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POLICY DEPARTMENT
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Economic and Monetary Affairs

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**Internal Market and
Consumer Protection**

An economic review on the Collaborative Economy

In-Depth Analysis for the IMCO Committee



DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY

An economic review on the Collaborative Economy

IN-DEPTH ANALYSIS

Abstract

This paper provides an overview of the empirical evidence concerning the potential gains from collaborative economy and the economic impact some of its business models on. It discusses how we can distinguish professional and non-professional services and provides a list of 9 tentative recommendations for the better protection of the users of the collaborative platforms. It also summarises the main regulatory concerns that emerge from the operation of such platforms.

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LIST OF ABBREVIATIONS

B2C Business-to-consumer

FP For-profit

NFP Not for-profit

P2P Peer-to-peer

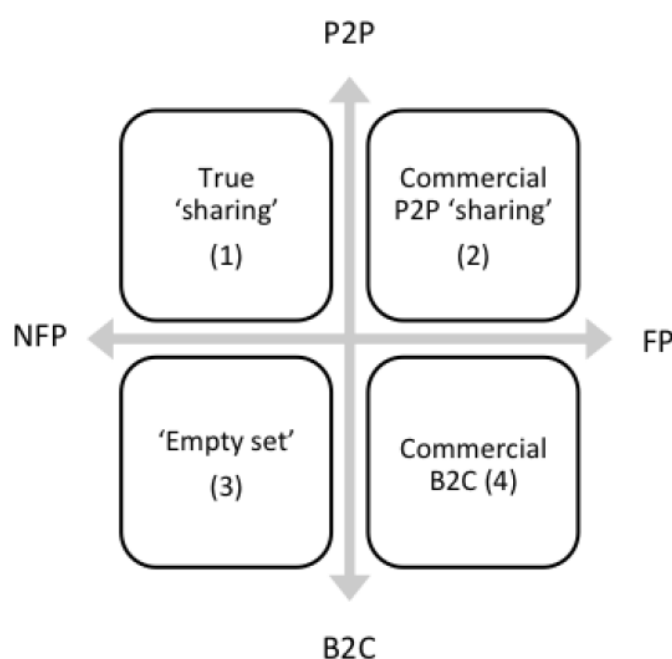
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EXECUTIVE SUMMARY

The collaborative economy matches people who want to share assets and services online. The use of information technologies can unlock many possibilities for the “actors” of the economy that did not exist before. The new technology can bring high benefits but may also bring some costs and risks. The aim of this paper is to: i) discuss how the collaborative economy can be defined; ii) provide an overview of evidence about its potential benefits for European economies and the impact of specific platforms in the sectors of their operation; iii) illustrate the criteria that help us distinguish between professional and non-professional services offered through collaborative platforms; iv) develop some tentative recommendations for the priorities for the platforms so that they can create a safe and transparent environment for the transactions of their users; v) discuss further regulatory concerns and how we should approach them.

The collaborative economy is not monolithic but rather characterised by a great variety of business models. It spans multiple sectors each of which has its own market characteristics. It is thus a heterogeneous group of online platforms that contain many new and innovative economic and social activities that are hard to classify. A single definition is therefore beyond reach and also recommendations cannot easily be generalised. However, a common element that we observe in the majority of business models is the use of underutilized assets for the extraction of economic benefits. Codagnone and Martens (2016) provide, to my view, a good conceptual framework in order to map the collaborative economy:



Source: Codagnone and Martens (2016).

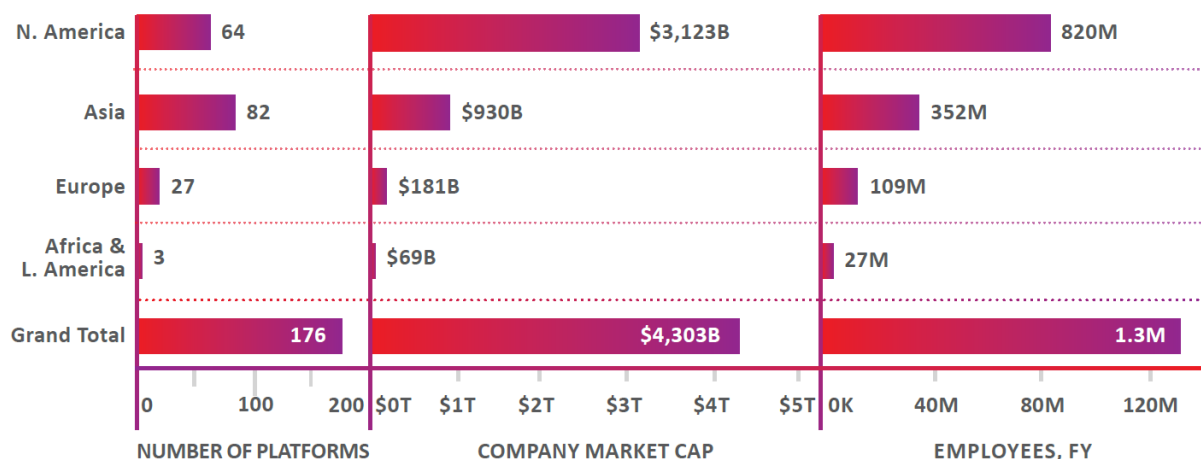
There is evidence that Europe can enjoy multi-billion gains from the collaborative economy, especially if it removes barriers and adjusts the regulatory framework to accommodate better such information technology platforms. Geron (2013) has estimated that the revenue flowing through the collaborative economy directly into people's wallets reached \$3.5 billion, while its value in EU 28 is €20 billion. Vaughan and Hawksworth (2014) calculate that on a global basis the collaborative economy was worth \$15 billion and could reach \$335 billion by 2025. In his more optimistic assessment, Goudin (2016) approximated the potential economic gain linked with a better use of capacities as a result of the collaborative economy to be €572 billion in annual consumption across the EU-28 if substantial associated regulatory barriers are removed. Such barriers could reduce the value of potential increased use to up to €18 billion

in the shorter-term and up to €134 billion in the medium and longer term, depending on the scale of the obstacles.

Nevertheless, when we focus our attention to particular sectors such as ride-sharing and short-term accommodation, then the benefits from the operation of platforms come at a cost, as they have a detrimental effect to “traditional” incumbent operators. The technology is thus disruptive to many traditional businesses. For example, Zervas et al (2014) find that Airbnb’s impact on the hotel market consists of an 8%-10% reduction in revenues with lower-priced hotels, and hotels not catering to business travel being the most affected segments. They also find that affected hotels have responded by reducing prices, an impact that benefits all consumers. Bond (2015) shows that Uber has had a negative impact on both the revenue of the taxi industry and on the values of the taxi licenses in San Francisco area. Indeed, according to the San Francisco Metropolitan Transportation Agency, within 18 months of Uber’s introduction in the market, taxicab use declined by 65%.

While, according to EU legislation, it is not clear when the services supplied through collaborative platforms can be classified as professional, a careful examination of business models following a case-by-case analysis approach can help us define some relevant criteria. The frequency with which the service is provided, the motive of the provider and the associated remuneration, are three important aspects which can help us distinguish between professional and non-professional services in collaborative economy.

