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CLARIFYING THE SHARING ECONOMY: CONCEPTUALIZATION, TYPOLOGY, ANTECEDENTS, AND **EFFECTS**

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ABSTRACT

In the last decade, we have seen a spectacular rise of companies that are often described by the common term "the sharing economy." The emerging academic research on the topic reflects the importance and the far-reaching implications of this phenomenon but also demonstrates a lack of conceptual clarity about what the sharing economy represents. By addressing the main conceptual tensions that exist in this field, our paper integrates the body of knowledge on the sharing economy, clarifies the concept, and develops a typology of sharing-economy organizations. We map out the antecedents and effects of the sharing economy, identifying empirical research that has been done at the consumer, provider, and platform levels of analysis and develop avenues for future research.

Keywords: sharing economy; peer-to-peer; conceptualization; typology; antecedents; effects

CLARIFYING THE SHARING ECONOMY: CONCEPTUALIZATION, TYPOLOGY, ANTECEDENTS, AND EFFECTS

In the last decade, we have seen a spectacular rise of companies that are often described by the common term "the sharing economy" (Davis, 2016; Sundararajan, 2016). Rapid growth and disruption created by many peer-to-peer businesses, such as Airbnb, Uber, and TaskRabbit (Einav, Farronato, & Levin, 2016) have attracted the attention of the general press, legislators, incumbent businesses, activists, and society at large. By 2025, the sharing economy within Europe is projected to grow in revenues to €80 billion, up from €4 billion in 2015, according to Price Waterhouse Coopers (2016). Early on, some lauded the sharing economy as one of "10 ideas that will change the world" (Walsh, 2011) and as a path to sustainability (Martin, 2016). However, as the phenomenon developed, others began to view it as "the latest example of insurgent sentiment used to sell the bona fides of profit-making corporations" (Lee, 2015, p. 17). Clearly, it is time for the management field to take stock of where the sharing economy is today.

Having covered an impressive developmental trajectory in a short period of time, the sharing economy no longer represents a monolythic phenomenon but encompasses a wide range of diverse platforms, business models, and transactions. It is not surprising, therefore, that the emerging academic research on the sharing economy demonstrates a lack of conceptual clarity (Cheng, 2016). The diversity of activities that have come to be associated with the sharing economy from local grassroots platform cooperatives (Orsi, 2013; Schneider, 2015; Scholz, 2016) to gigantic venture capital-backed global firms like Uber or Airbnb, and the conflation of the rhetoric of sharing and altruism with the money-making agenda of many of the sharing economy platforms and their participants demand clarification.

It is increasingly apparent that the largest sharing economy players have amassed significant levels of power, creating asymmetries of information and control between the platform and its participants and fueling concerns about growing inequality. This has prompted some researchers to claim that the sharing economy has nothing to do with sharing at all (Sholz, 2017; Slee, 2015). Instead, it "seems poised to do a great deal of *taking*—extract more and more value from participants while continuing to enjoy the veneer of a disruptive, socially minded enterprise" (Calo & Rosenblat, 2017, pp. 1627–1628). That is why some have suggested that the new phenomenon would be better described as a form of platform capitalism (Srnicek, 2017).

In this paper we ask what the sharing economy is and what it is not, where this phenomenon is today and how it may evolve going forward. By identifying the key features of the sharing economy and the relevant dimensions of sharing transactions we provide a lens that management scholars and business practitioners can apply to navigate the heterogeneous landscape of the sharing economy. We consolidate the accumulated research on this topic across a broad range of management disciplines, such as business strategy, marketing, consumer research, environmental studies, tourism and hospitality, urban studies, ethics, and culture. We systematize the available empirical findings on the antecedents and effects of the sharing economy and formulate clear potential questions for future research.

CONCEPTUAL CLARIFICATION

The sharing economy is still rather young, and the corresponding research field is at the formation stage. According to Gerring (1999), conceptual formation involves three interconnected aspects of a concept: (1) the phenomenon, (2) its properties or features, and (3) the label or term. We can firmly attest that by now the phenomenon of the sharing economy has become an integral and visible part of today's business landscape and will

likely continue to increase in prominence. Identifying its key properties is more challenging, owing to its multifaceted and evolving nature (Schor, 2016).

The Phenomenon of the Sharing Economy

Sharing as a social phenomenon has existed since time immemorial, but it was usually limited to close family and friends (Belk, 2014). The advancement of information and communications technologies enabled traditional offline sharing to move online, expanding the circle of participants to complete strangers located all over the world (Schor, 2016). The early online exchanges in the 1990s mainly involved sharing digital items, such as files, songs, videos, etc., or enabled collaboration in digital spaces (for example, Wikipedia and Linux). The emergence of social media platforms such as Facebook helped people to get comfortable with sharing some aspects of their private lives, such as personal updates, photos, or videos. The novelty of the sharing economy has been to facilitate offline sharing of physical objects or human assets with people who do not belong to the same social networks of family, friends, or neighbors.

Lessig (2008) was one of the first authors to introduce the concept of the sharing economy. Botsman and Rogers (2010, 2011), who brought it into the center of general discourse, noted that since the early 2000s people have been increasingly using online technology to form communities and get access to products and services in both the online and offline worlds. Enabled by new mechanisms of digital trust, the community ethos of sharing and collective empowerment (Lee, 2015), traditionally found in small local time banks, toy or tool libraries, etc., suddenly grew in scope and scale.

Thus far, the sharing economy has moved from nonprofit platforms (such as Couchsurfing,³ founded in 2004) to profit-seeking multibillion-dollar businesses (such as Airbnb and TaskRabbit, both founded in 2008) and more recently, to platform "cooperativism." A reaction to the highly publicized controversies about the growing power imbalance between the platform and the individual platform participants in the cases of some of the largest players such as Uber (Slee, 2015), cooperativism is a movement that sets out to create a sharing economy in which collectively owned and managed platforms will provide an alternative to those backed by venture capital (Scholz & Schneider, 2015). In various countries local projects are emerging, such as the Denver, USA, Green Taxi Cooperative, which is owned by its drivers and competes directly with Uber and Lyft as an app-based ridehailing company. However, such projects are still rather small in scale and real impact.

Views of the sharing economy range from all-embracing to narrow and focused and continue to evolve with the phenomenon itself. Early on, Botsman and Rogers (2011) described the emergent phenomenon as collaborative consumption and defined it as an economic model based on organized sharing, bartering, swapping, trading, or renting products and services, prioritizing access over ownership. Objecting that this definition "mixes marketplace exchanges, gift giving and sharing," Belk (2014, p. 1597) separated sharing activities, where no compensation is involved, from collaborative consumption, where people coordinate "the acquisition and distribution of a resource for a fee or other compensation." In this view, all platforms that allow free sharing among users, such as Couchsurfing, would be considered part of the sharing economy, while Airbnb or Lyft would not, because their users receive compensation for sharing their assets.

³ Importantly, Couchsurfing was founded as a nonprofit corporation but in 2011 changed its status to a for-profit corporation.

By contrast, Botsman (2013) defined the sharing economy as "an economic model based on sharing underutilized assets from spaces to skills to stuff for monetary or non-monetary benefits." Under her definition, Airbnb, Lyft, and other platforms that facilitate access to underutilized capacity belong to the sharing economy, regardless of the involvement of money in the transaction. Many researchers now include both monetary and nonmonetary transactions in their conceptualizations of the sharing economy (Frenken & Schor, 2017; John, 2017; Laurell & Sandström, 2017; Mair & Reischauer, 2017; Puschmann & Alt, 2016; Sundararajan, 2016).

Other authors have been more restrictive, limiting the scope of the sharing economy to, for example, a particular type of asset, suggesting that it involves temporary access only to "under-utilized physical assets ('idle capacity'), possibly for money" (Frenken & Schor, 2017, pp. 4–5). By this definition, Task Rabbit would not belong to the sharing economy, because providers bring to the platform their human assets (skills, abilities, or time), while Airbnb would, since the assets on this platform are physical, such as a room or an apartment.

Table 1 shows some definitions and examples proposed by previous researchers.

Insert Table 1 about here

These definitional debates reveal tensions that are relevant to understanding the phenomenon. First, there is no agreement about the boundaries of the sharing economy—which platforms and transactions are within this domain and which are outside. Second, there is a palpable tension between the nonreciprocal, communal spirit of sharing and the competitive money-making agenda of many fee-based businesses that have come to be associated with the sharing economy (Richardson, 2015). Third, there is an ongoing debate about what type of assets—capital, human assets (such as labor), or both—can be included in

the sharing economy. Lastly, there is a tension between the early projections, offered mostly by the proponents of the sharing economy as it was first emerging, and the real outcomes observed a decade later (Murillo, Buckland, & Val, 2017; Slee, 2015).

Key Features and the Definition of the Sharing Economy

Our review of the literature (Table 1) suggests that sharing economy organizations have the following four features: (1) they are organized as digital platforms enabling offline transactions between users (Belk, 2014; Botsman, 2013; Frenken & Schor, 2017; Hamari, Sjöklint, & Ukkonen, 2016; Sundararajan, 2016); (2) they facilitate peer-to-peer transactions, where both the providers and the consumers are private individuals, not businesses or professional operators (Frenken & Schor, 2017; Hamari et al., 2016); (3) they emphasize temporary access rather than ownership (Belk, 2014; Botsman, 2013; Frenken & Schor, 2017; Hamari et al., 2016; Stephany, 2015); and (4) they are focused on the use of underutilized capacity (e.g., physical assets, resources, skills, or time) (Botsman, 2013; Constantiou, Marton, & Tuunainen, 2017; Stephany, 2015). Although none of these four features is unique to the sharing economy, the combination forms the core of a new socioeconomic system.

