

## Contrived Surplus and Negative Externalities in the Sharing Economy

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### **Abstract:**

The modern-day sharing economy delivers a multitude of benefits to users and providers worldwide. While there is much discussion about its benefits (e.g., convenience, access, and income), due to its largely unregulated/ under-regulated status, the increasing commercialization of the sharing economy spawns negative effects which must be mitigated to foster long-term sustainability. Based on externalities and concerned markets, this conceptual paper examines the implications of contrived surplus for stakeholders in ridesharing, home sharing, and bike sharing and presents managerial implications for developing these sectors in a reasonable and sustainable manner.

**Keywords:** sharing economy | consumers | economy sustainability | negative outcomes

### **Article:**

The sharing economy has evolved beyond the simplicity of peer to peer sharing and is now predicated upon idle assets and resources employed to create large-scale economic profits and progress. Within this paradigm, the sharing economy insists on unbounded growth. To capitalize on the inherent profitability, companies like Airbnb and Uber among others, have engaged within this access-based consumption environment by creating deliberate-idled assets and resources. This practice reflects what, Belk (2014, p. 11) calls pseudo-sharing, referring to “a business relationship masquerading as communal sharing ... But it is not sharing, despite promoters often employing a sharing vocabulary.” Purposefully creating an inventory of surplus assets, classifying them as idle, and then employing them within the sharing economy toward achieving higher profits is essentially contrived idle surplus. For example, a company which acquires rental properties in a community, decreases the inventory of rental housing thereby reducing community members’ access to affordable housing. These properties, which are categorized by the company as idle surplus housing, are then made available for use by those engaged in the collaborative sharing market on a short-term occupancy basis at a relatively

higher price. Such practices negatively impact the community in terms of increased homelessness, as the rental options in the local housing market become increasingly unavailable, inaccessible and priced beyond reachable market price ranges.

This strategy of fabricating idled surplus assets is a growing practice across multiple domains of the sharing economy. The expansion of contrived surplus resources does not necessarily result in consumption expansion within the market. Rather, it erodes the quality of the existing resources by overwhelming the endowment of free access within the access-based collaborative sharing environment. In other words, contrived idleness produces negative externalities as it affords inefficiencies that has significant impact on consumers, society, the environment and other stakeholders.

Negative externalities “are secondary effects that produce inefficiencies in resource allocation. Some come from consumption (waste), others from production (carbon emissions). They occur frequently when resource property rights are uncertain or non-existent, so negative externalities producers are not responsible for the external costs generated” (Lazăr, 2018, p. 113). These inefficiencies give rise to market concerns about “those things and situations that for better or worse are related to us, can affect us and worry us” (Geiger, Harrison, Kjellberg, & Mallard, 2014, p. 2). The interconnected networks of the sharing economy can produce overflows from production and consumption, which can be either absorbed by the demand in the market, renegotiated by the involved parties or remain as a negative after-effect – a blight on society. These outcomes can create transactional discords, especially when the actors and contingency plans for negative outcomes are less known, making the sharing economy a concerned market.

A concerned market is “a market in which something that has previously been regarded as a mere contingency is recast as part of a situation of a defined nature – that is, a situation where actors become related” (Geiger et al., 2014, p. 5). In other words, outcomes of the sharing economy, like the creation of contrived surplus, has further unintended effects on parties not involved in the transactional exchange (e.g., neighborhood residents). These contingent effects can cause the uninvolved parties to become related or entangled in the outcomes of exchanges in the sharing economy. While some may conceive these effects to be the dark side of the sharing economy, we posit that these less than desirable outcomes are economic and social side effects, the impact of which must be understood in order to identify proper redress to these negative effects.

The purpose of this paper is to explore the unintended effects of contrived surplus in the sharing economy, specifically in terms of identifying various negative externalities and other impacts. We argue that contrived idleness, which is the fabrication of usable assets, held and classified as ineffectual for the purpose of engaging them within the sharing economy to achieve higher profits, creates negative externalities. We draw on economic theories of externalities and concerned markets to understand these outcomes of the sharing economy.

Understanding externalities resulting from the sharing economy will provide insight into governmental roles and responsibilities in the allocation of resources to ensure positive actions, rather than neglecting the outcomes which can lead to exacerbated negative environmental and

societal impacts. Governments have the responsibility of equitably allocating resources for goods and services for which the private sector fails to assign sufficient resources (e.g., disposal services, recycling) (Cornes & Sandler, 1986). In addressing negative externalities in the sharing economy, governmental actions taken should not diminish the quality or availability of the product or service for consumers. Rather, it should decrease the negative effects brought about by the contrived surplus of idled resources. Further, the capacity for redistribution of excess supply may be a strategic approach that may contribute toward the reduction of social costs.

In what follows, we provide a theoretical overview of concerned markets and externalities, with an emphasis on negative externalities as it relates to the sharing economy. This is followed by a discussion of the sharing economy, drawing attention to marketplace practices of ride, home, and bike sharing, heightening market concerns and triggering negative externalities. We present a model of intersecting impact of negative externalities and conclude with a discussion of these impacts, and directions for future research.

### **Concerned markets**

The recent innovations and developments in the sharing economy has had some unexpected consequences for different marketplace actors (e.g., providers, users, common citizens, communities, local and national governments). These consequences include unexpected pollution, waste, and resource depletion, giving rise to market concerns. Concerned markets are markets where the economic and the social are heavily interwoven (Geiger et al., 2014). More specifically, concerned markets deal with political and public concern that are of interest to citizens or the public authorities representing them. Markets in the sharing economy, which are intended to be peer to peer (P2P), continue to evolve, excluding the P2P foundation and are instead being established through various organizational expertise and processes, which implies input and integration of numerous norms and values (Araujo, Kjellberg, & Spencer, 2008). Perren and Kozinets (2018, p. 21) question the use of the term “peer” as a referent to the types of markets in the sharing economy, primarily because the market and respective transactions tend to include “professional sellers and buyers.” Accordingly, Geiger et al. (2014, p. 2) state: “In the indeterminacy of matters of concern, the political, the social, and the economic fuse.” In concerned markets, actors become related and multiple methods of reaching agreement or encompassing disagreement exist compared to the more traditional conflict resolution in markets, namely competition. There are three facets of concerned markets: “(i) Concerning as *relating*; organizing the direct transactions between market actors; (ii) Concerning as *affecting*; orienting market transaction so as to handle externalities for other actors, which do not take part directly in the market transactions, but nonetheless experience positive or negative consequences of these transactions; and (iii) Concerning as *resolving controversies*; making markets governable, that is to say, articulating economic and political regulations of markets” (Geiger et al., 2014, p. 9). In this study, we primarily focus on “concerning as affecting” in our conceptualizations of contrived idling of resources and market concerns as it pertains to various stakeholders “any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman, 1984, p. 46).