Legal certainty and regulatory clarity are also required in order to incentivise further investments in efficient information technologies and platforms. The current uncertainty over the status of the collaborative economy platforms, the legal disputes in national and European courts, the decision to restrict their operation at a local/city level generate an environment that it is difficult to attract new investments in Europe. It is not a coincidence that Europe is far behind North America and Asia in number of created platforms and their market capitalization:



Source: Evans and Gawer (2016)

Regulatory authorities should move quickly into defining the framework of the operation of such platforms to restore investors’ confidence. Local regulation is very important for defining the dimensions of the operation of collaborative platforms that can bring the highest benefits to the local economies. But, an EU-wide approach is also needed for defining the general framework of the operation of these platforms and for addressing in a decisive and clear way the associated regulatory concerns.

Collaborative platforms, as intermediaries that match requests between providers and receivers of certain services, have access to a bulk of information about the market, and their users that are not available to other market participants or the regulator. Consumer protection

requires a safe and transparent environment of transactions. Platforms based on their market position could be very helpful with this respect. While there is no one-size-fits-all recommendation list due to the heterogeneity of models, the following 9 priorities for protection of consumers may be applicable to different degrees to different platforms depending on their business models, the types of services they accommodate and the market characteristics:

- **Safety of service:** Platforms together with the authorities should ensure that the providers of (especially professional) services have gone through the appropriate training and inspection process and have all the required qualifications to provide the service to consumers in a safe way. Professional service providers should be required to comply with the same standards as the “traditional” firms operate in the same market.
- **Transparency over collection and process of personal data:** Platforms collect personal data from their users that help them to improve the efficiency of their matching algorithms. In some cases data collected contains sensitive information such as locations at various moments or credit card details. Platforms should inform their users through clear and easy to read notifications about the amount of data they collect and the way they process it. Users should always give their explicit consent.
- **Clear liability rules:** Liability rules should be ex-ante clear and all involved parties should be properly notified and insured. Platforms can be exposed to liabilities when they define the terms and conditions as well as control the provided service.
- **Reliability of reputation mechanisms:** The ability to check and evaluate the profile of the service provider and read the reviews about the quality of the service is important and can maximize the benefits from an efficient transaction by removing information asymmetries. So, it is of vital importance that these mechanisms are designed in an unbiased way so that the users reveal their true preferences and judgments.
- **Prevention of fraud:** As the transactions and payments are made online, there is always the risk of an attempted fraud. Ranchordas (2015), for example, reported numerous protests about scams on websites in the context of collaborative economy transactions. Platforms should design the payment process in a way that minimizes the risk of fraud. Moreover, it is important for consumers to be able to file complaints and obtain a quick and fair complaint resolution through an easy and clear procedure.
- **Assurance of non-discriminatory provision of services:** Platforms should encourage general, clear and transparent rules against any form of discrimination (including racial minorities, low-income users and low-income regions) that should be respected by all participating individuals. The lack of relevant regulation about collaborative economy (Edelman and Geradin, 2015) should not leave an open “window” for such practices.
- **Closer collaboration with local authorities:** The close collaboration of platforms with local authorities is essential for the fair allocation of the generated benefits within the local communities as well as the creation of smart cities that are based on collaborative consumption. Discussions and bilateral agreements in a series of issues such as city taxation, local employment, investments in infrastructure and efficient ways to share assets can improve the living standards and increase the value from participation in collaborative economy.
- **Motivation of digital users’ unions:** Platforms and information technologies can facilitate further interactions among users and can help them to form unions that represent their interests. This is particularly important in big and successful business models with many users in which platforms contain the right to control (at least partially) the terms and conditions of the provision of the service. Such interaction among users can improve the

users' collective bargaining position and help the platforms to make operational decisions that benefit to a greater extent their users. Hence, it should be encouraged.

- Encouragement of evidence based economic analysis: While there are multiple collaborative business models that have entered many sectors of the economy, there are only a limited number of empirical studies that deal with the impact of collaborative economy platforms. One of the profound reasons for this is the lack of available data related to the operation of these platforms. On top of that, some of the existing studies that have direct access to platforms' data are commissioned by them. Research by academic and policy institutions should be encouraged. As access to data is needed, platforms could agree to open the access to parts of their datasets (to the extent that they do not compromise their business activities) to empirical researchers. Assessing their exact impact is of vital importance for the design of the correct policies.

2. INTRODUCTION

The collaborative economy matches people who want to share assets and services online. Rather than buying a power drill¹ that I only need for 15 minutes, for example, I can just rent one from someone else who's not using theirs. A collaborative economy platform can help to identify who is willing to offer his power drill and initiate the transaction instead of buying a new one that is more expensive and I will barely use. By the use of information technologies, platforms can match suppliers and consumers according to their preferences and needs. If the consumer has a preference for a drill of particular technical characteristics, it will be beneficial for her to be directly driven to the supplier that offers exactly what she needs. Platforms can provide such recommendations and therefore facilitate efficient transactions through their matching algorithms. In this way, users can maximize the value generated from their underutilized assets and this contributes to a better allocation of resources.

While, collaborative economy through the use of information technologies can unlock many possibilities for the "actors" of the economy, it also generates the necessity for an optimal regulatory response to the challenges that emerge. For example, the direct competition of collaborative platforms with "traditional" firms that are subject to more restrictive regulation raises questions about how we can restore the market level playing field. Platforms due to their position in the market can also provide helpful services in setting a safe and transparent environment that sufficiently protect their users.

In this paper I discuss some of these challenges such as the distinction of professional and non-professional services, consumer protection and further regulatory issues. Specifically:

- In Chapter 2, I provide an overview of definitions of collaborative economy. The great variety and diversity of business models makes it very difficult to derive a unique and official definition. A key characteristic of the majority of business models is the efficient use of under-utilized assets and services. I then proceed to discuss empirical evidence over the potential gains from collaborative economy as well as the impact of specific business models such as AirBnB and Uber on their competitors and their users. Preliminary research illustrates that multi-billion benefits for the European economy are expected. However, as the studies on particular marketplaces illustrate, the entry and growth of collaborative platforms have detrimental effects on "traditional" firms and can therefore be their substitutes rather than complements.
- In Chapter 3, I identify the key elements in the business models of platforms which allow us to identify when the provision of a service is professional and when it is not. The three basic criteria refer to how often the service is offered, what is the main motive for the participation of the provider in the platform and what is his generated benefit. I also present available relevant evidence that underlines the profit-seeking behavior by some providers.
- Chapter 4 discusses a list of 9 tentative recommendations to improve users' experience from participating in the platform. It is important to create a safe and transparent environment in order to maximize the benefits from the collaborative platforms. In addition, further regulatory concerns such as the level playing field between online and offline firms and employment are covered.
- Chapter 5 concludes

¹ This example is inspired by Rachel Botsman's TED talk in 2010:

https://www.ted.com/talks/rachel_botsman_the_case_for_collaborative_consumption/transcript?language=en

3. DEFINITIONS, BUSINESS MODELS AND THE IMPACT OF COLLABORATIVE ECONOMY

KEY FINDINGS

- Given the big variety and diversity of collaborative business models, it is difficult to provide a single definition.
- Many collaborative economy business models rely on the exploitation of underutilized assets
- Necessary dimensions for the taxonomy of collaborative platforms refer to whether they are for-profit or not and whether they facilitate business-to-consumer or peer-to-peer transactions
- Collaborative platforms can bring multi-billion gains to the European economy.
- According to available empirical evidence, the market entry of platforms like AirBnB and Uber has detrimental effects on the hotel and taxi industry, respectively. However, positive spill-over effects may also be significant.
- Based on existing empirical findings, the entry of collaborative platforms is very likely to bring net benefits to consumers.

