogpost/spotify-apple/ accessed 1 May 2021.

¹⁸⁰ To put in the words of the Executive Vice-President Margrethe Vestager, in charge of competition policy, “With Apple Music, Apple also competes with music streaming providers. By setting strict rules on the App store that disadvantage competing music streaming services, Apple deprives users of cheaper music streaming choices and distorts competition. This is done by charging high commission fees on each transaction in the App store for rivals and by forbidding them from informing their customers of alternative subscription options”. In these terms, see EU Commission (30 April 2021) *Antitrust: Commission sends Statement of Objections to Apple on App Store rules for music streaming providers*, available at https://ec.europa.eu/commission/presscorner/detail/en/ip_21_2061 accessed 30 April 2021.

their preliminary assessment of the proposal.¹⁸¹

What the EU is trying to achieve at EU level, Germany has already approved the Tenth Act Amending the Act against Restraints of Competition for Competition Law 4.0 (ARC-Digital Competition Act) by the German Bundestag on 14 January 2021 and came into force on 19 January 2021.¹⁸² The Act is intended to realise the German government's goal of creating a "regulatory framework for digital competition".¹⁸³ Some of the key changes are: (1) Companies with paramount cross-market significance. A novel regulatory approach targets a limited number of large "gatekeepers and intermediaries" in digital markets (new Section 19a GWB).

Currently, the *Bundeskartellamt* is examining whether Amazon is of paramount significance for competition across markets;¹⁸⁴ (2) List of conduct considered problematic. The types of conduct of such companies with "paramount cross-market significance" that the Federal Cartel Office may now prohibit under Section 19a (2) GWB includes, among others: a) engaging in self-preferencing when providing access to supply and sales markets (in particular with regard to the display of offers and exclusive pre-installation of offers; b) refusal to provide essential data to competitors; c) impeding the interoperability of products or services or the interoperability of data; (3) New rules on merge controls and cartel investigation. If the DMA would be adopted, the new German law would be surpassed by the new EU rules.

Conclusions.

This research has aimed to provide an analysis of the intersection between digital platforms, economics, and law. It has discovered the following findings. First, as far as digital platforms operate in various economic sectors, their definition is as dynamic as the possibilities for tech companies to reinvent their business digitally or develop new businesses online. Second, the rise of

¹⁸¹ See Cabral L, et al., (2021) *The EU Digital Markets Act - A Report from a Panel of Economic Experts*, EU Commission; Cerre report (December 2020) *Digital Markets Act: Making economic regulation of platforms fit for the digital age*; Cerre report (January 2021) *The European proposal for a Digital Markets Act: A first assessment*; See Damien Geradin, (May 27, 2021) *The DMA proposal: Where do things stand?* available at <https://theplatformlaw.blog/2021/05/27/the-dma-proposal-where-do-things-stand/> accessed 2 June 2021.

¹⁸² See Gesetz gegen Wettbewerbsbeschränkungen (GWB) - "Gesetz gegen Wettbewerbsbeschränkungen in der Fassung der Bekanntmachung vom 26. Juni 2013 (BGBl. I S. 1750, 3245), das zuletzt durch Artikel 5 Absatz 3 des Gesetzes vom 9. März 2021 (BGBl. I S. 327) geändert worden ist. Available at <https://www.gesetze-im-internet.de/gwb/BJNR252110998.html> ; For the formal English translation see https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Others/GWB.pdf?__blob=publicationFile&v=7

¹⁸³ See Bosch W, et al. (09.02.2021) *The tenth Amendment to the Act Against Restraints of Competition – digital competition act is in force*, available at https://www.gleisslutz.com/en/Digital_Competition_Act_is_in_force.html#:~:text=The%20Amendment%20generally%20strengthens%20the,to%20intervene%20in%20this%20regard Accessed 21 April 2020; See also Herrlinger et al., (20 January 2021) *New Competition Law in Germany - 10th amendment to German Act against Restraints of Competition passed*, available at <https://www.whitecase.com/publications/alert/new-competition-law-germany-10th-amendment-german-act-against-restraints> accessed 2 June 2021

¹⁸⁴ See Bundeskartellamt (18 May 2021) *Proceedings against Amazon based on new rules for large digital companies (Section 19a GWB)*, available at https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2021/18_05_2021_Amazon_19a.html accessed 18 May 2021.

platform and collaborative economy comes with many benefits to both consumers and business (i.e., platforms reduce search/ transaction costs, build trust, allow consumers to act as 'sellers' or 'workers', increase social capital formation, etc.).¹⁸⁵ Third, almost all digital platforms are characterized by network effects, algorithm management and pricing strategies which drive and increase the volume of transaction on the platforms. Fourth, the diriment role of online platform provider rises specific legal issues in relation to the market operation for each category of digital platforms. Thus, digital platforms have been challenging the law, and this is a key feature and consequence of their operation. They rise regulations concerns in various sectors and dimensions both from a supplier and consumer perspective. Nevertheless, judges, regulators and concerned public authorities are trying to address these challenges either by fitting the platform economy under the existing regulatory framework or by developing sector-specific legal intervention to tackle various competition and consumer issues. Indeed, due to the rise of new business models and digital services, the EU has started to update some of its legal framework from the internal market. It has been suggested that, before the development of new regulations on online platforms, policymakers must take into account two things: first, they need to consider the underlying characteristics of platforms and business models rather than trying to deal with digital platforms as single category; and, second, they must explore existing instruments and options that can be applied to digital platforms before considering new rules.¹⁸⁶

Additionally, a future regulatory EU framework for the platform economy should not only address platform operators as market intermediaries, but should also consider their role as actors participating in the regulatory chain, be it as a provider of private ordering services or as a regulatory intermediary implementing public ordering.¹⁸⁷

Finally, the fact that digital platforms exploit huge quantities of data, including personal data, raises new issues such as data portability, open data, sharing/accessing data, data as commodities, data sovereignty, etc. Accordingly, a key proposal of the new European data strategy document¹⁸⁸ is the creation of nine common EU data spaces across the following sectors: industrial (manufacturing), mobility (transport), health, finance, energy, agriculture, public administration, etc. In specific, such data spaces will facilitate access, pooling and sharing of data from existing and future transport and mobility databases.¹⁸⁹

¹⁸⁵ Eva S. & Bruno B, 2015, "Online Intermediaries: Impact on the EU economy", <https://www.copenhageneconomics.com/publications/publication/online-intermediaries-impact-on-the-eu-economy>. Pg. 46.

¹⁸⁶ See Pieter Nooren et al. "Should We Regulate Digital Platforms? A New Framework for Evaluating Policy Options" in Policy & Internet (2018) p. 266

¹⁸⁷ Increasingly, public authorities are involving platforms in their regulatory activity, drawing on their superior operational capacities and direct access to data and effective means of influencing the behaviour of platform users. In such a scenario, platform providers act as regulatory intermediaries. See Busch, Christoph, "Self-Regulation and Regulatory Intermediation in the Platform Economy" p. 6, (November 30, 2018). Forthcoming in: Marta Cantero Gamito & Hans-Wolfgang Micklitz (eds.) The Role of the EU in Transnational Legal Ordering: Standards, Contracts and Codes, Edward Elgar 2019. Available at SSRN: <https://ssrn.com/abstract=3309293>

¹⁸⁸ See EU Commission 'A European strategy for data' COM (2020) 66 final, p. 16.

¹⁸⁹ Ibid. p. 22.

The first step towards this goal was the adoption of the Proposal for a Regulation (2020/) on European data governance – an enabling framework for common European data space (Data governance Act).