### **Understanding externalities**

Externality is based on theories of environmental economics in which “economic activities are understood to produce environmental side effects often ignored by the generator” (Cornes & Sandler, 1986, p. 8). An externality exists when the actions of one individual or company affect the utility of another individual, company or community. Laffont (2008, p. 192) argues that “externalities may be positive or negative. Examples include pollution activities (e.g., air pollution, water pollution, noise pollution ...), malevolence and benevolence, positive interaction of production activities.”

Positive externalities are those that produce benefits for others while negative externalities are those that place others in worse conditions (Cowen, 1999). For example, a positive externality would be the advantage of accessing lower-priced and more convenient ride-hailing services in New York City (NYC) through various companies such as Uber and Lyft, compared to consumers having to contend with the limited coverage (many yellow cabs refuse to leave Manhattan to go to other boroughs) and higher costs of the traditional dispatch taxi system. Additionally, sharing economy-based ride-hailing has resulted in other positive social impacts such as reduced traffic congestion thereby decreasing CO2 emissions (Chen & Kockelman, 2016) and increased access to transportation by vulnerable populations (Dillahunt & Malone, 2015; Ertz, Durif, & Arcand, 2016). Co-lodging and home-sharing platforms such as Couchsurfing, Airbnb, Onefinestay, and VRBO (Vacation Rentals By Owner) offer positive environmental and social benefits in the tourism sector (Ertz et al., 2016).

Negative externalities are side effects generated from the overproduction of supply beyond the capabilities of societal demands (Cornes & Sandler, 1986). Although Uber offers lower prices and more widespread geographical access in NYC, for example, the oversupply of vehicles adding to existing traffic congestion, and the fact that the sharing platform is underregulated has resulted in diseconomies across the taxi industry. Transaction costs, which is a dimension of externalities, are “any obstacles to market exchanges that interfere with or discourage the process of transacting ... In the presence of transactions costs, externalities are often considered a source of market failure” (Cowen, 1999, p. 2–3). In a situation where transaction costs exist, markets overproduce goods and services that lead to negative externalities while simultaneously under-producing those that result in positive externalities (Cowen, 1999).

Consumption within the sharing economy is characterized by making private goods available for public use. From an environmental economics standpoint, the sharing of idle assets and resources is considered *nonrivalrous consumption*, which refers to “cases wherein individual’s ability to consume a good or service is not diminished by allowing additional individuals to consume it” (Cowen, 1999, p. 4). For example, homeowners sharing their space with temporary renters through Airbnb listings, and bicycle sharing platforms that make bicycles available for anyone’s use, are aligned with nonrivalrous consumption. In other words, one individual’s consumption or use of the product or service does not prevent another individual from consuming the same good or service.

## **OVERVIEW OF THE SHARING ECONOMY**

The sharing economy is “an economic system based on sharing underused assets or services, for free or for a fee, directly from individuals” (Botsman, 2015). Technology facilitates the

availability of assets and collaborative transactional exchanges, through different forms across multiple types of platforms in the marketplace. Within this context, collaborative consumption (CC) entails “resource circulation systems that enable consumers to both obtain and provide temporarily or permanently, valuable goods and services through direct interaction with other consumers or through a mediator, mainly through community-based online platforms or applications” (Ertz et al., 2016, p. 15). The ease with which sharing or collaborating can occur, has incentivized more and more people to offer their goods through online platforms, while simultaneously increasing efficiencies in finding what they are looking for when they need it (Habibi, Kim, & Laroche, 2016). Although multiple categorizations of the sharing economy entities exist in the literature, Schor’s (2014), conceptualization offers a broader understanding of the sharing economy. Specifically, Schor (2014) posits four categories of sharing economy entities which are concerned with; 1) recirculation of goods (i.e., Craigslist, eBay, local initiatives), 2) increased utilization of durable assets (i.e., Lyft, GetAround, Zipcar, Relay Rides, Uber, CouchSurfing, Airbnb), 3) exchange of services (i.e., Task Rabbit, Time banks), and 4) sharing of productive assets, and building of social connections (i.e. Mama Bake, Soup Sharing, EatWithMe). In the current research, we focus on commercial endeavors in the second category that are leveraging collaborative sharing platforms and creating the most evident negative externalities.

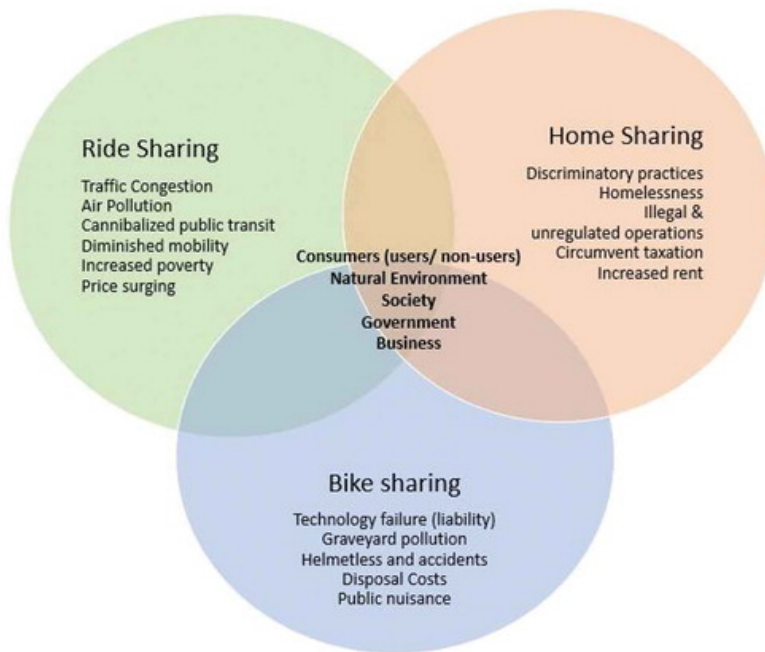
### **Marketplace practices creating negative externalities**

In the global marketplace, some engaged practices in the sharing economy have resulted in unexpected transaction costs like traffic and air congestion, undisposed waste, decline in living wages, and depletion of natural resources, impacting many stakeholders including communities, societies, and governments. Through commercialization of the sharing economy’s P2P ethos, profit-driven businesses such as Uber, Lyft, Didi, Ola (ridesharing); Airbnb, VRBO, and HomeAway (home sharing); Ofo and Mobike (bike sharing), now dominate their respective collaborative sharing space. Unlike traditional organizations where the waste or remnants that results from production and consumption are known, allowing for contingency plans to manage and resolve aftereffects like congestion and pollution, commercial companies in the sharing economy have no such exigency. As a result, the transaction costs in conducting business have the potential to become negative externalities, which are levied on society and governments. In the following section, we discuss ride, home, and bike sharing, to explicate the practice of contrived surplus of idled assets, which produces negative externalities in the process of transforming consumers’ marketplace experiences (see Figure 1).