3.1. How to define the collaborative economy?

Terms such as “collaborative economy”, “sharing economy”, “gig-economy”, “on-demand economy”, “peer economy” are often being used interchangeably. The multitude of names is suggestive of the confusion that surrounds this concept. Frenken et al. (2015) defines collaborative economy as the economy in which consumers grant other consumers temporary access to underutilised assets (possibly for money). Maselli et al. (2016) expands this definition in two ways. First, they discard the temporary access by considering all goods that are shared among consumers in a second-hand economy. Second, they take into account the provision of services from one consumer to another via contests or auctions, instead of only counting the trade of underutilized assets.

Botsman (2015) defines collaborative economy as “an economic system of decentralized networks and marketplaces that unlocks the value of underused assets by matching needs and haves, in ways that bypass traditional middlemen”. In this economic system we can identify three broad categories (Botsman and Roger, 2010):

- access to products or services without need for owning the underlying assets
- re-allocation of goods
- exchange of intangible assets.

She also identifies 4 key criteria for a platform to be included in the collaborative economy family:

1. The core business idea involves unlocking the value of unused or underutilized assets whether it's for monetary or non-monetary benefits.
2. The company should have a clear values-driven mission and be built on meaningful principles including transparency, humanness, and authenticity that inform short and long-term strategic decisions.
3. The providers on the supply-side should be valued, respected, and empowered and the companies committed to making the lives of these providers economically and socially better.

4. The customers on the demand side of the platforms should benefit from the ability to get goods and services in more efficient ways that mean they pay for access instead of ownership.
5. The business should be built on distributed marketplaces or decentralized networks that create a sense of belonging, collective accountability and mutual benefit through the community they build.

There are multiple other studies² that provide alternative definitions that differ to particular dimensions. Codagnone et. al. (2016), in their careful and comprehensive review of the literature, provide a critical assessment on the main differences among these definitions. These dimensions include: a) the ability of facilitating exchange among strangers rather than within community; b) the strong reliance on technology that may also favour offline activities; and c) the participation of high cultural capital consumers rather than being limited to a survival mechanisms among the most disadvantaged.

Despite the multiple definitions, we could say that a key characteristic of collaborative economy is that it provides an economic opportunity for individuals to trade their underutilized 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 is exclusively only provided through collaborative platforms as the supply of goods and services through other channels subject to licencing and other regulatory barriers.

3.2. Business models and sectors

The main actors in the business models of 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 that consume the provided assets
- Intermediaries that connect via collaborative platforms providers with consumers and that may also facilitate transactions (for example, the payment from the consumers to the provider)

The transactions generally do not involve change of ownership and may be temporary. Intermediaries, by using information technologies can capture the underlying preferences and characteristics of potential providers and users and match supply and demand of assets in an efficient way. They typically charge a transaction fee which is a percentage of the value of the transaction.

Removing information barriers through the use of technology that provides valuable information about the quality of products and services can be very beneficial for the economy. Akerlof (1970) shows how the quality of goods traded in a market can degrade in the presence of information asymmetry between buyers and sellers. If buyers can't distinguish between a high-quality car (a "peach") and a bad-quality one (a "lemon"), then they are only willing to pay a fixed price for a car that averages the value of a "peach" and "lemon" together. But, sellers know the exact quality of the car they hold (private information). Given the fixed price at which buyers will buy, sellers will sell only when they hold "lemons" and they will leave the market when they hold "peach". Eventually, as enough sellers of "peach" leave the market, the average willingness-to-pay of buyers will decrease (since the average quality of cars on the market decreased), leading to even more sellers of high-quality cars to leave the market

² Dubois et al. (2014); Schor (2014), (2015); Schor and Fitzmaurice (2015); Schor et al. (2014).

through a positive feedback loop. It is possible that this loop will lead to a market failure in which not trade takes place as there are only “lemons” available in the market. Intermediaries that signal the quality of goods and services and remove asymmetric information barriers can therefore reduce the risk of market failures and lead to more efficient transactions.

The four sectors in which collaborative economy platforms have the most significant presence are:

- 1) Accommodation: Platforms allow people to rent out properties or parts of properties. Examples of such companies are: AirBnB, HomeAway, HouseTrip, 9Flats, Wimdu, Onefinestay, Roomerama, Sleepout, Love Home Swap and Holiday lettings. AirBnB provides residential space renting platform matching hosts and guests; as of February 2016 the platform reports: presence in 34,000 cities covering more than 190 countries, 2 million listings, and more than 60 million guests hosted. It is valued at \$ 10 billion³. Homeway with similar business model covers 190 countries. It is a public company valued at \$ 3.4 billion. 9Flats has a strong European presence with 100,000 listings.
- 2) Transportation: We can distinct two different broad categories of platforms in this sector. In the first one, platforms only facilitate the hiring of assets such as cars, motorbikes and bicycles. Examples are ZipCar, EasyCar, Car2Go, Autolib and Velib. In the second one, platforms help their users to rent assets together with labor and human capital. Examples of this category are BlaBlaCar, Sidecar, Uber and Lyft. Car2go offers transportation on demand using “by-the-minute” rates. It is present in 29 European and North American cities. It reports having 1,000,000 members. Blablacar enables drivers with empty seats and paying passengers to share distance travel costs; as of February 2016 the platform reports: 25 million members and 10 million travelers per quarter; It is a private company valued at \$ 1.6 billion. Uber matches individuals needing a ride services with drivers; it has 160,000 registered drivers and covers 230 cities in 58 countries. Its estimated revenues in 2014 were between \$ 1.5-2 billion (Codagnone et. al., 2016). It is currently valued at \$ 41.2 billion (Austin et. al., 2015). It’s competitor Lyft has 60,000 registered drivers and it is valued at \$ 2.5 billion.
- 3) Online labour markets such as Amazon Mechanical Tusk, Adtriboo, TaskRabbit, Oltretata, Freelancer, Crowdsourc, Crowdfunder and Clickworker. These platforms specialize in micro-tasking by matching employers and on demand workers.
- 4) Finance: Crowdfunding platforms such as Kickstarter and IndieGogo match individuals with creative and entrepreneurial projects with funders (venture capital financing). Peer-to-peer lending platforms like Lending Club and Prosper connect individuals and SMEs with potential peers-lenders without the involvement with any financial institution.

