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**THE DISTINCTIVE DOMAIN OF THE SHARING ECONOMY:
DEFINITIONS, VALUE CREATION, AND IMPLICATIONS FOR RESEARCH**

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ABSTRACT

The objective of this special issue is to expand our understanding of the *sharing economy*. To this end, we consider how the sharing economy can be demarcated and provide a definition that distinguishes the sharing economy from other forms of economic organization and resource orchestration. Specifically, the sharing economy entails *multisided platforms that facilitate user access to—rather than ownership of—assets that are rivalrous in their use, and that are not owned by said platforms*. Using this definition, we identify and show how the sharing economy creates and distributes economic value among participants and we summarize the seven articles in the special issue. All in all, this introduction and the seven studies clarify how the sharing economy and its three main constituencies—sharing platforms, asset providers, and users—reduce commercial friction by increasing trust, facilitating interaction, easing resource access and orchestration, and maximizing ecosystem-wide value.

Key Words: Sharing Economy, Digital Platforms, Temporary Access, Rivalrous Assets

The rise of resource sharing platforms—e.g., Airbnb, Fiverr, MTurk, TaskRabbit, Uber, and many others—reveals an interactive commerce that has been expanding rapidly and globally. These sharing platforms create ecosystems that reduce commercial friction by facilitating supply-demand matching via algorithms and rating systems and by linking resource providers with users. The distinctive feature of sharing platforms is that they provide users with *temporary access to assets*, enabling a range of services based on many types of capital and labor. While some hail sharing platforms as a fundamentally new way to organize business, ease transactions, reduce information asymmetry, and facilitate connections between resource providers and consumers, commercial matchmakers are as old as human history. What is new is the introduction of *digital* platforms whose low cost and broad reach dramatically facilitate engagement and connections between users and providers of assets and labor services.

The more efficient forms of organizing commercial activity brought on by digital platforms—e.g., enhanced supply and demand matching, network effects, and optimized access to assets and labor—are critical features of the sharing economy and its ability to expand economic opportunities to a broader sector of society. While digital platforms create substantial economic and social value, they also raise significant institutional, regulatory, and societal challenges, including potential data breaches, privacy and safety issues, and concerns over the distribution of value. The recognition of these benefits and challenges has drawn attention and brought awareness to the fact that scholars, executives, and policymakers need to better understand the sharing economy and its boundaries (e.g., Bostman, 2013).²

² We use the terms *access* and *sharing* interchangeably, but other modalities include lending, gifting, swapping, renting, etc. Regardless of modes, the focus is on *enhancing access* to rivalrous assets owned by others rather than asset type.

The purpose of this special issue—and particularly this introductory essay—is to define the domain of the sharing economy and to assess the challenges and consequences of participation in it. To make the sharing economy more understandable and predictable, we bring clarity to its three main actors (i.e., sharing platforms, asset providers, and users) and how they scale engagement and trust and reduce interparty friction (e.g., coordination challenges, incentive misalignment, operational disputes, and other forms of costly mishaps and disagreements). Our introduction begins by focusing on two main questions: *(1) What is the sharing economy? and (2) How do participants in the sharing economy create and capture value?* Addressing these questions and advancing research and theory in this domain—especially when the sharing economy continues to change and expand—requires precision and granularity. To this end, and because quite a few of the studies in this special issue either allude to or focus on access to transportation and housing, we delve into the Uber and Airbnb platforms to illustrate the logic of the sharing economy. We start by considering alternative definitions and classifying examples in an effort to demarcate the boundaries of the sharing economy. After discussing how participants in the sharing economy create and capture value, we consider how our definition and notions of value creation and capture have implications for future research. We close with a summary of the seven studies that reflect this special issue and offer expansive and concluding comments.

WHAT IS THE SHARING ECONOMY?

Many definitions of the sharing economy have been proposed in the literature. However, as often occurs following the emergence of a new research domain, these definitions are not fully consistent, encompassing, or coherent. Some emphasize how the sharing economy facilitates socioeconomic connection and peer-to-peer engagement (Köbis, Soraperra, & Shalvi, 2021); others highlight the distinction between efforts to coordinate collaborative access and

consumption for a monetary versus non-monetary compensation (e.g., bartering, trading, and swapping; Belk, 2014), while still others direct attention to whether individuals or business entities own or share the accessed assets. For example, Möhlmann (2015) differentiates between sharing a physical asset that is privately owned (e.g., a home on Airbnb, or a peer-to-peer carsharing company such as Turo) and assets that are company-owned (e.g., car2go and ZipCar). Schor (2016: 9) highlights that the sharing economy is about specific activities that “fall into four broad categories: recirculation of goods, increased utilization of durable assets, exchange of services, and sharing of productive assets.”

While such definitions continue to proliferate, virtually all recognize that the sharing economy is a subset of the broader economic sector that is based on digital platforms. Many types of platform exist (e.g., Baldwin and Woodward, 2009), and useful typologies are provided in the literature. These include *collaboration platforms*, where members cooperate to produce goods (Cusumano, in press; Gallus, 2017; O’Mahoney & Ferraro, 2007); *exchange platforms*, in which parties buy, sell, or swap products or services (Gerwe, Silva, & Castro, in press; Lewis, Cordero, & Xiong, in press; Reuber & Fischer, 2009; Taeuscher, 2019) or even digital assets (Benkler, 2006); and *innovation platforms*, where parties introduce complementary innovations (Boudreau & Lakhani, 2009; Nambisan, Siegel, & Kenny, 2018; Srinivasan & Venkatraman, 2018). Cusumano, Gawer and Yoffie (2019, p. 20) define *transaction platforms* as “intermediaries or online marketplaces that make it possible for people and organizations to share information or to buy, sell, or access a variety of goods and services.”

Additional platform types exist, and more will surely emerge, but a distinct feature of the sharing economy is that its platforms facilitate matchmaking around *access* to assets, services and resources rather than ownership *per se* (Evans & Schmalensee 2016; Gawer & Cusumano

2014). The sharing economy coalesces digital platforms, asset owners, and users—thus creating interactive, commercial ecosystems that are less bureaucratic or hierarchically centralized than seen inside firms, and yet it is also more predictable than seen in open markets (Bai & Velamuri, in this issue).

In one of the most thorough efforts to identify the scope of the sharing economy, Gerwe and Silva (2020, p. 71) define sharing platforms as socioeconomic systems that allow users “*temporary access*” to “underutilized physical and human assets.” They explain (p. 68) that sharing platforms entail the following features: (i) enabling offline transactions between users; (ii) facilitating peer-to-peer transactions, where both the providers and the consumers are private individuals rather than businesses or professional operators; (iii) emphasizing temporary access rather than ownership; and (iv) focusing on the use of underutilized capacity (e.g., physical assets, resources, skills, or time).