### **Ridesharing**

Ridesharing, popularized by companies such as Uber, Lyft, Didi, Ola, and BlaBlaCar, is now well entrenched in the global sharing economy. These companies, which connect drivers and their vehicles with users who require transportation through apps, have experienced remarkable growth in a relatively brief period as they have disrupted the ridesharing industry to provide consumers with a more cost-effective and convenient service relative to that offered by taxi companies. While debates exist as to whether the success of ridesharing companies, like Uber, stems from lack of regulatory oversight, their advantage stems from the creation of an efficient market for ridesharing services in terms of reducing uncertainty. Specific drivers are assigned to

specific users; drivers cannot poach others' assignments or abandon their assigned customers; and the users may monitor their assigned drivers' progress prior to and during the ride (Hiltzik, 2015). However, though users garner value, growth of the ridesharing sector has been accompanied by controversy with respect to charges of eroding public transit profitability and ridership, unfair competition and contribution to the increasing congestion levels in large cities.



**Figure 1.** Negative Externalities in the Sharing Economy

### Impact on Users

In terms of externalities or negative effects on users, the primary elements that surface are concerns regarding quality and/ or safety, and lack of pricing consistency with respect to car sharing. First, as noted earlier, limited regulations are in place to address the unique business models and challenges presented by sharing economy practices. While regulations are being formulated in different parts of the world, concerns exist about collaborative sharing platforms not adequately protecting consumers (Rauch & Schleicher, 2015) nor offering standardized pricing or service levels (Cusumano, 2015). For example, there is contention that ridesharing services have less stringent guidelines for vetting their drivers. Uber, being the most prominent player in the ridesharing arena, appears to receive more attention than other companies. For instance, CNN reported that, since 2014, 103 Uber drivers have been accused of either sexually assaulting or abusing female passengers (O'Brien, Black, Devine, & Griffin, 2018). Additionally, besides dozens of pending cases, at a minimum 31 Uber drivers have been convicted for a variety of crimes including forcible touching, false imprisonment, and rape (O'Brien et al., 2018). As a result, Uber has taken a number of measures to address these concerns including requiring annual driver background checks and the development of a "safety center" within the Uber app through which riders may call 911 as well as designate contacts with whom they share trip details during the ride (O'Brien et al., 2018). Like Uber, Lyft which provides 1 million rides each day to North American consumers, has had at least 18 drivers

accused of either sexual assault or abuse with four being convicted (O'Brien et al., 2018). The 'Who is Driving You?' national public safety campaign spearheaded by the Taxicab, Limousine & Paratransit Association (TPLA), an association representing taxi and limo companies, notes: "Neither Uber nor Lyft uses fingerprints or law enforcement to background-check their drivers. And Uber doesn't even bother to meet with drivers in person before allowing them to ferry passengers. The result is a series of incidents involving 'ridesharing' passengers being harmed and criminal offenders behind the wheel" (Whoisdrivingyou.org, 2018). For its part, despite criticism about loopholes that have permitted those with criminal histories to drive, Uber notes that its background checks, conducted through a company called HireEase, are consistent across the U.S. and is "often more rigorous than what is required to become a taxi driver ... Ours cover courthouse records, county, state, and federal records ... We cover the gamut in terms of what we look at" (LaFrance & Eveleth, 2015). Thus, while it is yet to be determined whether it is riskier for users to opt for ridesharing companies as opposed to taxis, at a minimum, the difference in the driver vetting process contributes to the perception that companies such as Uber could better prioritize user safety.

Besides safety, ridesharing companies' use of surge pricing (or dynamic pricing) also poses for concern for users. This entails adjusting prices based on shifts in supply or demand. Simply put, users pay more during high demand periods, for example, on New Year's Eve, during inclement weather, or even during rush hour (tplusride.com, 2018). Essentially, during high demand periods, the companies incentivize more drivers to drive by increasing rates (Posadzki, 2015). While Lyft allows users who pre-book to "lock in" a rate, Uber base its pricing on conditions at the time of the ride (Vomiero, 2017). While some experts such as Ian Lee, a faculty member at Carleton University, sees surge pricing as "simply good old-fashioned supply and demand" that is utilized, albeit in a less transparent manner, in multiple other industries, it is a cause for concern as the lack of consistency catches consumers by surprise (Posadzki, 2015). For example, a Toronto user was assessed \$14,400 for a 20-min ride, and an Illinois-based rider was charged \$925 for what is typically a \$120 ride (Economy, 2017). Additionally, though Uber denies this charge, as high demand periods includes times of natural disasters, significant inclement weather, or security threats, some question whether ridesharing companies are engaging in price gouging by capitalizing on users' vulnerability (Lowrey, 2014). In response, despite Uber's claims of "outdated taxi-style requirements" being imposed on ridesharing companies, on June 2018, Honolulu, Hawaii, passed a price-capping bill, limiting what these companies are able to charge users during peak periods (USNews.com, 2018).

### Impact on Providers (Drivers)

The sharing economy aims to create value by connecting those with idle resources to peers in the market possessing the desired resources. Now, instead of utilizing individuals' idle resources, in their quest to have more vehicles on the road, Uber and Lyft create idle resources by offering aspiring rideshare drivers without vehicles the means to lease, rent, and purchase vehicles through financing (Ting, 2016). For example, in 2013, Uber positioned itself as the middleman between General Motors, Toyota, and multiple financing companies and its drivers to help the latter purchase cars through reduced financing rates and "get them on the road faster" (Lashinsky, 2014). By strategically connecting the various parties, Uber met its goal of generating additional revenue by making more vehicles available for users as those without cars,

those with poor or no credit, and those with older cars that do not meet Uber's requirements, were able to access acceptable vehicles and become Uber drivers (Lashinsky, 2014). These arrangements also benefitted car dealers and financing companies as the Uber CFO, Brent Callinicos, noted; "We're helping finance the instrument of revenue generation. In that sense, we're generating revenue from this already" (Lashinsky, 2014). However, enticed by promises of monthly incomes of over \$5,000, which have never manifested, many rideshare drivers now feel trapped, are living below the poverty level, with low incomes such as to require public assistance to survive (Fitzsimmons & Scheiber, 2018).

While the rideshare drivers use their own vehicles, pay for their own gas, maintenance, and insurance costs, it has been reported that Uber at times, has engaged in "manipulating fares or the supply of new drivers for its own benefit and arguably to the disadvantage of incumbent drivers" (Hiltzik, 2015). Moreover, there is debate as to whether the drivers are employees, independent contractors, or independent workers (Eisenbrey & Mishel, 2016), leading to the question of whether ridesharing companies owe more to those that execute their core work than is currently provided.