Moreover, online marketplaces such as eBay, Amazon and Etsy act as intermediaries in consumer-to-consumer and business-to-consumer relationships in which the main purpose is the sale of goods.

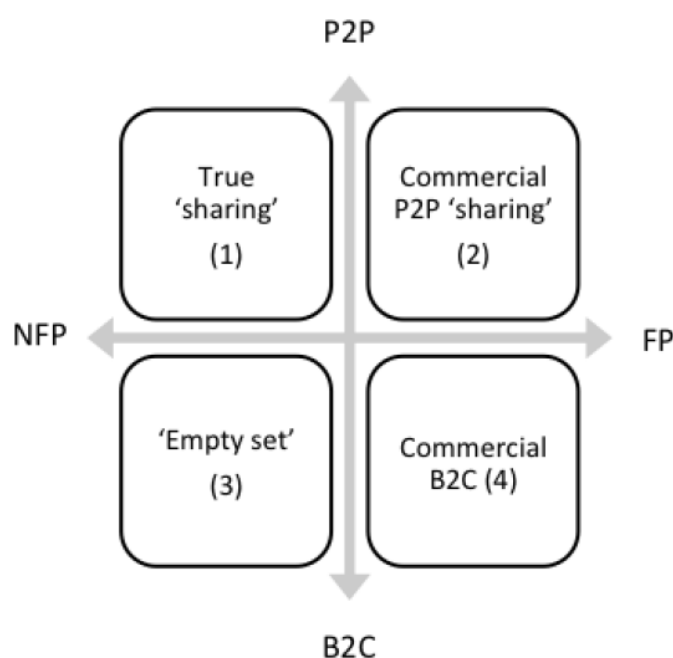
³ See VB Profiles & Crowd Companies (2015) for the market valuations of the collaborative platforms reported here.

Collaborative economy consists of a great variety of business models which are active to multiple sectors each of which has its own market characteristics. There is a very heterogeneous group of online platforms that contains many new and very innovative economic and social activities that are hard to classify. A single definition and taxonomy is therefore beyond reach. However, Codagnone and Martens (2016) provide, to my view, a good conceptual framework in order to map the collaborative economy. Their two dimensional classification matrix is illustrated in Figure 1.

The first dimension of the matrix classifies sharing platforms into for-profit (FP) and not-for-profit activities (NFP), which is a proxy of “true sharing”. The second dimension follows the business-to-consumer (B2C) versus the peer-to-peer (P2P) axis. While, many P2P platforms are owned and operated by formal businesses, the primary service producers in these platforms are individuals who are not formally organized as companies.

The two dimensions of the matrix separate the classification space into four quadrants. The northwest quadrant corresponds to platforms with true sharing motives. The southeast quadrant connects the collaborative economy to ordinary B2C online activities. The northeast quadrant corresponds to the heart of the collaborative economy platforms that facilitate transactions among peers. Platforms such as Uber, Airbnb, TaskRabbit, Upwork belong to this category. They have a large user base, raise short-term regulatory concerns, and the largest players disrupt “traditional” incumbent industries and trigger their protest. The southwest quadrant is an empty set as businesses have by definition a profit motive.

Figure 1: Classification matrix of collaborative economy platforms



Source: Codagnone and Martens (2016).

3.3. Generated value and empirical findings

Geron (2013) has estimated that the revenue flowing through the collaborative economy directly into people's wallets reached \$3.5 billion, while its value in EU 28 is €20 billion. Vaughan and Hawksworth (2014) calculate that on a global basis the collaborative economy was worth \$15 billion and could reach \$335 billion by 2025. Barbezieux and Herody (2016) estimate that in France the collaborative economy activities turn over \$2.5 billion, involve about 15,000 firms (including self-employed micro-entrepreneurs), and generate 13,000 permanent jobs. This would amount to approximately 0.1% of French GDP generated by 0.5% of French companies for 0.05% of French total employment. Goudin (2016) approximated the potential economic gain linked with a better use of capacities as a result of the collaborative economy to be €572 billion in annual consumption across the EU-28 if substantial associated regulatory barriers are removed. Such barriers could reduce the value of potential increased use to up to €18 billion in the shorter-term and up to €134 billion in the medium and longer term, depending on the scale of the obstacles. Most of these estimates, however, should be taken with caution as because of the lack of reliable data and consolidated empirical evidence they are inevitably based on questionable assumptions (Codagnone et. al., 2016).

Owyang et al. (2014) in their survey in the UK, the US and Canada found that 29% of the British population had engaged at least once in a sharing transaction and 23% used one or more platforms such as Airbnb, Uber, TaskRabbit, Etsy, Kickstarter. Stokes et al. (2014) estimated that in 2014, 25% of the UK adult population shared online in some way. Huws and Joyce (2016b) using a nationally-representative sample of the UK population aged 16-75 and conducted at the end of 2015, reported that 72% of the respondents are either making an income from online activities or buying labour from others. Of these, around 1% is only involved in online rental schemes such as Airbnb. Huws and Joyce (2016a) found that around 68% of the Swedish adult population is active in some way in the online economy, for instance selling goods online or renting out rooms on platforms like Airbnb (those involved only in online rental are around 1% in Sweden as well). Van de Glind (2013) provides a large representative survey of Amsterdam's citizens and shows that 38% of respondents are willing to take part in all possible forms of collaborative consumption and 84.1% are willing to take part in at least one form. PIPAME (2015) reports the findings of a survey conducted in 2009, indicating that, at that time, 89% of the respondents had engaged at least once in a collaborative consumption practice. Nielsen (2015) focuses on ride services and renting in the traditional ICT usage by household survey in Denmark and found that by mid 2015 3.1% of Internet users let out through digital platforms and 8.7% rented from Airbnb and similar platforms abroad and 4.4% in Denmark; Moreover, Uber was used by 2.8% of the Internet users.

As for empirical research⁴ that focuses on the microstructure of specific marketplaces, the majority of studies refer to the models of AirBnB and Uber:

Fradkin (2014) reports that in Airbnb potential guests typically view only a subset of potential matches in the market and more than 40% of listings remain vacant for some dates; hosts reject proposals to transact by potential guests 49% of the time, causing the potential guests to leave the market although there are potentially good matches remaining; and without search frictions (guests had all information and knew which host were willing to transact with them), there would be 102% more matches and revenue per searcher would be \$117 higher.

⁴ Codagnone and Martens (2016) provide a nice review of the empirical research findings

Zervas et al (2014) used data obtained from both Airbnb and the hotel industry in the Austin areas.

They find that Airbnb's impact on the hotel market consists of an 8%-10% reduction in revenues and that this impact is non-uniformly distributed, with lower-priced hotels, and hotels not catering to business travel being the most affected segments. They also find that affected hotels have responded by reducing prices, an impact that benefits all consumers.