The Gerwe and Silva’s definition provides a solid starting point, but in light of new developments, we present a more precise and consistent definition of the sharing economy. First, the requirement that asset owners hold *underutilized* capacity seems superfluous. Physical assets and human labor are seldom, if ever, fully utilized. Structures, vehicles, and equipment often sit idle, and most freelancers are willing to work extra hours beyond what is considered a standard workday if adequate incentives are provided. As long as these exchanges are voluntary there is some underutilized capacity; if this were not the case, a voluntary provider would *not* choose to commence with the exchange (e.g., Otteson, 2019). Thus, the fourth element of Gerwe and Silva’s definition captures the important idea that the sharing economy unlocks underutilized capacity, but it is not a distinct feature as it does not rule out specific cases.

Gerwe and Silva’s requirement that “both the providers and the consumers are private individuals, *not businesses or professional operators*” is more problematic. Platforms such as Uber and Airbnb, which are typically considered to be part of the sharing economy, become a gray area due to the mixed nature of asset owners. One could potentially draw a line where platforms that support *mostly* peer-to-peer (P2P) transactions are considered to be within the sharing economy, whereas platforms where peer-to-peer activity falls below some threshold are excluded, but such a division would be arbitrary.

We argue that to have a consistent definition, the sharing economy should include all platforms that link users with resource providers (either individuals, businesses, or both) that are independent of the platform. In other words, a sharing platform and resource providers must be separate entities. This definition rules out many platforms (e.g., those owned by hotels, airlines, banks, etc.) that provide users with temporary access to services from assets directly owned by the said platforms. In contrast, it classifies within the sharing economy independent brokers for assets that give users temporary access to these assets (e.g., Expedia and Hotels.com). Many of these brokers have not traditionally been considered as part of the sharing economy, but a consistent definition must include them as they too provide access to assets they do not own.

A further requirement is that sharing economy platforms provide access to private goods and services. This excludes platforms such as Wikipedia, which provide broad access to information. Such platforms have “public” goods properties—i.e., they provide services that are characterized by non-excludability and non-rivalrous consumption; access to Wikipedia by one user does not limit the usefulness or accessibility of the information to another user. Arguably, Facebook, Instagram, Google Search, Twitter, etc., have similar properties. On these platforms, information resources are shared freely without diminishing the value to other users. In contrast,

for platforms in the sharing economy, the utilization of a resource by one user precludes its simultaneous use by another.

Thus, we define the sharing economy as entailing *users, asset providers, and multisided platforms that facilitate temporary access to—rather than ownership of—assets that are rivalrous in their use, and that are not owned by said platforms*. The focus on shared assets, resources, or services that are rivalrous in their use suggests that they must also be private goods rather than public goods. Our definition is parsimonious and robust, as it is agnostic to (i) who the participants are (private individuals or firms); (ii) whether their engagement is part-time or full-time; and (iii) whether assets can be identified as “under-utilized” or not. Moreover, compensation to asset owners can take many forms, including financial payments, barter, and other forms of exchange. Given that the overwhelming majority of platforms are digital, and payments often entail online transactions, qualifying the sharing economy based on whether transactions, exchanges, or access are conducted online or offline seems unhelpful.

Our definition directs attention to the condition under which *temporary access* is granted to assets rather than asset types. Assets such as housing, transportation, labor, and even certain kinds of data and software could all be part of the sharing economy, but only if they are rivalrous in their use—the same assets would be *outside* the bounds of the sharing economy when usage is not rivalrous. Our definition is broader than in the past and it includes platforms that some might exclude from the sharing economy (e.g., Expedia, Hotels.com, crowdsourced delivery platforms such as DoorDash, Postmates, Grubhub and Uber Eats, or software and usability testing such as Applause). To be fair, our expansive view of the sharing economy was either anticipated or hinted at by the burgeoning literature (e.g., Ameri, Rogers, Schur, Kruse, 2020; Gerwe & Silva, 2020; Köbis et al., 2021; Pan Fang, Wu, & Clough, 2021; Ta, Esper, & Hofer, 2018).

Table 1 provides a series of examples to help make these comparisons and classifications more specific. The left panel of Table 1 lists familiar examples of platforms as well as ancillary information regarding geographic focus and industry context that facilitates comparison across similar platforms active across the globe. The asset providers and users panel breaks down the parties in an exchange—i.e., individual-to-individual (I2I or peer-to-peer; P2P); individual to business (I2B); business-to-individual (B2I or business-to-consumer; B2C); and business-to-business (B2B). Then, the primary assets panel lists whether a platform grants access to assets that are rivalrous in their use, physical, or human. For completeness, the right panel indicates whether our definition would categorize a given example into a sharing platform and/or gig platform.

Insert Table 1 About Here

All the examples in Table 1 are digital platforms, but those listed at the bottom are excluded from the sharing economy based on our definition. For added context, hotel and car-rental platforms (e.g., Hilton or ZipCar) are *not* representative of the sharing economy as they own their assets—respectively, real estate and vehicle fleets. However, Expedia and many of its business units (e.g., Travelocity, VRBO, Orbitz, CheapTickets, Hotwire, Hotels.com, Trivago, etc.) fall within our definition of the sharing economy because currently they grant access to assets owned by entities that are independent of the platform. Facebook, WhatsApp, Instagram, WeChat, and Twitter contribute greatly to the *chat ecosystem*, but they are outside the sharing economy as they act as social-media platforms. They do not provide access to rivalrous assets, but rather serve as public goods hosted on privately-owned platforms, typically monetized by advertising and datamining. Similarly, by and large, the Amazon platform does not fit into the sharing economy because its value proposition is principally about *buying* products and ongoing

services rather than granting temporary access to them (Amazon Mechanical Turk being an important exception). Finally, the TripAdvisor platform offers (i) user-generated content on travel, lodging, restaurants, etc.; and (ii) online hotel reservations and bookings for lodging, transportation, and restaurants, so the former is part of the social media or the chat economy, but the latter is part of the sharing economy.