While some argue that Uber drivers are employees because "they don't set their own fares or freely choose their own customers, their performance is measured and controlled by Uber, their driving is essential to Uber's business" (Eisenbrey & Mishel, 2016), Uber regards its drivers as independent contractors, not employees. Critics contend that this is exploitative because the labor regulations that protect employees either do not apply or minimally do so to contractors (Das, 2017). While some contend that businesses have been discarding their employer identity and shifting to a contractor model for decades, thereby slowly eroding "pre-existing wage rates, annual leave, sick leave and other employee entitlements," companies such as Uber are essentially doing the same (Bornstein, 2015) on a more visible basis. Thus, while sharing economy platforms provide users with attractively priced services by avoiding the regulatory burdens required of industry incumbents (e.g., taxi companies) and by paying providers less, they are nonetheless "creating a virtual 'human cloud' of 'digital serfs' that leads to a global race to the bottom for wages and benefits" such that it has been referred to as the "share the scraps" economy (Das, 2017). Independent contractors often forego collective bargaining rights and "service agreements imposed on these workers ... are very asymmetric, and the employer controls the platform ... All the risks and most of the costs are borne by the workers. There's not a whole lot of sharing going on" (Blackburn, 2016). Thus, ridesharing practices are of concern because of their potential to erode employee protections by bestowing the risks of exploitation and economic uncertainty on providers (Das, 2017). Additionally, sharing economy providers are vulnerable to physical, legal, and platform-based risks (Schor & Attwood-Charles, 2017). With respect to ridesharing, the platform risks entail Uber, for example, taking disciplinary action against drivers with low acceptance rates (a ride request that is not answered within 15 s is recorded as a refusal) (Eisenbrey & Mishel, 2016) or requiring drivers to Uberpool (i.e., car pool) customers at a lower rate thereby reducing their earnings (Schor & Attwood-Charles, 2017). NYC-based drivers and on-demand workers, for example, expose themselves to "dangerous, illegal or unsafe tasks or situations" (i.e., physical risks) through their sharing economy work (Ravenelle, 2016; Schor & Attwood-Charles, 2017).

Impact on Incumbents (Taxi Industry)



Companies with sharing technology platforms possess an advantage over traditional companies and tend to compete unfairly due to sharing-based businesses being underregulated. As previously stated, the ridesharing industry lacks stringent governmental and regulatory oversight, unlike the strong controls regulating taxi companies. These incumbents have a higher bar to meet relative to sharing-based entrants (e.g., 35–40% of operating costs for taxi companies stem from meeting regulatory requirements) (Karsten, 2017).

While taxi drivers in many major U.S. cities must purchase a taxi medallion, also known as a Certificate of Public Necessity and Convenience, in order to operate, drivers of ride-share services have no such licensing requirement or guiding regulatory framework to guarantee standards for operating in the community. In NYC for instance, the number of medallions is fixed. In 2014, the price peaked at \$1 million per medallion. However, due to competition from ridesharing companies, the price has fallen steadily, and seven medallions were sold for under \$200,000 in January 2018 (Katz, 2018). The decrease in price aside, taxis require medallions to operate legally whereas drivers for ridesharing companies have no such requirement. As noted, many cities impose a limit on the number of taxis in operation. NYC for instance, which regulated its taxi industry due to a surplus of taxicabs in the 1930s (Van Gelder, 1996), currently permits over 13,600 to operate but does not limit ridesharing vehicles in such a manner (Katz, 2018). As a result, though many Uber drivers also work with other ridesharing services including Lyft (Hu, 2017), Uber, which initiated operations in NYC in 2011 with 105 vehicles is now affiliated with 60,000 of the 63,000 black cars (e.g., limo, executive cars) in operation (Katz, 2018). Additionally, the company is adding 24,000 autonomous driving Volvo SUVs to its existing fleet of vehicles over the next few years (Gibbs, 2017). Furthermore, ridesharing companies have been accused of flooding certain cities with cars, thus creating a surplus resulting in excess capacity of idle vehicles (Schaller, 2017). One study found that NYC rideshare drivers spend up to 30% of their time searching for users/riders thereby increasing congestion (Schaller, 2017). While ridesharing is becoming a more accepted alternative to taxis, more stringent standards exist for vetting taxi drivers as opposed to drivers for rideshare companies (Dardick, 2017). Such regulatory discrepancies, which allow ridesharing companies to compete more efficiently, has resulted in significant pressure on taxi companies and their drivers. For example, in Chicago, Cab Drivers United/ AFSCME Local 2500 union noted in reference to the increased competition by ridesharing companies:

Taxi driver jobs have been decimated and thousands of medallions are facing foreclosure, yet the city nibbles around the edges, allowing billion-dollar ride-hailing corporations to keep clogging our streets while making their own rules. (Dardick, 2017)

As Nino Hervias, the spokesperson for the Taxi Medallion Owner Driver Association states, “We are not against competition, we are not against technology, but we want to compete fair and square” (Hu, 2017). As such, tensions have erupted between taxi cab drivers and ridesharing drivers in numerous locales around the world (Burke, 2017; Zavis, Chang, & Wilshire, 2015). Additionally, four long-time taxi drivers in NYC committed suicide due to financial difficulties stemming from increased competition, which led to medallions decreasing in value thereby jeopardizing their retirement funding (Katz, 2018). Bhairavi Desai, the executive director of the

New York Taxi Workers Alliance, who describes the predicament faced by the taxi industry as “a living nightmare,” noted:

The business model of Uber and Lyft ... is destroying every driver across the sector. They are destroying the full-time jobs of professional yellow [cab], green [cab], livery, and black car drivers, and replacing them with poverty-paid gigs where Uber and Lyft drivers themselves cannot survive. (Katz, 2018)

### Impact on Society

Although ridesharing has provided an alternative means of transportation and greater mobility for some consumers, most ridesharing trips are undertaken at the expense of public transit (Schaller, 2018) especially as ridesharing is 50% less expensive than public transit on certain routes (Agrawal, 2016). A Metropolitan Area Planning Council research report revealed that the widespread popularity of ridesharing services, including among low-income households, is increasing regional road congestion, and decreasing use of transit services (Gehrke, Felix, & Reardon, 2018). In terms of “transit substitution,” in the absence of ridesharing, 12% of survey participants would have either walked or cycled, and 42% would have used public transit (Gehrke et al., 2018). Large city public services like Metro Boston Transit Authority with over half-million daily riders (Mass.gov, 2015), lose 35 cents for every average ridesharing trip taken by a potential transit passenger (Gehrke et al., 2018), a \$63 million annual potential loss in revenues for the city. The impact is even more dire, when consideration is given for the community of riders. Public transit users are “poorer and more likely to be minorities,” (Maciag, 2014) and many are low income – living/minimum wage earners, and without the resources to become frequent users of paid ridesharing. Consequently, as ridesharing undermines public transit, these consumers along with those living at the margins of society are most likely to experience greater disparities as their mobility becomes diminished.