Farronato and Fradkin (2015) found that the market expansion and business stealing effects of Airbnb differ by location, and attributed this heterogeneity to supply constraints - legal and geographic - relative to the level of demand. According to their model, hotels and peer-to-peer suppliers differ in their fixed (higher for hotels) and marginal costs (higher for peer-to-peer suppliers). Having run the model, the authors were able to conclude that efficient market structure depends on the level and variability of demand, and to quantify the welfare gains from peer-to-peer entry in the accommodation industry.

A statistical analysis of a dataset constructed from Airbnb (combining pictures of all New York City landlords on Airbnb with their rental prices and information about the quality of the rentals) finds what can be seen as indirect evidence of racial discrimination (Edelman and Luca, 2014). The main finding is that, controlling for other relevant covariates, non-black hosts charge approximately 12% more than black hosts for the equivalent rental. These effects are robust when controlling for all information visible in the Airbnb marketplace. These findings highlight the existence of discrimination in online marketplaces as an important unintended consequence of a seemingly routine mechanism for building trust.

In Uber, Bond (2015) analyses Uber impacts in San Francisco, District of Columbia and New York using extensive statistics on the taxi industry in the three areas pre- and post-Uber. The descriptive data suggests that Uber has had a negative impact on both the revenue of the taxi industry and on the values of the taxi licenses. Wallsten (2015) uses Google trends as proxies to measure the demand for Uber services and administrative records of taxi complaints placed by consumers in New York and Chicago for improved service quality by the traditional taxi industry. He identifies that an increased usage of Uber correlates with fewer complaints. He finds that Uber's competitive pressure has led traditional taxi drivers to improve customer service. However, due to data limitations it is difficult to estimate the exact magnitude of this spill-over effect. Greenwood and Wattal (2015) based on the natural experiment created by the staggered entrance of Uber in different Californian cities between 2009 and 2013, concludes that Uber services contributed to reducing alcohol-related motor vehicle homicides.

In TaskRabbit, before the recent change of model, Cullen and Farronato (2015) found that auction mechanisms were not very efficient as they did not vary much with market conditions and suggested that a simpler mechanism may be preferable. This spot market clears thanks to a high elasticity of supply: in periods when demand doubles, sellers work almost twice as hard, prices hardly increase and the probability of requested tasks being matched falls only slightly. Similar results are found by Horton (2014) for the oDesk market for professional services.

Fraiberger and Sundararajan (2015) provide a modelling simulation that has calibrated data from the traditional US car market and from just one online peer-to-peer rental service (Getaround). They show that peer-to-peer rental markets change the allocation of goods significantly and that below-median income consumers will enjoy a disproportionate fraction of eventual welfare gains from through broader inclusion, higher quality rental-based consumption, and new ownership facilitated by rental supply revenues. Schor, et al. (2014), in their qualitative empirical study based on fieldwork in four sites, analyse how class and other forms of inequality operate within this type of economic arrangements.

They find considerable evidence of distinguishing practices and the deployment of cultural capital (i.e. some individuals did not share with others who made grammatical errors in online exchanged text). This exercise of class power in turn undermines the ability to forge relations of exchange and the volume of trades. It creates an inconsistency between actual practice and the widely articulated goals of openness and even equality.

4. PROVISION OF SERVICES THROUGH COLLABORATIVE PLATFORMS

KEY FINDINGS

- The classification of services provided through collaborative platforms requires a case-by-case analysis
- There are three main criteria for classifying provided services as professional: frequency of provision, profit-seeking motive and remuneration
- These three criteria can define a single measure (score). By applying a threshold approach we can differentiate professional and non-professional services in peer-to-peer markets
- Empirical evidence confirm the profit-seeking motive in sectors in which collaborative economy platforms are present
- Further relevant empirical research with focus on the European markets should be encouraged

4.1 Professional vs. non-professional services

Collaborative economy platforms motivate the provision of services by individuals and SMEs. EU consumer and marketing legislation has been designed to address the framework of transactions so that all the involved parties are well protected. For professional services legislation impose additional requirements to service providers that include among others market access, tax and safety regulations which increase their operating costs (and consequently the cost of the transaction)⁵. However, EU legislation does not establish at what point a peer becomes a professional service provider in the collaborative economy. Member States use different criteria to differentiate between professional services and peer-to-peer services. Some Member States define professional services as services provided against remuneration compared to peer-to-peer services that aim at compensating costs incurred by the services provider. Other Member States have introduced a differentiation using thresholds. These thresholds are often developed on a sector-specific basis taking into account the level of income generated or the regularity with which the service is provided. Below these thresholds, service providers are usually subject to less restrictive requirements.

Collaborative economy blurs the separating line between professional and non-professional services, especially in the business models that belong to the northwest quadrant of Figure 1. Given the great variety of business models, classification of professional services requires a case-by-case analysis. By looking at the particular characteristics of the providers of services in collaborative economy models we can identify some general criteria⁶ that can help us to define professional services in such models:

- Frequency of service: If the service is provided on a frequent basis, then, it is more likely to fall into the professional ones

⁵ According to the Unfair Commercial Practices Directive:

- a trader is a person “acting for purposes relating to his trade, business, craft or profession”;
- a consumer is a person acting “outside his trade, business, craft or profession”

⁶ The European Commission, in its European agenda for the collaborative economy (see COM, 2016) correctly identifies these criteria as important for the definition of professional services.

- Motivation for service provision: It is important to identify if the service is offered based on cost compensation or there is profit seeking motive. If the main purpose of the provision of the service is to earn income, then the provider is more likely to be seen as a professional.
- Level of generated income: The higher is the generated income by the service provider, the more likely is that the service can be classified as professional.

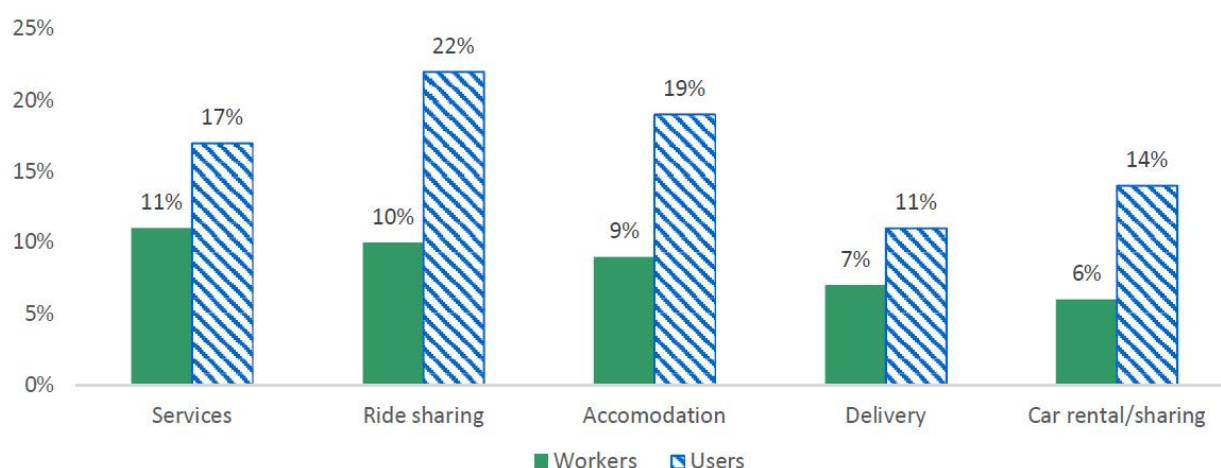
For example, BlaBlaCar platform is used for long-distance trips which on average (per provider) are not as frequent as the trips of urban ride-sharing platforms drivers (like Uber and Lyft and lift drivers). The motivation of a service provider that use BlaBlaCar platform is more likely to be the cost compensation of the trip instead of generating some income as in platforms like Uber and Lyft. In BlablaCar, the drivers would have possibly gone to the long-distance trip for personal reasons even if they had not shared their car with other passengers before. In Uber and Lyft this is not the case, as the passengers determine the exact route and time of the ride.