Companies listed in the top part of Table 1 help to clarify the distinction between our definition and that of Gerwe and Silva (2020). Recall, Gerwe and Silva include within the sharing economy only platforms that operate peer-to-peer (P2P, or I2I). Historically, attention to the sharing economy arose with the growing awareness, recognition and appreciation of P2P engagements, so it is no surprise that some scholars define the sharing economy based on its most salient participants: private individuals. The articles in this special issue as well as advances in technology and novel business models, however, reveal that a focus on who the participants are and whether certain exchanges—i.e., person-to-business (P2B), business-to-person (B2P), or business-to-business (B2B)—are excluded are unlikely to add conceptual clarity (Benkler, 2006). To illustrate, consider Fiverr, a platform that matches self-employed individuals, small enterprises, and large corporations for temporary access to business services. Naturally, private individuals and enterprises differ in their buying power and ability to access information, affect negotiated outcome, marshal legal and political support, and thus influence the creation and capture of value. However, as the Fiverr example demonstrates, the P2P, P2B, B2P, and B2B distinction is not a strong boundary condition for the sharing economy. Stated differently, focusing on who transacts with whom is *less clarifying* of the sharing economy than the *how* and *what*— i.e., *how* platforms coalesce asset providers and users and *what* the conditions are under which temporary access to rivalrous assets is granted.

Table 1 also distinguishes platforms that would be considered part of the “gig economy”—i.e., the collection of labor markets characterized by short-term contracts or freelance work. Gig platforms constitute an important subset within our definition of the sharing economy.

Finally, our view of the sharing economy acknowledges its dynamic nature, which explains why some platforms may move into or out of the sharing economy. For instance, Jiang, Zheng, Fan, Zhang, and Li (in this issue) explain that at its inception, Quid was a business-to-business sharing platform, but over time pivoted to become a professional data service company that is outside the sharing economy. Similarly, Airbnb started by enticing temporary capacity only from private individuals, but now even property-management firms and boutique hotels use the sharing platform on an ongoing basis (and demand too is not limited to private individuals).

While the sharing economy has distinct characteristics, an important commonality between this special issue and other studies (Gerwe & Silva, 2020; Köbis, Soraperra, & Shalvi, 2021) is our collective hope to dispel the notion that the sharing economy is independent from the “regular economy.” Like Matryoshkas—sets of nested Russian dolls—the sharing economy is nested in and intertwined with the wider systems of exchange of goods and services, and this growing complexity explains why it is often difficult to define its bounds. Platforms, like companies and organizations, evolve, change, and disband; however, given current conditions and research—including over 90 studies considered for this special issue—it becomes increasingly clear that the sharing economy is inseparable from the wider economic system. It entails diverse multisided platforms that assist diverse parties (e.g., private individuals, businesses, and noncommercial entities) to access diverse asset types (e.g., intangibles, goods, and services) that they do not own.

Just as there are distinctions and commonalities between the sharing economy and the wider economy, Figure 1 reveals some distinct orientations and foci among platforms within the sharing economy. For example, Uber, Lyft, and Turo focus their value proposition on access to transportation capabilities that they do not own; Airbnb, VRBO, and CouchSurfing emphasize housing solutions in properties they do not own; and TaskRabbit, Takl, and NeedTo provide access to labor in the trades industry, while Fiverr emphasizes access to labor in the digital space (e.g., programming, music and audio production, ecommerce, etc.) as well as in politics, strategy, and architecture. The MTurk (Amazon Mechanical Turk) platform gives access to remotely located “crowdworkers” to perform discrete tasks such as identifying content in an image or video, writing product descriptions, performing data de-duplication, transcribing audio recordings, or answering questions. A sharing platform in the education sector is LinkedIn Learning, which connects talented teachers (many of whom might be unaccredited) and courses with students who seek to develop applied skills even in the absence of certification or degrees. Neither TaskRabbit, Takl, NeedTo, Fiverr, MTurk, nor LinkedIn Learning directly employs any of the workers on their platform; rather, they facilitate temporary access to those workers.³

Insert Figure 1 About Here

Our special issue as well as the above discussion explain that the sharing economy can contribute greatly to the development of matching demand with supply—either existing or new. Current scholarship makes it clear that the types of assets, labor, or resources employed in sharing platforms can vary greatly. However, the connectivity of the Internet and access to inexpensive computing power implies that some classes of resources are becoming appreciably

³ Naturally, the reclassification of contract workers as employees (e.g., via a court decision regarding Uber in the UK), would have the effect of removing those platforms from our definition of the sharing economy.

more abundant—or more accessible—than in the past. Such resources are also associated with declining marginal costs (Rifkin, 2014) and increasing returns (Arthur, 1996; Geissinger, Laurell, & Sandström, 2020). Digital resources and platforms afford access to *long-tail* assets and consumers, and this development creates and scales up network effects that were not there before (Markman & Waldron, 2014). The long tail, especially apparent in digital contexts, refers to instances where consumer demand expands outwardly from highly popular or “hit” products with mass appeal towards more diverse, niche and obscure offerings (Anderson, 2008; Markman & Waldron, 2014). Thus, sharing platforms expand and create new demand-supply matches by luring engagement from parties (many of whom never engaged before) with more opportunities, options, and control to monetize their assets (some of which were never monetized before).

To offer a quantifiable context, at the end of 2019 Uber’s long tail spanned 3 million drivers, many of whom had never previously worked as taxi drivers, while Airbnb’s long tail included over 6 million listings worldwide. Much of this capacity and some of the associated demand, in both the transportation and lodging sectors (among others), had no previous modality to, respectively, monetize their assets or engage as consumers. Therefore, the decoupling of labor and assets from enterprises and the rise of sharing platforms affords the scaling-up of a wider range of assets, users and transactions that go well beyond the traditional reciprocity to create distributed value (Evans & Schmalensee, 2016). Our general conclusion is not that sharing platforms create radically new economic laws, but they certainly accelerate transactions’ velocity and expand commercial reach by decoupling labor and assets to reduce economic friction, transaction costs, and mistrust while increasing access, safety, and engagement.

HOW DO SHARING PLATFORMS CREATE VALUE?

Moving beyond what sharing platforms are, who the engaged parties are, and what types of assets are exchanged, a critical element in this unfolding phenomenon is its operational processes. For greater tractability, we elaborate on how two prominent platforms (Uber and Airbnb) create and capture economic value. Where possible, we also explain how the value created has been distributed among stakeholders, including asset providers, users, and even adjacent shareholders.

In general, sharing platforms create value by *reducing costs* and *delivering non-price benefits*. Cost reductions arise when a platform affords access to assets (owned by others) that could reach higher use and/or efficiency levels through automation; for example, Airbnb automated many functions for which hotels require human interactions. Non-price benefits include increases in trust; ease of access or use; reductions in the search, uncertainty, transaction, or coordination costs; and the introduction of useful new services. As noted, to make these sources of cost reduction and benefits more concrete, we describe how they arise in the specific contexts of Uber and Airbnb.