Online platforms that facilitate offline transactions. Sharing economy organizations are online multisided platforms (Constantiou et al., 2017; Henten & Windekilde, 2016) that create value for the participants by facilitating interactions and matching users (Parker, Van Alstyne, & Choudary, 2016). Importantly, the platforms do not own the assets that underlie the transactions (Frenken, 2017), but make investments (e.g., in advertising and technology) that reduce barriers to entry and transaction costs for individuals who want to provide or consume goods and services (Davis, 2016; Edelman & Geradin, 2016; Einav et al., 2016). In

addition, the platform provides mechanisms of digital trust (ratings, reviews, etc.) that make possible trust-based transactions between complete strangers (Calo & Rosenbat, 2017; Schor, 2016).

The use of digital platforms differentiates sharing economy organizations both from traditional offline forms of sharing like local clothing, toy, or tool libraries, which require physical repositories of assets, and from purely digital exchanges or sales of goods on digital platforms like Napster or Ebay, which may not involve any offline human interaction.

Sharing economy transactions are organized online but are usually carried out offline, in the real world (Lan, Ma, Zhu, Mangalagiu, & Thornton, 2017). Entering another person's home, getting a ride in a stranger's car, spending a night in a house with a host you just met—all of these transactions are risky for both parties in ways that are different from the risks of sharing files, performing online tasks, or making online purchases. One of the innovations of the sharing economy platforms was to come up with mechanisms to mitigate these risks; and the absence of such mechanisms allows us to categorize Craigslist, for example, as a predecessor of the sharing economy but not a sharing economy firm.

Peer-to-peer transactions. Transactions in the sharing economy occur between private individuals, not businesses or firms. Platform participants have been described by a number of competing terms, such as "peers" (Einav et al., 2017), "small suppliers" (Einav et al., 2017), "the crowd" (Sundararajan, 2016), or "consumers," used for both providers and recipients of goods or services (as in the term "consumer-to-consumer" used by Frenken and Schor, 2017). The participation of private individuals instead of businesses as consumers and suppliers in the sharing economy has important regulatory implications. For instance, legislation concerning consumer rights and protections usually applies to transactions

between individuals and businesses but not to transactions between individuals (European Commission, 2016).

The difference between peer-to-peer (P2P) and business-to-peer (B2P) models can be illustrated by comparing Turo and Zipcar. Both firms provide short-term car rentals. In the case of Turo, private individuals own the cars and make them available to other drivers when the owners are not using the vehicles. In the case of Zipcar, the firm owns a dedicated fleet of vehicles that are available for short-term access to local communities of registered Zipcar users. Similarly, in TaskRabbit individuals offer services, such as walking a dog or running an errand, to other ordinary citizens, whereas in UpWork independent professionals and businesses collaborate remotely.

The peer-to-peer character of the sharing economy has not been free of controversy (Perren & Kozinets, 2018). Though the term peer-to-peer usually implies "an absence of hierarchy and a sense of egalitarianism" (John, 2017, p. 85), it does not necessarily imply close similarity between a given platform's consumers and providers. On some platforms, such as Peerby, Couchsurfing, or Airbnb, private individuals may participate as both consumers and suppliers: today you host a guest in your spare bedroom and in a month you are staying at someone else's property at a travel destination. However, on other platforms it is more difficult to expect such equality. Would a cleaner who offers his services through TaskRabbit be likely to hire his customer or another individual to clean his house? Einav and colleagues (2017) show that the main function of peer-to-peer businesses is to facilitate transactions between large numbers of small suppliers and consumers. It is the participation of private individuals, not businesses, that allows researchers to categorize TaskRabbit, Uber, or Lyft as peer-to-peer businesses, even if consumers and providers differ in many ways and a given "peer" rarely assumes both roles. It is important to point out that today individual providers often coexist with business suppliers on the same platform. However, we posit that

cases where all providers or all consumers are formal business organizations lie outside the sharing economy domain.

asset without permanent transfer of ownership. This feature differentiates the sharing economy from secondhand markets, where peers sell or give their underutilized assets to other peers, such as Freecycle (Frenken & Schor, 2017), and from other peer-to-peer markets, such as Etsy, where makers of arts and crafts can sell their unique products. For the sharing economy to be possible, there needs to exist a sizeable pool of consumers who would like to get temporary access to goods owned by others, either because they have chosen to forgo ownership (Botsman & Rogers, 2011) or because personal ownership is impossible because of high price (e.g., a boat, a car), space constraints for storage (e.g., a ping-pong table), or geographical remoteness (e.g., a room at a travel destination) (Horton & Zeckhauser, 2016). Importantly, allowing other people temporary access to your assets may create a unique set of risks and considerations, such as privacy, personal safety, and proper care of the asset. Thus, temporary access requires sophisticated mechanisms for ensuring trust and personal safety.

Underutilized capacity. The final feature that defines the sharing economy is the reliance on underutilized capacity. In advanced economies, there exist many goods with "relatively wide-spread private ownership ... [that] will systematically exhibit slack capacity relative to the demand of their owners" (Benkler, 2004, p. 277), such as parked cars, empty rooms, idle tools, underused sports equipment, etc. These goods are "lumpy"; that is, they have to be purchased in units that exceed the buyer's immediate needs and therefore remain idle much of the time (Benkler, 2004). Sharing economy platforms make it easy and cheap for individuals to connect with each other and share their excess capacity (Calo & Rosenblat,

2017). This key feature excludes from the sharing economy platforms that own or rely on specially dedicated capacity (e.g., Zipcar or Car2Go, which buy fleets of vehicles in order to rent them out).

The sharing economy unlocks the value of underused physical assets (spare rooms, cars, tools, etc.) or human assets (time, skills) and can thereby benefit owners, consumers, the platform, and society at large. First, owners can benefit from sharing their resources by receiving monetary or nonmonetary rewards (social connection) for assets that otherwise would be exclusively dedicated to personal consumption (Schor & Attwood-Charles, 2017). Second, consumers may benefit from the increasing variety and lower prices of goods and services (Calo & Rosenblat, 2017). As a result, the use of idle assets has the potential to create a new market with new demand and new supply. Third, sharing economy platforms can grow much faster than traditional competitors (e.g., Airbnb vs. a traditional hotel chain) because they do not need to make any investments in the assets that underlie the transaction (e.g., real estate) but merely to attract more service providers to offer their underused assets (Parker et al., 2016). Finally, the sharing economy increases the efficiency of underutilized physical resources (Muñoz & Cohen, 2017) and may thus reduce the need to manufacture new assets, which could make the sharing economy more environmentally sustainable than the traditional economy (Frenken, 2017).

Definition of the sharing economy. Summing up the four features above, we define the sharing economy broadly as a socioeconomic system that allows peers to grant temporary access to their underutilized physical and human assets through online platforms.

Importantly, this definition allows us to include in our conceptualization both fee-based and non-fee-based transactions, a topic we discuss below.

Couchsurfing is a good example of a sharing economy firm, as it operates as an online platform that does not own real estate but connects peers and facilitates their access to individually owned underutilized capacity (a spare room in a host's house and the host's spare time to interact with guests). Other online peer-to-peer platforms that provide offline access to the underused assets of individuals also belong to the sharing economy: platforms that provide short-term access to properties (Airbnb, Homeaway, LoveHomeSwap) or products (Peerby); ride-sharing (BlaBlaCar); car-sharing (Turo, Getaround); ride-hailing (Lyft); crowd-shipping (Piggybee); tutorials (SuperProf); or other types of services (TaskRabbit).

Conceptual boundaries of the sharing economy. Even though the four features outlined above distinguish the sharing economy from other socioeconomic systems, we must concede that its boundaries are not clear-cut and will most likely continue to change as the sharing economy continues to evolve. The two most challenging issues concern the reliance on underused capacity and the peer-to-peer nature of transactions. As we have briefly mentioned, on some platforms, including the most visible ones like Uber and Airbnb, peer providers with underused assets now operate alongside formal businesses with dedicated assets.⁴ Can these platforms still be considered part of the sharing economy?

We submit that Lyft, Uber, or Airbnb represent the sharing economy only when the services on these platforms are provided by private individuals using their underutilized human or physical assets. Many providers on such platforms would fit this description. The

⁴ The coexistence within the same platform of individual service providers and business operators is a challenge not only theoretically, but empirically. It is now being actively addressed by legislators. For instance, the European Union is trying to differentiate clearly between the two types of participants, working out the different tax, regulatory, legal, and other implications for each, based on frequency of service, profit-seeking motives, and the turnover generated by the service provider (European Commission, 2016).

majority of Uber drivers in 2015 had a full- or part-time job outside Uber (Hall & Krueger, 2018). For example, a full-time teacher may drive passengers several hours per week after work, using an individually owned vehicle that was not purchased for this purpose and would be otherwise idle. However, when Uber facilitates bank loans or car leases to attract drivers, when UberBlack requires its drivers to have commercial licensing and registration, or when Airbnb relies on professional real estate managers to bring their portfolios of properties to the platform, the resulting transactions cannot be considered part of the sharing economy. Fuzzy boundaries are a common feature of new concepts at a formation stage (Gerring, 1999); management scholars must take them into account and be aware of the extent of the overlaps.