It is important to understand that the above three criteria should not be examined in isolation. We should define a general classification score of these three dimensions and set a threshold of this score above which the service can be classified as a professional. Since, each Member State use different criteria and thresholds for defining professional services, a European-wide coordination is needed to avoid big cross-border discrepancies. With this respect collaborative economy can provide a great opportunity for better collaboration across Member States which is vital for the fulfilment of digital single market's goals.

Identifying which services are classified as professional is important for applying the appropriate regulatory framework that guarantees protection for all the involved parties. While a case-by-case analysis is the correct approach, it is interesting to review some relevant (but unfortunately, not so rich) existing statistics on the providers of services. Profit-seeking motives seem to be well justified from the available empirical evidence. In fact, the proportion of full time providers is not negligible. This suggests that some individuals consider their involvement with collaborative platforms as the primary source of their income. However, further analysis and evidence is needed to reach a conclusion about the potential share of activities in collaborative economy that can be classified as professional.

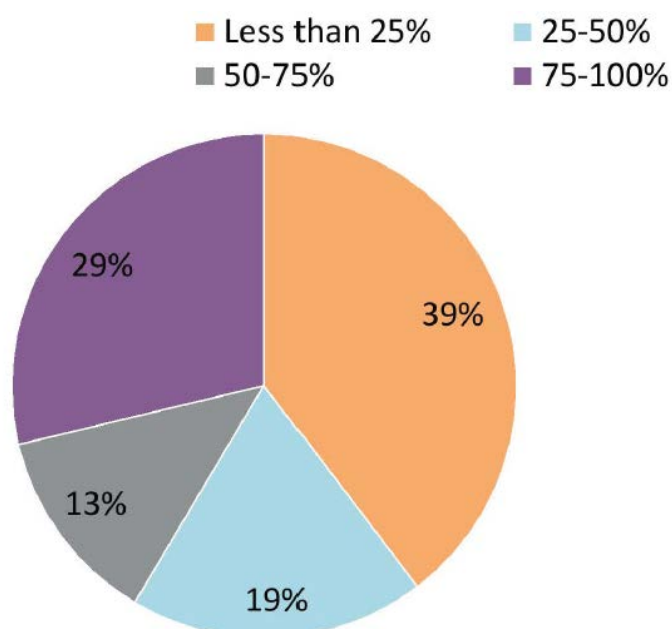
Collaborative economy associated jobs account for less than 50 % of household income for 58.5 % of respondents to the RFS 1099 Economy Workforce Report, and less than 25 percent of household income for almost two-fifths. Moreover, according to a survey commissioned by Burston-Marsteller, the Aspen Institute and TIME among 3 000 Americans in 2015, 44 % of the population have used collaborative platforms. The figures corrected for internet usage and demographics show that almost all of the people involved in the collaborative economy have used the services (42 %) of a collaborative platform and about half have worked (22 %) through a collaborative platform.

Figure 2 presents the share of US population participating in the collaborative economy. The providers primarily offered services such as home repair and moving (11%), ride-sharing (10%), accommodation (9%), and to a lesser extent delivery of food (7%) and car rental/sharing (6%). The provided services are quite evenly spread across different types of services identified in the survey, which are more specific for leisure-related products/services. In turn, the demand is more biased towards ride-sharing, accommodation (19%) and services (17%). Both providers and users have, on average, been offering/using services from two types of platforms.

Figure 2: US population share that participates in collaborative economy

Source: Burston-Marsteller, the Aspen Institute and TIME (2015)

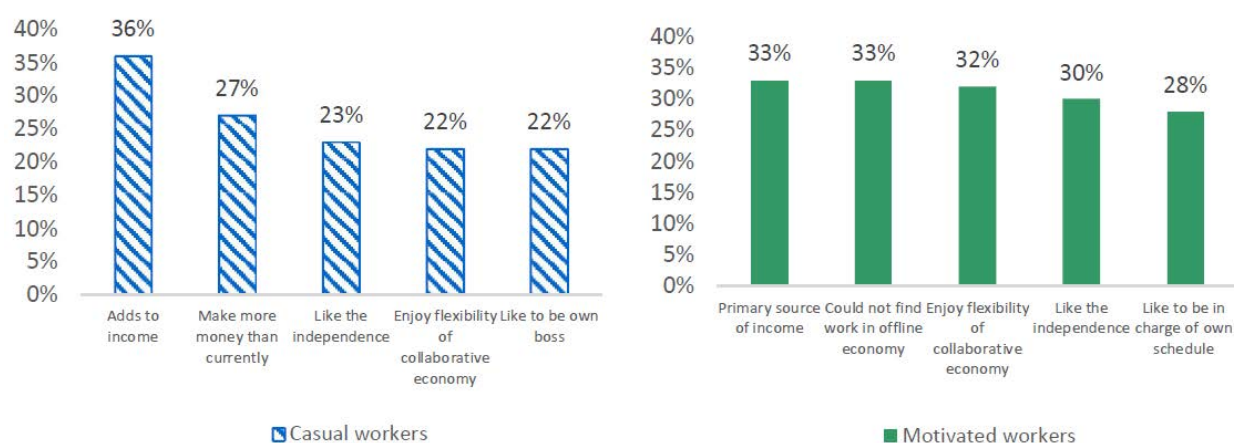
Figure 3 illustrates the percentage of the household income in the US from the collaborative economy. The 39% of the households earn less than 25 % of their income from Collaborative economy, while the 29% of the households rely heavily on the income from collaborative economy platforms.

Figure 3: Percentage of household income in the US from the collaborative economy

Source: RFS 1099 Report, Bloomberg

Figure 4 shows the responses of casual workers as well as motivated workers (the ones who earn more than 40 % of their monthly income in the collaborative economy). The 36% and 33% of each category, respectively, consider collaborative economy as the primary source of their income, while a smaller percentage are attracted mostly because of the flexibility of work in collaborative economy business models.

Figure 4: Motivation to join collaborative economy platforms



Source: Burston-Marsteller, the Aspen Institute and TIME (2015)

A further more comprehensive empirical analysis with European focus could provide many useful insights, especially to the direction of the frequency of provided service and remuneration.