Uber's Value Creation

As a platform, Uber taps into two sources of assets held by drivers—vehicles and time. Drivers, for their part, join the Uber (or Lyft) platform because it is an appealing modality to monetize their assets. Indeed, in the absence of a ride-sharing platform, drivers are unable or unlikely to monetize either type of asset. This raises an interesting question: Which resource—capital or labor—is more valuable? The average annual salary of a taxicab driver is \$31,000 (ZipRecruiter.com), while the manufacturer's suggested retail price (MSRP) of a Toyota Prius, a common taxi vehicle, is \$24,000 (Toyota.com). Given that taxis have a

useful life of about 5 years, it is clear that the labor cost (driver time) is most valuable; it is more than six times the cost of the taxicab. This effort to reduce costs explains why Uber is experimenting with self-driving vehicles.⁴

Beyond tapping into drivers' capital and labor, Uber's platform also enhances resource utilization compared with the existing offerings (taxis). A study by Cramer & Kreuger (2016) found that in Los Angeles and Seattle, the capacity utilization rate for taxis (i.e., percent of miles driven with a passenger) was 40.7% and 39.1% respectively, which means that when taxicabs are operational, about 60% of the time they wait for passengers. By comparison, Uber's utilization rates were 64.2% in Los Angeles and 55.2% in Seattle, so it was more efficient overall in its use of labor, capital, and fuel. This utilization boost means that Uber's resource cost is about 2/3 of the taxi's cost—a substantial economic gain. This example shows that a superior provider-user match enables higher resource utilization in two ways: by unlocking untapped sources of capital and labor and enhancing resource utilization as compared with existing modalities.

As noted, Uber also delivers economic value through non-price benefits, such as reductions in costs related to search, uncertainty, and trust, and the introduction of new and useful add-ons (e.g., tracking capability, added safety, predictability, and ease of use). Most riders prefer to get a ride using an app rather than call a dispatch or hail a taxicab, particularly late at night or during bad weather. Adding to this ease-of-use benefit is a reduction in uncertainty; the app provides geolocation information on vehicles, estimated arrival time, and driver rating. Even in cases where the ride sharing platform fails to work perfectly, users can be assured that they will not be stranded. The availability of the ride-sharing platform allows many users to confidently make trips that they otherwise would hesitate to embark upon. Also, the fact

⁴ The transition to self-driving cars and the elimination of drivers (as asset providers) is ongoing, and as noted, if Uber will own self-driving vehicles it will exit the sharing economy.

that the app keeps track of the identity of the driver and the passenger provides a degree of security that is absent for taxis. As a transportation platform, Uber is also proliferating new services such as Uber Eats, Uber Pool and black car services, thus capturing a wider spectrum of users based on their different preferences. While the value of these options and non-price features varies, for many they are critical benefits of the Uber platform.

Economists have attempted to estimate Uber's total value to consumers, also known as *consumer surplus*.⁵ For example, a recent study based upon Uber's "surge pricing" data estimates \$6.76 billion in annual consumer surplus from UberX in the US (Cohen, Hahn, Hall, Levitt, & Metcalfe, 2016). This surplus is extremely large—approximately 1.57 times the total consumer expenditures on rides taken at base pricing—hinting that a vast majority of Uber's value creation takes the form of consumer surplus. It is important to recognize, however, that this value creation may be largely inherent in the ride-sharing platform model rather than in the Uber platform *per se*. While Uber's customers have benefited significantly, what have been the economic gains for other stakeholders? Some, particularly early investors, also saw significant benefits. As of this writing (December 30, 2020), Uber had a market capitalization of \$93.74 billion and much of the shareholder return had gone to its venture capital firms and founders, Garrett Camp and Travis Kalanick. Despite these shareholder returns in the stock market, which reflect profit expectations, Uber has yet to earn a positive accounting profit.

While Uber customers and investors have enjoyed substantial economic benefits, the evidence is more mixed for Uber's non-financial resource providers—the drivers. Using surveys and administrative data, Hall and Krueger (2018) explain that drivers are enticed to join and stay

⁵ Consumer surplus is the difference between what provided charge and the extra that consumers would be willing to pay. For example, on stormy, freezing nights consumers would be willing to pay 100-200 percent above the taxi rates (i.e., consumer surplus) in order to avoid the freezing cold and get home dry and quickly.

with Uber for several reasons, including the flexible schedule and the pay, which often complements other income sources. Citing a Federal Trade Commission charge (2017), and Uber's subsequent consent to pay a \$20 million fine for misleading drivers with inflated earnings and financing promises, Berg and Johnston (2019; p.40) described the Hall and Krueger study as "fraught with methodological problems and unsubstantiated claims." Still, it is undeniable that Uber offers tremendous flexibility, given that for many in the transportation industry, work hours are fixed and afford little flexibility. Further, some claim that its drivers earn more than twice the pay of drivers who face inflexible work arrangements (Chen, Rossi, Chevalier & Oehlsen, 2019). We agree with Phung, Buchanan, Toubiana, Ruebottom, and Turchick-Hakak (in this issue) who explain that the relations between Uber and its drivers are complex, as are comparisons with taxi drivers. Our assessment is that the enthusiasm for the platform has been significantly stronger from consumers than from Uber's drivers. For example, the latter continue to wage legal battles to be classified as employees rather than independent contractors.

To recap, as a dominant ride-sharing platform, Uber has created substantial economic value; much of which has been captured by the consumption side of the sharing economy though early investors also gained, based on profit expectations. While Uber has generated substantial consumer surplus, an open question is how much of that value will be captured by the ride sharing platform and the drivers.

Airbnb's Value Creation

Like Uber, Airbnb creates value by affording easy access to resources held by others, thus generating non-monetary benefits. However, the value distribution differs from the Uber case. The value of resource sharing at Uber includes important components from both capital (vehicles) and labor (drivers), while Airbnb's value creation derives almost entirely from the

sharing of capital (real estate). Housing is a costly asset—the value of capital stock of housing in the US (apartments and homes) is more than six times that of automobiles—which explains why such assets are particularly valuable for sharing purposes. As a result, a vacant apartment or house is significantly more wasteful than an unused car. The implication is that the amount of value that Airbnb can create by exploiting its assets is vastly greater than what Uber can create (all else being equal).

As has been shown, much of the benefit of Uber's ride-sharing platform originates from the higher asset utilization that is achieved relative to the current system (taxis); but in the case of Airbnb, the prior lodging ecosystem is more diverse and complex, including hotels and short-term rental services. For example, average daily rates (ADR; the average room rental price per day) and occupancy rates (the ratio of days in a month for which a property is occupied) are typical utilization indicators in the lodging industry, but they make it difficult to compare full-service, year-round hotels with part-time housing. Given that Airbnb focuses on sporadic, temporary, and even long-tail access, it seems unlikely that the Airbnb platform can outperform hotels with respect to total resource utilization. Although the Airbnb platform may enable higher utilization compared with most vacation rental platforms, this superiority is unlikely to be of the order of magnitude between Uber and taxis, as described above. Thus, Airbnb's major economic gain would seem to derive from unlocking the value of previously inaccessible, idle resources within a national housing stock. In March 2019, Airbnb afforded access to over six million properties worldwide (more than the combined room capacity of the six largest hotel groups).