On a broader scale, besides the aforementioned factors, an initial appeal of ridesharing was its potential for delivering environmental benefits. Daniela Rus an MIT researcher who reports that carpooling options such as those provided by Uber and Lyft have the potential to reduce the number of vehicles on the road by a third without affecting travel time, notes that researchers must examine ways to develop efficient and reliable ridesharing services due to their “enormous potential for positive societal impact with respect to congestion, pollution, and energy consumption” (Conner-Simons, 2017). To this end, initiatives like Zipcar have been praised for removing between 5 and 13 vehicles off the road per car (Transport and Environment, 2017) thereby potentially reducing pollution. However, some studies indicate that the expected benefits of ridesharing are not materializing to the extent expected. A study examining ridesharing services in nine densely populated urban centers (e.g., NYC, Los Angeles, Washington, D.C.) reported that combined, these companies transported 2.61 billion users in 2017, a 37% increase from 2016 (Schaller, 2018). Growth of this sector is partly driven by consumers “who would otherwise have taken transit, walked, biked or avoided the trip,” increasingly engaging in ridesharing. This has translated into the addition of 5.7 billion vehicle miles over a six-year period (Siddiqui, 2018). Essentially, “shared rides add to traffic because most users switch from non-auto modes ... In addition, there is added mileage between trips as drivers wait for the next dispatch and then drive to a pickup location. Finally, even in a shared ride, some of the trip

involves just one passenger (e.g., between the first and second pickup)” (Schaller, 2018; Siddiqui, 2018). All of which makes ridesharing inefficient in one sense as well as worsening traffic and presumably vehicle-related pollution. Additionally, one may expect congestion to exacerbate the challenges, as auto manufacturers enter the sharing economy with programs such as BMW’s Drive Now and Daimler’s Car2Go, two industry powers that also announced plans to merge (Sachgau & Rauwald, 2018) or Volkswagen’s We Share electric-car program (Volkswagen, 2018).

In summary, traffic congestion, air pollution, cannibalization of public transit, diminished mobility for low-income consumers and those living at the margins of society, increased poverty levels of drivers, amassing a fleet of automobiles to create contrived idleness, safety issues, surge pricing and decimation of the taxi service industry – are negative externalities and implications of ridesharing in the sharing economy. These services negatively affect providers (drivers), local businesses (taxi service), governments (public transit), and users and those who are not even involved in the transactions, making ridesharing a concerned market factor. While the intent in the P2P context was to be nonrivalrous consumption, ridesharing has become rivalrous, as individual’s use of the service leads to diminished capabilities for a wide range of others.

## **Home sharing**

In 2015, one in three Americans used home-sharing services compared to one of ten in 2010 (Glusac, 2017). With this rise in popularity of home sharing, the U.S. private accommodation rental market was estimated to reach \$36.6 billion in 2018 (Quinby, 2017). While entities like Couchsurfing, Servas International, and Homestay offer authentic P2P home sharing experiences without monetary transactions, profit-oriented companies are increasingly commercializing this sector at the expense of certain stakeholders. In terms of commercialization, Airbnb’s competitor, HomeAway and its associated companies VRBO and VacationRental.com are now owned by Expedia.com, an internet discount travel and hotel site. This merger consolidates three entities resulting in a formidable player in the accommodations hospitality industry.

Airbnb, which is the largest commercial home-sharing platform, connects providers of space (i.e., from a single bedroom to a castle and everything in between) with users seeking temporary accommodations. The platform offers over 5 million listings in over 191 countries and, since inception, local hosts have accommodated over 3 million guests (Airbnb.com, n.d.). HomeAway, which notes that many users can get “twice the space for half the cost of a hotel,” offers over 2 million listings in 190 countries (homeaway.com, n.d.).

Benefits of home sharing elaborated by proponents include, generating economic support for local hosts and businesses, affordable stays for those seeking it, fostering cultural exchanges, encouraging tourists stay longer and explore non-tourist areas of various locales - a simulacra of the locale (FTC.gov, 2015). However, despite the lauded benefits, concerns have surfaced about home sharing practices that negatively affect multiple stakeholder parties.

## **Impact on Users**

By engaging in home sharing, users expose themselves to multiple risks. Besides concerns regarding physical safety and breach of privacy, for example, in terms of hidden cameras (Dangerfield, 2017), an analysis of over 1,000 negative Airbnb reviews reported unchecked scams and loopholes including last-minute cancellation of reservations by the host, demands for cash payments, creating multiple listings (for one property) at varying prices and cancelling the lower-priced reservations, and offering non-existent properties for reservation (Alini, 2018). In response to the report, Airbnb, which noted that it aims to develop “a safe and trusted community” and has successfully served over 260 million guests to date, contends that “the stats cited aren’t statistically significant, nor are they accurate, and the claims are misrepresented and flat-out false” (Alini, 2018). Critics contend that Airbnb could do more to address the issues while the company itself notes that “negative incidents are extremely rare but when they do arise, we work hard to make things right” (Alini, 2018).

Discriminatory behavior is another concerned market outcome of home sharing in the sharing economy. In addition to concerns about the shift of accommodations from the rental market to the tourism market, some consumers have reported that some renting hosts engage in biased and discriminatory practices against guests/users, with sordid details surfacing in the media. A Harvard University study reported that irrespective of the race of the host and the gender of the potential guest, Airbnb providers were 16% less likely to rent accommodations to guests with African American sounding names (Kelly, 2015; Parkinson, 2016). In some cases, lawsuits have been filed when discrimination has been documented and evidence found. In one such case, an African American Airbnb user filed a lawsuit when his initial reservation request, which was denied when he applied with his personal profile, was later accepted when he applied using two fake profiles of two different white men (King, 2016). In a second scenario, an Asian American consumer reported that her Airbnb host canceled her reservation at the very last minute with the message “I wouldn’t rent to u if u were the last person on earth. One word says it all: Asian” (Jenkins, 2017). Experiencing market lockout, some entrepreneurially driven consumers have sought vindication by launching ventures like Noirebnb and Innclusive, targeting African Americans (Lebeau, 2016; Robertson, 2016) and Misterb&b for gay travelers (Bender, 2014; Finsmes.com, 2017; Glusac, 2017). These home sharing ventures are aimed at competing directly with Airbnb, or at the very least, attracting those most likely to experience discriminatory behaviors.

### Impact on Providers

Providers of home-sharing services are also vulnerable to various risks. Hosts open their homes to strangers, a potentially risky proposition for both providers and users on multiple fronts. While users and providers create online profiles, the potential risk exists for the physical well-being of either party. Additionally, for the host, there is the risk of property damage, concerns regarding insurance, and theft (Devine, 2014). For example, an Airbnb host in Australia was left with a \$14,000 bill for repairs stemming from an incident with a stove and sparklers (Burke, 2018) and a Texas-based host was left with \$18,000 worth of damage and little help from Airbnb despite its claim of covering damages up to \$1,000,000 (Baragona, 2018).

### Impact on Incumbents

The business model for home sharing in the sharing economy has become one driven by the amalgamation of surplus with a mass-market-target orientation. Competitively, home sharing is a challenge for incumbent firms in the hotel industry as they tend to offer similar services (Zervas, Proserpio, & Byers, 2017) often at lower costs due to low to no overhead, and in some cases, more amenities than even some higher-end hotels. In response, hotel chains such as AccorHotels has partnered with Oasis, a sharing platform which offers short-term rentals that are “drop-dead gorgeous ... in desirable locations” (Locker, 2017), which adds a fleet of high-end idled rental accommodations to the market. Similarly, hotel conglomerates such as Marriott International has entered the home-share market through a collaborative partnership with home rental management company Hostmaker, in an effort to reclaim market shares in the U.K., and with the intent of global launch in the near future (Ting, 2018).

