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Georgios Petropoulos

Collaborative Economy: Market Design and Basic Regulatory Principles

Recent technological developments in information technologies have enabled the emergence and rapid growth of the collaborative economy, through which providers of durable goods and services can trade online with individuals. While there are a great variety of business models that fall into this new market economy, a key common characteristic of the collaborative economy models is that they provide an economic opportunity for individuals and small enterprises to trade their under-utilised assets with other individuals through intermediaries that match supply and demand in an efficient way and with the help of information technologies. In many cases, this opportunity to individual suppliers is only provided through collaborative platforms, as the supply of goods and services through other channels is subject to licencing and other regulatory barriers.

The main participants in the collaborative economy are:

- Service providers who share assets, resources, time and/or skills; they can be either private individuals offering services on an occasional basis (peers) or professional services providers;
- Users who consume the provided assets;
- Intermediaries that connect providers with consumers via collaborative platforms and that might also facilitate payments from the consumers to the providers, among other transactions.

Transactions generally do not lead to a change of ownership. By using information technologies, intermediaries can capture the underlying preferences and characteristics of potential providers and users and match supply

and demand of assets in an efficient way. Intermediaries typically charge fees in the form of a percentage of the value of the transaction.

The emergence of collaborative economy models has an economic explanation that is based on the following main principles:

Value of information: Akerlof showed how the quality of goods traded in a market can degrade if buyers and sellers do not have equal access to information.¹ If a buyer is unable to distinguish between a high-quality and a low-quality car, he or she will only be prepared to pay a fixed price for a car that averages the value of both. But sellers know the exact quality of the car they hold (private information). Given the fixed price at which buyers will buy, the only sellers that will sell are those holding low-quality cars. Eventually, the average willingness to pay among the buyers will decrease, because the average quality of cars on the market will decrease, which in turn will lead even more sellers of high-quality cars to leave the market. It is possible that this will lead to a market failure in which no trade takes place because there are only low-quality cars available. Intermediaries that signal the quality of goods and services and remove barriers to the sharing of information can therefore reduce the risk of market failure and enable more efficient transactions. Online traders can be informed through online reviews and feedback mechanisms about the characteristics of the transactions in a transparent way, and therefore they can approximate with precision the value from their participation in the transaction, in this way reducing the risk of potential market failures.

Economies of scale in the platform economy: The collaborative economy platforms have become popular even in

Georgios Petropoulos, Bruegel, Brussels, Belgium.

1 G. Akerlof: The Market for "Lemons": Quality Uncertainty and the Market Mechanism, in: Quarterly Journal of Economics, Vol. 84, No. 3, 1970, pp. 488-500.

industries where economies of scale are not negligible. Peer providers manage to compete more effectively with professional/traditional ones and capture a substantial share of market demand. The role of platforms that facilitate the transactions is crucial for allowing individuals to compete with industry incumbents when economies of scale are significant. Individuals lack the resources to promote the products and services they offer. They lack marketing budgets and expertise, the variety of ways of accepting payments that are convenient for customers, well-adapted insurance products, and procedures and facilities for re-setting goods after use.² They also lack brands, which have proven to be highly relevant even in cases when quality differences are not significant.³

Demand and supply heterogeneity: Demand and supply heterogeneity provide opportunities for efficient matching that in many cases exceeds the value of transactions through traditional means. Information technologies lead to efficient matchings of providers offering specific goods and services with consumers that maximise their value from consuming them. As heterogeneity increases, so does the added benefit from using information technologies in trade.

Low search and transaction costs: The collaborative platforms reduce transaction costs and provide individual asset owners tools previously available only to firms. The increasing penetration of the Internet and the proliferation of smartphones were the technological shocks that made some of these peer-to-peer markets feasible. In such markets, consumers can search quickly and in real time for the goods and services that better suit their preferences, dramatically reducing search costs.

It is estimated that collaborative platforms operating in five key sectors of the collaborative economy generated revenues of around €3.6 billion in the EU in 2015.⁴ The potential of the collaborative economy is significant, with annual growth exceeding 25%.⁵ Estimates of the economic gain linked with the better use of capacities as a result of the collaborative economy reach as high as €572 bil-

lion.⁶ However, these benefits can only be achieved if we adopt a regulatory framework which is friendly to this new market economy – one that eliminates entry barriers and ensures a safe, secure and well-protected trade environment for all the involved parties.