Terminology

Many terms have been used to describe our phenomenon, among them "sharing economy," "collaborative consumption," "collaborative economy," "access-based consumption," "peer-to-peer economy," "platform economy," "gig economy," "crowd-based capitalism," or "on-demand economy." The plethora of labels reflects the search for an adequate term typical of the early phases in new concept formation (Weber, 1949), when "words with similar meanings crowd around each other, vying for attention and stealing each other's attributes" (Gerring, 1999, p. 361).

Each term highlights a different aspect of the underlying phenomenon: the private status of participants in the term peer-to-peer economy; the prioritization of access over ownership in the term access economy; the platform's efficient matching of consumers and suppliers to produce an immediate service delivery in the term on-demand economy; the temporary offering of tasks in the term gig economy; or collaboration in the terms collaborative consumption and collaborative economy. The apparent overlap between the terms makes it possible to apply several labels to the same platform. For instance, TaskRabbit

can be described as a sharing economy platform but also as part of the peer-to-peer economy and the gig economy. The short-term rental of an underused apartment through Airbnb can be considered part of the sharing economy; however, the short-term rental of an apartment offered by a real estate company through Airbnb is better described by the term access economy (Rinne, 2017).

The overlap has increasingly elicited attempts by researchers to clearly delineate these terms and the underlying concepts, depending on the context (Botsman, 2013; Frenken & Schor, 2017). At the same time, some of the terms continue to be used interchangeably. For example, Hamari and colleagues (2016) use the terms collaborative consumption and the sharing economy as synonyms. The positive connotations of the common word "sharing," its familiarity and resonance, which, according to Gerring (1999), are important for adoption of a new term, most likely contributed to the wider acceptance of this term than of all the other labels. As an umbrella concept (Heinrichs, 2013), the term "sharing economy" by now has become the one most widespread in public discourse, the general press, and, increasingly, the academic literature.⁵

Some scholars consider the term "sharing economy" inherently contradictory. For instance, Slee (2015, p. 3) claims that "we think of sharing as a non-commercial, person-to-person, social interaction. It suggests exchanges that do not involve money, or that are at least motivated by generosity, by a desire to give or to help. 'Economy' suggests market transactions—the self-interested exchange of money for goods and services." Some researchers have tried to reconcile the two by defining the sharing economy as a "hybrid economy" between a market and a gift economy (Puschmann & Alt, 2016; Scaraboto, 2015;

⁵ For example, a search for "sharing economy" in Google Scholar on October 30, 2018, generated 26,700 results, "collaborative economy" 5,010 results, and "collaborative consumption" 8,430, while the term "ondemand economy" produced 1,890 results and "gig economy" 5,650 results.

Sundararajan, 2016) or by clearly distinguishing between for-profit and nonprofit sharing economy organizations (Schor & Fitzmaurice, 2015). Others believe that due to an increasing for-profit and money making focus on many platforms associated with the sharing economy, a better term to describe the new phenomenon would be "platform capitalism" (Davis, 2016) or "crowd-based capitalism" (Sundararajan, 2016).

Initially creating a halo of excitement and positive branding around the new phenomenon (Baker, 2014), the term "sharing economy" inevitably drew a wave of criticism since transactions in the sharing economy turned out to be quite different from the traditional understanding of sharing. As John (2017, p. 146) explains, the word "sharing" has different meanings and these meanings have changed over time: "the notion of 'sharing' today involves the expansion of the public at the expense of the private in a manner that is increasingly mediated by digital, for-profit enterprises." Accordingly, we submit that the everyday word "sharing" and the term "sharing" in the context of the sharing economy have diverged in meaning. The latter has undergone semantic stretching (Gerring, 1999) and now signifies peer-to-peer access to underused assets through an online platform. Admittedly, the term "sharing economy" may be "a kind of awkward label, but it does get the idea across: building a new or sub-economy around sharing under-utilized assets" (Cusumano cited in Chandler, 2016).

A TYPOLOGY OF SHARING ECONOMY ORGANIZATIONS

Since for-profit platforms today are by far the most influential in the sharing economy universe, we believe it is critical for management scholars to understand the dynamics within this subgroup and the significant differences among its actors. Two dimensions seem particularly salient, the types of transactions and the types of assets.

Transactions on for-profit sharing economy platforms can be money-based or not. Money-based transactions, in turn, may involve a monetary remuneration that would allow the service provider either to cover costs or to generate additional income. For instance, Couchsurfing and Peerby, a household appliances and sports equipment rental platform, promote free transactions between peers; Blablacar drivers charge users only the prorated costs of the journey; but Turo, Airbnb, and Lyft allow providers to generate additional income.

In terms of asset type, capital platforms facilitate access to physical assets, such as property, cars, household appliances, etc., and labor platforms facilitate access to human assets, such as skills, talents, knowledge, or time, which is one of an individual's most valuable resources (Calo & Rosenblat, 2017). Airbnb, Turo, and BlaBlaCar are capital platforms, as they facilitate access to an idle physical asset, such as a property, a vehicle, or an empty seat in a car, respectively. Sittingaround, Piggybee, TaskRabbit, or Superprof, offering peer-to-peer offline services such as babysitting, crowd-shipping, house cleaning, and tutorials, respectively, are labor platforms because they provide access to the time and skills of providers. Uber and Lyft are considered in the literature as labor platforms because their main goal is to offer a service requested by a consumer, even though it requires a use of an asset (a vehicle) (Codagnone, Abadie, & Biagi, 2016; Farrell & Greig, 2016; Kuhn & Maleki, 2017). Just like the capital platforms described above, labor platforms can facilitate transactions without monetary exchange between peers, as does Sittingaround, allow providers to cover costs, as does Piggybee, or provide opportunities for additional income generation, as do Uber X, Lyft, and TaskRabbit (Table 2).

Insert Table 2 about here

The combination of transaction type and asset type has direct implications for consumers, providers, and platforms. Consumer needs will determine who uses a specific platform, how often, and when. Providers need incentives to overcome their privacy concerns and the risks of sharing their assets with strangers. Therefore, sharing economy organizations must understand the balance between social and market logics in each setting (Milanova & Maas, 2017) and develop different value propositions depending on whether or not the interactions between peers involve money-making opportunities and whether or not they require the provider to own physical assets. Platforms that facilitate money-based transactions, such as Airbnb, will emphasize economic gains, while platforms whose transactions are nonmonetary, such as Couchsurfing, will emphasize social benefits (e.g., the chance to meet new people). Similarly, the availability of privately owned physical assets (property, cars, etc.) versus only human assets (time or skills) will determine peers' ability to participate in different types of sharing economy platforms.

The opportunity of service providers to generate income has direct implications for the growth potential of the platform as well as for other elements of its business model and design, such as the development of a payment system, a pricing system, etc. At this point in the sharing economy's development, firms with money-based transactions seem to be by far its largest players. Airbnb has grown much more than Couchsurfing, and Uber much more than BlaBlaCar. That is why, for example, Sundararajan (2016) proposed to replace the term "sharing economy" with "crowd capitalism" or Davis (2016) with "platform capitalism." Arguably, it is precisely the entrance and expansion of money-based platforms that has caused the new economy's growth.

The clear dominance of money-based transactions also explains the increased scrutiny and criticism from multiple stakeholders. Providers who make money on sharing economy

platforms may become increasingly dependent on this income if, for example, the deterioration of their financial or employment situation outside the platform "forces" them to dedicate more and more time or specialized assets to sharing. This dependence may increase their vulnerability while empowering the platform (Schor & Attwood-Charles, 2017). The power of the platform is likely to increase further with the growing professionalization of the sharing economy. As providers dedicate increasingly more time or specialized assets to participate on the sharing economy platforms, the bargaining power of the platform over them will increase.

We can also expect differences between capital and labor platforms in the factors that determine growth. Already, the literature has started to term the service providers of labor platforms "workers" (Kuhn & Maleki, 2017), while it maintains the terms "provider" or "user" for service providers on capital platforms. Labor platforms, especially money-based ones, seem to have much greater control and power over service providers, who increasingly resemble employees despite being usually described as independent contractors or self-employed persons (Kuhn & Maleki, 2017). Thus, the typology above provides a valuable lens, needed for research progress and for a more nuanced view of the processes that occur in the for-profit segment of the sharing economy.

ANTECEDENTS AND EFFECTS OF THE SHARING ECONOMY

The following sections examine research on the antecedents and effects of the sharing economy, emphasizing empirical papers published in academic journals with impact factor.⁶

⁶ We conducted a systematic search of journals with impact factor using the keyword "sharing economy." In the first stage, we identified 220 published papers in which the keyword "sharing economy" was cited in the abstract, title, or keywords provided by the author/s. In the second stage, we read the abstract to identify whether the paper was empirical. In the third stage, we read the empirical papers to select those that were focused on

Reflecting the platform and peer-to-peer makeup of sharing economy firms, we group papers on the consumer, provider, and platform levels of analysis and, where possible, highlight the context of the empirical research (money-based or non-money-based transactions; capital or labor platforms).