### Impact on Society (communities)

The practice of creating contrived surplus has paralyzed some home rental markets, resulting in the elimination of home rental options for local residents. For example, Los Angeles, CA, is a market characterized by relatively high housing rental rates with renters utilizing 47% of their income (median percentage) on housing (Lee, 2016). Landlords seeking greater profits have turned long-term residential rentals into short-term rental spaces for Airbnb users. This has led to decreased availability of affordable housing options for city residents as units have shifted from the rental market to the hotel/ accommodations market. Many of the surplus units are unlicensed hotel rooms, unoccupied by those who own or rent them, with some managed by full-time investor companies that may also own or lease dozens of other multi-unit properties as home share (Lee, 2016). The American Hotel and Lodging Association (AHLA, 2016) reported that multi-unit operators account for approximately 40% of Airbnb’s revenues. These rental practices by entities like Airbnb raise concerns about safety and security of consumers in unlicensed and unregulated hotels, which are “undermining the social fabric that makes our neighborhoods stronger and safer” (AHLA, 2016). Furthermore, operating unregulated and unlicensed also means uncollected taxes and untaxed income from private home-hotel-like businesses that provide no revenue contributions to the municipality or society.

In addition to the economic negative externality, an even greater concerned market issue is the rise of homelessness, which negatively impacts the economic and social community. In other words, the extraction of homes from the long-term rental market has increasingly displaced some residents. Research has shown that an increase in Airbnb listings is connected to an increase in average rent prices in the same neighborhood (Costello, 2018), making accessibility of traditional rental options near impossible for many of the residents. Reducing the supply of available residential options has not only resulted in an exorbitant increase in rental rates but has also spawned “cottage hotels” that contributes to “displacement, gentrification, and segregation” (Lee, 2016, p. 230). One could argue that perhaps a reversal or re-appropriation of short-term rental units back into the long-term local supply, would stem the tide of this trend. In Portland, Oregon, for example, the removal of illegal short-term rental options from Airbnb would make 1,718 homes available for the rental market (Monahan, 2016). Certainly, this option may require governmental and regulatory intervention. However, this option among similar others may be positively received by consumers as a step in the right direction toward combating the growing predicament of homelessness. Indeed, some cities have labeled the practice of short-term renting

as illegal, and home-sharing entities like Airbnb have come under fire in the popular press. While regulators in a few locales, for example, Anaheim, Barcelona, and New Orleans, have taken measures to either completely or partially restrict short-term rentals (Nieuwland & van Melik, 2018), for the large part these entities have faced little legal or regulatory actions or consequences.

In summary, homelessness, illegal, unethical, and unregulated operations, circumnavigating taxes, and discriminatory practices, are negative externalities of home sharing in the sharing economy. The organizational orchestration of these services affects communities (neighborhoods), the business environment (illegal and unregulated rentals/hotels), governments (loss of revenues from uncollected taxes), residents (non-users, increased homelessness) and users (discriminatory experiences). These practices have made home-sharing nonrivalrous and unaligned with the premise of sharing idled resources, which is a foundational tenet on which the sharing economy is built. Use of these services has resulted in negative effects for another (e.g., homelessness; socioeconomics) and to a greater extent, diminish the livelihood of others in the community.

### **Bike sharing**

Bike sharing, a mobility business model in the sharing economy, has become widespread across certain regions, attracting a host of entrepreneurial startups and established firms. Rather than peer to peer sharing, the practice is more of the traditional B2C exchange. The sharing aspect reflects the fact that bikes are continuously used and reused by different people and is accessible to everyone where it is offered. The bike-share market has several major players including Jump (an Uber company), Limebike, MoBike, Ofo, and Spin, and a few minor entities like Pace, Donkey Republic, Vbike, LennyBike and Riide (Nacto.org, 2017). Shared bike systems, which are typically situated in commercial, business, and urban areas, attract a range of users including students, local residents, errand users, leisure users, professionals and tourists (O'Brien, Cheshire, & Batty, 2014). According to the National Association of City Transportation Officials, the popularity of bike-share is such that in 2017 tourists and residents in the U.S. took over 35 million bike-share trips (Marshall, 2018), and since 2010, 123 million trips have been taken by U.S.-based bike-share users (Nacto.org, 2017).

The growth and popularity of bike share is not just a U.S. occurrence, but rather a global phenomenon. In 2015, there were an estimated 1 million shared bicycles globally, with share bikes being most prevalent in China (Goodyear, n.d.; Richter, 2018). According to Statista.com, “by the end of 2016, nearly 2.3 million bikes were available to the public around the world, with 1.9 million of these located in China alone. With 430 bike-sharing programs, China is the clear frontrunner in terms of bike sharing” (Richter, 2018). Along with China, the top five countries with public bike-share programs are Italy with 147, the U.S., with 109, Germany with 76 and Spain with 68 (Richter, 2018). A Google world-map of bike-share prevalence shows currently, over 18 million self-service shared bicycles and pedelecs (motorized bicycles) are available for consumer use around the world (Google Bikesharing Map, 2018). Within this market, two types of sharing-models exist; docked, which consists of a central station platform for retrieving and returning bikes and, dockless which is station-less, free-floating pickup and return “wherever”

system. Both systems operate using smartphone apps as the mechanism through which users subscribe, find, select, and pay for use.

Bike sharing has been touted to have many positive externalities, including the creation of more cyclists (adding to daily exercise), encouraging transit use (provides access to routes not covered by public transit), decreasing greenhouse gases (minimizes exhaust emissions from automobile traffic congestion), improving public health (DeMaio, 2009), and extending the existing intermodal connectivity (bus, train, ferry) in cities thereby adding to the transportation mobility of consumers. However, a growing host of negative externalities exists, which raises questions about the benefits versus the costs of bike sharing, specifically with respect to the more popular dockless format.

In 2016 there were 2,655 docked bike-share stations operated by 46 bike-share systems in 65 cities (Smallen, 2016), with 54,000 docked bikes available in the U.S. in 2017 (Nacto.org, 2017). In the U.S., in 2017, there were five major dockless bike-share companies operating in 25 U.S. cities and suburbs. New dockless bike startups entering multiple U.S. cities in 2016, caused the number of shared bikes to increase from 42,000 to 100,000 in 2017 (Nacto.org, 2017). While docked-station sharing systems provide more structured access, use and accountability controls, dockless bike share is less controlled. As a result, a deluge of free-floating bikes has been launched across cities and towns around the world, presenting a significant challenge for governments and local communities.