In what follows, I will focus on one regulatory challenge in the era of collaborative consumption: ensuring a level playing field in market competition between peer-to-peer transaction marketplaces and incumbent, traditional providers of durable goods and services. I will provide some basic principles for the regulatory framework which needs to be adopted. Then, I will discuss the opinion of the European Court of Justice's Advocate General Maciej Szpunar about the classification of Uber as a transportation company. I will focus on the implications that his reasoning could have on other collaborative economy platforms and not on the opinion itself.

Market competition in the collaborative economy era: Some basic principles

Despite the efficiencies and benefits associated with the collaborative economy, there are concerns about how it can be properly regulated. The difference in regulatory regimes for online and offline services can lead in some cases to situations of unfair market competition. Thus, it is important to examine two essential questions: How can we restore a level playing field? And what rules will promote fair competition? There are five principles that a proper regulatory framework, i.e. one that deals with such concerns, should address.

Principle 1: A broad regulatory framework cannot be effective given the diversity of collaborative business models. We need specific rules that are based on the key characteristics of each business model.

Collaborative business models can differ to a great extent, even when they operate in the same industry. Hence, rules that are relevant to one business model may not be helpful to another, even if the two operate in the same market (see below for a relevant example with the business models of Uber and BlaBlaCar). The classification of business models to particular groups of platforms for the purpose of imposing uniform rules to each group can be very complex, with many dimensions to be considered in the group definition. Thus, it is not a helpful exercise to try to generalise the regulatory approach.

2 J.J. Horton, R.J. Zeckhauser: *Owning, Using and Renting: Some Simple Economics of the "Sharing Economy"*, NBER Working Paper Series, No. 22029, 2016.

3 B.J. Bronnenberg, J-P. Dubé, M. Gentzkow, J.M. Shapiro: *Do Pharmacists Buy Bayer? Informed Shoppers and the Brand Premium*, NBER Working Paper Series, No. 20295, 2014.

4 K. Dervojeda, D. Verzijl, F. Nagtegaal, M. Lengton, E. Rouwmaat, E. Monfardini, L. Frideres: *The Sharing Economy, Accessibility Based Business Models for Peer-to-Peer Markets*, Case Study 12, Business Innovation Observatory, European Commission, 2013.

5 Ibid.

6 P. Goudin: *The Cost of Non-Europe in the Sharing Economy. Economic, Social and Legal Challenges and Opportunities*, European Parliamentary Research Service, European Parliament, 2016.

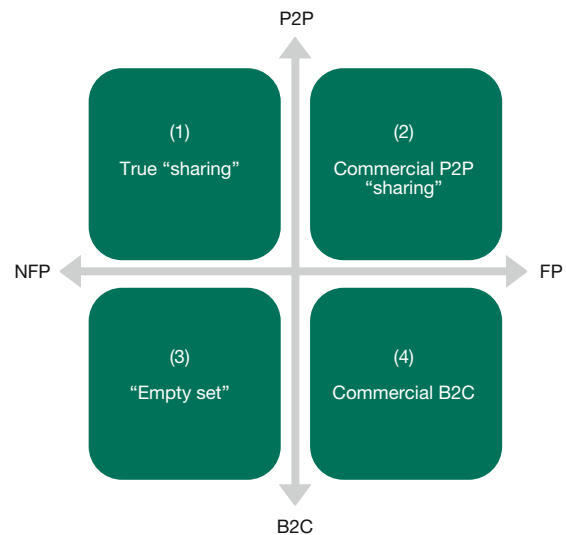
Codagnone and Martens provide a simple and useful conceptual framework to map the collaborative economy into different categories (see Figure 1).⁷ The grouping is based on two different dimensions: 1) for-profit (FP) and not-for-profit (NFP) activities, which is a proxy for true “sharing”, and 2) business-to-consumer (B2C) and peer-to-peer (P2P) categories. Many P2P platforms are owned and operated by companies, but the primary service producers are individuals who are not formally organised as companies.

