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THE SHARING ECONOMY AS AN EQUALIZING ECONOMY

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Economic equality is often said to be the key problem of our time. But information technology dematerializes the world in ways that are helpful to the ninety-nine percent, because information can be shared. This Article looks at how one fruit of the information revolution—the sharing economy—has important equalizing features on both its supply and demand sides. First, on the supply side, the intermediaries in the sharing economy, like Airbnb and Uber, allow owners of housing and cars to monetize their most important capital assets. The gig aspect of this economy creates spot markets in jobs that have flexible hours and monetizes people's passions, such as cooking meals in their home. Such benefits make these jobs even more valuable than the earnings that show up imperfectly in income statistics. The law and economics analysis of Hernando de Soto has shown how creating property rights and more formal markets can help those of modest means in the developing world. The sharing economy performs a similar function for people of modest means in the developed world.

Second, on the demand side, the sharing economy also creates gains for consumers that largely go to the ninety-nine percent. Airbnb finds them cheaper accommodations in places that may have been unaffordable. But the advantages go beyond price. Summoning a ridesharing car almost anywhere with the press of a smartphone is a much closer approximation of having a chauffeur—a hallmark of wealth—than hailing a taxi. The law and economics analysis of Ronald Coase shows how replacing such physical agents with online agents redounds largely to the benefit of those with modest incomes.

If the sharing economy has equalizing as well as efficiency features, regulations must be careful not to disturb them. But because the sharing economy permits new entry into markets, incumbents will respond with new regulatory efforts to hamper it. This Article provides a taxonomy of the different kinds of regulation to help preserve the equalizing features from being impaired.

The Article ends by showing how the sharing economy more generally problematizes the conventional story of growing material inequality. The dematerialization of the world provides greater opportunities for broadly shared consumption, like that on Facebook, and improves working conditions, particularly for the middling classes. Only by taking account of these trends can we understand the changing relative material conditions of people.

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Introduction

Today many claim that economic inequality is the most pressing social problem of our time.[1] But that contention sits uneasily with the rise and ubiquity of information technology that gives the middling classes more equal consumption of many things to which the rich have long had easy and excellent access. Information itself is one example. In years past, the rich had large private libraries and even librarians. Today most of the world's knowledge is available to be shared on the internet.

Beyond specific examples, basic economic principles show that an information society necessarily has important equalizing aspects. The most salient trend of our world is the way it is dematerializing. Information technology is making distance and material things relatively less salient. And since material things are scarce and often cannot be consumed jointly, but immaterial things, like information and virtual reality, are easily shared and can be consumed by everyone at once, consumption becomes more broadly distributed.

This Article considers how one transformation driven by the rise of information technology and computation—the sharing or gig economy—provides an example of an equalizer in our world. The sharing economy provides equalizing benefits on the both the supply and demand sides. On the supply side, its dematerializing qualities make possible markets in prop-

1 As articulated by politicians and social theorists alike. *See* Neil H. Buchanan, *Yes, the Political and Economic Issue of Our Time Really Is Inequality*, Verdict (Sept. 21, 2017), https://verdict.justia.com/2017/09/21/yes-political-economic-issue-time-really-inequality; Richard McGregor, *Inequality Is 'Defining Issue of Our Time,' Says Obama*, Fin. Times (Dec. 4, 2013), https://www.ft.com/content/0cf55624-5d0f-11e3-a558-00144feabdc0 (quoting Barack Obama, President of the U.S., Remarks by the President on Economic Mobility (Dec. 4, 2013)).

erty and human capital, in which the middling classes possess a disproportionate share of their assets. On the demand side, it creates online agents that give middling classes opportunities for consumption once available only to the rich.

On the supply side, these markets particularly redound to the benefit of the nonrich, because they hold wealth predominantly in those kinds of assets rather than the securities and businesses that the rich disproportionately hold. As a result of the rise of the sharing economy, for instance, a homeowner or a car owner can generate income from his home or car through Airbnb and Uber.

The gig aspect of the sharing economy also creates new kinds of opportunities for supply by creating spot markets for jobs, like driving a car for hire or cooking, that are accessible to people with modest skills. These jobs also have amenities like flexible hours, which the rich have long enjoyed and which economists have shown are so much in demand that they can represent as much value as a substantial portion of the wage earned.

On the demand side, the dematerialization of the world reduces search and contracting costs, allowing online agents to be substituted for physical agents. Thus, instead of standing out in the street to hail a cab with the uncertainty of finding one, Uber gives much greater assurance of having a car at your door within minutes. One of the defining aspects of being rich previously was having agents to avoid hassles, but online agents today provide close substitutes. Having an Uber app on one's smartphone is a lot closer to having a chauffeur—a service only the rich once enjoyed.

Law and economics illuminate not only the efficiencies of the sharing economy but also these equalizing effects. On the supply side, a great law and economics theorist of the developing world, Hernando de Soto, showed that poor people stayed poor in no small part because they did not have property rights in their homes and other assets that they controlled.[2] As a result, they had difficulty generating income from the property in the form of a mortgage, or accumulating family capital by bequeathing their property to relatives.[3] De Soto argued that this was a substantial source of inequality.[4]

While the middle class in the developed world has long enjoyed formal property rights, information technology allows people to make effective divi-

2 *See* Hernando de Soto, *Excerpts From* The Mystery of Capital, 6 BRIGHAM-KANNER PROP. RTS. CONF. J. 9, 13 (2017) (noting that the poor in undeveloped countries "hold [their] resources in defective forms: houses built on land whose ownership rights are not adequately recorded, unincorporated businesses with undefined liability, industries located where financiers and investors cannot see them").

3 *See id.* ("Because the rights to these possessions are not adequately documented, these assets cannot readily be turned into capital, cannot be traded outside of narrow local circles where people know and trust each other, cannot be used as collateral for a loan, and cannot be used as a share against an investment.").

4 *See id.* at 15 (noting that societies that participate in capitalism without capital are marked by inequality).

sions within them that can be sheared off and pooled to generate income.[5] It does so with real property, like homes; personal property, like cars; and human capital, like the capacity to cook excellent meals. Thus, it enlivens their capital, just as formal rights enliven the capital of the less well-off in the developing world.[6]

Given that taxation has not caught up with these sources of income, they are imperfectly measured in government income statistics. Moreover, for the mass of people who have little or no income beyond their salary, this income is worth more than additional salary income dollar for dollar, because it diversifies sources of income and protects against life's risks. Thus, if hours on regular jobs are cut back, or one gets sick, another source of income is available to fall back on.

Relevant to the demand side, Ronald Coase showed the centrality of transaction costs, including search costs, to the economy.[7] Sometimes the costs of transactions are so high that the transactions cannot occur.[8] Examples of such transactions include many short-term room rentals and car hires. But information technology has sharply reduced such transaction costs.[9] And that has also redounded to the advantage of the middling classes. The rich could bring agents into their household even for transactions that were hard to get on the market, like reliable on-time drivers. Their help could find places to stay and guides that perfectly match their peculiar interests. But now these services are broadly available online.

The law and economics of the equalizing aspects of the sharing economy also show that regulations of this economy must be careful not to undermine its equalizing features. For instance, forcing Uber drivers to be employees with regular hours would harm both middling workers and consumers. It would make it harder for the workers to have the completely flexible hours that are valuable to them. And it would make it more difficult for the supply of cars to match the needs of passengers and give them reliable, real-time service, because this supply varies widely depending on time, weather, and events that are impossible to predict in advance. While some regulation is compatible with preserving equalizing features, there has been far too little attention to these dangers to equality.

5 *See* Ryan Calo & Alex Rosenblat, Essay, *The Taking Economy: Uber, Information, and Power*, 117 COLUM. L. REV. 1623, 1641 (2017) ("The sharing economy promises to unlock various resources with excess capacity, such as a household's guestroom.").

6 *Where Does the Wealthy Investor Place Their Money?*, SPECTREMGROUP, https://spectrem.com/Content/wealthy-investors-portfolio.aspx (last visited Dec. 22, 2017) (noting that high net worth individuals store their wealth primarily in investable assets, compared with sixteen percent of wealth held in a principal residence).

7 *See* R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 10 (1960) ("With costless market transactions, the decision of the courts concerning liability for damage would be without effect on the allocation of resources.").

8 *Id.* at 15.

9 *See* Vanessa Katz, Note, *Regulating the Sharing Economy*, 30 BERKELEY TECH. L.J. 1067, 1075 (2015) (noting that the sharing economy has decreased transaction costs through "decreas[ing] the information cost of determining whether a provider is trustworthy").

This Article proceeds in five Parts. First, it briefly uses Airbnb as an example of the sharing economy, emphasizing its equalizing features. Second, it shows how to categorize and understand these equalizing features in terms of the law and economics theories of de Soto and Coase. Third, it responds to possible critiques of the equalizing thesis, such as the concern that the sharing economy makes its investors rich and has put some employees out of work. Fourth, it provides a taxonomy of the regulations proposed for the sharing economy—regulations that variously protect incumbents, prevent regulatory arbitrage, and address what are perceived to be new problems created by the sharing economy. It then suggests that focusing on the equality-creating features of the sharing economy helps determine which of these regulations are beneficial.

Finally, it argues that the sharing economy provides a window into the wider range of equalizers of the modern information economy. Even when we consider only income as a measure of equality, some new and growing sources of income may be hard to measure in government statistics, like much of that from the sharing economy, because technology is changing work structure so much that taxation has trouble keeping up. But even more importantly, technology is creating better nonmonetary conditions for jobs of average income workers, like flexibility and safety, that are also a part of the material condition of employment and of life. Finally, technology is creating aspects of consumption that redound particularly to the broad middle of society, like the ability to summon a quality ride wherever and whenever needed and to have fast access to information—benefits that were once largely the province of the rich. Only by accounting for such matters can one come to a fair assessment of whether equality of material condition is increasing or declining.

It should be noted that this Article does not argue that the sharing economy tempers the problem of poverty, although aspects of it may help some poor people. Inequality must be contrasted with poverty, both conceptually and empirically.[10] Poverty concerns the inability to meet basic needs and can be defined absolutely once the basic needs of society are determined. It also often involves various incapacities that prevent people from working at all. Inequality concerns the relative position of the rich and less well-off and thus is a distinct issue.

I. An Introduction to the Sharing Economy

The sharing or gig economy provides an excellent example of how technology can both increase economic efficiency, and narrow the difference in material living experiences of the middle class and the rich. It does both by creating more liquid markets in more kinds of assets, unlocking the income-generating potential of the property that middle-income groups own, and the skills that millions have. It also creates online agents, making possible

10 *See generally* Andre Beteille, *Poverty and Inequality*, 38 Econ. & Pol. Wkly. 4455 (2003).

bargains that rich people with their paid physical agents could already strike. It gives greater flexibility and autonomy to middle-income groups that many higher-income professionals already enjoy.

The growing and vibrant sharing economy is a child of computation and the internet.[11] It combines our greater connectivity and calculating power to facilitate transactions that would have been impossible even ten years ago.[12] Thus, it shows how the dematerialization of the world through the power of information processing can be an equalizer among all of those who have the discipline and skills to use it.