Literature on the Antecedents of the Sharing Economy

Conceptual academic papers on the drivers of the sharing economy highlight the roles of technology (Belk, 2014; Puschmann & Alt, 2016), the search for sustainable consumption and production (Cohen & Muñoz, 2016), population growth and urbanization (Cohen & Kietzmann, 2014), and the economic crisis of 2007-2008 (Laamanen, Wahlen, & Campana, 2015) as predictors of the growth of the sharing economy. Mainly, these papers have focused on identifying the motivations of consumers, while few studies have examined those of service providers. Even less is known about the predictors of entry at the platform level. The empirical research predominantly focuses on profit-driven capital platforms with money-based transactions, particularly Airbnb (Table 3).

organizations that fit our conceptualization and to identify whether the research question involved a driver or an effect of the growth of the sharing economy. In this step, we discarded papers that were focused on initiatives or organizations that were not platforms (e.g., physical spaces, as for example, toy libraries or makerspaces), that were not peer-to-peer (e.g., business-to-consumer organizations such as those that offer car-sharing services), that did not provide temporary access (e.g., organizations that promote food or clothes exchanges or donations), or that offered not idle assets but dedicated capacity (e.g., car sharing companies such as Zipcar). If the paper studied different organizations, we kept it when at least one of the organizations fit our conceptualization. Finally, we examined the references to identify additional articles that provided empirical evidence about drivers and effects of organizations that fit our conceptualization. We classify the empirical papers related to antecedents and effects according to the level of analysis (i.e., platform, consumer, or service provider) and the type of platform (i.e., money-based and non-money based; capital and labor).

Insert Table 3 about here

Predictors of consumers' participation in the sharing economy. The empirical literature largely focuses on consumers' motivations to participate in capital- and money-based rather than in labor- (Zhu, So, & Hudson, 2017) or non-money-based platforms (Davidson, Habibi, & Laroche, 2018; Parigi, State, Dakhlallah, Corten, & Cook, 2013). Studies have explored individual characteristics such as sociodemographic features (Lindblon & Lindblon, 2017), personal values (Piscicelli, Cooper, & Fisher, 2015), individual motivations (Hamari et al., 2016; Möhlman, 2015; Tussyadiah & Pesonen, 2016b; Wu, Zeng, & Xie, 2017), or perceived trust (Tussyadiah & Pesonen, 2016b; Wu et al., 2017). Researchers have also looked at how product-service advantages (Guttentag, Smith, Potwarka, & Havitz, 2018), service provider characteristics (Ert, Fleischer, & Magen, 2016; Fagerstrom, Pawar, Sigurdsson, Foxall, & Yani-de-Soriano, 2017; Wu, Ma, & Xie, 2017), platform reputation systems (Liang, Schuckert, Law, & Chen, 2017), and the new social ties created through the platform (Parigi et al., 2013) affect consumer behavior toward the sharing economy.

Though consumers' participation is driven by many factors, those that dominate are economic and utilitarian motives, increased choices, and higher flexibility (Guttentag et al., 2018; Möhlmann, 2015). However, these motivations may vary across different settings or consumer groups (Hellwig, Morhart, Girardin, & Hauser, 2015; Tussyadiah & Pesonen, 2016b; Wilhelms, Merfeld, & Henkel, 2017b). Sharing is associated not only with benefits (lower expenses, social gains, higher flexibility, etc.) but also with costs (price of the shared products, learning costs, search costs, perceived risk, etc.). However, little research exists on the impediments to sharing (Tussyadiah & Pesonen, 2016b).

Predictors of providers' participation in the sharing economy. Few papers to date have analyzed owners' motives to share their assets. Research shows that providers on capital platforms are more likely to share objects of lower personal importance (Hellwig et al., 2015) and that possessiveness (the tendency to retain control of one's possessions) reduces individuals' sharing intentions (Akbar, Mai, & Hoffmann, 2016). Bucher, Fieseler, and Lutz (2016) find that social-hedonic motivations are the most important for providers of physical assets, followed by moral and monetary motivations. However, money-based and non-money-based sharing appear to have different motivations; the former is driven largely by monetary reasons (Bucher et al., 2016; Wilhelms, Henkel, & Falk, 2017a; Wilhelms et al., 2017b) and the latter by moral and altruistic reasons (Bucher et al., 2016).

As for labor platforms, Hall and Krueger (2018) find that Uber's drivers are attracted by the level of income and the flexibility, which can be especially appealing to certain workers (e.g., those with children at home). Most had full or part-time employment before joining Uber; only 8% had been unemployed. Thus, similar to capital platforms, the expectation to earn additional income is an important motivation for service providers to join a labor sharing economy platform, however, in contrast to capital platforms, the flexible work schedule seems to be one of the most important motivations for service providers on labor platforms.

Predictors of the entry, growth, and success of the platform. There is a clear scarcity of research on what determines the entry, growth, and success of sharing economy platforms. A qualitative study by Barnes and Mattsson (2016) identifies technological and economic factors (financial benefits, lack of conventional employment opportunities) as the most important drivers for the growth of the sharing economy in general, while environmental

issues seem to be of minor importance. Main barriers to growth are lack of awareness; materialistic cultural norms; political, social, and legal issues; and business-related factors (difficulty of building critical mass, difficulty of establishing trust). In a qualitative study of five cases of platform failure, Täuscher and Kietzmann (2017) identify some causes of failure including low control over service quality, high competition for idle resources, and changes in the legal environment. Hall and Krueger (2018) analyze differences in Uber's growth rate across cities. They show that city population and the number of taxi licenses per 1,000 people are positively associated with growth in number of Uber drivers, while, surprisingly, the unemployment rate, population density, gross domestic product, and the number of cars in the city are unrelated to the growth rate.

In sum, these studies provide early evidence that factors at both the macro level (political, economic, social, legal, and technological factors; availability of idle assets) and the platform level (presence of network effects, control over service quality, reputation systems, ability to offer financial benefits for individuals) influence the entry, growth, and success of sharing economy platforms.

Literature on the Effects of the Sharing Economy

Unlike the empirical literature about antecedents, which mainly looks at consumer motives for participation in the sharing economy, the empirical research on the effects shows a broader focus. There are studies that analyze the effects on consumers (benefits, discrimination, changes in behavior), providers (working conditions), industry (performance of incumbent firms, employment in the industry) and the broader context (effect on the rental market and on the labor market). Reflecting the current status of the sharing economy, the empirical research is largely concentrated on for-profit platforms with money-based transactions, with Airbnb and Uber representing capital and labor platforms, respectively.

This makes it difficult to generalize the findings to other sharing economy organizations, especially those where transactions are not money based. Since the conceptual literature on the potential effects on the sharing economy is quite extensive and dispersed, in the following section we first present the expectations about specific sharing economy outcomes and then introduce related empirical findings (Table 4).

Insert Table 4 about here

The effect of the sharing economy on consumers. Conceptual papers suggest a range of potential benefits of the sharing economy for consumers, who can get access to an increased variety of goods and services at lower prices (Belk, 2014; Calo & Rosenblat, 2017) and expand their social relationships through peer-to-peer exchanges, usually offline (Botsman & Rogers, 2010; Kennedy, 2016). On the negative side, the personal character of sharing economy transactions may expose some consumers to discrimination based on their sociodemographic characteristics (Abrahao, Parigi, Gupta, & Cook, 2017).

The empirical findings show that sharing economy organizations indeed offer monetary savings, greater variety, and experiential benefits, like enjoyment, personalization, and local flavor of services (Mody, Suess, & Lehto; 2017; Tussyadiah, 2016). Examining capital platforms, Roos and Hahn (2017) find that the more consumers engage in shared consumption, the more altruistic they become over time. Tussyadiah (2016) finds that social benefits influence Airbnb's customer satisfaction when guests share space with the host, but not when hosts are absent. Direct interaction between peers seems to be important to positive outcomes in sharing transactions.

Among negative effects, the empirical evidence confirms the existence of racial discrimination. For example, Edelman, Luca, and Svirsky (2017) find that Airbnb guests with African American names are 16% less likely to be accepted than identical guests with white names.

The effect of the sharing economy on service providers. The conceptual literature suggests that service providers may benefit from sharing their resources by receiving monetary or nonmonetary rewards (Schor & Attwood-Charles, 2017). It also emphasizes that sharing economy platforms could potentially offer service providers a high degree of flexibility and empowerment, create a new generation of micro-entrepreneurs (Sundararajan, 2016), reduce income volatility (since full-time employees can work additional hours to supplement their income), and create job opportunities for people who remain outside the full-time labor market because of family, education, or health issues (Calo & Rosenblat, 2017). On the downside, criticisms have arisen that workers who are "forced to share" can face higher insecurity and lower wages (Murillo et al., 2017; Schor & Attwood-Charles, 2017). Scholars have also expressed concerns about the increasing power of sharing economy firms over service providers, resulting, for example, from their status as independent contractors on such platforms (Schor & Attwood-Charles, 2017). Platforms—especially labor platforms—are intrinsically capable of manipulating data to extract more value from participants (Calo & Rosenblat, 2017; Murillo, Buckland, & Val, 2017; Newlands, Lutz, & Fieseler, 2017). Opponents of the sharing economy have noted that the status of the independent contractor on the sharing economy platform can erode traditional employment relationships, leading to poorer working conditions, labor uncertainty, growth in the platform's power, and ultimately the rise of a new "precariat" (Hill, 2015; Kuttner, 2013; Newlands et al., 2017; Slee, 2015).