Like Uber, Airbnb generates substantial non-price benefits to consumers. The Airbnb platform reduces search and transaction costs, making the booking of a rental property as easy as booking a hotel room. The Airbnb option is surely attractive in localities that lack hotels, but a

key point is that prior to the platform's launch the search costs for housing were too high, and the availability of such rentals was rather low. Like Uber, the Airbnb platform reduces customer costs relating to uncertainty and trust. Extensive photos and web tools on the platform allow asset providers to demonstrate quality, and customers to search effectively for desired benefits. Assurance systems and reviews, including payment and insurance protocols, enable asset providers and users to transact reliably. Airbnb has also created value over time by adding services and enhancing areas of differentiation. Originally a price-sensitive, couch-sharing service, Airbnb now offers a broad variety of housing options and add-on services. Airbnb Luxe, for example, features glamorous high-end listings around the world, thus bringing even greater custom-made accommodations.

With respect to the distribution of value among stakeholders, Airbnb differs from Uber in that asset providers have been major beneficiaries of the Airbnb platform. The economic value created by Airbnb has been distributed more evenly to both types of platform participants (asset providers and users) as compared with Uber, where the satisfaction of consumers has, in general, greatly exceeded that of asset providers. Likewise, Airbnb is enticing the formation and influx of microenterprises whose sole purpose is to assist providers and users (e.g., greeting, check-in, cleaning, dealing with emergencies, etc.), thus further solidifying the Airbnb ecosystem.

Such comparisons between Uber and Airbnb with respect to value creation and capture show that both platforms created substantial economic value by enhancing resource utilization, and by providing non-price benefits (principally by reducing search costs and uncertainties in resource-sharing transactions). Moreover, in both examples, consumers captured substantial economic value. Yet, there are also important differences between the two cases. These relate to the precise sources of value creation (types of assets and how the platform enhances their

utilization) and the distribution of value among stakeholders (particularly, the degree to which asset providers capture benefits).

From a broad economic perspective, a core function of sharing platforms is merely to match asset supply and demand. Unpacking this core function, however, shows that sharing platforms facilitate *access* to assets that they do not own by reducing commercial friction—i.e., by lowering costs; removing barriers to trust, use and consumption; increasing transparency and certainty; and accelerating transaction velocity. Naturally, when sharing platforms increase trust—which they do by reducing information asymmetry (e.g., review systems) and integrating with the wider economic infrastructures (i.e., the ecosystem of regulations, insurance, payment technologies, certifications, complementors, microenterprises, etc.)—they create a critical mass of users and providers, network effects and efficiency. It is apparent, therefore, that technology is a key enabler for scaling up supply-demand matching and for trust enhancement, both of which antecede asset sharing. As the articles in this special issue show, sharing platforms are economic production systems that entice engagement from diverse users and asset providers (well beyond transportation and housing) because they diversify, facilitate, simplify, and accelerate access to and monetization of assets.

IMPLICATIONS FOR FUTURE RESEARCH

This section explores whether and how sharing platforms raise distinct managerial challenges or opportunities and directs attention to three promising future research opportunities.

The definition of the sharing economy proposed in this essay emphasizes processes—*how* platforms coalesce asset providers and users and under *what* conditions access to assets is granted. In other words, we deemphasized the parties to sharing transactions and the types of asset involved. Nevertheless, there are reasons to believe that parties influence the *sources* of

value created and the *distribution* of value among the users, asset providers, and platforms.

Table 1 highlights one way to distinguish between different types of users and providers that engage with a platform—i.e., by focusing on exchanges between providers and users that fit one or more of the following classifications: (i) individual-to-individual (I2I) or peer-to-peer (P2P) exchanges; (ii) individual-to-business (I2B) exchanges; (iii) business-to-individual (B2I) or business-to customer (B2C) exchanges; and /or (iv) business-to-business (B2B) exchanges. These four categories reflect variations in value-creation and value-capture dynamics. For instance, individual providers may be less able to create and benefit from economies of scale than business providers, and individual users may have more variable demand preferences than business users. It may also be the case that individual providers and private users are less able (or willing) to develop and exploit consumer data as compared to business providers.

The above suggests it will be beneficial to study whether and under what conditions different party permutations affect managerial choice and the creation and distribution of economic value. For example, does the assumed variability in demand preferences among users imply that search and matching algorithms are more significant sources of value on individual-to-individual sharing platforms as compared to business-to-individual sharing platforms? Are sharing platforms characterized by diverse providers and users (with different likelihoods of requiring demand variability and/or scale economies) more likely to capture the dominant share of value created? More generally, how do attributes of the ecosystems defined by these four party categories (I2I, I2B, B2I, B2B) affect managerial choice and the creation and distribution of economic value?

A second area for future research is to consider variation in the asset shared via a platform. Table 1 highlights distinctions between platforms that share physical and human assets

and offers prominent examples of sharing platforms that emphasize each of these assets. For instance, Airbnb provides temporary access to physical assets (lodging); TaskRabbit and Fiverr provide temporary access to services from human assets (the latter focuses on programming, music and audio production, and ecommerce); and Uber provides temporary access to a combination of physical and human assets (automobiles and drivers). Data and digital-based assets are typically non-rivalrous in their use, and thus outside our definition of the sharing economy. There are, however, some notable exceptions—especially patents and trademarks, where excludability is enforced by law, so platforms that match patent creators and users would arguably be considered within our definition. Data facilitate and augment the utilization of assets and services within conventional platforms; however, it would be interesting to see whether platforms can develop modalities to share data as a type of a rivalrous asset.

Over and above data and digital-based assets, distinguishing between types and combinations of assets might also be fruitful. Generally, if stable differences exist across platforms leveraging different types of assets, then we might expect that the types of assets affect outcomes of interest. For instance, the literature on *production functions* suggests the existence of stable differences in returns to investment across physical, financial, human, and labor capital (cf., Varian, 2003; p. 63). Similarly, research on technology management reports differences in the appropriability of (largely tangible) physical assets and (largely intangible) intellectual property (e.g., Arrow 1962; Teece, 1986). The above literature streams suggest that there may be differences in value creation, capture, and distribution, and their persistence across sharing platforms that provide temporary access to diverse asset types. We have examined two cases—Uber and Airbnb—but there are opportunities to delve more deeply into the nature and magnitude of value creation and capture in the sharing economy.