The upper left quadrant of Figure 1 corresponds to platforms with true sharing motives. The bottom right quadrant connects the collaborative economy to ordinary B2C online activities. The upper right quadrant corresponds to collaborative economy platforms that facilitate transactions between peers. Well-known platforms such as Uber, Airbnb, TaskRabbit and Upwork belong to this category. While this classification is helpful to identify the necessity of regulatory intervention for such platforms, the new regulatory approach depends on the exact business model in place.

Principle 2: Banning the operation of collaborative business models should not be used to restore the level playing field. The imposition of proper rules for their operation is much more effective.

In specific sectors in which collaborative platforms facilitate services that are close substitutes (from the perspective of consumers) to those offered by traditional firms, the additional regulatory costs faced by traditional firms might prevent them from competing with digital firms. In such cases, the establishment of a level playing field should not lead to bans or increased regulatory costs for platforms, which would likely be passed through to consumers. Policymakers should not aim to make the operation of platforms less efficient to ensure that they compete on an equal basis with the incumbents. Their main objective should be to maximise the benefit and protection of consumers (both from a static and dynamic perspective) rather than trying to protect competition by removing efficiencies in collaborative consumption. Rules should not restrict the socially beneficial aspects of the operation of platforms in the name of fair competition. Well-targeted rules should achieve the highest social benefits in combination with fair and transparent rules for all market players. An illustrative example is the rule introduced in France in 2013 which mandated a 15-minute waiting time for a pickup for urban transportation collabora-

Figure 1
Classification matrix of collaborative economy platforms



Source: C. Codagnone, B. Martens: Scoping the Sharing Economy: Origins, Definitions, Impact and Regulatory Issues, JRC Technical Reports, Digital Economy Working Paper 2016/1, 2016, p. 12.

ative companies. According to this rule, drivers had to wait at least 15 minutes before letting their passenger get in the vehicle. While such measures move in the direction of restoring fair competition, they do so at the expense of consumers.

Principle 3: The competitive pressure introduced by the collaborative economy should be accompanied by appropriate adjustments in the rules applied to the industry incumbents in order to maximise the dynamic efficiency gains from new entrants and the increase in competition.

The entry of digital firms into traditional markets can have positive spillover effects for the traditional incumbents. The entry of collaborative platforms can increase competition in the long run, provided that incumbents are not forced to exit the market (or merge with their horizontal rivals). Such competitive pressure can stimulate investment in innovation by offline firms in order to protect their market positions. Regulation in the main sectors of collaborative activity should also be aimed at promoting the greater adoption of information technologies by offline firms so that they can compete more efficiently with their collaborative competitors. In this way, market exit by the incumbent will be minimised and additional benefits will accrue to consumers as a result of increased competition. For example, strict price regulation in the taxi industry (which to some extent was introduced for transparency and passenger protection reasons) has been over-

⁷ C. Codagnone, B. Martens: Scoping the Sharing Economy: Origins, Definitions, Impact and Regulatory Issues, JRC Technical Reports, Digital Economy Working Paper 2016/1, 2016.

taken by the liberalisation of the market with the entry of Uber, Lyft and other collaborative ride-sharing firms. The availability of digital information on the terms and conditions of ride services provides transparency about the transaction, even if the price of the ride is not fixed. Since fixed prices are no longer necessary for transparency, taxis will not feel constrained by the regulatory framework and will be able to reduce their prices and compete more effectively with collaborative platforms (as hotels did in response to the entry and operation of Airbnb).⁸ Rules that apply to incumbents should be updated to take account of the arrival of efficient collaborative competitors and the technology-enabled liberalisation of the market.

Principle 4: Harmonisation of rules and legal certainty across member states can help collaborative SMEs to expand their operations across the EU, enabling them to grow and thereby increase market competition.

Legal certainty and regulatory clarity are also required to incentivise further investment in efficient information technologies. The current uncertainty over the status of collaborative economy platforms, the legal disputes before national and European courts, and decisions to restrict the operations of platforms at the local level have created an environment in which it is difficult to attract new investment opportunities. Regulatory authorities should move quickly to define the framework of the operation of such platforms in order to restore investors' confidence. To that end, the European Commission's 2016 Communication on the European agenda for the collaborative economy is very helpful and important, as it aims to establish a common, EU-wide approach towards collaborative economy models.⁹ However, it should be considered only the first step towards this approach. Further initiatives by the European Commission are necessary.