How do service providers perceive their work on sharing economy platforms? Ravenelle (2017), after analyzing 78 interviews with service providers of Airbnb, TaskRabbit, Uber, and Kitchensurfing, finds that providers view their platform participation primarily as a tool to make money, but their perception of working conditions depends on the type of platform. Although the majority do not view themselves as entrepreneurs, those with significant skills (chefs who offer their skills on Kitchensurfing) or capital (owners of several apartments who rent them through Airbnb) do identify themselves as entrepreneurs. In addition, she shows that workers perceive themselves more as employees than as independent contractors when platforms have the power and can unilaterally make sudden changes in platform design. There is evidence that some platforms are exercising high control over how service providers do their jobs. Rosenblat and Stark (2016) analyzed Uber drivers' comments in forums to show how the design of the platform created power and information asymmetries that allowed Uber to control drivers' behavior, limiting their flexibility and autonomy. In contrast, a study by Malin and Chandler (2017) based on interviews with Uber and Lyft drivers reveals that drivers view their work as flexible, fun, and even beneficial to society. The authors suggest that this positive perception may result from the fact that these drivers use Uber and Lyft as a source of supplemental income and not as a full-time job. Thus, it seems that the level of assets and skills in possession of the service provider, the power of the platform, and the degree of income dependence of the service provider on the platform may influence how they perceive their working conditions.

Hall and Krueger (2018) present quantitative evidence that supports a positive effect of Uber on the labor market. They find that half of Uber's drivers view the income earned on Uber as a supplement to their income, 71% consider that their work on Uber has increased their overall income, and 74% perceive that Uber has made their lives better. The authors

conclude that Uber drivers earn at least as much per hour as an average taxi driver, and probably more.

As for the negative effects of the sharing economy on providers, there is qualitative evidence of social inequality within nonmoney platforms (Schor, Fitzmaurice, Carfagna, Attwood-Charles, & Poteat, 2016). Both providers and consumers can engage in snobbish judgments and exclusion of low-status members.

The effect of the sharing economy on industry. Scholars highlight that the entry of sharing economy firms may expand the market, as low prices entice nonconsumers to enter the market (Belk, 2014). However, they also acknowledge that if the product or service provided by a sharing economy firm substitutes for a product or service provided by incumbent firms, incumbents' performance may decrease (Sundararajan, 2016). Little empirical research has analyzed the market expansion effect, and again, Uber and Airbnb dominate the empirical context. Fang, Ye, and Law (2016) find that a higher presence of Airbnb in the United States is positively associated with the level of employment in the tourism industry as a whole. Most empirical studies have analyzed the effect of the entry of sharing economy firms on incumbents' performance, and the results are mixed. Some studies show that the services provided by Uber and Airbnb are replacing the traditional services offered by taxi drivers (Chang, 2017) and the hotel industry (Guttentag & Smith, 2017; Xie & Kwok, 2017; Zervas, Proserpio, & Byers, 2017). For instance, Chang (2017) reports that the entry of Uber is associated with a decrease of 12% in the revenues of taxi drivers in Taiwan, and Zervas and colleagues (2017) report that in Texas, a 10% increase in the size of the Airbnb market has caused a 0.39% decrease in hotel room revenues. In contrast, other studies have found no negative effects on incumbents. Kim, Baek, and Lee (2018) find no evidence that the number of taxi trips, the revenue per driver, or the occupancy rates of the taxi

industry in New York changed after the entry of Uber. Instead, taxi drivers have started to pick up customers in a more widely dispersed area of New York, a sign that the industry is becoming more competitive overall. The studies also report that the effect is not uniform for all incumbents. For instance, Guttentag and Smith (2017) show that consumers used Airbnb as a substitute for mid-range hotels, while Zervas and colleagues (2017) find that the negative effect of the entry of Airbnb is stronger for lower-price hotels and hotels not serving business travelers.

Scholars have argued that one of the main advantages of sharing economy platforms over incumbents is greater efficiency (Edelman & Geradin, 2016)—their technology and data analytics capability facilitate a more efficient match between demand and supply than that made by traditional incumbents. Others have claimed that sharing economy firms are not competing fairly, and their cost advantage may come from some form of regulatory arbitrage (Calo & Rosenblat, 2017) or offloading of costs onto local communities or service providers (Slee, 2015). For example, according to Edelman (2017), Uber's business model is predicated on lawbreaking, and its cost advantages come from avoidance of multiple regulations and requirements that typically apply to commercial transportation companies. Even though the sources of value creation and efficiency gains in the sharing economy are mixed and the subject of heated debate, Cramer and Krueger (2016) nevertheless report that Uber X drivers, for example, had a passenger in the car half of the time they were working, in comparison to 30% to 50% of the time for taxi drivers. Thus, we can say that some empirical evidence of efficiency gains in the sharing economy is starting to emerge.

Some scholars have expressed concern about the emergence of dominant sharing economy platforms and its effect on the restriction of the competition (Lougher & Kalmanowicz, 2016). Similar to other platforms, the existence of network effects (e.g., Lyft will be more attractive for users when there are more drivers who are using the Lyft app) may

be an important source of value creation for sharing economy platforms (Parker et al., 2016). The power of network effects may contribute to the emergence of dominant sharing platforms, which can limit the entry of new competitors and reduce price competition in the market. However, some scholars have defended that the tendency toward a global monopoly will be weaker in the sharing economy than in traditional platform markets because the network effects may be localized (Sundararajan, 2016). This means that the attractiveness of some sharing-economy platforms for their users will only depend on the number of providers that exist in that city. Therefore, the risk of reduced competition will be at the local level not at the global one, as the local network effects will lead to one dominant platform in each local market. To the best of our knowledge, no empirical research has explored the nature of the network effects in the context of the sharing economy and the evolution of the competition between platforms.

Broader effects of the sharing economy. Proponents of the sharing economy suggest that the higher utilization of idle assets may reduce the need to manufacture new assets, making this phenomenon more environmentally sustainable than the traditional economy (Frenken, 2017). It also has the potential to increase economic productivity, as more output can be produced with the same resources (Sundararajan, 2016). By contrast, opponents have argued that the sharing economy's lower prices may increase consumption and amplify environmental problems (Codagnone, Biagi, & Abadie, 2016). Scholars have also discussed some potential negative externalities, that is, harmful effects on noncustomers and the public at large (Edelman & Geradin, 2016), such as noise, dirt, and public safety problems (Tussyadiah & Pesonen, 2016a), and negative effects on the market of the asset, such as the negative effect of Airbnb growth on neighbors due to the rise of assets' prices (Malhotra &

Van Alstyne, 2014) or the morphing of housing into accommodation for visitors, a form of gentrification that makes it hard for residents to find affordable places to live (Gant, 2016).

Empirical evidence about the positive effects of the growth of the sharing economy on sustainability⁷ and productivity remains scarce. However, there are studies of other positive outcomes; for example, Greenwood and Wattal (2017) that the entry of UberX in California is related to a drop in alcohol-related vehicle fatalities.

As for the broader negative outcomes of the sharing economy, empirical research in this area is accumulating a substantial amount of evidence. For example, there is evidence that Airbnb increases rental prices and displaces local residents. Horn and Merante (2017) show that a one-standard-deviation increase in Airbnb listings is associated with an increase in rents of 0.4%. Gant (2016) provides qualitative evidence of tourism-driven displacement as residential buildings are converted into accommodation for visitors. There is also evidence of other negative effects on the labor market and on entrepreneurial activity. Schor (2017) claims that the sharing economy can create labor inequality. After interviewing service providers of several platforms, she found that the majority had a high level of education and a full-time job. This may signal a crowding-out effect in the labor market, as these providers now do the type of work that is traditionally done by less educated people. As for the level of entrepreneurial activity, Burtch, Carnahan, and Greenwood (2018) report a negative effect after the entry of Uber X. Their result supports the view that the presence and growth of labor platforms may provide employment possibilities for entrepreneurs of necessity, thus reducing total entrepreneurial activity in a market.

⁷ Several studies have analyzed the effect of B2C car sharing services on environmental sustainability (see Jung & Koo, 2018). However, we have not considered this literature because B2C services do not fit our conceptualization, as the provider is a firm and the transaction is a short-term rental.

Overall, studies on the broader outcomes of the sharing economy show that researchers to date have been mainly interested in the effects by the largest sharing-economy firms on their respective markets, depending on the assets that underlie transactions in these platforms (i.e., physical asset or labor). The focus has been primarily on the effect in the housing market in the case of Airbnb and the labor market in the case of Uber.

FUTURE RESEARCH DIRECTIONS

Since the extant research has mostly focused on the drivers and outcomes of individuals' participation in the sharing economy, future research needs to focus more on the platform. In addition, as scholars have been mostly interested in testing direct effects, the next stage of research needs to introduce contingencies that moderate these effects. Below we list the themes that most pressingly merit study.

Growth and Performance of Sharing Economy Firms

Despite the impressive growth of the sharing economy phenomenon, we still know little about the most general questions regarding the entry and growth of the sharing economy businesses. The empirical evidence reveals strong differences in the rate of growth of sharing economy firms across cities (Hall & Krueger, 2018). It is therefore critical to understand how political, economic, social, and regulatory factors determine the entry and growth of sharing economy platforms in a particular market. How do these conditions influence the entry and growth of labor platforms versus capital platforms, money versus nonmoney platforms?