5. REGULATORY CHALLENGES AND CONSUMER PROTECTION

KEY FINDINGS

- 1) We should not only look at how to regulate collaborative platforms but also how we should adjust the regulatory framework in the markets of their offline competitors in order to encourage innovation and further adoption of information technologies by more “traditional” firms.
- 2) There should be a well-coordinated application of regulatory rules in local, national and EU level for maximizing the benefits from the operation of such platforms.
- 3) Regulatory certainty and clarity is really for the growth of European platforms and for closing the gap with North America and Asia.
- 4) Collaborative platforms have increased access to information related to their users and market conditions. So, they can substantially contribute to the protection of their users. Their close collaboration with authorities is essential to guarantee high protection standards.
- 5) 9 recommendations about how to improve and protect users of collaborative platforms are presented.

5.1. Regulatory concerns and approach

Despite the efficiencies and benefits associated with collaborative economy, there are concerns about what the proper regulatory intervention should be. Goudin (2016), for example, concludes that the current regulatory framework is not appropriate suggesting that a new framework is needed. In addition, the difference in regulatory regimes for online and offline services can lead in some cases to situations of unfair market competition. One important question then is: how can we restore a level playing field?

Definitely, to answer this question we should not only look at how to regulate collaborative economy platforms but also to how to adjust the existing regulatory framework of offline services to the arrival of the collaborative efficient competitors. The entry of digital firms in traditional markets can incorporate positive spill-over effects for the “traditional” incumbents⁷. The entry of collaborative platforms increases competition in the sector they operate. Such a competitive pressure can motivate investments on innovation by the offline firms in order to protect their market position. Regulation in the main sectors of collaborative activities should also target on how to induce the offline firms to adopt information technologies, enter the digital era and compete more efficiently with their collaborative competitors. In this way, additional benefits will be released by consumers due increased competition⁸. For example, the strict price regulation in the taxi industry (which to some extent has been introduced for transparency reasons and passenger protection) does not have any point since the market has been liberalized with the entry of Uber, Lyft and the other collaborative ridesharing firms. Digital information over the conditions and terms of ride provide transparency over the transaction even if the price of the ride is not fixed. In addition, taxis will not feel constrained by the regulatory framework to reduce their prices and compete

⁷ As Wallsten (2015) predicts. See relevant discussion at Section 2.3.

⁸ I believe that this point should have also be covered by the Commission’s European agenda for the collaborative economy.

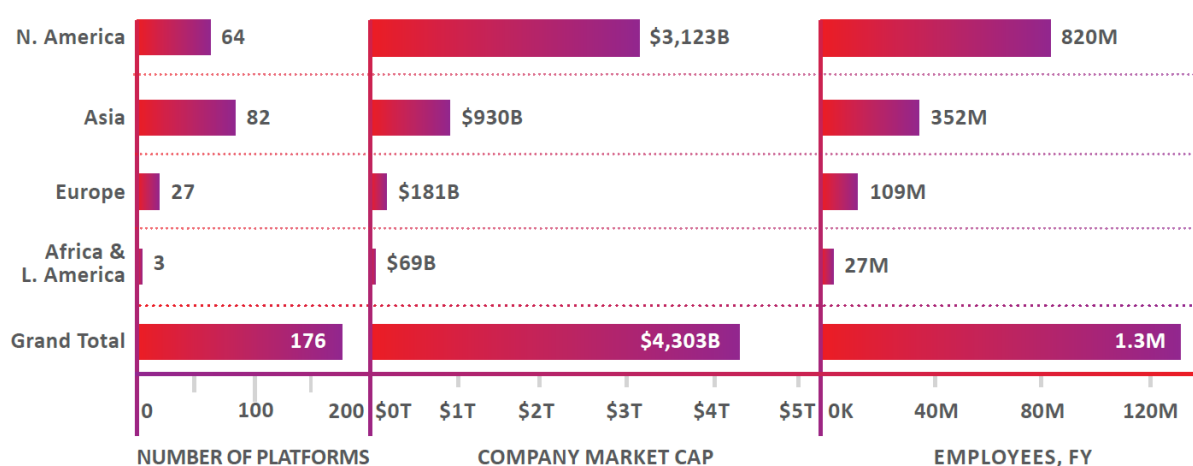
more effectively with collaborative platforms (as hotels did in the empirical study of Zervas et al, 2014 in response to the entry and operation of AirBnB).

In specific sectors where collaborative platforms facilitate (professional) services that are close substitutes (from the perspective of consumers) with the ones offered by “traditional” firms, the additional regulatory costs in offline economies may prevent them from competing with digital firms. In such cases, the establishment of a level playing field should not incorporate additional costs for the consumers. We should not increase the regulatory costs of platforms having as a unique objective to restore the level playing field, because in this case the costs are likely to pass to consumers. The main objective should be the protection of consumers and not the competition.

Legal certainty and regulatory clarity are also required in order to incentivise further investments in efficient information technologies. The current uncertainty over the status of the collaborative economy platforms, the legal disputes in national and European courts, the decision to restrict their operation at a local/city level generate an environment that it is difficult to attract new investments in Europe. Regulatory authorities should move quickly into defining the framework of the operation of such platforms to restore investors’ confidence. Besides, restricting the operation of particular business models will have a higher impact to European newer and smaller platforms than the American ones that have reached a critical scale to absorb such regulatory shocks. For example, the decision of the Berlin’s city court to ban short-term rentals has a higher 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.

If we compare the online platforms that are created in Europe with the ones that are founded in North America and Asia, we will see that Europe is far behind both in number of platforms and their market capitalization. Figure 5 provides some relevant statistics by Evans and Gawer (2016).

Figure 5: Online platforms by region



Source: Evans and Gawer (2016)

By providing a clear regulatory framework for the operation of platforms and their market interaction with offline firms can only incorporate benefits. Another key question then is whether or not there is a need for regulatory intervention, at EU level or at a local level. We should not ignore that collaborative platforms have a primary impact on the local economy. So, it is natural to underline the importance of local-level regulation that fully accommodates the characteristics of the different regions in Europe.

However, as collaborative platforms have the tendency to expand to multiple countries a European approach is also necessary to make sure that all EEA cities are in line with the basic principles of the digital single market and agenda. The balance between European-wide and local regulation should be stable and reflect to the needs of each region.

Some of the current open regulatory issues (except the ones discussed extensively above) refer to:

1. Employment: Should the provider of services through collaborative platforms be considered employees or independent contractors? The great variety of business models signals that we should adopt again the case-by-case approach. If the platform has the right to control the provision of the service and set the terms and conditions then we are closer to an employment relationship. However, a common characteristic of the main business models is the flexibility on the side of provider. The provider in the most models can choose when and for how long to work. The relationship between the platform and the provider is usually non-exclusive allowing the providers to multi-home in other platforms or activities. According to the European Court of Justice⁹, the essential feature of an employment relationship is that:
 - a. For a certain period of time a person performs services for and under the direction of another person.
 - b. In return of this service, he/she receives remuneration.