One should bear in mind that restricting the operation of particular business models will have a greater impact on newer and smaller European platforms, rather than on established American platforms that have reached a scale sufficient to absorb such regulatory shocks. For example, the Berlin city court's decision to ban short-term rentals had a greater impact on 9Flats than Airbnb, because Berlin's accommodation market is much more important for the operation of the former (given its smaller scale) than the latter.

8 G. Zervas, D. Proserpio, J.W. Byers: The Rise of the Sharing Economy: Estimating the Impact of Airbnb on the Hotel Industry, in: *Journal of Marketing Research*, Vol. 54, No. 5, 2017, pp. 687-705.

9 European Commission: A European agenda for the collaborative economy, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2016) 356 final, 2 June 2016.

Principle 5: The collaborative economy requires a federal system of regulatory governance.

Collaborative platforms mainly have an impact on local economies. It therefore makes sense to emphasise local-level regulation that responds to the characteristics of different localities. However, because collaborative platforms have the tendency to expand to multiple countries, a European approach is also necessary to ensure that local rules are in line with the basic principles of the digital single market. The balance between EU-wide and local regulation should be stable, while meeting the needs of each region and the principles of fair competition.

The opinion of Advocate General Szpunar and its potential implications

On 11 May 2017, Advocate General Szpunar of the European Court of Justice (ECJ) concluded that Uber is a transportation company and hence it should be subject to stricter rules and obligations.¹⁰ This in effect could mean that the San Francisco company will have to suspend its UberPop application, through which unlicensed private drivers transport passengers using their own vehicles. In fact, this is something that the company has already done in some member states following bans by national courts.

While the opinion of the Advocate General is non-binding, the ECJ usually follows the Advocate General's advice. The impact of whether Uber is ultimately deemed a transportation company or an information society service company goes beyond that company's operations and may have broader implications for all collaborative economy companies.

Information society service companies enjoy the freedom to provide services under lighter business authorisations, licensing obligations or minimum quality standard requirements than typical industry firms. If the ECJ accepts the Advocate General's reasoning, then there will be two criteria that separate information society service companies from typical industry firms (which of course may also use information technologies in their business model). The first criterion is that of *independent supply*, which examines whether the suppliers of the service pursue an autonomous activity that is independent of the platform. The relevant question here is whether agents would have supplied the service if the platform did not exist. The second criterion is the question of *who controls the conditions under which the service is provided* – the platform or the peer provider?

10 Court of Justice of the European Union: Advocate General's Opinion in Case C-434/15, Press Release No. 50/17, 11 May 2017.

If supply is independent of the platform and the peer suppliers control how they supply the service, then the platform has as a main objective to match supply with demand and hence it is classified as an information society service. If instead the first condition is violated and the online company also controls the provision of the service, then it should be considered as a sector-specific firm and subject to the same rules as the “traditional” firms, i.e. the industry incumbents.

By applying these two criteria, the Advocate General classified Uber as a transportation company. He reasoned that since UberPop drivers are not licensed, they depend on the platform to a great extent in order to provide the service, and therefore the first condition is violated. Moreover, the company also sets the price of the service, as it exerts control over the quality of provision through an online rating system of drivers that is based on reviews by passengers. Drivers that receive ratings below a given threshold are excluded from the platform. Uber also implements a surge-pricing mechanism that rewards drivers who are willing to provide the service at times of high demand (e.g. Saturday nights). Thus, Uber has increased control over the provision of service. Consequently, according to this reasoning, Uber is an urban transportation company that will have to focus on its licensed services and make sure that it respects the same regulatory rules as taxis.

Note that these two criteria can be applied to other business models and sectors where collaborative economy platforms have flourished, such as accommodation and finance. Thus, they can be utilised to create a classification of different business models in different industries after a proper market analysis is carried out.

However, we should not ignore the dynamic nature of online business models. If the ECJ accepts these separating criteria as determinants of the classification in the case of Uber, P2P platforms may simply adjust their models in order to satisfy these criteria so they can continue to be classified as information society service companies. In this way, they could “escape” the stricter sector regulation of their traditional industry competitors.

A natural question is how representative is Uber’s business model and how many other platforms can fall under the scrutiny of the aforementioned criteria. While the numerous business models in place make it impossible to accurately answer this question, it is insightful to compare Uber with two other popular collaborative economy platforms, BlaBlaCar and Airbnb.