The empirical results presented above reveal that consumers and service providers have different motivations and constraints for participating in the sharing economy. What specific characteristics of a platform's design increase its attractiveness for users? Moreover, the mere entry of a user onto the platform does not guarantee that a transaction will happen—

and the platform can capture value only after the transaction has occurred. Thus, we need to better understand which mechanisms used by platforms are most effective in bringing about transactions. What is the effect of multihoming by platform participants on the growth and performance of a particular sharing economy firm? To study these issues, researchers need to analyze sales data, not just the provider entry and participation data that have been predominantly used so far.

Another group of important research questions deals with differences in business models between sharing economy firms. Researchers have started to compare business models across platforms (Cohen & Kietzmann, 2014; Richter, Kraus, Brem, Durst, & Giselbrecht, 2017), but we still know little about how platforms' choices of business models affect their scalability, profitability, and growth. Some firms have already gone out of business; others have achieved tremendous growth and success. It will be important to study what makes the difference.

We have seen a general shift from the "sharing" aspect towards the "economic" aspect of the sharing economy. For example, Couchsurfing changed from a nonprofit to a forprofit organization; Airbnb, which grew from an inflatable mattress in the founders' spare room, now makes an increasing portion of its revenues from professional real estate managers; Uber offers drivers a lease or a credit for a dedicated vehicle; Peerby, a nonmoney-based platform, recently introduced a new extension, Peerby Go, in which the same household or sport items can be used for a fee that includes delivery. Uber's recent initiative to develop driverless cars and Airbnb's collaboration with Newgard Development Group to build an apartment complex specially designed for home-sharing are looking much more like vertical integration than peer-to-peer access to underused capacity.

Furthermore, capital platforms' reliance on individually owned underused capacity implies an inherent limit to growth, determined by the availability of underused physical

assets. Similarly, labor platforms may eventually need to rely on a more stable base of employees, not independent contractors, to avoid understaffing and churn. Will the search for growth and greater efficiency in the sharing economy transform this phenomenon into the traditional economy?

Lastly, scholars should look at the competitive dynamics between sharing economy platforms. Will the network effects that gave incredible prominance to other types of platforms, like Amazon, Facebook, or Google, create similar outcomes for the sharing economy platforms? For instance, Lougher and Kalmanowicz (2016) posit that sharing economy intermediation markets are likely to become concentrated and possibly dominated by a single player. By contrast, Sundararajan (2016) argues that it is difficult for one platform to monopolize the entire market because network effects in the sharing economy are localized, as the services provided are usually local and the value of the platform for a user in one city would mostly depend on the number of users in that city. Will winner-take-all scenarios unfold, as in other platform markets, or can we expect continued competition among sharing economy platforms?

Broader Effects of the Sharing Economy

More research is needed about the macroeconomic effects of the sharing economy.

For instance, what is the effect of the growth of the sharing economy on the unemployment rate? Is the growth of labor platforms increasing the ratio of contingent labor to total workforce? How is reliance on idle capacity affecting economic productivity? In particular, the mixed results regarding the effects of the entry of sharing economy firms on incumbents' performance demand more research. What contingencies could moderate this effect? For instance, is increasing regulation leveling the playing field between traditional and sharing economy firms? More studies are also needed on environmental effects. On the one hand, the

use of idle capacity decreases the need to manufacture new assets; on the other, the increase of consumption can degrade the environment. What are the net environmental effects?

Power Asymmetries in the Sharing Economy

There is much controversy about information asymmetries due to the algorithmic management of sharing economy platforms (Kuhn & Maleki, 2017). Interestingly, the negative aspects of reliance on algorithms seem to be more pronounced in the case of labor platforms, especially Uber, while the positive aspects seem to be more noticeable on capital platforms, such as Airbnb. Why is this so? Rosenblat and Stark (2016) state that Uber refers to its drivers as partners or customers, suggesting that drivers are end-users of its application, equal to consumers. However, their analysis of driver experiences reveals that Uber is controlling drivers' working conditions to the extent that "the company produces the equivalent effects of what most reasonable observers would define as a managed labor force" (Rosenblat & Stark, 2016, p. 3777), and indeed, Uber is facing several lawsuits in which its drivers claim to be employees. If a peer-to-peer platform may become increasingly similar to a traditional company as it exercises more control over users, we need more research about how the design of the platform affects the degree of its power and its effects on consumers, service providers, industry, and society.

Finally, what can we expect about the future growth of platform power and control? On the one hand, the increasing professionalization of peer participation and the shift toward dedicated capacity may increase platforms' bargaining power. On the other hand, the rise of blockchain technology could change this power imbalance. Blockchain applications can allow individuals to coordinate without the need of a third party. For instance, the decentralized carpooling platform ArcadeCity operates similarly to Uber but without the need of a centralized organization (De Filipi, 2017). This technology can facilitate the emergence

of different types of organizations administered by individuals and thus can help a more equal distribution of the value created in the sharing economy.

CONCLUSION

The rapid growth of the sharing economy over the last years has generated an intense academic debate about the conceptualization, the drivers of its growth, and its positive and negative outcomes. Our article is written to bring clarity to the management literature with respect to the main contentious issues on the sharing economy. We do so, first, by identifying the four common features of the sharing economy actors (online platform organization, peerto-peer nature of transactions, the logic of access over ownership, and reliance on underused capacity). Our conceptualization allows us to distinguish those firms that are part of the sharing economy from those that are not. Even though the boundaries of this phenomenon today are at times fuzzy, owing to the participation on the platforms of both peers and professionals and the use of both dedicated and underused capacity, we can expect that regulatory and legislative efforts may define these boundaries more clearly. Moreover, due to the strategic choices that some sharing economy platforms are currently making, they may move further away from the original concept of the sharing economy. As firms and professionals increase their participation in some of these platforms (e.g., in February 2018, Airbnb announced its expansion by introducing new rental categories such as hotel rooms (Bosa & Zaveri, 2018)), in the future, maybe they can no longer be labeled as part of the sharing economy. Instead, they will fit better under the general concept of platform economy.

Second, we address the contentious money-making agenda of the sharing economy participants. We submit that the literature has to a large extent converged to include into the conceptualization of the sharing economy both money-based and non-money-based transactions, resulting in the diversion between the common word "sharing" and the meaning

of sharing in the sharing economy. In order to systematically differentiate sharing economy firms, we provide a typology of the for-profit platforms based on two important dimensions: the type of compensation for the service provider (non-money-based, money-based cost-covering, or money-based income-generating transactions) and the type of asset used in the transaction (capital or labor).

Third, keeping in mind the early promises of the sharing economy, we analyze the empirical findings on the antecedents and effects of the sharing economy. We find that to date researchers have largely looked at the motivations and impediments of consumers and service providers, paying much less attention to factors at the platform level. Importantly, the research shows that the sharing economy has created significant efficiencies in comparison to traditional firms, allowing both consumers and providers to reap economic and social benefits including flexibility, which is especially important for providers on labor platforms.

However, we also have evidence that the sharing economy creates significant problems, such as inequality and discrimination. Moreover, the increasing control on some platforms, especially labor platforms, may lead to an increasing appropriation of value by the platform at the expense of the providers, who end up bearing many costs of platform participation but are not given any protections that traditional employment would offer.

Lastly, we highlight future research directions. First, more work is needed at the platform level, distinguishing between capital and labor platforms, and taking into account different business models. Second, we need to pay closer attention to the evolution of power dynamics and its implications for the labor market, platform performance, and providers' working conditions. Third, despite the difficulties of getting access to data, management research needs to expand the empirical focus beyond Airbnb and Uber to a multitude of other players.

In the last decade, the sharing economy has created significant value and wealth. Some of it came as a result of real efficiencies; some came from operating in the regulatory gray zone, offloading costs on local communities or squeezing peer providers. Despite the early feel-good rhetoric of community and equity, today the most visible and powerful sharing economy players are profit-driven platforms with money-based transactions. The management field needs to pay close attention to the efficiencies that these platforms provide as well as to their increasing power and professionalization, in order to promote a better balance between the positive and the negative outcomes of the sharing economy.