Dockless bike sharing is greater in popularity as users can access a bike, use it, and leave it practically anywhere they choose, with little to no penalty. In China, Ofo, which is the country's first dockless bicycle-sharing company, has grown into a \$2 billion business. Along with Mobike, Ofo's primary competitor, these companies operate in 21 countries and 250 cities across China, Singapore, Italy, Japan, the U.K., and the U.S. (Campbell, 2018), offering 50 million rides each day (Larmer, 2017). The Chinese government, which posits bike-sharing as one of China's "great new inventions," (Larmer, 2017) offers these businesses multiple benefits, including tax breaks (Campbell, 2018; Larmer, 2017) which has resulted in significant growth of shared bikes in a relatively short period of time. For instance, including Ofo and Mobike, over 70 bike-sharing companies, backed by over \$1 billion in financing, (Hernández, 2017) make 12 million shared bicycles available to the Chinese market (Lipton, 2017). To illustrate the degree of bike-sharing penetration in China, consider the following comparative data: Beijing has 2.4 million shared bicycles and 11 million registered users (Campbell, 2018). In Shanghai, there are 16 users per shared bicycle in the market (Rotterdam School of Management, 2017). In contrast, NYC offers 10,000 shared bicycles to 236,000 users, and 21,000 and 16,500 shared bicycles are available in the Paris and London markets, respectively (Campbell, 2018). However, as indicated below, the outcomes of bike sharing have been less than ideal and far less than what some stakeholders expected.

### Impact on Users

Bike sharing raises questions about consumer safety in several respects. Users are often without helmets, as this is not an ancillary component that comes with a bike. According to the Centers for Disease Control and Prevention (CDC): "Millions of Americans ride bicycles, but less than

half wear bicycle helmets. For example, a national survey conducted in 2001–2003 found that only 48% of children ages 5–14 years wore bicycle helmets when riding. Further, older children were less likely to wear helmets than younger children” (CDC.gov, 2015). While the assumption may be that teens and adults are the primary users of bike sharing, there are in fact no consistent age restrictions stipulated by providers for access and use. Any individual with a smart mobile device or access to one, can download the app, find, pay and use these bikes.

The dangers of riding helmetless and the injuries and fatalities that can result are documented. According to the CDC, “in 2010 in the U.S., 800 bicyclists were killed and an estimated 515,000 sustained bicycle-related injuries that required emergency department care. Roughly half of these cyclists were children and adolescents under the age of 20. Annually, 26,000 of these bicycle-related injuries to children and adolescents are traumatic brain injuries treated in emergency departments (CDC.gov, 2015). While these results are before the infusion of docked and dockless bike sharing, with the volume of bikes growing across cities, ridership increasing, and helmets not being a mandatory part of the equipment for use, a rise in injuries and fatalities can be expected. “Any bicyclist who does not wear a bicycle helmet is at increased risk of head injury” (CDC.gov, 2015).

#### Impact on Society (on Non-Users and Local Communities)

In the dockless sharing business model, some cities have become overrun with bikes as bike provider have essentially set them loose on society with seemingly no ownership or accountability. Providers like Ofo and Mobike among others amass exorbitant numbers of bikes, which are released in cities and then abandoned as these companies fail to retrieve, repair and maintain their fleets. This contrived surplus, which in many cases far exceeds demand in some markets, creates overwhelming inefficiencies and added constraints on governments, residents, the social community and the natural environment.

Contrived surplus of the magnitude involved in dockless bike sharing can only inundate markets. For example, Beijing and Shanghai have already reached their saturation points (Campbell, 2018). In Dallas, Texas, residents have filed hundreds of complaints as more than 10,000 dockless bikes are used and left unattended in inconvenient places or loitering in the streets (Reigstad, 2018). Due to the dockless nature of these bicycles, once the trip is completed, users can easily leave them cluttering sidewalks or by building entrances (Larmer, 2017), on public and private lawns, dumped in local waterways (e.g., rivers), discarded in parks, alleyways (Rotterdam School of Management, 2017), alongside roads and in public squares (Hernández, 2017). This causes frustration, especially among non-users who experience annoyance stemming from users’ inconsiderate behaviors. In one example, as a non-user removed an abandoned bike he stated: “There’s no sense of decency anymore ... We treat each other like enemies” (Hernández, 2017).

As bike sharing took most cities by storm, some local municipalities and other government administrations were ill equipped to handle the onslaught of damaged, vandalized, and discarded bikes that took over the streets. With the cost per use as little as \$1.00 per ride (Nieuwesteeg, 2018), many users see little reason to properly secure and protect the bikes once used. Thus, the burden of collecting and disposing of vandalized and discarded bikes falls on city



officials. Some providers, who fail in attracting enough riders and market share to be sustainable, divest from their investments, often without collecting their inventory of bikes. When leaving a city, rather than collect their bikes and refund customers for prepaid rides, a practice of the more established firms like Mobike, some firms simply walk away. For example, Bluegogo, at one time, was China's third largest bike sharing business with 20 million users and 700,000 bicycles. The company went bankrupt, ended operations, leaving its inventory behind in public spaces and trash heaps (Campbell, 2018; Yang, 2017). As a result, "vast piles of impounded, abandoned, and broken bicycles have become a familiar sight in many big cities ... their huge surplus of bicycles can be found collecting dust in vast vacant lots" (Taylor, 2018) creating bicycle graveyards.

In summary, the negative externalities of bicycle sharing include the safety risks posed by derelict bicycles, the added costs assumed by cities for collecting and disposing discarded bicycles, bicycle graveyards, and added encumbrance on law enforcement to investigate bike vandalism. Additionally, in terms of negative implications, the potential injuries and fatalities for helmetless users is a concern. The practice yields unwanted outcomes that impact both users and non-users and a range of entities, many of whom may be uninvolved in the bike sharing transactional process, making bike sharing rivalrous-concerned market issue. Lack of adequate regulations to counter these issues further exacerbates these challenges, and negatively impacts the natural environment and societal well-being. While bike sharing in the sharing economy has added value for many consumers, the unintended effects bikes threatens to overshadow the positives.

## **DISCUSSION AND MANAGERIAL IMPLICATIONS**

The sharing economy ethos essentially entails strangers, united by technology, sharing and accessing idle resources. Central to this discussion is the fact that many commercialized sharing economy platforms are creating idled resources purely for economic gains without considering the wellbeing of various stakeholders including consumers. Their approach is akin to "sharewashing," whereby the word or implication of sharing is added to a market venture without it actually integrating a true sharing component (Rinne, 2018). Perren and Kozinets (2018, p. 20) acknowledge that there is "limited understanding about the underlying characteristics and relative effectiveness of different forms of peer-to-peer markets." We see an erosion of P2P collaboration, and maybe sharing itself, that is driven by a greed component, particularly in marketplace players with pure profit motives instead of a dual value proposition, which takes consumers or societal wellbeing into consideration. This raises several managerial questions: What are the consequences in terms of accountability for start-ups who flood marketplaces with their inventory without proper planning? How should cities handle the various negative externalities including the environmental and economic impacts? Obviously, some sharing economy platforms have disrupted the incumbents in the marketplace, which by itself is not negative, as innovation and improvements can often come through marketplace disruptions. As such, incumbents of the public transportation and hotel industries have been forced to change their product portfolio to include ridesharing and short-term home rentals respectively in order to keep pace with sharing based businesses. For managers, this requires gaining new knowledge and understanding of this unpredicted competitive landscape and the impending challenges it brings. For example, like Uber, many taxi companies now offer apps that allow consumers to