A specificity of the Uber business model is that it employs a centralised matching algorithm. When a passenger re-

quests a ride, the platform matches him/her with a particular driver, and the driver must then agree to provide the service. The client is informed about the profile of the driver and the ride fare before deciding whether to confirm the ride. In contrast, BlaBlaCar and Airbnb implement decentralised mechanisms in which the client can simultaneously observe all the potential suppliers and the price at which each of them is willing to supply the service. Only after reviewing all of this information does the client select a service provider. In such decentralised systems, suppliers are in an advantageous position that allows them more freedom in defining the terms and conditions of the service, while the client has the option to choose which supplier he/she prefers.

Note that a valid argument for implementing a centralised mechanism is that demand for urban transportation is more homogeneous than that of accommodation or longer car-sharing rides. The main interest of each passenger is to arrive at his/her destination, and he/she generally cares little about the comfort of the ride (e.g. the type of car). This leaves minimal scope for the decentralisation of the mechanism.

In the BlaBlaCar business model, drivers offering their services would go on their long-distance trip regardless of the existence of the platform, as they primarily organise the trip for themselves. That is closer to satisfying the first criterion. Therefore, it is more likely that they would look for interested passengers to share the cost of the trip even if they were not participating in the platform. They have a share-the-cost motive rather than a profit-making motive. These key characteristics of the BlaBlaCar model were proven important in its court case against Spanish bus companies. The ruling concluded that BlaBlaCar is not guilty of unfair competition, as the drivers on the BlaBlaCar platform are not employed by the company, nor do they belong to another firm seeking to make a profit; rather, “(t)hey are individuals who offer their services on the platform of their own accord and at their own risk, looking for people who are interested in going on the same trip and paying.”¹¹

In the case of Airbnb, the suppliers of the accommodation have the liberty to set the price of the service as well as some of the conditions (minimum or maximum duration of the stay, cleaning fee and so on). This satisfies the second criterion, as they have the opportunity to choose some key dimensions for the provision of their service, a feature which is not available in Uber’s business model. Note that

11 The Local: Victory for car-sharing as Spanish buses lose ‘unfair competition’ case against BlaBlaCar, 3 February 2017, available at <https://www.thelocal.es/20170203/spanish-buses-lose-unfair-competition-case-against-blablacar>.

while the suppliers choose their price, there is competition among suppliers through the decentralised matching mechanism, which restricts the range of equilibrium prices observed.

If the second criterion proves to be of decisive importance for the determination of which regulatory framework each business model belongs to, then it may well be the case that platforms that fail to meet the second criterion will move away from controlling the provision of the service. However, some level of control is desirable, as platforms equipped with information technologies can impose rules that certify the quality of services. For example, an online rating system used by the platforms to evaluate their users and prevent individuals with low ratings from continuing to use its interface can increase the value of the online transaction for the remaining users. Thus, it appears evident that the business models that are more likely to be affected by the two criteria can only be identified through careful case-by-case analysis.

The second criterion over the control in the provision of the service could also be relevant to the intense employment debate that applies to collaborative economy platforms. When the platform controls the provision of the service and sets the terms and conditions, the relationship between the platform and the provider moves closer to the definition of an employment relationship. However, flexibil-

ity on the part of the provider is a common characteristic of the business models of most platforms: the provider can choose when and for how long to work. The relationship between the platform and the provider is usually non-exclusive, allowing providers to offer services via other platforms or in other ways. Such characteristics suggest that the relationship between the platform and the provider diverges from the typical employment relationship.

While labour law in principle falls under national competence, the European Union has developed certain minimum standards (Article 153 of the Treaty on the Functioning of the European Union) that distinguish an employment relationship from self-employment. For example, Uber drivers currently work as independent contractors and not as employees. According to the ECJ, the essential features of an employment relationship are a) a person performs services for and under the direction (control) of another person or entity for a certain period, and b) in return, they receive remuneration.

These minimum standards do not fully capture the flexibility with which services are provided through collaborative platforms. Flexibility is also not fully captured in the employment relationships as defined across member states. The rise of the collaborative economy platforms reveals that policymakers need to start thinking about how to introduce flexibility in the provision of services in these formal relationships with adequate protection for all of the involved parties.