The essence of the sharing economy is that it uses online agency to create markets in property and jobs that were not nearly as effective previously. As a result, people, particularly those of modest means, can more easily enter markets with a new supply.[13] The online agency aspects of the sharing economy reduce search, information, and agency costs, making available better and cheaper services and products for those who demand it.[14]

Take Airbnb, the company that helps bring property owners and short-term renters together.[15] A classic intermediary earning revenue from both guests and hosts, it uses an internet platform that allows owners of houses and condominiums to advertise and rent out rooms, apartments, or houses to travelers they have never met through a website maintained by the company.[16]

To be sure, people have been renting out their houses or rooms for a long time. But the information technology provided by Airbnb makes the transactions much easier and more attractive for both property owners and renters. The owners get to advertise to a much larger potential pool of renters because people from all over can inspect their properties online, and potential renters get to inspect a larger pool of properties. The owners get standard form legal contracts and insurance against damage to their property.[17] As a result, they can rent out their homes for stays of much shorter durations and with much greater confidence that they will find guests.

Being able to rent out your property at short notice and for both short and longer durations enhances economic well-being by providing a stream of

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11 *See* Elia Brugnoni et al., *Innovation and Governance: The Role of Sharing Economy*, *in* ICT FOR PROMOTING HUMAN DEVELOPMENT AND PROTECTING THE ENVIRONMENT 195 (Francisco J. Mata & Ana Pont, eds., 2016) https://files.ifi.uzh.ch/hilty/t/Literature_by_RQs/RQ%20305/2016_Brugnoni_Polzonetti_Sagratella_Innovation_and_Governance.pdf (arguing that the sharing economy is a consequence of Moore's law and the internet).

12 *See* Martin Kenney & John Zysman, *The Rise of the Platform Economy*, ISSUES SCI. & TECH., Spring 2016, at 61, 61.

13 *See* Christopher Koopman et al., *The Sharing Economy and Consumer Protection Regulation: The Case for Policy Change*, 8 J. BUS. ENTREPRENEURSHIP & L. 529, 540 (2015).

14 *See infra* Section II.B.

15 *See* Georgios Zervas et al., *The Rise of the Sharing Economy: Estimating the Impact of Airbnb on the Hotel Industry*, 54 J. MARKETING RES. 687, 689 (2017).

16 *See id.*

17 *See infra* note 76 and accompanying text.

income.[18] Some property owners will use the rental income to do more travelling themselves. More leisure for travel is a historical marker of being rich. And the increased travel creates even more demand for Airbnb rentals.

The renter, in turn, gets an expanded selection of rental properties that can be rented with little notice. By providing cheaper accommodations, Airbnb helps travelers stay in places they could not have afforded or lets them live more comfortably than they could have with friends or family. And even for those travelers who could afford a hotel, settling in someone's home often provides a richer and more distinctive experience of a particular location. A shingle house evokes New England's past. The Pueblo style summons up the history of the Southwest. And the uniqueness of an individual's home contrasts with standard hotel accommodations that look more and more the same everywhere. Airbnb's slogan, "Belong Anywhere," captures both the reach of its operations and the personal touch of living in someone's house.[19] The rich have long been able to enjoy such distinctive experiences.

Airbnb's online agency permits both the host and the guest to gain confidence in one another because travelers rate the host and their rental properties and the host rates the travelers—what the CEO of Airbnb calls a "design[ ] for trust."[20] Renting a room in a house before the advent of Airbnb often seemed a risky proposition, because the owner might turn out to be a criminal, including a sexual harasser. The rating system reduces the possibility of dreadful results. It helps assure hosts that the guest will treat their properties with respect and makes the traveler expect that the property will live up to its specifications. This new system is also a direct result of the dematerialization of the world. Word of mouth—the phenomenon that a rating system perfects—is a term that itself reflects the more laborious physical origins of distributing information.[21]

This use of such information technology is more of a boon to those of modest means than the rich. First, consider the property owners. For most people of moderate means, real property is their greatest asset.[22] Airbnb

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18 *See* Calo & Rosenblat, *supra* note 5, at 1644 ("Airbnb takes the stance that the income people earn through its platform allows them to afford their rent.").

19 *See* Brian Chesky, *Belong Anywhere*, AIRBNB: BLOG (July 16, 2014), https://blog.atairbnb.com/belong-anywhere/ ("You see, a house is just a space, but a home is where you belong. And what makes this global community so special is that for the very first time, you can *belong anywhere*." (emphasis added)).

20 Charlie Aufmann, *Designing for Trust: Observations From My First Year at Airbnb*, AIRBNB, https://airbnb.design/designing-for-trust/ (last visited Oct. 10, 2018).

21 *See* Zachary Crockett, *How the Sharing Economy Makes Us Trust Complete Strangers*, HUSTLE (Apr. 14, 2018), https://thehustle.co/sharing-economy-trust ("Arun Sundararajan, author of 'The Sharing Economy,' tells us these technologies have essentially 'expedited' the process of gaining trust.").

22 *See The 2016 Survey of Consumer Finance*, FED. RES., tbls. 8 & 9 https://www.federalreserve.gov/econres/files/scf2016_tables_public_real_historical.xlsx (last updated Nov. 15, 2017).

allows them to monetize their property and turn it into a stream of income.[23] According to data provided by Airbnb, the typical host who rents out a single property makes $7530 a year—no small sum, and about fourteen percent of the median income.[24] And most of Airbnb's hosts are not rich.[25] This kind of income provides an additional advantage: it is independent of employment and thus represents a kind of diversification in sources of income.[26]

In contrast, higher-income people generally have their wealth invested in traditional financial assets that diversify their income beyond that gained by employment. And those rich people who do rent out their grand properties are well-placed to demand security deposits that assure that their property will be treated well. Airbnb uses the internet to allow average people to monetize their property, generate income, and democratize the kind of trust and confidence that before was available only to higher-income groups.[27]

Next, consider the travelers and how they benefit from Airbnb. For those of modest means, Airbnb provides a low-cost place to stay at prices that are often $50 to $100 cheaper per night compared to a hotel.[28] In contrast, higher-income groups can easily afford hotels when they travel and do not need to search for low-cost accommodations. And for those travelers who value a more personal experience when vacationing, Airbnb can provide a richer and more diverse experience of the place they are visiting than a hotel. The rich can already choose some of the most historically distinctive lodgings of the world, like the Waldorf Astoria in New York City or the Statler Hilton off the Spanish Steps in Rome. Thanks to the new entrepreneurial sharing economy, affordable Airbnb rentals are often not so distant from high-end luxury hotels in such cities.

II. The Law and Economics of the Equalizing Features of the Sharing Economy

It is not a contingent fact about the world that this new economy improves the lot of the bottom ninety-nine percent more than the top one percent or even the top ten percent. Instead, it is the equalizing effect of the new information technologies. The new collaborative platforms benefit average households as owners, because the peer marketplaces create more liquid

23 *See supra* note 5 and accompanying text.

24 *See* Gene Sperling, How Airbnb Combats Middle Class Income Stagnation 8 (2015), https://www.stgeorgeutah.com/wp-content/uploads/2015/07/MiddleClassReport-MT-061915_r1.pdf.

25 In Los Angeles, for instance, the median income of an Airbnb host is $49,241 and in New York it is $53,058. *Id.* at 11. Even in San Francisco it is $78,724. *Id.*

26 *See* Rachel S. Siegel & Carol Yacht, Individual Finance 63–64 (2012).

27 *See* Calo & Rosenblat, *supra* note 5, at 1623 (noting how economic value is provided by "[s]haring economy firms such as Uber and Airbnb [who] facilitate trusted transactions between strangers on digital platforms").

28 *See* Talia Avakian, *Here's Where It's Cheaper to Book an Airbnb Over a Hotel Room*, Bus. Insider (Feb 18, 2016), http://www.businessinsider.com/is-it-cheaper-to-airbnb-or-get-a-hotel-2016-2.

markets in new areas where a large swath of the population, not just the rich, can monetize their capital and generate income.

Technology also helps the middle class as consumers because it creates online agents to connect consumers to products and services in real time. The rich already have agents of their own—like private secretaries, maids, landscapers, chauffeurs, and cooks. The reduction of agency costs in the form of rating systems also benefits both producers and consumers by reducing monitoring and search costs for services—costs that the rich have had agents to address.

A. *De Soto and Enlivening Capital*

The ideas of two famous law and economics scholars illuminate how creating markets in more kinds of real and personal property, through virtual assistance, helps both the earnings and consumption of the middle class. A native of Peru, Hernando de Soto recognized that much of the capital in developing nations was locked up in the informal economy.[29] Importantly, for instance, squatters lacked property rights in their houses even after decades of living there and improving the land.[30]

As a result, many people's most important capital asset—their home—was inert or, as de Soto put it, "dead."[31] For example, the lack of legal title means that real property cannot be pledged to support a mortgage, to start a small business, or to pay for private education. Property could often not be easily sold or rented, because the squatter had no formal rights with which to contract.[32] Thus, because of poor legal institutions and a lack of property rights, lower-income groups in the developing world remained impoverished for generations, because they were not able to access their "dead capital"[33] as a path toward a better life.[34]

Prompted by de Soto's ideas, many nations around the world have improved their legal systems for recording property and giving legal title to

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29 *See* de Soto, *supra* note 2, at 13 (noting that poor countries have vast significant amounts of wealth that cannot be leveraged "outside of narrow local circles where people know and trust each other").

30 *See id.* at 31 (noting how the "integrated property market," which was gradually created in the United States as Congress formalized the "property rules created by millions of immigrants and squatters," helped "fuel[ ] the United States' explosive economic growth").

31 *Id.* at 13.

32 *Id.* at 55 (noting how "legal apartheid" constrains the poor in developing countries to real estate transactions "restricted to closed circles of trading partners, keeping the assets of extralegal owners outside the expanded market"). For discussion of how insurance contracts by an intermediary solve agency problems, see Thomas A. Weber, *Intermediation in a Sharing Economy: Insurance, Moral Hazard, and Rent Extraction*, J. MGMT. INFO. SYS., Winter 2014, at 35, 37. For Airbnb's offer of insurance, see *Host Protection Insurance*, AIRBNB, https://www.airbnb.com/host-protection-insurance (last visited Sept. 4, 2018).

33 De Soto, *supra* note 2, at 13.

34 *See id.* at 55 ("Blocked from entering the bell jar, the poor could never get close to the legal property mechanisms necessary to generate capital.").

people who converted abandoned property into homes.[35] These legal reforms have greatly enlivened the real property in those nations.[36] When a squatter becomes a property owner, he has more capital than he previously enjoyed and greater capacity to put that capital to productive use, as with a mortgage. The advantages of these legal reforms affecting real property go almost entirely to people of modest means. Not only did the rich generally always have formal title to their real property, that property is a much smaller proportion of their total assets, which are mostly invested in the form of financial securities (e.g., stocks and bonds) and other forms of legally protected assets.

Similarly, the sharing economy enlivens capital in the developed world, and it also focuses on the kind of capital to which people of modest means have access. Even in the United States, where the vast majority of people have formal title to their real and personal property, their property often lies fallow when it could be earning money.[37] When a homeowner is away on vacation, he can legally rent his home for a short time. He also can rent out a spare bedroom or a suite over a garage when his children are away at college. But the practical obstacles to do so for a reasonable price were previously prohibitively large.[38] That is where Airbnb's service makes the difference, by giving a homeowner access to a global pool of potential renters, and by creating an off-the-shelf contract and insurance to facilitate making the rental transaction as easy as possible from a legal standpoint.