Third, as suggested above, our framework indicates that the sharing economy is dynamic, with platforms and asset providers moving into or out of the sharing economy (or parts of it) over time. For instance, the Airbnb platform started by enticing temporary capacity only from private individuals, but now even property-management firms, professionally run B&Bs, and boutique hotels use this platform on an ongoing basis (and demand is not limited to private individuals). An important commonality between this special issue and other studies is the recognition of this dynamism (Gerwe & Silva, 2020; Köbis, Soraperra, & Shalvi, 2021), which implies opportunities to explore whether and to what extent sharing platforms characterized by different providers and users and/or different assets will exhibit more or less churn in membership. Alternatively, we might argue that those provider and user categories with more uniform user demand and/or more stable sources of providers might support more persistent advantages for platform providers.

SUMMARY OF PAPERS IN THE SPECIAL ISSUE

The calls for manuscripts for this special issue began late in 2016, with papers submitted until January 15, 2018. After the first round of review, we invited the authors of 94 projects to participate in a paper development workshop (PDW) at the University of International Business and Economics (UIBE), in Beijing, China (May 8-9, 2018). Participants were arranged into groups based on research topics, presented their papers, and received feedback from guest editors and peers. We should recognize the breadth of definitions of the sharing economy provided by the workshop attendees and acknowledge that even some of the papers in this special issue deviate from our definition of the sharing economy. This was expected; scholarly research is rarely uniform—and to be fair, we developed the definition of the sharing economy deductively after studying the papers and while surveying the wider literature on this topic.

The paper by Jiang, Zheng, Fan, Zhang, and Li investigates the role of business models in clarifying differences in performance among sharing platforms. Given the importance of reducing the friction and costs associated with transactions, they identified six business-model elements: (1) *asset-lightness* (the degree to which a shared asset belongs to external stakeholders as opposed to a focal firm); (2) *transaction frequency*; (3) *anonymity* between asset owners and users; (4) *transferability* (the capacity of a transacted asset to be moved geographically); (5) *modularity* (the edification of ecosystems by products or services—e.g., Mobike, a station-less bicycle-sharing system, is a “last mile” solution to commuters who are too far to walk to their final destination, but too close take a taxi); and (6) *product category* (consumer’s knowledge of product or service quality before purchasing). Then, using these six elements and a fuzzy-set qualitative comparative analysis (fsQCA) technique, the study by Jiang and colleagues reveals six business model configurations, four of which are consistently related to high performance and two to lower performance. Interestingly, the study also shows that, of the four, no single configuration is superior—i.e., there are multiple and equally effective business model configurations that lead to either high or low performance. Finally, they show that superior and poor performance configurations are not opposite or mirror images of each other (see their final table). These findings carry conceptual and applied benefits by demonstrating—with great granularity—which configurations are helpful (and harmful) for platform performance.

Bai and Velamuri explain that the sharing economy represents a unique context to study distinct yet blending governance structures, business models and organizational forms. Drawing on insights from transaction cost economics (TCE) and the resource-based view (RBV) of the firm, they elevate attention to two organizational roles that the sharing economy facilitates: first through the creation of transactional platforms, which operate like markets to optimize episodic

usage rights; and second through modular architectures, which function like firms for value co-creation. To better understand new organizational forms within the sharing economy, the authors present a two-dimensional framework. One dimension is the reliance on centralized information processing (divided into strong versus weak), and the second is the boundary of information exchange (classified as either closed or open). This framework regards the sharing economy as an apt governance form when the reliance on centralized information processing is strong, but the boundary of information exchange is open. Their view of the sharing economy suggests that markets and firms are not as distinct or dichotomous as they often seem but are more blended instead—especially when new technology enables new ways to organize activities and automate functions. All in all, Bai and Velamuri provide a theoretical underpinning from which to explain the conditions under which the sharing economy emerges and how the blending of governance structures, business models, and organizational forms play a critical role in expanding the sharing economy.

The intensive interactions among unfamiliar stakeholders that characterize many sharing platforms suggests the central role of trust between asset providers, users, and platforms. Clarifying the role of a sharing platform (Xiaozhu) in facilitating access to housing in scenic and residential areas in China, Gu, Zhang, Lu, and Song report that solid trust predicts access to both scenic and residential areas; however, access to housing in residential areas is often associated with elevated risk perceptions. These authors highlight that perceptions of trust and risk do not lay on a single continuum nor are they as symmetrical as they often appear; but in fact, they depend heavily on context. Gu et al. explain that because scenic areas are rather commercial, their residents are more accustomed to the inflow and outflow of tourists and also more accepting of temporary occupants. In contrast, many in residential neighborhoods experience

short-term occupants, tourists, and the associated high turnover rates as threatening their neighborly relations, daily routines and harmony—e.g., late-night check-in and out; increased noise and traffic; and obstreperous behavior (loud music, trash, smoke, drug use, etc.). Beyond the trust-risk asymmetry, these findings also draw attention to *indirect stakeholders*. These are neighbors of those who participate in the sharing economy who do not partake themselves, yet nevertheless play a critical role in how well a sharing activity is received.

Relational models theory explains that individuals use four main types of interaction to generate, interpret, coordinate, contest, and evaluate social interactions: *communal sharing*; *authority ranking*; *equality matching*; and *market pricing* (cf. Fiske, 1991; 1992). Building on this theory and recognizing the sizeable risk of sharing private assets with total strangers, Stofberg, Bridoux, Ciulli, Pisani, Kolk and Vock evince that when platforms encourage prosocial peer-to-peer relationships among participants, they can mitigate risk and even scale up greater stakeholder engagement. Using a sample of 975 participants from four sharing platforms, the authors show that three of the four relational models—(i) *communal sharing* (i.e., community membership guides engagement); (ii) *equality matching* (i.e., balanced reciprocity guides engagement); and (iii) *market pricing* (i.e., a cost-benefit analysis to guide engagement)—are related to platform performance. Stofberg et al. reveal that peer-to-peer relations based on *communal sharing* and *equality matching* are positively related to a platform performance, whereas peer-to-peer relations based on *market pricing* seems to suppress engagement and thus platform performance. Here, we highlight two of several contributions provided by Stofberg and colleagues: First, their attention to different types of peer-to-peer relations complements the study by Gu et al. by highlighting that platforms may build trust by facilitating *communal sharing* and *equality matching* relations and can mitigate risk by curbing *market pricing*

relations. Second, the Stofberg paper aligns prosocial action in the sharing economy with organizational citizenship behavior (OCB), conceptualizing it as *sharing citizenship behavior* (SCB).