track their taxi and pay online. The implementation required employee training to advance the technological know-how of drivers, and ensure they are equipped with smart mobile communication devices. Marriott International has partnered with Hostmaker, a technology-based home rental management company, and other hotel chains are revisiting their services and amenities to offer more host-like tours to their guests, with the direct intent to compete with entities like Airbnb. Large auto-manufacturers are targeting consumers with new innovations like vehicle-less shared automobile programs. These corporations must keep current with what sharing platforms are offering in order to remain competitive in the marketplace. While competition and evolution of offered services is not an issue in itself, what is of concern are the negative externalities created by sharing-based businesses in the marketplace and how the local municipalities deal with the disruptions. Thus, there are lessons to be learned from cities, such as Seoul, South Korea that have taken a proactive approach to sharing platforms (Chasin, 2018). In 2012, the Seoul government initiated the “Sharing City Seoul” program to address “challenges in transportation, housing, and general resource overcapacity” as well as diminishing connections between individuals (Chasin, 2018, p. 248, see also The Sharing City Seoul Project, n.d.). This initiative, which entailed the city providing support to sharing based businesses, embraced a range of options from “unused parking lots, to leasing empty rooms, from exchanging kid’s clothes and even meals, to sharing bookshelves and letting citizens use idle spaces in public or government-owned facilities” (Guerrini, 2014). While the initiative has room for development, in terms of making Seoul residents better aware of its existence (Chasin, 2018), it nonetheless presents an example of how governments can promote and encourage citizens’ participation in sharing initiatives.

The sharing economy platforms discussed in this article have taken what Callon (1998) refers to as “cool” situations (i.e., markets that are in an ideal state and relative stability) to a “hot” market (i.e., “the very core of the market’s functioning). The “economization or disentangling of the product or service bought and sold from prior or subsequent relations in order to make it calculable - is called into question” (Geiger et al., 2014, p. 3). Resolving negative externalities in concerned markets involve “scientific inquiry, political negotiations, legal proceedings, or civic ideas” (Geiger et al., 2014, p. 6). In other words, rather than letting competition resolve these challenges, a more focused and integrative approach is needed. Managerially, this offers new challenges across multiple domains for traditional firms with goals of long-term stability. The sharing economy is burgeoning with success and increases non-ownership forms of consumption. Managers must be mindful in assimilating and promoting sharing-related attributes that may be more pseudo-sharing (Habibi, Davidson, & Laroche, 2017). As forward-thinking components of strategic planning for future sustainability, ventures operating in the sharing economy must consider the potential for negative externalities and implement contingencies to minimize side-effect impacts.

## **CONCLUSION, LIMITATIONS AND FUTURE RESEARCH**

The platforms of the sharing economy deliver benefits to millions of individuals worldwide. Simultaneously, however, they cultivate negative outcomes that must be considered by governments, toward regulations curtailment and mitigation. With respect to regulation, Nieuwland and van Melik (2018), in their discussion of Airbnb, identify three regulatory approaches: *prohibition approach*, which implies the banning of such platforms; *laissez faire*

*approach*, which, as the name implies, references not taking concrete measures; and finally, the *limitation approach* whereby measures are taken to regulate certain aspects of the sector. With Airbnb and similar others, the latter may entail both quantitative and qualitative measures. Quantitative measures such as restricting the number of short-term rentals, locational restrictions whereby the short-term rentals are confined to certain areas of a city, and density restrictions, which entail limiting the number of short-term rentals in a specific neighborhood, may be employed. Qualitative restrictions should specify the type of accommodation permitted, for instance an entire home, safety requirements such as the presence of smoke alarms and fire extinguishers should be utilized (Nieuwland & van Melik, 2018). While many cities in the U.S. and around the world have had to rethink their regulations to meet the influx of sharing platform startups, it is yet insufficient. Although a one-size-fits-all approach is likely infeasible for all sharing economy platforms, and perhaps for all locations, some form a systematic regulation that mitigates risks to various stakeholders, including the wider society, in the sharing economy is necessary. Without such an approach, the sharing economy will continue to be a concerned market whereby entities' operations negatively impact multiple stakeholders.

This research represents an aerial view of the sharing economy practices in three distinct sectors, a limitation that future studies must address. Given the differences that exist between, and even within, these sectors, we must be mindful that evaluating the sharing economy in a one-size-fits-all approach is likely inappropriate and impractical. Within a given sector, for example, home sharing, the mode through which the sharing occurs may be different (for example, Airbnb, which is commercialized, as opposed to CouchSurfing, which presents true sharing without monetary transactions). Thus, to make meaningful progress, in understanding the multifaceted dimensions involved, researchers must move from the aerial view to consider the ground level implications of the specific sharing practices, in order to identify and address any negative effects that may arise.

The sharing economy offers much toward creating social innovative measures in building economic opportunities. It incites rapid entrepreneurial activities among consumers on a global scale, with the potential for reinvigorating commerce at the neighborhood levels where incomes can be earned, and idled resources utilized. While negative externalities are inevitable, positive ones can be fostered through proper planning in the promotion of sharing resources. Future research should explore the impact of governance, formalized policies, sharing promotion principles, ethical designates and governmental guidelines on the reduction of negative externalities derived from the sharing economy.

Trust and reciprocity are tenets upon which the sharing economy is built. The potential exists for the sharing economy to rejuvenate communal bonding among participants toward a stronger sense of community. This includes participants at both the firm and consumer levels of involvement. Given the influx of individual independent entrepreneurial ventures capitalizing on marketplace gaps in product and service offerings, consumer to business (C2B) transactions are an inevitable disruption in the exchange process. Future research should explore the commercialization of the interconnectedness between consumer to business sharing transactions and the impact on idle assets resource utilization.

The sharing economy has amassed many names, including lateral exchange markets (Perren & Kozinets, 2018) and collaborative consumption (Botsman, 2015; Ertz et al., 2016), among others. Regardless of the diversity in nomenclature, sharing in some form is promoted as the underlying practice. Habibi et al. (2017, p. 114) argue that “even though most practices are called sharing or are promoted as sharing, they have varying degrees of true sharing characteristics in their nature.” This means that the participants in the collaborative or sharing environment can be further distinguished based on the level of sharing embedded, as reflected in the sharing-exchange continuum advanced by Habibi et al. (2016). From an evaluative standpoint, Uber and Airbnb which were focal in this current study, falls under the balanced sharing and exchange category in the sharing-exchange continuum, as they rely on consumers’ personal assets (use of homes/apartments/cars) in their business models. However, bike-sharing models discussed here, fall under exchange as there are corporations and/or municipalities (cities and towns) owning the bikes that are being shared. This highlights a limitation of this current study as externalities or concerned markets were not considered within the context of pure sharing (Belk, 2014) or pure exchange (Habibi et al., 2017) markets. Future research should investigate both positive and negative externalities, that these types of businesses and the related activities may contribute.

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