Just as in the developing world, the benefits of enlivening and monetizing the capital in people's homes that would otherwise be dormant redounds more to the middle class than the rich because real property is a greater proportion of their total assets and net worth than it is for the wealthy. For most average nonwealthy people, their home is their largest asset.[39] In contrast, for higher-income households, their homes are a much smaller proportion of their total net worth.[40] Because of the relative insignificance of the value of their homes to their total assets, upper-class Americans are less likely to be interested in renting out their real estate in the first place.

The sharing economy enlivens all kinds of property, even beyond the most familiar example of Airbnb. For example, the website Spacer allows you to rent out extra space in your home or garage for storage.[41] There are also

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35 *See Breathing Life into Dead Capital*, ECONOMIST (Jan. 15, 2004), http://www.economist.com/node/2328596.

36 *Id.*

37 *See* Calo & Rosenblat, *supra* note 5 and accompanying text.

38 *See* Katz, *supra* note 9 and accompanying text.

39 Jacob Goldstein, *A Lost Decade for American Families*, NPR: PLANET MONEY (June 11, 2012), http://www.npr.org/sections/money/2012/06/11/154782513/a-lost-decade-for-american-families.

40 *Compare Where Does the Wealthy Investor Place Their Money?*, *supra* note 6 (noting that high net worth individuals store their wealth primarily in investable assets, compared with sixteen percent of wealth held in a principal residence), *with* Goldstein, *supra* note 39 (noting homes are the single largest asset for many middle-class families).

41 SPACER, https://www.spacer.com/ (last visited Feb. 18, 2018).

peer-to-peer web platforms that do for personal property what Airbnb does for real property. For example, Turo is a website that helps arrange peer-to-peer car rentals so that car owners can rent their vehicles to individuals when those vehicles would otherwise sit idle.[42] Peer-to-peer rental and sharing platforms like Spinlister do the same for bikes.[43] You can now offer your bike for rent anywhere in the world.[44]

More famously, app-based platforms like Lyft and Uber allow car owners to monetize their personal vehicles when they become drivers for the ridesharing companies and pick up passengers.[45] The ridesharing business model enlivens capital in automobiles—another big-ticket capital asset for most people.

But ridesharing also enlivens another wholly different kind of capital—human capital—because an owner's return from turning his or her vehicle into a taxi comes not just from the return on the financial capital invested in their car, but also from the money earned from the ridesharing services.[46] This part of the sharing economy is less commented upon, but it may turn out to be even more important because of the variety of human capital for which markets are not practically available.

As with real and personal property, the problem was that without the internet it was difficult to make a market in different kinds of human capital, particularly where employed in short-term jobs.[47] Those who wanted to hire people for short-term and part-time jobs did not have nearly as good a way to find a pool of willing applicants.[48] And those who wanted to work in this

42 TURO, https://turo.com/ (last visited Feb. 18, 2018).

43 SPINLISTER, https://www.spinlister.com/ (last visited Feb. 19, 2018).

44 Natasha Baker, *Spinlister App Connects Bike Owners with Renters*, HUFFINGTON POST (Aug. 5, 2013), http://www.huffingtonpost.com/2013/08/05/spinlister_n_3706373.html; Kirsten Korosec, *The Airbnb of Cars Just Bought a Startup From Its Newest Investor*, FORTUNE (Sept. 6, 2017), http://fortune.com/2017/09/06/turo-mercedes-daimler/.

45 LYFT, https://www.lyft.com/ (last visited Feb. 21, 2018); UBER, https://www.uber.com/ (last visited Feb. 21, 2018).

46 *See* Calo & Rosenblat, *supra* note 5, at 1641 (noting that the sharing economy unlocks money-making potential in people's time by "provid[ing] more and more diverse opportunities to make money," allowing those whose schedules are not conducive to normal jobs to still earn money).

47 *See id.* at 1642 (first citing Alex Rosenblat & Luke Stark, *Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers*, 10 INT'L J. COMM. 3758, 3761 (2016); then citing Jonathan V. Hall & Alan B. Krueger, *An Analysis of the Labor Market for Uber's Driver-Partners in the United States* 11–12, 16 (Princeton Univ. Indus. Relations Section, Working Paper No. 587, 2015), http://arks.princeton.edu/ark:/88435/dsp010z708z67d) (noting that the nature of the sharing economy allows workers the freedom to switch fluidly between jobs, benefiting those who require short-term or temporary jobs for whatever reason)).

48 *See* Hall & Krueger, *supra* note 47, at 1 (noting that Uber's "flexibility is appealing to driver-partners," as they "can choose to pursue other work opportunities or spend time taking care of non-work obligations" even while they remain eligible on Uber's platform).

area did not have nearly as much access to a pool of employers.[49] Just as information technology allows people to segment their personal and real property in a way that makes it more saleable, information technology has the same effect on human capital.

Some of these companies specialize in human capital markets for very specific purposes. Rover, for instance, facilitates dog sitting.[50] Others are more general, like Thumbtack,[51] Fiverr,[52] and TaskRabbit,[53] which are peer-to-peer platforms that connect those who are willing to be hired to perform a variety of services with those who are willing to pay somebody to do those services. For example, using Fiverr, you can hire freelancers to perform services including logo design, illustrations, web design, infographics, business copywriting, translation, animation, legal consulting, financial consulting, and birthday greetings.[54]

Airbnb is now enlivening human capital as well as real property by extending its peer-to-peer platform to include the opportunity for travelers in unfamiliar locations to make arrangements to meet with "hosts" through the new service called "Experiences."[55] For instance, if you are a local expert on the history of the Civil War and the geography of Gettysburg, Pennsylvania, the Airbnb platform can connect you to those travelers who want a private tour of the battlefield.[56]

The websites BonAppetour[57] and Eatwith[58] similarly connect those who have a passion for cooking with travelers who want the experience of a home-cooked meal in a new city. Some people are great cooks, while most lack the ability to make a soufflé. But most such cooks never get the opportunity to cook for anyone besides their friends and family. With BonAppetour and Eatwith, passionate cooks who enjoying entertaining can now host travelers from all over the world in their homes and monetize their homes and cooking skills.

Thus, the peer-to-peer sharing economy allows people to more easily make money from their vocations or avocations and generate income in ways that were never possible before. The wealthy already have high-paying jobs and enough assets and net worth that make raising their incomes less important. Moreover, many high-income individuals have reputations, like well-

49 *See id.* at 10 ("The fact that over one-third of driver-partners partnered with Uber without actively searching for a job suggests that Uber provided a new alternative that enticed a large number of people to engage in work activity that was not previously available.").

50 ROVER, https://www.rover.com/ (last visited Feb. 19, 2018).

51 THUMBTACK, https://www.thumbtack.com/ (last visited Feb. 20, 2018).

52 FIVERR, https://www.fiverr.com/ (last visited Feb. 19, 2018).

53 TASKRABBIT, https://www.taskrabbit.com (last visited Feb. 20, 2018).

54 *See* FIVERR, *supra* note 52.

55 *Host an Experience on Airbnb*, AIRBNB, https://www.airbnb.com/host/experiences?from_nav=1 (last visited Feb. 19, 2018).

56 *Id.*

57 BONAPPETOUR, https://www.bonappetour.com/ (last visited Feb. 19, 2018).

58 EATWITH, https://www.eatwith.com/ (last visited Feb. 19, 2018).

known lawyers, that are self-advertising and need no pooling market for their services. These peer-to-peer services primarily help those of more modest means.

And these jobs generate not only income but also personal satisfaction that other jobs do not. Just as most college professors get a lot of personal job satisfaction beyond their financial compensation because they are able to teach and write about their favorite topics, the same is true with chefs and night club guides.[59] They are being paid for what they love to do.[60]

The formal law and economic perspective on this benefit comes from the analysis of compensating differentials.[61] An unpleasant job has to offer people a wage premium to be equivalent to jobs requiring the same skills. In contrast, a gratifying job leads people to accept lower wages.[62] For example, a coal miner is paid more than other jobs requiring equivalent skills because the job is both unpleasant and dangerous.[63] It follows directly that the more utility one gets from a job outside compensation, the less compensation will be required, holding skills equal.

Thus, it is important to note that significant gains from the sharing economy in human capital come in the form of nonmonetary compensation that does not show up in income statistics at all. For most of human history, most people have not enjoyed the jobs they have, because they are burdensome or even dangerous. The rich have often been an exception to the reality that work involves unpleasant toil. Being a captain of industry allows a chief executive scope for creativity and command that most find pleasurable. As the sharing economy allows people to profitably pursue their passions, they are improving their life satisfaction and thus equalizing human happiness.

Moreover, even besides opportunities to combine passions and vocations, the gig economy and peer marketplace have other characteristics, like autonomy and flexibility, that increase the value of those jobs beyond the wages received. For example, a freelance job for an illustrator through a website like Fiverr or TaskRabbit can be completed according to a timeframe that works for both the buyer and seller. As discussed below, flexibility can

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59 *See* LOUIS PUTTERMAN, THE GOOD, THE BAD, AND THE ECONOMY: DOES HUMAN NATURE RULE OUT A BETTER WORLD? 69 (2012) (noting that professors are paid less because of the autonomy and other satisfactions they enjoy).

60 *See* Leonard A. Schlesinger et al., *Choosing Between Making Money and Doing What You Love*, HARV. BUS. REV. (Mar. 29, 2012), https://hbr.org/2012/03/choosing-between-making-money.

61 *See, e.g.*, Peter F. Kostiuk, *Compensating Differentials for Shift Work*, 98 J. POL. ECON. 1054, 1054 (1990).

62 *See* Tom Lehman, *Countering the Modern Luddite Impulse*, 20 INDEP. REV. 265, 270–71 (2015) (noting “lower monetary earnings to those workers employed in more-attractive occupations” like a professor or family doctor, as opposed to more stressful occupations, like emergency room physician).

63 *See* Devin Dwyer, *Craving Coal Dust ‘Like Nicotine’: Why Miners Love the Work*, ABC NEWS (Apr. 7, 2010), https://abcnews.go.com/US/Mine/west-virginia-coal-miners-allure-dangerous-profession/story?id=10305839 (explaining that the dangerous profession of coal mining includes a high starting salary).

be worth forty percent more than actual wages earned compared to a job with inflexible hours.[64] This is not surprising; temporal flexibility allows one to take care of family responsibilities as needed. Geographic flexibility allows one to avoid long commutes. This kind of autonomy and flexibility is usually only enjoyed by those who are very well-off—like tenured professors or many of the rich.

Furthermore, that same flexibility allows people to work part-time. Part-time work can be worth more per hour to people than full-time work if they only want to work part-time. It is valuable because working only for a portion of the day at hours of one's choosing allows ample time to take care of families, pursue a career as a writer, actor, or artist, or take care of chronic medical conditions.[65]

One study found that this flexibility is a significant incentive for individuals who choose to drive part-time for Uber: eighty-seven percent expressed a desire "to be my own boss and set my own schedule," eighty-five percent wanted "to have more flexibility in my schedule and balance my work with my life and family," and seventy-four percent wanted "to help maintain a steady income because other sources of income are unstable/unpredictable."[66]

Thus, the information connectivity that is the hallmark of the sharing economy makes key nonmonetary aspects of job more like the jobs that the well-off have traditionally had. These aspects of converging nonmonetary compensations represent gains for equality.