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TABLE 1

Definitions and Examples of the Sharing Economy in Extant Literature

Author/s	Definition	Examples provided by the authors	Features of the
			sharing economy
Belk, 2014	"There are two commonalities in sharing and	Couchsurfing, YouTube, Flickr,	Temporary access;
	collaborative consumption practices: (1) use of temporary	Linux, Wikipedia, Tripadvisor,	Online exchange
	access non-ownership models of utilizing consumer	Freecycle, toy libraries, cooperative	
	goods and services, (2) reliance on the internet, and	car sharing organizations	
	especially Web 2.0. Differently to collaborative		
	consumption, in sharing activities there is no		
	compensation involved" (p. 1595).		
Botsman, 2013	"An economic model based on sharing underutilized	Lyft	Underutilized assets;
	assets from spaces to skills to stuff for monetary or non-		Individual ownership
	monetary benefits."		
Botsman, 2015	"An economic system based on sharing underused assets	Airbnb, Cohealo, BlaBlaCar,	Underused assets;
	or services, for free or for a fee, directly from	JustPark, Skillshare, RelayRides,	Direct exchange
	individuals."	Landshare	between individuals
Frenken &	"Consumers granting each other temporary access to	BlaBlaCar and other hitchhiking or	Temporary access;
Schor, 2017	under-utilized physical assets ('idle capacity'), possibly	carpooling platforms	Underutilized physica
	for money" (pp. 4-5).		assets
Hamari,	"The peer-to-peer based activity of obtaining, giving, or	Zipcar, Couchsurfing, and Airbnb	Peer-to-peer
Sjöklint, &	sharing the access to goods and services coordinated	(renting, swapping, and trading)	exchange;
Ukkonen, 2016	through community-based online services. Sharing the		Online platforms
	consumption of goods and services through online		
	platforms" (p. 2047).		
Laurell &	"ICT-enabled platforms for exchanges of goods and	Airbnb, Facebook, Lending Club,	Online platforms;
Sandström,	services drawing on non-market logics such as sharing,	Craigslist	Nonmarket logic of
2017	lending, gifting and swapping as well as market logics		exchange
	such as renting and selling" (p. 63).		
Mair &	"We define the sharing economy as a web of markets in	Uber, Airbnb, YouTube, Venmo	Participants as
Reischauer,	which individuals use various forms of compensation to	(P2P lending), Lyft, Couchsurfing,	individuals;

2017	transact the redistribution of and access to resources,	Kickstarter, Fairmondo	Redistribution of and
	mediated by a digital platform operated by an		access to resources;
	organization" (p. 12).		Digital platform
			mediation
Milanova &	"What characterizes the sharing economy, besides its	Insurance sharing	Digital nature
Maas, 2017	prevalently digital nature, is the interplay between the		
	compensation aspect of collaborative consumption and		
	the prosocial character or pure sharing" (p. 160).		
Schor, 2016	"Sharing economy activities fall into four broad	(1) eBay, Craigslist, Freecycle; (2)	Recirculation of
	categories: recirculation of goods, increased utilization of	Zipcar, Uber, Lyft, Couchsurfing,	goods;
	durable assets, exchange of services, and sharing of	Airbnb; (3) time banks, TaskRabbit;	Utilization of durable
	productive assets" (p. 9).	(4) Cooperatives, communal offices,	assets
		co-working spaces, educational	Exchange of services
		platforms	
Stephany, 2015	"The sharing economy is the value in taking underutilized	Airbnb, JustPark	Underutilized assets;
	assets and making them accessible online to a		Online community;
	community, leading to a reduced need of ownership of		Reduced need for
	those assets" (p. 9).		ownership
Sundararajan,	"I have found that is useful to view the new economic	Airbnb, Lyft, Uber, Etsy,	Position on the
2016	activity as existing on a continuum between gift	TaskRabbit, BlaBlaCar, Didi	continuum between
	economies and market economies, with some cases at		gift and market
	both ends of the spectrum, and many more in between"		economies
	(p. 38).		

Table 2

Typology of For-Profit Sharing Economy Organizations

	Capital	Labor
Nonmoney	Couchsurfing (couch-sharing)	Sittingaround
(free)	Peerby (short-term rental of products in	(babysitting cooperatives)
	the neighborhood)	
Money based	BlaBlaCar (ride-sharing)	Piggybee
(cover costs)		(crowd-shipping)
Money based	Airbnb, HomeAway	UberX; Lyft (ride-hailing)
(income	(short-term rental of properties)	TaskRabbit (tasks)
generation)	Turo, Getaround (car-sharing)	Rover (dog boarding)
	JustPark (short-term rental of parking	SuperProf (tutorials)
	spaces)	

TABLE 3

Empirical Papers on the Predictors of Growth of the Sharing Economy at Different Levels

Level	Authors	uthors Journal Context		Main findings	Type of platform		
Consumer	Davidson, Habibi, &	Journal of Business Research	Couch sharing	Materialism will lead to greater participation in the sharing economy.	Capital	Nonmoney	
Consumer	Ert, Fleischer, &	Tourism Management	Airbnb	The more trustworthy the host is perceived to be from her photo, the higher the price of the	Capital	Money	
	Magen, 2016			listing and the probability of being chosen.			
Consumer	Fagerstrom, Pawar,	Computers in Human	Airbnb	The results show that price, service providers' facial expressions and customer ratings	Capital	Money	
	Sigurdsson, Foxall, &	Behaviour		influence consumer's tendency to explore the web page, and likelihood to rent.			
	Yani-de-Soriano, 2017						
Consumer	Guttentag, Smith,	Journal of Travel	Airbnb	Airbnb users are primarily attracted to the service by low cost, location convenience, and	Capital	Money	
	Potwarka, & Havitz,	Research		home benefits, whereas interaction, novelty, sharing economy ethos, and local authenticity are			
	2018			secondary.			
Consumer	Hamari, Sjöklint, &	Journal of the Association	Sharetribe,	Primary motives for participation in the sharing economy are sustainability, enjoyment of the	Capital	Money &	
	Ukkonen, 2016	for Information Science	Finland	activity, and economic gains.		nonmoney	
		and Technology					
Consumer	Hellwig, Morhart,	Psychology and	Swiss-German	Owners' disposition to share depends on the characteristics of the shared object and the scope	n.s.	n.s.	
& service	Girardin, & Hauser,	Marketing	and German	of sharing partners. The study identifies four clusters of sharing consumers.			
provider	2015		consumers				
Consumer	Liang, Schuckert, Law,	Tourism Management	Airbnb	An accommodation with the superhost badge is more likely to receive reviews.	Capital	Money	
	& Chen, 2017		accommodatio				

			ns in Hong			
			Kong			
Consumer	Lindblom & Lindblom,	International Journal of	Finland	Female, younger consumers and those staying at home on parental leave have the most	n.s.	n.s.
	2017	Consumer Studies		positive attitude towards collaborative consumption.		
Consumer	Mao & Lyu, 2017	International Journal of	Airbnb	Attitude and subject norms are significant determinants of repurchase intention.	Capital	Money
		Contemporary Hospitality				
		Management				
Consumer	Möhlmann, 2015	Journal of Consumer	Airbnb and	Utility, trust, cost savings, and familiarity were important considerations for participation.	Capital	Money
		Behaviour	Car2Go			
Consumer	Parigi, State,	PLOSone	Couchsurfing	To have many prior friends in Couchsurfing decreases participation, while to make new	Capital	Nonmoney
	Dakhlallah, Corten, &			friends through Couchsurfing increases participation in this platform.		
	Cook, 2013					
Consumer	Piscicelli, Cooper, &	Journal of Cleaner	Ecomodo, UK	Ecomodo users score higher in self-transcendence (benevolence, universalism) and openness	Capital	Money &
	Fisher, 2015	Production		to change (self-direction, stimulation) and lower in self-enhancement (achievement, power)		nonmoney
				and conservation values (security, tradition, conformity).		
Consumer	Tussyadiah & Pesonen,	Current Issues in Tourism	P2P	Two factors drive the use of P2P accommodation: desire for community & sustainability and	Capital	Money
	2016b		accommodatio	cost savings. Trust, efficacy and cost are the main barriers.		
			n (USA and			
			Finland)			
Consumer	Wu, Ma, & Xie, 2017	International Journal of	Xiaozhu.com	The host attributes that affect renter reservations are time of reservation confirmation,	Capital	Money
		Contemporary Hospitality		acceptance rate, number of listings owned, presence of personal profile page, and gender.		
		Management				

Consumer	Wu, Zeng, & Xie, 2017	International Journal of	Peer-to-peer	Utilitarian and hedonic motivations as well as perceived trust affect tourists' behavioral	Capital	Money
		Contemporary Hospitality	short term	intentions. Past experience moderates this relationship.		
		Management	rentals			
Consumer	Yang, Song, Chen, &	Journal of Services	Sharing	Confidence, social benefits, and safety have a positive effect on commitment in sharing	n.s.	n.s.
	Xia, 2017	Marketing	economy in	economy services.		
			general			
Consumer	Zhu, So, & Hudson,	International Journal of	Ride-sharing	The main factors that affect consumers' perception of value of ridesharing applications are	Labor	Money
	2017	Contemporary Hospitality		self-efficacy, functional value, emotional value, and social value. Learning effort and risk		
		Management		perception are not significant perceived costs for consumers in adopting ridesharing		
				applications.		
Service	Akbar, Mai, &	Journal of Business	Car-sharing,	Possessiveness is the dominant inhibitor of sharing. This relationship is moderated by the	Capital	n.s.
provider	Hoffmann, 2016	Research	tool-sharing,	desire for unique products and the product-need fit.		
			fashion-			
			sharing			
Service	Bucher, Fieseler, &	Computers in Human	Commercial	The results allow ranking the influences of sharing behavior: social hedonic, moral, and	Capital	Money &
provider	Lutz, 2016	Behaviour	(Airbnb) &	monetary motives. Noncommercial sharers are more driven by moral motives.		nonmoney
			noncommercia			
			1			
Service	Hall & Krueger, 2018	ILR Review	Uber's drivers	An analysis of survey and administrative data shows that drivers are attracted by flexible	Labor	Money
provider				schedules. Uber's drivers are more similar in terms of age and education to the general		
				workforce than to taxi drivers and chauffeurs. Most of the drivers had full-time or part-time		
				jobs before joining Uber, and many continue in those positions after starting to work on the		