This definition does not fully match with the flexibility of providers in collaborative economy platforms. So, for the cases that the platform has the right to control the provision of the service, we need a new employment relationship which provides sufficient worker's protection but does not abolish the flexibility which in combination with the efficient information matching technologies can bring additional benefits to the providers of service. Note, however that if the providers are classified as employees, the platform will incur additional costs which are likely to pass to the end users (providers and consumers).

2. Taxation: While substantive law on tax sharing activities exist, enforcement may face challenges because some platforms have the possibility to pick the most favourable regulatory regime. Tax issues should be addressed both in a local level with the good cooperation between authorities as well as in an international one by removing opportunities for tax evasion.
3. Data and privacy regulation: Platforms rely extensively on user data and algorithms to match buyers and sellers, set prices and monitor behaviour. The detailed data collection and the use of personalized algorithms raises challenging regulatory issues and questions: For instance, what rights should consumers have to limit the way these businesses use data? Should it be possible to share or sell individual feedback ratings or purchase histories? If a worker performs poorly or a consumer gets bad feedback when using a particular service, should they be able to expect a fresh start with another one? According to Tucker (2015) a worker whose poor feedback follows her to her next job may suffer economic harm, but even if she does not, she may suffer an inherent—and difficult to quantify—cost from the loss of privacy.

⁹ See also European Commission (2010).

4. Optimal timing of when regulators should act¹⁰: Digital platforms can grow and evolve extremely fast if they succeed. One difficulty in trying to regulate rapidly growing and evolving businesses is that regulations cannot easily be changed or withdrawn, so rules that look sensible at the time they were imposed may appear outdated or misguided. However, we should not ignore that in platform markets; there can be a great deal of path dependence, so regulatory measures have an impact on the potential development of platforms. What is more important than the time of regulatory intervention is the clarity of the rules that allow platforms to design their growth path under certainty.

5.2. Users' protection: a list of 9 tentative recommendations

There is no one-size-fits-all recommendation list due to the heterogeneity of models. The following 9 priorities (in random order) for protection of consumers may be applicable to different degrees to different platforms depending on their business models, the types of services they accommodate and the market characteristics:

- Safety of service: Platforms together with the authorities should ensure that the providers of (especially professional) services have gone through the appropriate training and inspection process and have all the required qualifications to provide the service to consumers in a safe way. Professional service providers should be required to comply with the same standards as the "traditional" firms operate in the same market.
- Transparency over collection and process of personal data: Platforms collect personal data from their users that help them to improve the efficiency of their matching algorithms. In some cases data collected contains sensitive information such as locations at various moments or credit card details. Platforms should inform their users through clear and easy to read notifications about the amount of the data they collect and the way they process it. Users should always give their explicit consent.
- Clear liability rules: Liability rules should be ex-ante clear and all involved parties should be properly notified and insured. Platforms can be exposed to liabilities when they define the terms and conditions as well as control the provided service.
- Reliability of reputation mechanisms: The ability to check and evaluate the profile of the service provider and read the reviews about the quality of the service is important and can maximize the benefits from an efficient transaction by removing information asymmetries. So, it is of vital importance that these mechanisms are designed in an unbiased way so that the users reveal their true preferences and judgments. Potential concerns over how unbiased these mechanisms include the fact that people may be reluctant to provide negative ratings (being for example afraid of initiating a bad rating "war" and hurt their reputation). In markets where the stakes to individual transactions are higher, or where personal safety is a concern, reputation mechanisms have become increasingly sophisticated. Prosper, for instance, collects and posts credit bureau information about potential borrowers, and Airbnb verifies the true identity of both buyers and sellers. Two-sided reviews also play an important role. For instance, Uber uses customer reviews to screen out problematic drivers, and it shows drivers the ratings of potential riders, so that riders who behave badly may have a harder time to find a ride in the future. Of course, heavy reliance on feedback scores raises the concern that users will seek to manipulate these scores. Mayzlin et al. (2015) argue that on review platforms such as Trip Advisor or Yelp, where anyone

¹⁰ See Einav et al (2015)

can post a review, manipulation is pervasive. Platforms should design carefully their review and evaluation mechanisms so that reports are truthful and manipulation limited.

- Prevention of fraud: As the transactions and payments are made online, there is always the risk of an attempted fraud. Ranchordas (2015), for example, reported numerous protests about scams on websites in the context of collaborative economy transactions. Platforms should design the payment process in a way that minimizes the risk of fraud. Moreover, it is important for consumers to be able to file complaints and obtain a quick and fair complaint resolution through an easy and clear procedure.
- Assurance of non-discriminatory provision of services: Platforms should encourage general, clear and transparent rules against any form of discrimination (including racial minorities, low-income users and low-income regions) that should be respected by all participating individuals. The lack of relevant regulation about collaborative economy (Edelman and Geradin, 2015) should not leave an open “window” for such practices. As it is discussed in Section 2.3, such discrimination practices have been empirically observed and should properly be addressed.
- Closer collaboration with local authorities: The close collaboration of platforms with local authorities is essential for the fair allocation of the generated benefits within the local communities as well as the creation of smart cities that are based on collaborative consumption. Discussions and bilateral agreements in a series of issues such as city taxation, local employment, investments in infrastructure and efficient ways to share assets can improve the living standards and increase the value from participation in collaborative economy.
- Motivation of digital users’ unions: Platforms and information technologies can facilitate further interactions among users and can help them to form of unions that represent their interests. This is particularly important in big and successful business models with many users in which platforms contain the right to control (at least partially) the terms and conditions of the provision of the service. Such interaction among users can improve the users’ collective bargaining position and help the platforms to make operational decisions that benefit to a greater extent their users. Hence, it should be encouraged.
- Encouragement of evidence based economic analysis: While there are multiple collaborative business models that have entered many sectors of the economy, there are only a limited number of empirical studies that deal with the impact of collaborative economy platforms. One of the profound reasons for this is the lack of available data related to the operation of these platforms. On top of that, some of the existing studies that have direct access to platforms’ data are commissioned by them. Research by academic and policy institutions should be encouraged. As access to data is needed, platforms could agree to open the access to parts of their datasets (to the extent that they do not compromise their business activities) to empirical researchers. Assessing their exact impact is of vital importance for the design of the correct policies.

6. CONCLUSIONS

The arrival of collaborative economy is associated with many benefits for consumers and the economy as a whole. Online platforms through their efficient matching algorithms improve the efficiency of transactions increasing the trade of underutilized assets among peers.

A regulatory intervention that addresses concerns generated by the operation of collaborative platforms should adopt a case-by-case analysis approach. However, so general criteria for classifying the services in professional and non-professional can be adopted. In fact, it will be helpful if there is an EU-wide agreement over the classification.

The literature on the topic shows that we are far from providing unambiguous answers to some of the fundamental questions about the collaborative economy. The available research is too limited to give us a comprehensive and coherent picture. As collaborative platforms are expected to further penetrate markets, it is essential to encourage and motivate further empirical research that focuses on the impact of these platforms on the economy, the generated regulatory concerns and the optimal way to address them and how we can incentivize more investments in information technologies to increase further their positive impact on the economy.

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