B. Coase and the Reduction of Agency Costs

Another law and economics scholar, Ronald Coase, showed how the costs of engaging in market transactions are an important part of economic life. These costs of using the market come at every stage of a transaction. Each of these costs is so important that economists give them a name: the costs of finding someone with whom to deal are "search costs."[67] The costs of writing the agreement are "contract costs."[68] And the costs of making sure that the contract is performed are "monitoring costs."[69] Sometimes these costs, collectively called "transaction costs," can be so prohibitively high that they can prevent otherwise mutually beneficial deals from taking place.[70]

64 *See infra* notes 108–09 and accompanying text.

65 Most part-time workers want to work only part-time for these reasons. *See* Barry Hirsch, Empl't policies Inst., The Relative Compensation of Part-Time and Full-Time Workers 4 (2000), https://www.epionline.org/studies/r17/.

66 Hall & Krueger, *supra* note 47, at 11.

67 *See* P.K. Rao, The Economics of Transaction Costs xvi (2003).

68 *See id.*

69 *See id.*

70 Coase, *supra* note 7, at 15 ("[Transaction costs] are often extremely costly, sufficiently costly at any rate to prevent many transactions that would be carried out in a world in which the pricing system worked without cost.").

Coase pointed out that one result of high transaction costs is that large corporations have many agents on the payroll.[71] It makes economic sense to perform many services internally when transaction costs with outside contractors or suppliers are high.[72] For instance, if the company employs someone full-time to look for merger partners, it does not have to contract with an investment bank to perform those services. Of course, there are costs to performing tasks internally that include the compensation expenses of hiring full-time employees. We often speak of corporate bureaucracy, because a large corporation sometimes resembles the inefficiency of a government bureaucracy in terms of generating a lot of paperwork and relying on administrative orders rather than the market.[73] Nevertheless, corporations exist because often these costs of internal production are less than the transaction costs of using the market for individual contracts.[74]

Similarly, one of the defining features of being rich through the ages has been employing people within the household to avoid the transaction costs of using the market. For instance, it is often hard to be sure of obtaining instant and reliable transportation by relying on a spot market for transportation. But by hiring a chauffeur, the rich could enjoy quality on-demand transportation services.

The sharing economy reduces transactions costs at every stage. First, the peer economy makes it easier for providers of services and consumers to find one another, reducing search costs. For instance, Airbnb uses the scale of the internet to list millions of rental properties to a large pool of potential renters. According to a recent report, Airbnb now has four million listings in 191 countries worldwide, an amount that tops the 3.3 million room listings globally held by the top five hotel brands combined (Marriott International, Hilton Worldwide, Intercontinental Hotels, Wyndham Worldwide, and Hyatt Hotels).[75]

Second, the sharing economy reduces the cost of entering into a legal contract. Airbnb provides a standard form legal contract that regulates the rights of both the property owners and the guests and provides property owners with insurance coverage that would be difficult for them to find on their own.[76] Finally, the peer-to-peer sharing economy for rental properties through Airbnb significantly reduces monitoring costs by allowing property

71 *See* R.H. Coase, *The Nature of the Firm*, 4 ECONOMICA 386, 396–97 (1937) (proving that firms will grow to the extent that organizing transactions in the firm are cheaper than contracting on the open market).

72 *Id.* at 392.

73 *See id.* at 388 (noting that a firm substitutes the pricing mechanism of the market with "the entrepreneur-co-ordinator, who directs production").

74 *See supra* notes 71–72 accompanying text.

75 *Updated Infographic: Look at Hotel Industry's 'Largest,'* HOTEL NEWS NOW (Feb. 14, 2017), http://hotelnewsnow.com/Articles/115537/Updated-infographic-Look-at-hotel-industrys-largest.

76 *See* Ron Lieber, *A Liability Risk for Airbnb Hosts*, N.Y. TIMES (Dec. 5, 2014), https://www.nytimes.com/2014/12/06/your-money/airbnb-offers-homeowner-liability-coverage-but-hosts-still-have-risks.html?mcubz=0.

owners and their guests to rate one another after each transaction. The guests rate the quality of the rental property and the service provided by the host and the property owner rates each guest. This dual rating system provides powerful incentives for each party to follow through on the terms of the contract to assure the opportunity for more contracts in the future.[77]

Importantly, the consequences of reducing transaction costs matter much more to the middle class than to the rich. First, agency costs tend to be relatively fixed for a particular good or service. Thus, those costs constitute a larger share of the total value of the exchange for less expensive properties, goods, or services. As a result, fewer of these properties, goods, and services will be offered when transaction costs are high, and that reduction in exchange is considered to be a market failure that harms both providers of goods and services and consumers.

Second, the sharing economy equalizes the quality of services and reduces the difference in quality that previously existed between high-income groups and the average middle-class group.[78] The peer economy substitutes online agency, like a mobile app or the internet, for the real, human agents. This online agency makes less difference to the rich who employ full- or part-time agents in their household. These agents can drive cars, find the places to stay that will match their deepest preferences, and generally get the right people to work for them even for short-term tasks.

For instance, the founders of Uber began the service in part because San Francisco's radio car services and taxis offered such poor and expensive service.[79] Uber and Lyft are thriving today because, by using modern information technology with its online agents, they offer superior services to traditional taxis at prices that are often cheaper.[80] By eroding the distinction between the hail-and-dispatch markets, these on-demand apps provide far more frictionless transportation services than traditional taxis.[81]

By radically changing the costs of search, Uber and Lyft now provide transportation services to the average person that more closely resemble having a chauffeur, because the ridesharing services deliver drivers to riders on demand at the press of a cell phone.[82] And these benefits clearly help people of modest means because cabs are disproportionately used by people who

77 *See* Steven Tadelis, *Reputation and Feedback Systems in Online Platform Markets*, 8 ANN. REV. ECON. 321, 328–29 (2016) (concluding that such mechanisms are crucial to success of such markets).

78 Katie Benner, *Airbnb Tries to Behave More Like a Hotel*, N.Y. TIMES (June 17, 2017), https://www.nytimes.com/2017/06/17/technology/airbnbs-hosts-professional-hotels.html?mcubz=0.

79 *See* ADAM LASHINSKY, WILD RIDE: INSIDE UBER'S QUEST FOR WORLD DOMINATION 71 (2017).

80 Sara Silverstein, *These Animated Charts Tell You Everything About Uber Prices in 21 Cities*, BUS. INSIDER (Oct. 16, 2014), http://www.businessinsider.com/uber-vs-taxi-pricing-by-city-2014-10?IR=T.

81 *See* James B. Speta, *Southwest Airlines, MCI, and Now Uber: Lessons for Managing Competitive Entry into Taxi Markets*, 43 TRANSP. L.J. 101, 111 (2016).

82 *See id.* at 117.

may not have market alternatives for transportation, like the poor and disabled.[83] Some of these benefits may be large, even lifesaving. A recent study has shown that ambulance rides decline when ridesharing comes to town, showing that ridesharing can in some circumstances be a more reliable form of transport to the hospital even for serious matters.[84] Besides the radically improved convenience, the cost is lower too.[85] And costs are particularly lower for the high-value trips, like those to and from airports.[86]

And just as Airbnb has innovated and expanded on its original single service, so have ridesharing companies expanded their offerings on a regular basis. Uber and Lyft now allow consumers to share their rides with others at a reduced fare through the options called uberPOOL and Lyft Line. The GPS capabilities of the ridesharing apps make this kind of service more possible than before, because it can easily match people going in similar directions along similar routes, making ridesharing cheaper for all passengers while ensuring the same compensation for the driver. Uber Express Pool charges even less by picking people at designated places.[87]

UberPOOL provides an example of how innovative information technology is equalizing services down the income scale. UberPOOL is replacing some public transportation.[88] And yet the difference in quality between a pooled car and public transportation is even greater than between a ride summoned by an app and a taxi. Thus, such innovations suggest how the sharing economy may move to deliver benefits down the income scale.

III. Measuring the Equalizing Benefits of the Sharing Economy

As with many new technologies, the distinct advantages that the sharing economy provides—in this case particularly the advantages to the bottom

83 *Id.* at 115 (citing Adrian T. Moore & Ted Balaker, *Do Economists Reach a Conclusion on Taxi Deregulation?*, 3 Econ. J. Watch 109, 109 (2006)).

84 *See* Leon S. Moskatel & David J.G. Slusksy, *Did UberX Reduce Ambulance Volume?* 9 (Univ. of Kan., Dep't of Econ., Working Papers Series in Theoretical and Applied Economics No. 201708, 2017), http://www2.ku.edu/~kuwpaper/2017Papers/201708.pdf.

85 *See* Speta, *supra* note 81, at 118.

86 *Id.*

87 Josh Constine, *Uber 'Express POOL' Offers the Cheapest Fare if You'll Walk a Little*, TechCruch (Nov. 10, 2017), https://techcrunch.com/2017/11/10/uber-express-pool/.

88 *See* Regina R. Clewlow & Gouri Shankar Mishra, *Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States* 27 (Inst. of Transp. Studies, Univ. of Cal., Davis, Research Report UCD-ITS-RR-17-07, 2017) (finding a net six percent decrease in public transit use in major cities as a result of ride-hailing substitutions); Nicole Sadowsky & Erik Nelson, *The Impact of Ride-Hailing Services on Public Transportation Use: A Discontinuity Regression Analysis* 11–12 (Bowdoin Coll. Econ. Dept. Working Paper Series, Paper No. 13, 2017) (estimating that competition between Uber and Lyft depresses ridesharing prices sufficiently to serve as a "public transportation substitute"); Jeff McMahon, *UberPool and LyftLine Find the Gaps in Public Transit*, Forbes (July 29, 2016), https://www.forbes.com/sites/jeffmcmahon/2016/07/29/uberpool-and-lyftline-find-the-gaps-in-public-transit/#2623da0e53cd (assessing where these services are superior to public transport).

ninety-nine percent—are often hard to measure. Quantitatively, the issue is to determine the size of two kinds of benefits. First, what additional consumer surplus is created by the sharing economy and how is it distributed among different economic classes? Second, what do the largely nonrich participants and hosts earn from the sharing economy and what other nonpecuniary benefits are earned?

Even without exact quantification it is easy to conclude that the consumer surplus of the sharing economy is large and growing. Many consumers now recognize that they would have to wait a lot longer and pay a lot more to summon a taxi compared to using an on-demand ridesharing service like Uber or Lyft.[89] And Uber and Lyft's phenomenal growth rates in revenues are some of the highest of any company in the history of the world, and Airbnb's growth is not far behind.[90] The impressive growth rates of these companies suggest that they are hitting the sweet spot for millions of consumers.[91]

But in the case of Uber we have harder data, because another aspect of the sharing economy is its creation of a huge amount of market data detailing the number of drivers, passengers, and the prices at which they contract for each ride.[92] This detailed market information allows the supply and demand curves to be estimated and with them the surplus or value generated for consumers from ridesharing services. University of Chicago economist Steve Levitt found that in 2015 alone the additional consumer surplus within the United States generated by Uber was about $7 billion.[93] And that number does not include the surplus added by smaller competitors like Via, Gett, and Lyft.