In the sharing economy, how do capacity providers react to platforms' inauguration of novel protocols (e.g., Uber's introduction of driver rating systems) and do their reactions vary when regulations are applied directly or indirectly? To answer this question, Karanović, Berends, and Engel analyzed 36,531 online posts made by Uber drivers on the UberPeople forum across twelve US cities and one European city (London, UK). Despite drivers' suppressed bargaining power over their platform, these labor-asset providers react to regulations by exhibiting a range of reactions. These run the gamut from passive resistance to active opposition and all the way to committed engagement and the introduction of complementing solutions. Moreover, when regulations are applied directly, enforcing rules onto asset providers and platforms, providers tend to engage with greater enthusiasm and offer novel solutions. For example, Uber drivers share information about best times to drive, or send alerts about traffic jams or obstacles in their city. However, when platforms are instructed to regulate their asset or capacity providers, giving them more leeway in enforcing the rules, said providers tend to object and resist. For example, drivers reacted to some of Uber's algorithms to assign rides with efforts to 'game the system' or accept tips in spite of Uber's objections. This line of research brings deeper appreciation to the delicate power balance among providers, platforms, and regulations—and how their codependency impacts price and service quality, thus influencing end-users and consumers. To echo Bai and Velamuri (also in this special issue), consumers are more likely to spend a night at an Airbnb apartment and take an Uber ride when asset providers, platforms, and regulators blend their governance and collaborate effectively.

Stigma is associative so when an occupation is stigmatized, so will be those who enter said occupation (Kulik, Bainbridge, & Cregan, 2008). Phung, Buchanan, Toubiana, Ruebottom, and Turchick-Hakak focus on the exceptions, examining the conditions under which stigma *does not* transfer to new occupational members. Using an inductive methodology to study Uber's entrance into the stigmatized taxi driving occupation ("morally and physically tainted" and "issues related to race and class"), they show that a stigma can actually be deflected. Why did this happen? Phung and his colleagues explain that Uber's strong emphasis on technology created a categorical distinction—especially in the eyes of the media, consumers, and prospective drivers—separating its drivers from taxi drivers. Moreover, just as technology prominence created a distinct identity that deflected stigma, it also worked to further entrench the stigma that afflicted taxi drivers, eventually shaping an occupation that is stratified along a stigma faultline. This research shows that significant business model changes and/or the creation of a multisided platform help firms and individuals to repel stigma, though the nature of their work is essentially identical to that of the stigmatized occupation.

Why do some individuals, and not others, become active users on new task-based sharing platforms, and does such engagement vary by gender? Maslach, Devine, King, and Holmes conducted two field experiments addressing this question. The first one utilized A-B testing (randomized, controlled trials) to compare digital ads on a real startup and found that financial benefits entice users to learn more about new task-based platforms. The authors also learned that the preference for financial benefits is larger for males than females. In the second study, Maslach and his colleagues focused on professional editors; they used a preregistered experiment and found that a sense of control increased individuals' willingness to become active users. In fact, a sense of control strengthened the importance of financial benefits, especially for males,

and a post hoc analysis revealed that the financial benefits, a sense of control, and being a male also elevated task performance. This line of research is important on two main grounds: First, in theory, there is little reason why gender would influence the decision to become an active user on sharing economy platforms, so the tendency of men to engage more than women is quite intriguing. Second, not only are their field experiment and the ability to observe behaviors as they unfold in the context of a real startup inspiring, they also mitigate validity issues that are common with secondary data and typical experiments with college students.

EXPANSIONS AND CONCLUDING COMMENTS

Our special issue focuses on *sharing* contexts entailing three parties—users/consumers, asset providers, and platforms—but of course sharing contexts are influenced by constellations of other factors and adjacent players. We also know very little about the differences between sharing platforms that are open to all and those that are, paradoxically, quite exclusive (e.g., when access is by invitation only, based on certain skills or having a particular profile, etc.). The point being that platforms are rarely “neutral” intermediaries, but in fact incessantly expanding. We envision, therefore, research opportunities that unpack additional elements, including user privacy; the balance of power among platforms, asset providers, and users; and—as noted—the level of a platform’s openness, and even scope. For instance, Airbnb and Xiaozhu focus on housing, but in theory they could expand their matching to a greater spectrum of tangible assets, including airplanes and boats, as well as activities (e.g., chainsaw carving, survival workshops).

As referenced, sharing platforms are particularly interesting when they reach into the *long tail* (i.e., when they develop and turn nonproviders and nonconsumers into engaged participants; Markman & Waldron, 2014) because such effort expands and invigorates local economies. For example, housing platforms such as Airbnb are facilitating the founding and

entry of microenterprises that stimulate demand for ancillary services to asset providers and users, thus expanding and solidifying the Airbnb ecosystem (via personalized check-in, laundry, concierge services, etc.). We hope to see new research on how sharing platforms increase engagement among complementors, create longer tails, and distribute value more equitably.

The papers in this special issue focus primarily on firm- and institution-level issues associated with value creation and capture, but the sharing economy introduces tension and challenges in other fields such as human resource management and employment relations (Sundararajan, 2017). A growing number of individuals are using several platforms simultaneously, hoping to earn a living by starting microenterprises while working part-time as sole proprietors for firms that, in turn, must learn how to integrate on-demand talent and temporary workers with their permanent workforce. In theory, the use of platforms to access the best talent is quite alluring, especially given the flexibility to synchronize hiring and firing gigs based on demand fluctuation. But are temp workers as loyal as full-time employees, and will this practice halt the commitment of full-time employees? Also, the practice of quickly embedding temporary workers in a regular workforce and then suddenly extracting them from it might disharmonize employment relations and demoralize a cohesive labor force. These changes represent opportunities to explore whether and how managerial tasks differ across various types of platforms. How would employment relations and managerial tasks vary depending whether a platform relies on physical assets (e.g., Airbnb), physical and human labor (e.g., Uber), or just labor (e.g., MTurk or InnoCentive)?

Because the sharing economy is challenging traditional HR functions—e.g., staffing, performance appraisal, career development, reward and recognition, talent retention, succession, and governance—sharing platforms pose operational challenges. Employee commitment and

operational continuity allow firms to develop critical capabilities, innovate, connect with their customers, and reduce costs. How, then, will the sharing economy and its loose connection between employees and employers impact a firm's esprit de corps, pay systems, labor law, and even the development of distinct capabilities (Kost, Fieseler, & Wong, 2020)? Human cloud platforms vet the expertise of its talent pool, but which work processes are amenable to chunking and automation? Similarly, under what conditions will the prompt access to and deployment of worldwide talent avert the collateral risks to product quality and permanent employees (e.g., becoming demotivated or uncommitted due to loss of pay, and job insecurity)?

