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Sharing Economy: For an Economic Taxonomy

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Abstract

Sharing economy is an emerging phenomenon without a consolidated economic approach. We focus on main economic characteristics of sharing economy, as a category of peer-to-peer markets, which include collaborative consumption and redistribution markets. Peer-to-peer markets create a positive externality when exploiting idling capacity, adding further exchange advantages to those usually related to classical two-sided markets. Sharing economy differs from peer-to-peer redistribution markets, where a transfer of full ownership of goods occurs, because goods are used to provide services excludable but non-rivalrous. Problems arising from sharing economy growth are briefly analysed.

Keywords: sharing economy, peer-to-peer markets, collaborative consumption

1. Introduction

There are multiple definitions for similar business innovations born and developed on the internet: eBay, Uber and Airbnb are alternatively defined as “peer-to-peer” markets (Einav et al., 2015) or sharing economy phenomena (Balck & Cracau, 2015). Economic literature does not have a consolidated approach to this issue, and a complete taxonomy of new exchange/production methods is a prerequisite to analyse the effects, implications and future developments of such markets.

According to Puschmann and Alt (2016), the term “sharing economy” was first mentioned by Lessig (2008, p. 143), who defined it as “the collaborative consumption made by the activities of sharing”. The sharing economy phenomenon is not only a commodities or services markets prerogative. Bitcoin can be analysed as a sharing monetary market. The area where sharing is more consolidated is the information market, where open source software and files sharing is still analysed. Much attention in this field is devoted to illegal sharing, intellectual property rights and regulatory systems of piracy. Information sharing covers many separate issues, from open access resources to open data policies to open source software creation and use. In financial markets, too, sharing is a growing opportunity with new forms of peer-to-peer lending. In what follows, the attention will be focused on the standard economic theme concerning commodities and services.

2. Peer-to-Peer and Two-Sided Markets

For peer-to-peer markets, economics does not provide a consolidated definition, so it is useful to start from computer science to find a basic definition of peer-to-peer systems.

According to Steinmetz and Wehrle (2015), Oram et al. (2001) give a basic definition of the term “peer-to-peer” as “a self-organizing system of equal, autonomous entities (peers) [which] aims for the shared usage of distributed resources in a networked environment avoiding central services”. The main characteristics of peer-to-peer systems for information sciences are decentralized resource usage and decentralized self-organization.

When applying this definition to market exchange, we observe that the second characteristic is usually lacking: to become a relevant economic issue, the peer-to-peer market needs to be organized through a platform on the internet and this intermediation is often the origin of the birth of a peer-to-peer market and not its consequence.

The peer-to-peer market can be viewed as a particular form of two-sided market, where two groups provide each other with network externalities through a platform: in the peer-to-peer case, the two groups’ components have the same economic characteristics (they are peers) and cannot be analysed as different types of economic agent. Classical two-sided markets are credit cards, advertising platforms, recruitment sites and search engines.

In the two-sided market, the platform reduces transaction costs between two distinct economic agents, which are easily identified as producers and consumers. Economic literature has a consolidated approach to two-sided markets (Rochet & Tirole, 2003) that can also be applied to peer-to-peer, but the latter has further economic differentiation that should be analysed. A two-sided market is one in which: 1) two sets of agents interact through an intermediary or platform; and 2) the decisions of each set of agents affects the outcomes of the other set of agents, typically through an externality (Rysman, 2009).

Elements of two-sided markets are therefore the two (different) sets of agents, an intermediary or platform, and the presence of externalities between the two sets of agents.

The externalities are typically associated with membership or usage, where the positive externality for each side of the market arises if the membership or the usage for the opposite side is sufficiently extended. The difference between a one-sided and a two-sided market is in the effects of externalities on prices: in the two-sided markets, prices depend on the success of the intermediation (how many consumers/producers are reached), whereas in the one-sided market, prices are not influenced by the mechanism connecting to the other side. In a technical sense, the literature on two-sided markets could also be seen as a subset of the literature on network effect (Rysman, 2009).

2.1 Hybrid Markets

Though it is useful to distinguish between markets where the business side is present and peer-to-peer markets, it should be stressed that on many platforms these markets coexist. When searching accommodations on Airnbnb, you can find both hotels and professional providers, and private sellers. This implies that these markets have a hybrid connotation, as stressed in the field of consumer research where the market definition is based on the difference between market-based exchange, and non-market economies (e.g. gift economies, sharing economies). From this perspective, hybrid economies can be characterized by the co-existence of multiple modes of exchange (Scaraboto, 2015).

3. Externalities in Peer-to-Peer Markets

Peer-to peer markets can be viewed as a subcategory of two-sided markets, where the intermediary or platform is fundamental for exchange development and the peers exploit/exchange an externality, but there are differences between the two that cannot be reduced to the characterization of the two sides only: in what follows, we highlight further characteristics of the peer-to-peer market, both in the kind of externality internalised and in the explanations available for these phenomena.