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89 Silverstein, *supra* note 80; *see also* Chungsang Tom Lam & Meng Liu, Demand and Consumer Surplus in the On-demand Economy: The Case of Ride Sharing 29 (Oct. 11, 2017) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2997190 (noting that a large share of consumer surplus derived from ridesharing applications is a result of shortened wait time with a small amount of consumer surplus attributable to price).

90 *See* Eric Newcomer, *Uber, Lifting Financial Veil, Says Sales Growth Outpaces Losses*, BLOOMBERG (Apr. 14, 2017), https://www.bloomberg.com/news/articles/2017-04-14/embattled-uber-reports-strong-sales-growth-as-losses-continue. *See generally* Chiara Farronato & Andrey Fradkin, The Welfare Effects of Peer Entry in the Accommodation Market: The Case of Airbnb (Oct. 18, 2017) (unpublished manuscript), https://marketing.wharton.upenn.edu/wp-content/uploads/2017/08/10-19-2017-Fradkin-Andrey-PAPER.pdf.

91 *See* Lam & Liu, *supra* note 89, at 9 ("[T]he sheer volume of realized transactions on Uber and Lyft indicates consumers' valuation, by revealed preference.").

92 *See* Adam Creighton, *Uber's Pricing Formula Has Allowed Economists to Map Out a Real Demand Curve*, WALL ST. J.: REAL TIME ECON. (Sept. 19, 2016, 11:01 AM), https://blogs.wsj.com/economics/2016/09/19/ubers-pricing-formula-has-allowed-economists-to-map-out-a-real-demand-curve/.

93 *Id.*; *see also* Peter Cohen et al., *Using Big Data to Estimate Consumer Surplus: The Case of Uber* 5 (Nat'l Bureau of Econ. Research, Working Paper No. 22627, 2016), https://ideas.repec.org/p/nbr/nberwo/22627.html.

According to yet another economic study, Airbnb has also boosted consumer surplus by offering consumers lower prices and increased selection.[94] In 2014, the surplus was estimated to be about $350 million for the top ten U.S. cities alone.[95] A reasonable estimate of total surplus for the United States might be about $700 million. Given the increase in bookings Airbnb is experiencing, this surplus could have reached more than two billion dollars in 2017 and is likely to increase another tenfold by 2025.[96] These benefits to consumers do not count any that are provided by new, smaller housing services that have arisen to compete with Airbnb.[97]

And then to properly account for all of the increase in consumer value from the peer economy, we would have to include the added consumer surplus from all other smaller companies and web platforms in other areas of the sharing economy. There might be an additional annual consumer surplus of a few billion dollars generated directly by the companies themselves, for a total of between five and ten billion dollars from the sharing economy. And given that the sharing economy is supposed to grow by a factor of ten in less than seven years, we can expect a surplus soon in the hundreds of billions of dollars.[98]

These numbers do not include all the added consumer surplus generated by the improvements in incumbent services because of the entry of ridesharing companies, for example, by taxis that have improved their service and/or lowered fares in response to competition from the ridesharing services.[99] For instance, the number of complaints against traditional taxis substantially decreased following the arrival of ridesharing services.[100]

The other equalizing effect of the sharing economy is the new utility, both income and improved working conditions, that is being generated for service providers. Services like Airbnb can unlock large amounts of underused capital assets.[101] We have already noted that the average income of a single property Airbnb host is very substantial, about fourteen percent of the average wage.[102] Airbnb hosts observe that because of the infrastructure and service provided by Airbnb, the time they spend on management tasks

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94 *See* Farronato & Fradkin, *supra* note 90, at 3–4.

95 *See id.* at 2.

96 *See* Clay Dillow, *Can Airbnb Book a Billion Nights a Year by 2025?*, FORTUNE (Apr. 11, 2016), http://fortune.com/2016/04/11/airbnb-bookings-one-billion-a-year/.

97 HomeAway may be the biggest of these. *See* HOMEAWAY, https://www.homeaway.com (last visited Oct. 11, 2018).

98 *See* Niam Yaraghi & Shamika Ravi, *The Current and Future State of the Sharing Economy* 3 (Brookings India IMPACT Series No. 032017, 2017), https://www.brookings.edu/wp-content/uploads/2016/12/sharingeconomy_032017final.pdf.

99 SCOTT WALLSTEN, TECH. POLICY INST., THE COMPETITIVE EFFECTS OF THE SHARING ECONOMY: HOW IS UBER CHANGING TAXIS? (2015); *see also* Adi Gaskell, *Study Explores the Impact of Uber on the Taxi Industry*, FORBES (Jan. 26, 2017), https://www.forbes.com/sites/adigaskell/2017/01/26/study-explores-the-impact-of-uber-on-the-taxi-industry/.

100 WALLSTEN, *supra* note 99, at 19.

101 *See supra* notes 41–45 and accompanying text.

102 *See supra* note 24 and accompanying text.

for their rentals is not hugely burdensome.[103] But for those property owners who would prefer to outsource these services to somebody else, companies have grown up recently to handle the details of Airbnb reservations and cleaning the spaces to be rented.[104]

There is also strong reason to believe that ridesharing has improved the employment opportunities of many of its drivers. Ridesharing has attracted many drivers—one estimate has suggested that Uber may have a million drivers in the United States alone.[105] Second, studies funded by Uber suggest that drivers earn substantially more than the minimum wage, and more than taxi drivers.[106] But even if Uber drivers earned only a little more than the minimum wage, the job would be worth a lot more to them than most minimum wage jobs.[107]

One advantage is that Uber and Lyft drivers do not have a set schedule, but instead work completely flexible hours at their own convenience. That flexibility allows ridesharing drivers to schedule their time to do other work (sometimes full-time jobs), do chores, go to school, or care for family members. For those drivers, their only other alternative to a fixed-hour work schedule might be going on welfare or disability. And it is important to note that rideshare drivers have substantially more flexibility than taxi drivers who could rent a cab for a day, because rideshare drivers make stop/start decisions continuously throughout the day at their own convenience.

A recent study found that having complete flexibility over the number of hours worked is worth as much to Uber drivers as forty percent of the value of their total earnings, or about $150 a week.[108] In other words, most Uber drivers prefer a flexible driving schedule with lower wages to a job that pays higher wages with a fixed work schedule. If they were required to be

103 *See* Airi Lampinen & Coye Cheshire, *Hosting via Airbnb: Motivations and Financial Assurances in Monetized Network Hospitality*, CHI '16: PROCS. OF THE 2016 CHI CONF. ON HUM. FACTORS IN COMPUTING SYS., May 2016, 1669, at 1673 (quoting an Airbnb host as remarking upon the convenience provided by the Airbnb infrastructure: "I guess the payment would just happen. I think it was just taken care of automatically by Airbnb").

104 *See* Marianna Sigala, *Market Formation in the Sharing Economy: Findings and Implications From the Sub-Economies of Airbnb*, *in* SOCIAL DYNAMICS IN A SYSTEMS PERSPECTIVE 159, 160 (Sergio Barile et al. eds., 2018) (noting that the subeconomy of Airbnb is made up primarily of businesses that "basically support Airbnb hosts by outsourcing them (accommodation) management services that are primarily found in the traditional hospitality industry").

105 *See* Melissa Berry, *How Many Uber Drivers Are There?*, RIDESHARE GUY (Nov. 3, 2017), https://therideshareguy.com/how-many-uber-drivers-are-there/.

106 *See* Niall McCarthy, *Fare Deal? How the Hourly Earnings of Uber and Taxi Drivers Measure Up*, FORBES (Nov. 28, 2016), https://www.forbes.com/sites/niallmccarthy/2016/11/28/fare-deal-how-the-hourly-earnings-of-uber-and-taxi-drivers-measure-up-infographic/#6aa69dc6689a.

107 *See infra* notes 108–11 and accompanying text.

108 M. Keith Chen et al., *The Value of Flexible Work: Evidence From Uber Drivers* 45 (Nat'l Bureau of Econ. Research, Working Paper No. 23296, 2017), http://www.nber.org/papers/w23296.

employed on fixed schedules they would reduce their hours by two-thirds.[109] This is a powerful example of the improved working conditions that the sharing economy can provide employees.

Moreover, another great advantage of working for ridesharing services is safety. Traditional taxi drivers have faced risks of bodily assault and even death at the hands of passengers who are disgruntled or have targeted them for robbery.[110] Indeed, in years past they have often been at greater risk of fatality from homicides than driving accidents.[111]

Yet, because all Uber and Lyft customers must provide credit card information to use ridesharing services, the passengers are identified and traceable, and thus are less likely to commit assaults or crimes against drivers or damage their vehicles.[112] Further, nonpayment risk is reduced since the passengers' credit cards are on file and charged for each ride.[113] And because passengers receive ratings from drivers after each ride, those passengers who are abusive or disorderly will receive low ratings and can be avoided by Uber and Lyft drivers.[114] The rich, similarly, have generally had safe, hassle-free jobs.

To be sure, most of the previous discussion of reasons that the consumer surplus has tended to go disproportionately to the nonrich has been a qualitative argument rather than quantitative. But one recent study of one aspect of the sharing economy does provide quantitative evidence that the gains to suppliers and surplus to consumers redound to the nonrich. Economists measured the effects of Getaround,[115] a service that permits peer-to-peer rentals of cars.[116] They found the gains to the automobile industry's consumer surplus to be substantial.[117] And the gains were concentrated in those with below-median incomes.[118] The reasons for this dispersion of consumer surplus were twofold. First, below-median income consumers were more

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109 *Id.* Taxicab drivers never have hours as flexible as Uber drivers, because while some may be able to decide whether to rent a cab for a particular day, they cannot decide to stop and start continuously, thus preventing them from making continuous decisions about what is worth more to them—work or leisure.

110 *See* Matthew Feeney, Cato Inst., Is Ridesharing Safe? 1 (2015) ("[T]he ridesharing business model offers big safety advantages as far as drivers are concerned. . . . [C]ash-free transactions and self-identified customers substantially mitigate one of the worst risks associated with traditional taxis: the risk of violent crime.").

111 *See, e.g.*, Bureau of Labor Statistics, U.S. Dep't of Labor, 2014 Census of Fatal Occupational Injuries (Final Data) 19, https://www.bls.gov/iif/oshwc/cfoi/cftb0291.pdf (last visited Jan. 25, 2018).

112 *See* Feeney, *supra* note 110, at 3–4.

113 *See id.* at 3.

114 *See id.* at 4 (noting how Uber and Lyft drivers have a safety advantage over taxi drivers because they "know[ ] the identity of their passengers").

115 *See* Getaround, https://www.getaround.com/ (last visited Feb. 19, 2018).

116 Samuel Fraiberger & Arun Sundararajan, Peer–to–Peer Rental Markets in the Sharing Economy 2 (Sept. 10, 2017) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2574337.

117 *Id.* at 4.