				Uber platform. They earn at least as much as taxi drivers and chauffeurs, and in many cases		
				they earn more.		
Service	Wilhelms, Henkel, &	Technological	Peer-to-peer	The study identifies four motivations of providers: economic interest, quality of life, helping	Capital	Money
provider &	Falk, 2017a	Forecasting and Social	car-sharing	others, and sustainability.		
consumer		Change	services			
Service	Wilhelms, Merfeld, &	Business Horizons	Peer-to-peer	The study identifies different motives of car owners (reduction of ownership costs, generation	Capital	Money
provider	Henkel, 2017b		car-sharing	of additional income, and joy of providing mobility) and renters (saving money and time,		
			services	signaling status, and getting exactly the specific mobility experience).		
Platform	Barnes & Mattsson,	Technological	Sharing	The environmental driver (sustainability) turned out not to be very important; economic	n.s.	n.s.
	2016	Forecasting and Social	economy in	drivers as well as technology and sociocultural drivers outrank it.		
		Change	general.			
Platform	Hall & Krueger, 2018	ILR Review	Uber	Uber's growth rate has varied across cities. A regression analysis shows that the population	Labor	Money
				and the number of taxi licenses per 1000 inhabitants predict the number of Uber drivers per		
				month in each city. Unemployment rate, GDP, and population density were found unrelated to		
				the growth of Uber.		
Platform	Täuscher & Kietzmann,	MIS Quarterly Executive	Five cases of	Five causes of failure: low customer lock-in, low control over service quality, high	Capital	Money
	2017		failure	competition for idle resources, low transaction frequency, high cost of developing both		
			(Homejoy,	market sides, unexpected changes in the legal environment.		
			Carpooling.co			
			m, Sidecar,			
			Stayzilla, and			
			Beepi)			
			• *			

n.s. not specified in the study

TABLE 4

Empirical Papers on Effects of the Entry/Growth of Sharing Economy Organizations

Level	Effects	Authors	Journal	Context	Main findings	Type of pla	tform
Consumer	Racial discrimination	Edelman, Luca,	American	Airbnb	Guests with African American names are 16 percent less likely to be accepted than	Capital	Money
		& Svirsky, 2017	Economic		identical guests with distinctively white names.		
			Journal—Applied				
			Economics				
Consumer	Benefits compared to	Mody, Suess, &	IJCHM	Airbnb and hotel	Serendipity, localness, comunitas, and personalization are dimensions on which	Capital	Money
	the experience provided	Xinran, 2017			Airbnb outperforms the experience provided by the hotel industry.		
	by hotels						
Consumer	Social-psychological	Roos & Hahn,	Journal of	Eight sharing	The more consumers are engaged in sharing behavior, the more altruistic they become	Capital	Money
	effects	2017	Business	organizations	over time.		and
			Research				nonmon
							ey
Consumer	Travel behavior	Tussyadiah &	Journal of Travel	P2P	The use of a peer-to-peer accommodation service increases travel frequency, length of	Capital	Money
		Pesonen, 2016a	Research	accommodation	stay, and range of activities.		
				(Finland and US)			
Consumer	Benefits	Tussyadiah, 2016	International	Airbnb	Enjoyment, monetary benefits (value), and accommodation amenities are the factors	Capital	Money
			Journal of		that have more impact on customer satisfaction. Social benefits influence customer		

			Hospitality		satisfaction for those staying in a private room that involved cohabitation with hosts,		
			Management		but this was an insignificant factor in customer satisfaction for those staying in an		
			(IJHM)		entire home or apartment.		
Service	Earnings and expenses	Hall & Krueger,	ILR Review	Uber's drivers	The authors estimate that Uber's drivers earn around \$19 per hour (net) in comparison	Labor	Money
provider		2018			with the \$13 of taxi drivers and chauffeurs; estimated expenses for part-time drivers		
					range from \$2.94 to \$4.38, while for full-time drivers the range is \$3.76–\$6.46. The		
					authors conclude that Uber's drivers earn as least as much per hour and probably more		
					than taxi drivers.		
Service	Nature of work	Malin &	Communication	Uber and Lyft	Drivers see their work as something flexible, fun, and even beneficial to the larger	Labor	Money
provider		Chandler, 2017	Culture &	drivers	society. This perception may derive from the fact that the interviewees are driving to		
			Critique		earn a supplemental income. They consider that their choices of when and where to		
					driver are constrained by the economics of ride-sharing (e.g., surge pricing) and their		
					personal circumstances.		
Service	Nature of work	Ravenelle, 2017	Cambridge	Airbnb,	Workers often reject the sharing economy rhetoric; they view their work as a tool to	Labor &	Money
provider			Journal of	TaskRabbit, Uber,	make money. They perceive themselves more as employees than independent workers	Capital	
			Regions	and Kitchensurfing	because of sudden changes in the platform design, service offerings, and algorithms.		
			Economy and		They do not perceive themselves as entrepreneurs; the few workers who identify as		
			Society		entrepreneurs often have significant skills or capital.		
Service	Control over drivers	Rosenblat &	International	Uber drivers	Uber leverages significant indirect control over how drivers do their jobs.	Labor	Money
provider		Stark, 2016	Journal of				
			Communication				
Service	Social inequality	Schor,	Poetics	Time banks, food	Digital platforms within the sharing economy explicitly claim to further open access	Labor	Nonmo

provider		Fitzmaurice,		swap, makerspace,	and equality of opportunities; however, the evidence shows that participants engage in		ney
provider		ŕ		1, 1			
		Carfagna, &		and open-access	snobbish judgments and exclusion of low-status members that impede the ability of		
		Attwood-Charles,			participants to make trades.		
		2016					
Industry	Taxi drivers' revenues	Chang, 2017	Journal of	Uber and taxi	The results suggest a substitution effect between Uber and taxi services. The entry of	Labor	Money
			Competition Law	industry (Taiwan)	Uber decreased taxi drivers' revenues (12% in the initial year).		
			& Economics				
Industry	Number of taxi trips,	Kim, Baek, &	Transportation	Uber and taxi	The number of taxi trips, the revenue per driver, and the occupancy rate have not	Labor	Money
	revenue per taxi driver,	Lee, 2018	Research Part A	industry (New	decreased after the entry of Uber in New York. However, taxis did begin covering a		
	occupancy rate,			York)	larger geographic area.		
	dispersion of pick-up						
	and drop-off locations						
Industry	Capacity utilization	Cramer &	American	UberX and taxi data	Uber-X drivers have higher capacity use than taxi drivers. While Uber X drivers have	Labor	Money
		Krueger, 2016	Economic Review	(five US cities)	a passenger in the car 50% of the time, taxi drivers have a passenger from 30% to 50%		
					of the time they are working.		
Industry	Employment in the local	Fang, Ye, &	Annals of	Airbnb	A higher presence of Airbnb in the county (number of listings) has a positive effect on	Capital	Money
	tourism industry	Law, 2016	Tourism		the overall level of employment in the tourism industry, but a negative effect on		
			Research		employment in the low-end hotel segment.		
Industry	Hotel demand	Guttentag &	IJHM	Airbnb	Nearly two-thirds of the respondents to the survey used Airbnb as a hotel substitute,	Capital	Money
		Smith, 2017			mainly as a substitute for mid-range hotels.		
Industry	Hotel revenue per room	Xie & Kwok,	IJHM	Airbnb, hotel	A higher supply of Airbnb listings reduces the revenue per room of nearby hotels, but	Capital	Money
		2017		industry (Austin,	this effect decreases as the price difference between Airbnb listings and hotels		

				Texas)	increases and as the price dispersion among Airbnb listings increases.		
Industry	Hotel revenues, prices,	Zervas,	Journal of	Airbnb	Entry of Airbnb into Texas reduced hotel revenues. This effect was stronger for lower-	Capital	Money
	and occupancy	Proserpio, &	Marketing		priced hotels and hotels not serving business travelers.		
		Byers, 2017	Research				
Broader	Entrepreneurial activity	Burtch,	Management	Uber X	The volume of campaigns launched on Kickstarted and the level of self-employment	Labor	Money
context		Carnahan, &	Science		(level of entrepreneurial activity) decreased 14% and 5%, respectively, after the entry		
		Greenwood, 2018			of Uber X in the location.		
Broader	Gentrification	Gant, 2016	Sociological	Airbnb (Barcelona)	There is qualitative evidence of tourism-driven displacement because of the conversion	Capital	Money
context			Research Online		of residential buildings into accommodation for visitors.		
Broader	Alcohol-related motor	Greenwood &	MIS Quarterly	Uber (California	The entry of Uber X has decreased the rate of motor vehicle fatalities per quarter in	Labor	Money
context	vehicle fatalities	Wattal, 2017		2009–2014)	California by 3.6%–5.6%.		
Broader	Rental market	Horn & Merante,	Journal of	Airbnb and rental	A one-standard-deviation increase in Airbnb listings is associated with an increase in	Capital	Money
context		2017	Housing	market (Boston)	rents of 0.4%.		
			Economics				
Broader	Inequality in the labor	Schor, 2017	Cambridge	Airbnb,	A substitution effect in the labor market can increase inequality. The providers	Labor &	Money
context	market		Journal of	RelayRides, &	interviewed were highly educated and used the platforms to supplement their salary.	Capital	
			Regions	TaskRabbit	The type of work that these providers are doing is the type of work done traditionally		
			Economy and		by less educated people.		
			Society				

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