Consider first the accommodation problem. Platforms like Booking.com or Expedia make it easier to know exactly accommodation prices and characteristics. But the sellers are still traditional service producers like hotels and minor accommodation suppliers: it is a business-to-consumer (B2C) two-sided market where hotels and travellers exploit the network externalities. The Airbnb revolution is not in the wider marketplace but in the new suppliers, who are not professional, often without employees and without established productive lines. The same holds true, even in a stronger manner, for platforms like Uber. The peers' advantage in the peer-to-peer market is not only in the success of intermediation, deriving from membership. Smorto (2015) underlines that alternative approaches to understanding these phenomena are:

1) It is a way to solve and reduce coordination, communication and general transaction costs.
2) It is a way to exploit idling capacity.
3) It is simply a "commodification", the creation of new markets.
4) The P2P vision exploits network externalities and/or cross externalities.
5) It is an evolution from a producer to consumer line to a consumer to producer line.

Though all these characteristics seem to fit the sharing economy, some further distinctions need to be made. First, a difference exists between collaborative consumption (or peer-to-peer renting) and redistribution markets, where only the first category belongs properly to the sharing economy. The redistribution markets category includes all transactions between private and/or professional agents where a definitive property right transfer occurs: it could be a free transaction (as in Freecycle and Kashless), a swap (Swap.com) or a complete economic exchange (eBay, Craigslist and Sell), but it is always characterised by a definitive transfer of ownership.

On the other hand, collaborative consumption is a temporary agreement on the use of a good or service with a flexible and temporary co-ownership. Bardi and Eckhardt (2012) refer to the latter characteristic as "access-based consumption", underlining that it represents the evolution of a consumption style where ownership is no longer the ultimate expression of consumer desire (Chen, 2009). The same characteristic is stressed in the definition of a sharing economy as "accessibility based business models for peer-to-peer (P2P) markets" (EC, 2013). Anyway, both the collaborative consumption and redistribution markets fit the characteristics of P2P markets, where the externality does not derive only from a successful intermediation. Both have the characteristic of making exchanges that would not take place without a P2P market: useless things would be discarded without eBay and apartment rooms would be empty without Airnbnb, as would the car seats without BlaBlaCar. The idling capacity in consumers' endowment is a common feature to all P2P markets. Furthermore, in the P2P markets, goods exchanged and services provided are supplied without a classical production line and without an established firm organization.

On the whole, collaborative consumption and redistribution markets create a positive externality when exploiting idling capacity and have a cost advantage (compared to a standard business) arising from the absence of a productive organization. A separate analysis should be devoted to the P2P labour markets, where different economic and institutional characteristics (compared to other service markets) require specific instruments to be analysed. Nonetheless, at a first approximation, we can include in the P2P markets category the time-banks and platforms like TaskRabbit: when tasks and jobs are exchanged between peers, the idling capacity and the absence of a production organization are still useful features to characterize these phenomena. Moreover, an additional explanation for P2P markets for job exchange is in the classical added worker effect, which is particularly relevant in recession phases. The overall classification proposed for P2P, redistribution and sharing economy markets is presented in Appendix.

4. Redistribution Markets and Sharing Economy: Private vs Shared Goods

In peer-to-peer markets, both goods and services can be exchanged. Usually, redistribution markets concern a transfer of full ownership of goods, which are private goods in the economic sense, excludable and rivalrous. When a good becomes "shared", it is used to provide services excludable but non-rivalrous. Note that the same good (e.g. a car) can be offered on a redistribution market or shared for a ride in a collaborative consumption market, so that the quality "redistributed" or "shared" is not in the nature of the good but in the kind of transaction chosen. A more correct way to analyse this collaborative consumption could be in the theory of club goods, at least when transactions give rise to monetary exchanges.

A particular feature of the sharing economy lies in the motivation to collaborate on consumption, where intrinsic motivation plays a relevant role. Intrinsic motivation operates when someone engages in behaviour because he finds the activity in itself challenging and rewarding. As stressed by some authors (Hamari et al., 2015), participation in collaborative consumption communities and services is generally characterized as driven by the obligation to do good for other people and for the environment, such as sharing, helping others, and engaging in sustainable behaviour (Prothero et al., 2011). Therefore, the driver for collaborative consumption can be viewed in the light of intrinsically motivated behaviour in the sense of Deci and Ryan (1985), when a free transaction occurs: developments of a free sharing economy should be analysed too in the light of undermining and/or crowding effects, which may emerge when an extrinsic reward is introduced. Intertemporal substitution effects take place if the free activity is transformed into an extrinsically motivated behaviour (Bruno, 2104), which is conversely the characteristic of a sharing economy when a monetary exchange or a swap occurs. The same distinction can be applied to task exchange markets.