118 *Id.*

likely to rent their cars.[119] Second, below-median consumers were more likely to forego purchasing cars because they could rent them more easily and cheaply when they wanted.[120] It is not clear that the rest of the sharing economy delivers benefits disproportionately to people below the median, but the same reasoning suggests that it will deliver its benefits disproportionately to people who are not high income. People of modest income will be more interested in being providers and consumers in these markets than the rich.

Some critics of the sharing economy claim that it is destroying some jobs, like those of traditional taxi drivers or housekeepers at hotels. This type of argument has been made for centuries, ever since the Luddites famously argued in the 1800s that new kinds of weaving machines were taking away jobs from those who had previously been weaving textiles by hand.[121] Economists almost universally view the Luddite movement as presumptively invalid.[122] It even gets its own name as a characteristic error in social thought: the "lump of labor fallacy."[123] The fallacy, or mistake, is to view the number of jobs in society as fixed.[124] In reality, new jobs are always created when some jobs disappear, but the number of new jobs always outnumbers the jobs destroyed, leading to a net increase in jobs.[125] The number of jobs is never limited, because people's desires for goods and services are potentially unlimited.[126] And in the long run the new jobs have paid higher wages than the old jobs lost, because of the greater wealth and economic growth that result from innovation and advances in technology.[127]

But even setting aside this general argument, we can see some particular ways that the sharing economy itself is likely to create more jobs than it eliminates. Airbnb serves many people who might not stay at a hotel, because they cannot afford one, prefer a more intimate setting, or value a larger living

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119 *Id.*

120 *Id.*

121 *See* Lehman, *supra* note 62, at 265 ("Fear of job loss attributed to increased technology in the workplace has recently reached a high point perhaps not seen since the Luddite uprisings and property destruction in British textile factories more than two hundred years ago.").

122 *See id.* (noting that economists "should be naturally skeptical of Luddite fallacies").

123 Paul Krugman, *Lumps of Labor*, N.Y. TIMES (Oct. 7, 2003), https://www.nytimes.com/2003/10/07/opinion/lumps-of-labor.html.

124 *See id.*

125 *See* Erik Brynjolfsson & Andrew McAfee, *Will Humans Go the Way of Horses?*, FOREIGN AFF., July–Aug. 2015, at 8, 8 ("[R]eal wages and the number of jobs have increased relatively steadily throughout the industrialized world since the middle of the nineteenth century, even as technology advanced like never before.").

126 *See* David Hamilton, *What Has Evolutionary Economics to Contribute to Consumption Theory?*, 7 J. ECON. ISSUES 197, 205 (1973) (noting how the proliferation of technology indicates "the human animal seems able to create the necessary demand and the necessary means of satisfying this demand").

127 *See generally* Brynjolfsson & McAfee, *supra* note 125.

space than a hotel room.[128] This expansion of travel experiences through Airbnb creates more jobs. Cleaning staff, for instance, are employed to tidy up rental spaces after guests leave.[129] The "host" jobs that Airbnb is generating for local guides have no counterparts in the hotel industry and few in the travel industry in general.[130] At least so far, the hotel industry and its employees do not seem to be suffering. Hotel occupancy rates remain high, suggesting that Airbnb is not generally taking business away from hotels as much as it is expanding travel experiences by bringing in new renters.[131]

Similarly, ridesharing services have expanded the number of people using transportation services and hiring cars driven by others. Thus, the total number of jobs for car drivers has gone up.[132] To be sure, the ridesharing services have taken away some business from traditional taxis, which has certainly reduced the number of traditional taxi drivers.[133] However, it is not clear how much that change substantially harms those who were previously driving traditional taxis for a taxi company, because they can easily choose to instead drive for ridesharing services with the advantages of safety and greater flexibility in scheduling.[134]

It is true that some owners of taxi medallions have been harmed.[135] When government-enforced scarcity of taxi medallions is eroded by new technologies, those who previously profited from the government regulation are indeed worse off. But this kind of regulation that limits entry is unlikely to help address income inequality overall because it prevents those with limited capital from entering the taxi business. Like ridesharing companies, the owners of medallions were also intermediaries between drivers and passengers, but they offered experiences that were less equalizing for drivers and passengers alike. The drivers lacked the valuable flexibility of making their own decisions when to drive, and passengers did not get the luxury of online ride hailing.

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128 *See* Farronato & Fradkin, *supra* note 90, at 1 (noting how most Airbnb "bookings would not have resulted in hotel bookings had Airbnb not been available").

129 *See* Kia Kokalitcheva, *Airbnb Lets Trusted Hosts Manage Others' Home-Rental Listings*, FORTUNE (Sept. 16, 2016), http://fortune.com/2016/09/15/airbnb-co-hosting/.

130 *See Host an Experience on Airbnb*, *supra* note 55.

131 *See Modest Growth to Continue for U.S. Hotels*, HOTEL NEWS RESOURCE (Aug. 10, 2017), https://www.hotelnewsresource.com/article95851.html.

132 *See* Thor Berger et al., *Drivers of Disruption? Estimating the Uber Effect* 2 (Oxford Martin Programme on Tech. & Emp't, Working Paper No. 2387, 2017) https://www.oxfordmartin.ox.ac.uk/publications/view/2387 ("[O]ur point estimates consistently suggest that the labor supply of traditional taxi drivers increased in cities where Uber was introduced relative to cities where it was not . . . .").

133 *See id.* at 8 ("[W]age-employed taxi drivers saw relative income declines after Uber's introduction . . . .").

134 *See id.* at 7 ("Uber's introduction [has] led to a relative increase in self employment among taxi drivers.").

135 *See* WALLSTEN, *supra* note 99, at 4 ("By 2015 . . . the price of a medallion [in New York City] had fallen by about 25 percent in response to competition from ride-sharing services.").

In fact, U.S. courts have, specifically in the case of Uber, recognized the value that the sharing economy brings to a particular city.[136] In a decision finding that Uber's entry into the Philadelphia market was not anticompetitive, the Third Circuit highlighted the benefits Uber brought to consumers—benefits such as "lower prices, more available taxicabs, and a high-tech alternative to the customary method of hailing taxicabs and paying for rides."[137] Furthermore, the court noted that Uber's economic efficiency is also advantageous and should "be encouraged, because that often translates to enhanced competition among market players, better products, and lower prices for consumers."[138]

Another equality argument against the sharing economy is that it makes a few people very rich: Travis Kalanick, the founder of Uber, and Brian Chesky, the founder of Airbnb, have become so rich that they are members of the Forbes 400.[139] This accretion of wealth to a few individuals counts somewhat against the equalizing effects of the sharing economy, but not as much as one might think. First, most of the value of startups goes to venture capital funds and much of the money in venture capital funds in turn comes from other actors, like pension funds, where profits redound much more diffusely.[140]

Moreover, the market cap of these firms is much less than the consumer surplus they deliver. For instance, the market cap of Uber is about $50 billion[141] and the yearly consumer surplus is currently $7 billion.[142] At a discount rate of five percent, the future stream of surplus is worth about $140 billion, assuming that surplus remains the same. But Uber has such a high valuation precisely because it is thought that it will grow to deliver much more consumer surplus in the future.

And the market is almost surely right, because the equalizing effects of the sharing economy will grow in importance as the younger generations age and become an even more important demographic group of consumers.[143]

136 *See* Daniel Wiessner, *3rd Circuit Rejects Philly Cab Companies' Antitrust Claims Against Uber*, REUTERS (Mar. 27, 2018), https://www.reuters.com/article/antitrust-uber/3rd-circuit-rejects-philly-cab-companies-antitrust-claims-against-uber-idUSL1N1R91YQ.

137 Phila. Taxi Ass'n v. Uber Techs., Inc., 886 F.3d 332, 340 (3d Cir. 2018), *cert. denied*, No. 18-32, 2018 WL 3306879 (Oct. 1, 2018).

138 *Id.*

139 *Forbes 400*, FORBES, https://www.forbes.com/forbes-400/list/ (last updated Oct. 3, 2018).

140 Bob Zider, *How Venture Capital Works*, HARV. BUS. REV., Nov.–Dec. 1998, at 131, https://hbr.org/1998/11/how-venture-capital-works.

141 *See* Johanna Interian, Note, *Up in the Air: Harmonizing the Sharing Economy Through Airbnb Regulations*, 39 B.C. INT'L & COMP. L. REV. 129, 132 (2016) (citing Scott Austin et al., *The Billion Dollar Startup Club: All Companies as of October 2015*, WALL ST. J. (Feb. 18, 2015), http://graphics.wsj.com/billion-dollar-club/).

142 *See supra* note 93 and accompanying text.

143 *See* Neil Charness & Walter R. Boot, *Aging and Information Technology Use: Potential and Barriers*, 18 CURRENT DIRECTIONS PSYCHOL. SCI. 253, 253 (2009) (noting that the "digital divide" caused by an aging population in a society of rapid technological progress "favor[s] younger adopters").

Seventy-two percent of all Americans have used the sharing economy for at least one transaction.[144] About a third of those who are under forty-five have used the peer economy for transactions with four different services.[145]

Thus, the differential use of the sharing economy by age groups shows that in a technologically accelerating society, age can become a fundamental axis of inequality.[146] Younger people are more likely to take advantage of technological advances than older people because they are comfortable with technology.[147] As technology accelerates, this axis makes the young systematically better off than the old. But substituting this kind of inequality for more material forms of inequality reduces inequality in any morally disquieting sense. First, the old have far more assets than the young.[148] Second and even more importantly, most of the young will become old and likely face technological disadvantages vis-à-vis the future generations.

And further developments are likely to make the sharing economy even more favorable for workers and consumers as compared to the investors in companies that facilitate these markets. Blockchain provides a decentralized intermediary for the sharing economy that is an alternative to a corporation managing the distribution of goods and services that is the essence of the sharing economy. Blockchains can create a peer-to-peer network for financial transactions on top of the internet.[149] It allows participants in a sharing economy to create a network cooperative.[150] The transparent verification process can assure that these rules are enforced among participants.[151]

Thus, essentially, a sharing economy cooperative using blockchain would eliminate the corporate intermediary that manages the network of service providers through its administration. This development can also be explained in terms of Coasean law and economics. By providing a transparent way of enforcing contracts and eliminating opportunism, blockchain so much lowers the transaction costs of enforcing long-term complex contracts that groups of people can collaborate in a network rather than use a corpo-

144 JACOB GALLEY, U.S. BUREAU OF LABOR STATISTICS, AWARENESS AND USAGE OF THE SHARING ECONOMY 1 (2016), https://www.bls.gov/opub/mlr/2016/beyond-bls/pdf/awareness-and-usage-of-the-sharing-economy.pdf.

145 *Id.*

146 *Cf.* Charness & Boot, *supra* note 143, at 255 (noting that new technologies are often "not designed with [the aging population's] capabilities in mind").

147 *Cf. id.* (establishing how older adults' lack of comfort with new technologies makes adoption less likely).

148 RICHARD FRY ET AL., PEW RESEARCH CTR., THE OLD PROSPER RELATIVE TO THE YOUNG: THE RISING AGE GAP IN ECONOMIC WELL-BEING (2011), http://www.pewresearch.org/wp-content/uploads/sites/3/2011/11/WealthReportFINAL.pdf.