Post-pandemic work policies favor remote working. Regardless, some firms have dismantled their HR departments while others have no physical location—i.e., all their employees across all functions operate remotely.⁶ The point being that increased automation of many work processes and functions and the proliferation of sharing platforms for human capital mean that traditional, direct supervision, and employee-employer dynamics are being altered. These changes open research opportunities in the areas of employment relations, contingency workforce, work design, governance, and management more broadly defined.

In closing, this special issue demarcates and defines the sharing economy as entailing multisided platforms that facilitate user access to—rather than ownership of—assets that are rivalrous in their use, and that are not owned by said platforms. Featuring seven articles on this topic, the special issue also shows how the sharing economy creates and distributes value among users, asset providers, and platforms. While the sharing economy obeys traditional management

⁶ For example, GitLab provides services for software programmers. Despite having more than 1,200 employees in more than 60 countries, the firm has no physical headquarters; its all-remote workforce includes engineering, sales, marketing, personnel management, and executive roles.

theory, it certainly reduces commercial friction by facilitating interaction, easing resource sharing and orchestration, and enhancing ecosystem-wide value.

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Figure 1: A Schematic Representation of the Conditions that Define the Sharing Economy

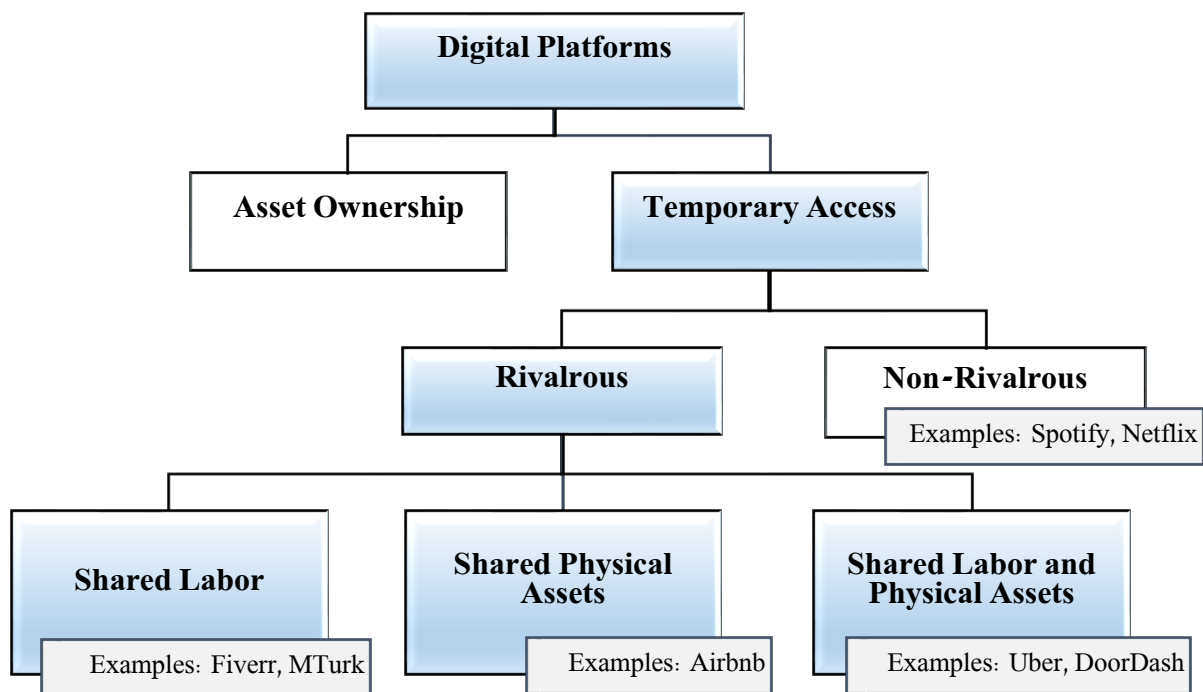


Table 1: Sharing vs. Non-Sharing Platforms by Asset Providers and Users and Asset Types

Platforms	Industry Context	Asset Providers & Users				Nature of Primary Assets ⁷			Platform Type	
		I2I (P2P)	I2B	B2I (B2C)	B2B	Rivalry in Use	Physical	Human	Sharing	Gig
Sharing Platform Examples										
Airbnb (US)	Lodging	✓	✓	✓	✓	✓	✓		✓	
OneFineStay (UK)		✓	✓			✓	✓		✓	
Xiaozhu (China)		✓	✓			✓	✓		✓	
CouchSurfing (US)		✓	✓			✓	✓		✓	
Booking.com, Expedia, Hotels.com, Priceline, Trivago	Travel			✓	✓	✓	✓		✓	
Blablacar (France); Didi (China), or Uber (US) ⁸	Transportation	✓	✓			✓	✓	✓	✓	✓
TaskRabbit (US) Takl (US)	Physical Labor	✓	✓			✓	✓	✓	✓	✓
AmazonMTurk (US), Fiverr (US) ⁹	Business Services	✓	✓	✓	✓	✓		✓	✓	✓
InnoCentive (US)				✓		✓	✓		✓	✓
LinkedIn Learning	Education	✓	✓	✓	✓	✓		✓	✓	✓
DoorDash, Grubhub, Postmates, Uber Eats	Delivery					✓	✓	✓	✓	✓
Non-Sharing Platform Examples										
Hilton Online*	Lodging			✓	✓	✓	✓			
Zipcar, Waymo*	Transportation			✓	✓	✓	✓			
Alibaba, Amazon Marketplace, Etsy, Craig’s List, eBay	Retail	✓	✓	✓	✓		✓	✓		
Facebook, Instagram, Twitter, etc.	Chat, Communication, Social Media	✓	✓	✓	✓					
Google Search, Wikipedia	Information	✓	✓	✓	✓					
Kickstarter, Indiegogo	Crowdfunding	✓	✓	✓	✓					
Netflix, Spotify, Disney+	Entertainment			✓	✓					

✓ = The example exhibits this characteristic and would be categorized by our definition as this type of platform.

* = Hilton, Zipcar, and Waymo provide temporary access to rivalrous assets, but they are outside the sharing economy because they *own* their own assets.

⁷ Assets can take many forms, so as noted, data or digital-based assets are often non-rivalrous and thus outside the sharing economy. However, when the owners of patent, trademark, software, or data afford temporary, rivalrous access to said assets, they could be part of the sharing economy. This is largely why our study emphasizes the rivalrous condition over asset types.

⁸ See also Fasten, Lyft, Turo, Via, etc.

⁹ Online marketplace; home services industry. Competitors include Handy, NeedTo.com, Porch, Thumbtack, Takl, Shiftgig, etc.