5. Economic Framework and Policy Implications

The right framework for analysing sharing economy phenomena is a necessary step to fully describe the main economic problems. Insights from the previous classification suggest some interesting research areas. All the peer-to-peer markets organised through platforms face a problem concerning the best way to build trust among peers (Einav et al., 2015), which in turn raises the question of consumer protection in the peer-to-peer exchange. While business-to-consumer exchanges are regulated through legal quality standards, regulations and a full consumer rights definition, P2P markets do not currently have any legal prescription. This fact also implies fiscal inequality between the two kinds of market, and the B2C actors can be afraid of unfair competition. Moreover, many peer-to-peer platforms become rapidly quasi-monopolistic in their area of interest, often crowding out non-profit networks of private agents; at the same time, the bulk of unprofessional suppliers approaching the market through sharing platforms have a strong competitive advantage over traditional providers of the same good/service, simply because no regulations or taxes are imposed on these private activities.

The consumer protection issue becomes a labour protection problem in platforms encouraging shared labour, which can be viewed as a new way to reallocate workers coming out of the traditional labour market, but without the legal and monetary guarantees usually associated with the traditional labour market.

Another interesting aspect of a sharing economy is its implication for growth, in the question of whether a sharing economy has supporting or crowding effects on growth; this theme is particularly relevant when considering the ability of professional networks to extract profits from the private sector simply by bypassing taxes, regulations and insurance and cutting down the costs associated with a traditional business. An accessory issue is the measurement of a sharing economy in its recording in the GDP measurement.

This list—surely incomplete—throws light on a potential issue of interest to economic studies, where many aspects concerning specific markets of interest for the sharing economy can be added.

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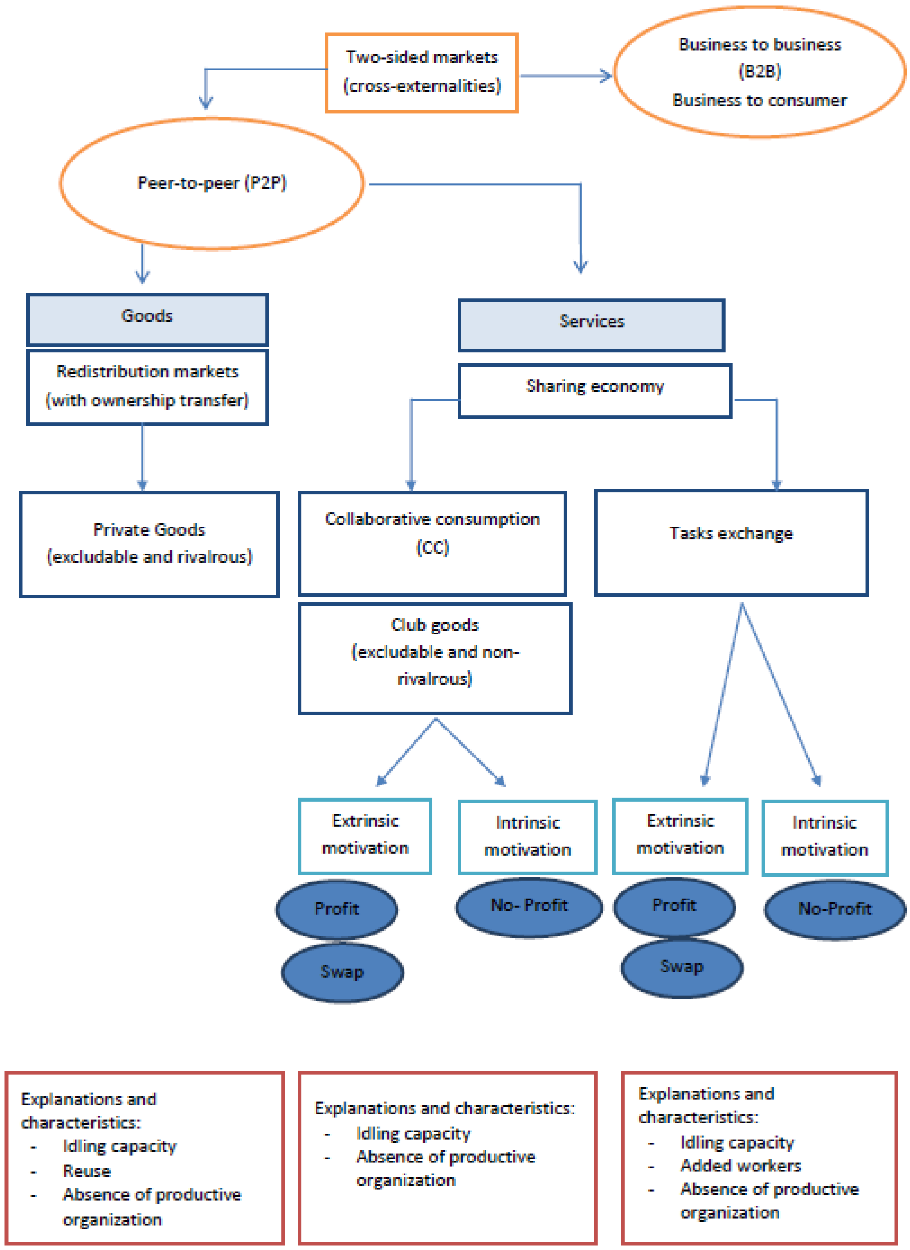
Appendix



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