149 *See* Marco Iansiti & Karim R. Lakhani, *The Truth About Blockchain*, HARV. BUS. REV., Jan.–Feb. 2017, at 118, https://hbr.org/2017/01/the-truth-about-blockchain.

150 *See* Primavera De Filippi, *What Blockchain Means for the Sharing Economy*, HARV. BUS. REV. (Mar. 15, 2017), https://hbr.org/2017/03/what-blockchain-means-for-the-sharing-economy.

151 *Id.*

rate intermediary that charges them for administration.[152] It is another step in the ongoing dematerialization of the world, which equalizes the positions of people along the income scale because they no longer have to pay for agents.[153] Just as sharing economy companies replaced less efficient intermediaries, like owners of taxi medallions, so may blockchain in turn displace these companies.

Already, small-scale blockchain cooperatives are appearing. For instance, Swarm City provides a blockchain to be an intermediary for ridesharing.[154] As blockchains mature and millennials more comfortable with such technology become a greater portion of the workforce, these kinds of cooperatives can grow. Even if they do not displace more traditional ridesharing companies, like Uber and Lyft, they will put pressure on these companies, requiring them to give better deals for their drivers.

IV. Regulation's Danger to the Equalizing Features of the Sharing Economy

Given the benefits of the sharing economy for equality as well as efficiency, care should be taken to avoid regulations that would undermine these features. Proponents of increased regulation of the sharing economy often exaggerate the benefits they expect the regulations to produce and downplay the likelihood or extent to which greater regulation can stifle innovation, be subject to regulatory capture by established businesses, harm the poor and the marginalized, and produce uncertainty.[155] And, in many cases, the proponents of these regulations fail to take into consideration the unique features of the sharing economy, such as the jobs available and the individuals willing to do them.

The desire to regulate the sharing economy must be balanced against not only the unintended harms that poorly thought-out regulations can produce, but also the myriad benefits that the sharing economy creates for society at large. Uber, for example, can provide greater job and income-earning opportunities for racial minorities and immigrants, a "multiplier" effect of "increased consumer spending and revitalization of downtown commercial areas" to which consumers have easier access, increased tax revenues, and even safer roads.[156] And, despite critics' claims that Airbnb has led to

152 *See* Sinclair Davidson et al., Economics of Blockchain 8 (March 8, 2016) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2744751.

153 *See* De Filippi, *supra* note 150.

154 *What is Swarm City?*, Swarm City, https://thisis.swarm.city/ (last visited Aug. 26, 2018).

155 *See generally* Ilya Shapiro & David McDonald, *Regulation Uber Alles: How Governments Hurt Workers and Consumers in the New New Economy*, 2017 U. Chi. Legal F. 461.

156 *Id.* at 475 ("According to a report by Mothers Against Drunk Driving, Uber's entry into Seattle was associated with a ten percent decrease in DUIs, and a Benenson Strategy Group survey found that '88% of respondents over the age of 21 agree with the statement that 'Uber has made it easier for me to avoid driving home when I've had too much to drink,' and 70–80 percent said Uber has made it less likely that their friends drive after

shortages of affordable housing and increased rents in densely populated urban areas, there is little evidence to back this up. In fact, there is greater support for the propositions that stringent regulatory policies have led to these negative consequences and that Airbnb helps alleviate this problem by giving low-income individuals and families an opportunity to earn extra income.[157]

This Part offers a framework for evaluating regulations, including a number of those that scholars have for some time predicted would emerge at the state and local levels.[158] Regulations that are simply designed to protect incumbents are obviously detrimental, because the sharing economy expands entry to the benefit of both consumers and new providers. Some new regulations may be justified as ways of preventing sharing economies from engaging in regulatory arbitrage. Through such arbitrage these companies make money by getting around public-regarding regulations that applied to the old economy. But whether regulatory arbitrage is in the public interest depends upon whether those prior regulations are delivering the same benefits as they did before the advent of the sharing economy. In many cases, as with regulations of driver safety for passengers and regulation of the employment relationship with companies, they need to be reconsidered because of technological change that redounds to the benefit of efficiency and equality. In contrast, the sharing economy should not be allowed to exploit loopholes in taxation, because the need for progressive taxation of economic activity remains unchanged with the sharing economy. Finally, some regulations focus on new risks that the sharing economy may be creating. For instance, some jurisdictions have prohibited home sharing on the grounds that it will raise the price of housing in the jurisdiction. Such regulations need to be scrutinized, however, to determine whether they are counterproductive and pretexts for incumbent protection.

A. Incumbent Protection

Much of the opposition to the peer economy comes largely from legacy incumbent businesses, like traditional taxi companies or hotels.[159] The incumbent businesses are frequently well-organized special interest groups

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drinking." (footnote omitted) (quoting BENENSON STRATEGY GRP., STUDY: DRIVING CHOICE AND TRANSPORTATION OPTIONS (2015), https://www.bsgco.com/insights/study-drinking-driving-and-transportation-options)).

157 *Id.* at 480.

158 *See, e.g.*, Daniel E. Rauch & David Schleicher, *Like Uber, but for Local Government Law: The Future of Local Regulation of the Sharing Economy*, 76 OHIO ST. L.J. 901 (2015).

159 *See* Benjamin G. Edelman & Damien Geradin, *Efficiencies and Regulatory Shortcuts: How Should We Regulate Companies Like Airbnb and Uber?*, 19 STAN. TECH. L. REV. 293, 307 (2016) (noting that much of the regulation of the sharing economy "seems to be designed to block the development of software platforms (or other new entrants) in order to protect incumbents").

and many have long-established connections with local politicians.[160] The result has been attempts to ban outright the expansion of the innovative and generally equalizing services that have emerged in the peer economy.[161] These efforts would obviously undermine the greater quality in income production and consumption that the sharing economy brings.

Some incumbent businesses have made blatant claims for being protected from competition. For instance, in Milwaukee, traditional taxi companies argued that since the city had granted a specific number of licenses for taxis, permitting Uber to operate at all was a "taking" of their property by the city government.[162] Richard Posner, the former Seventh Circuit judge who is also a famous law and economics theorist, dismissed this argument. Judge Posner held bluntly that "taxi permits issued by the Milwaukee city government are property, but have not been 'taken,' as they do not confer on the holders a property right in, amounting to control over, all transportation by taxis and taxi substitutes . . . in Milwaukee."[163] Then he noted that the cab drivers' losses are simply the result of the operation of the free market: "Undoubtedly by freeing up entry into the taxi business the new ordinance will reduce the revenues of individual taxicab companies; that is simply the normal consequence of replacing a cartelized with a competitive market."[164]

Philadelphia taxicab companies also alleged that Uber attempted to monopolize the market in violation of federal antitrust laws. But in another example of courts upholding Uber's legality against claims of anticompetitive behavior, the Third Circuit rejected this argument, reasoning that Uber "bolstered competition by offering customers lower prices, more available taxicabs, and a high-tech alternative."[165] The court added that "[r]unning a business with greater economic efficiency" is not anticompetitive; in fact, it "enhance[s] competition" by leading to "better products, and lower prices."[166] As discussed before, this market delivers equalizing benefits to both providers and consumers.

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160 *See id.* at 306 ("[R]egulators may become closely linked to the firms they regulate, often through extended discussions, career trajectories, or a desire to maintain the status quo." (citing Jean-Jacques Laffont & Jérôme Pouyet, *The Subsidiarity Bias in Regulation*, 88 J. PUB. ECON. 255, 255 (2003)).

161 *See id.* at 307 ("[L]icensing also invites license-holders to pressure public authorities to exclude new entrants from the market, as such market entry would create new competition and reduce the value of their licenses."); *see also id.* (noting how Uber's presence in France brought violent protests causing the French Parliament to pass a law designed to hinder the sharing economy).

162 Joe Sanfelippo Cabs, Inc. v. City of Milwaukee, 839 F.3d 613, 614 (7th Cir. 2016).

163 *Id.* at 616.

164 *Id.*

165 Phila. Taxi Ass'n v. Uber Techs., Inc., 886 F.3d 332, 340 (3d Cir. 2018), *cert. denied*, No. 18-32, 2018 WL 3306879 (Oct. 1, 2018).

166 *Id.*

B. Distinguishing Good from Bad Regulatory Arbitrage

A more plausible kind of regulation is one premised on the notion that sharing economy firms are profiting from avoiding regulations that are in the public interest, not just the incumbents' interests. Thus, the regulation should be imposed to close the loopholes the sharing economy has exploited. But regulatory arbitrage can be good, if it forces rethinking the need for particular kinds of regulation that may need modification in a world where transaction costs have changed.

Consider the effort to argue that it is in the public interest for safety that these new services be placed under the same regulatory scheme that their incumbent taxi competitors face.[167] Thus, Uber drivers should face the same requirements as taxicab drivers, such as being fingerprinted and going through a background check.

But applying the same existing regulations to these new ridesharing services ignores the innovations that Uber and Lyft bring. Uber and Lyft platforms set up legal contracts between the driver and the rider using the ridesharing app that also transfers funds from the passengers.[168] It is no longer the anonymous relationship of that which exists when a passenger hails a taxi on the street. Uber and Lyft vet the drivers, and the riders provide credit card information to the ridesharing services.[169] The driver rating system used by each passenger after each ride then also gives drivers far greater incentives to behave well than those faced by a typical taxi driver.[170]

Coase's analysis of agency costs helps show why regulation of ridesharing services is less necessary to protect safety. Government regulation may be essential when high transaction costs make it difficult to establish a workable contractual relationship where each side has confidence in the other's performance. But one of the greatest successes of the sharing economy has been to reduce transaction costs and make a greater variety of low-cost contracts workable and practical. When the buyer and seller of a service have

167 *See, e.g.*, Calo & Rosenblat, *supra* note 5, at 1645–46 (noting how critics of the sharing economy argue that the skirting of traditional regulations makes the sharing economy "underinsured, less safe, [and] less sanitary" than their traditional counterparts (first citing Adrienne LaFrance & Rose Eveleth, *Are Taxis Safer than Uber?*, ATLANTIC (Mar. 3, 2015), http://www.theatlantic.com/technology/archive/2015/03/are-taxis-safer-than-uber/386207/; then citing Amanda MacMillan, *6 Health Risks of Staying in Someone Else's Home*, HUFFINGTON POST (Nov. 13, 2014), https://www.huffingtonpost.com/2014/11/13/health-risks-staying-over_n_6146974.html)).

168 *See* Edelman & Geradin, *supra* note 159, at 297 (noting that a defining characteristic of sharing economy platforms is how they "place[ ] the entire transaction (including search, pricing, payment, and evaluation) onto the platform").

169 *See* Michael C. Munger, *Tomorrow 3.0: The Sharing Economy*, 20 INDEP. REV. 391, 394 (2016) (noting how the information provided by sharing economy platforms—in the form of "ratings and reputation"—serve as a form of vetting for security purposes, while the platforms' processing of the financial transaction "remov[es] most of the risk of robbery or reneging").

170 *See* Edelman & Geradin, *supra* note 159, at 300.

greater assurance of each other's good behavior for ridesharing services, less government regulation is needed.

Simply applying the same rules to ridesharing companies with ratings systems without allowing for the effects of these systems on safety creates a form of anticonsumer incumbent protection. Moreover, if requiring costly background check obligations causes ridesharing companies to withdraw their services, both riders and drivers will lose the benefit of their equalizing features.[171] Indeed, if a rating system provides more safety over time for both driver and rider, one of the non-price-equalizing features lost will be greater safety for people of modest means, the kind of safety the rich have always enjoyed.

It does not follow that because the ratings system strengthens the reputational road to safety, that no other regulation other than permitting such a system to satisfy safety requirements is needed.[172] But any safety requirement needs to be reconsidered in light of the safety that such a rating system brings. Then taxi companies should be given the option of using a ratings system to enjoy the advantages of the ratcheting down requirements.[173]

Another concern is that the sharing economy's business model depends on treating those offering services as independent contractors rather than as employees.[174] The arguments that this is a form of regulatory arbitrage differ in detail, both because the sharing and gig economies differ in their details from one area to another, and because the distinction between employees and contractors differs legally depending on the exact situation and the specific jurisdiction. But the basic argument is that a company like Uber exercises sufficient control over its drivers that they should be classified as employees and not as independent contractors.[175]

But if the traditional rules undermine the benefits of the sharing economy, they should be updated if the gains to both equality and efficiency are to be realized.[176] Just as treating new workers in the emerging peer economy

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171 *See* Eliana Dockterman & Time, *Uber and Lyft Are Leaving Austin After Losing Background Check Vote*, FORTUNE (May 8, 2016), http://fortune.com/2016/05/08/uber-lyft-leaving-austin/ (noting that fingerprinting hurts part-time drivers, "the heart of Lyft's peer-to-peer model").

172 *See* Speta, *supra* note 81, at 123.

173 *Id.* at 124.

174 *See, e.g.*, O'Connor v. Uber Techs., Inc., 82 F. Supp. 3d 1133, 1135 (N.D. Cal. 2015).

175 *See id.* at 1137 ("Uber is deeply involved in . . . qualifying and selecting drivers, regulating and monitoring their performance, disciplining (or terminating) those who fail to meet standards, and setting prices.").

176 *See* Seth D. Harris & Alan B. Krueger, *A Proposal for Modernizing Labor Laws for Twenty-First-Century Work: The "Independent Worker"* 8 (Brookings Inst., The Hamilton Project Discussion Paper 2015-10, 2015), http://www.hamiltonproject.org/assets/files/modernizing_labor_laws_for_twenty_first_century_work_krueger_harris.pdf ("Forcing these new forms of work into a traditional employment relationship could be an existential threat to the emergence of online-intermediated work, with adverse consequences for workers, consumers, businesses, and the economy."); *see also id.* at 14 ("[Such an employment classification] should be efficient in the sense that it enables workers and intermediaries to maximize the joint surplus that their relationship produces.").

under the same public safety regulations as the old economy ignores the significant safety advantages that the sharing economy brings to customers, so treating gig economy workers for all purposes as traditional employees reduces the advantages that workers get from the sharing economy—autonomy, safety, and flexibility.

Thus, many regulations that would force Uber drivers to work a certain set of hours or force ridesharing companies to monitor their drivers closely would deprive drivers of the autonomy and flexibility that are big benefits of the sharing economy. For instance, many drivers keep their apps on even when they are not working and switch among different ridesharing companies.[177] While this promotes flexibility and autonomy for the driver, it is inconsistent with many of the legal duties attributed to an employer.[178]

Moreover, the ability of drivers themselves to enter the market at the hours they want is also crucial to expanding supply at the appropriate times to match demand. A traditional employee-employer relationship, where hours are under the employer's direct control, would undermine the benefits of the sharing economy in ridesharing. Each individual driver makes a decision to drive based on how likely he is to obtain customers. This judgment is obviously unpredictable, depending on such matters as the exact weather conditions and public and private events in the area. The market will reach equilibrium faster when more participants are able to make decisions about entering it, exploiting the wisdom of crowds. This important economic reality allows ridesharing to deliver its equalizing benefits.

Regrettably, a recent California Supreme Court ruling[179] threatens to impose this corporate-employee relationship on companies providing services in the sharing economy.[180] In a case involving a delivery company, the California Supreme Court "ruled that employers must treat workers who do work related to a company's 'usual course of business' as full-fledged employees."[181] The key feature of this ruling is that the presumption will be that workers are not independent contractors, but rather are employees, and companies trying to classify their workers as independent contractors must satisfy each element of the California court's new test.[182]

Consequently, scholars predict that prices of sharing economy services in California will likely rise, as the higher payroll taxes and additional expenses that accompany the conversion of independent contractors to employees may "increase an employer's costs by about 25 to 40 percent per

177 *See id.* at 9.

178 *See id.* (noting that in this situation, "[i]f anything, Uber and Lyft are competitors for the driver's services, not co-employers").

179 Dynamex Operations W., Inc. v. Superior Court, 416 P.3d 1 (Cal. 2018).

180 Klint Finley, *A California Ruling Threatens the Gig Economy*, WIRED (May 2, 2018), https://www.wired.com/story/a-california-ruling-threatens-the-gig-economy/.

181 *Id.*

182 Ian Adams & Brian Jencunas, *Economic Costs and Policy Alternatives to California's* Dynamex *Decision* 1, 3 (R Street Policy Study No. 145, 2018), https://www.rstreet.org/2018/06/13/economic-costs-and-policy-alternatives-to-californias-dynamex-decision/.

worker."[183] Furthermore, smaller companies could have a much more difficult time breaking into the sharing economy,[184] and the ruling could undermine the quintessential benefit of the sharing economy—flexible hours and work arrangements that give more people an opportunity to take advantage of the sharing economy.[185]

Once again, Coase's analysis of agency costs helps to understand the issue at hand. Advances in technology have made it possible for individuals to contract efficiently with one another directly (peer-to-peer) without requiring them to be part of the same company.[186] Getting rid of the corporate-employee relationship eliminates the rigidity and inefficiency of that traditional relationship, which can restore valuable autonomy and flexibility to an individual contract worker. And that flexibility and autonomy can provide great value to an independent contractor.

Some have suggested that the way to handle sharing economy workers is to have hybrid classifications, giving independent contractors some of the regulatory benefits of being an employee without creating structures that would lead Uber to eliminate the benefits of the sharing economy, such as flexible hours.[187] For instance, a jurisdiction might try to assure that Uber drivers are getting a minimum wage for hours worked.[188] From an egalitarian standpoint, there is nothing intrinsically wrong with such proposals, but the equalizing features of this economy suggest the checklist that such hybrid regulations should satisfy. First, they must not undermine the equalizing benefits, such as regulations that make it impossible for workers to enjoy the autonomy and flexibility of setting their own hours. Second, they must not be so burdensome as to make it more difficult for sharing economies to offer

183 Finley, *supra* note 180; *see also* Adams & Jencunas, *supra* note 182, at 3 ("[I]ndependent contractors cost only 66 cents on the dollar for every hour worked by a full-time employee."); Andrei Hagiu & Julian Wright, The Status of Workers and Platforms in the Sharing Economy (June 20, 2018) (unpublished manuscript), www.andreihagiu.com/wp-content/uploads/2018/07/Liquidity-constraint-06202018.pdf.

184 Professor Arun Sundararajan of New York University Stern School of Business, said: "[P]rices will be higher, at least in California . . . . [N]ewer, smaller companies will have a much harder time than well-funded companies like Uber and Lyft, which will be better able to absorb costs and have established large labor forces." Finley, *supra* note 180.

185 *See* Adams & Jencunas, *supra* note 182, at 4; Helen Floersh, *Business Groups Appeal to State on* Dynamex *Decision*, SAN FERNANDO VALLEY BUS. J. (June 27, 2018), www.sfvbj.com/news/2018/jun/27/business-groups-appeal-state-dynamex-decision/.

186 *See* Valerio De Stefano, *The Rise of the "Just-in-Time Workforce": On-Demand Work, Crowdwork, and Labor Protection in the "Gig Economy,"* 37 COMP. LAB. L. & POL'Y J. 471, 476 (2016); *see also* Marina Lao, *Workers in the "Gig" Economy: The Case for Extending the Antitrust Labor Exemption*, 51 U.C. DAVIS L. REV. 1543 (2018).

187 *See* Andre Andoyan, Comment, *Independent Contractor or Employee: I'm Uber Confused! Why California Should Create an Exception for Uber Drivers and the "On-Demand Economy,"* 47 GOLDEN GATE. U. L. REV. 153, 172 (2017) (discussing danger that classifying Uber drivers as employees would result in much more hierarchical relation between drivers and owners); *see also* Harris & Krueger, *supra* note 176, at 10 (proposing "a new legal and economic category of independent workers").

188 Andoyan, *supra* note 188, at 168.

their services, thus limiting the circle of those who benefit. Third, in setting out notions of equality, regulations must take account of the nonpecuniary benefits of the sharing economy. Thus, if a hybrid regulation tried to provide a minimum wage, it should include in its calculation the benefits of the very flexible hours offered by sharing economy jobs. Otherwise, the minimum wage laws will have the perverse effect of penalizing jobs that offer workers more overall utility.

But there are also examples of regulatory arbitrage that consist of avoiding the incidence of justified regulations, like taxes. Many observers have noted that because of the current tax system, much of the income from the sharing economy is unreported.[189] Sharing economy companies must report to the federal government income that is paid by a consumer to a service provider using their platforms, but only if that income exceeds $20,000 a year.[190] However, many participants use more than one service to earn income, such as when car owners drive for both Lyft and Uber, thus taking advantage of ways of staying under that threshold.

Commentators have made thoughtful proposals to correct this problem by a combination of creating more capacious withholding and, at the same time, writing regulations with which it is easier for small business owners to comply.[191] Some of the complaints about taxation, however, while initially well founded, turn out be efforts at incumbency protection. When Airbnb tried to enter into an agreement with New York to collect occupancy taxes, the hotel industry, which had objected to tax avoidance by Airbnb providers, then tried to prevent the agreement for fear that that these agreements would give Airbnb legitimacy.[192]

C. Protecting Against New Threats

A final kind of regulation seeks to protect against new threats that the sharing economy is supposed to pose. New threats may indeed demand new regulation, but many of the proposed regulations would cramp the sharing economy, including its equalizing features, without delivering substantial benefits.

For instance, the equalizing effects of the sharing economy should also make us hesitant to expand consumer protection law to apply new requirements to the sharing economy. Of course, consumer protection law should apply to false advertising and other instances of fraud as much as it does anywhere else. But Ryan Calo and Alex Rosenblat want to retool such laws to

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189 Laura Saunders, *The Blind Spot in a Sharing Economy: Tax Collection*, WALL ST. J. (May 19, 2017), https://www.wsj.com/articles/the-blind-spot-in-a-sharing-economy-tax-collection-1495186206.

190 *Id.*

191 *See* Kathleen DeLaney Thomas, *Taxing the Gig Economy*, 166 U. PA. L. REV. 1415 (2018).

192 Alison Griswold, *Why Airbnb Desperately Wants to Pay Hotel Taxes*, SLATE (Feb. 13, 2015), http://www.slate.com/articles/business/moneybox/2015/02/airbnb_hotel_taxes_why_does_the_sharing_economy_startup_want_to_pay_them.html.

attack practices in the sharing economy that are not fraudulent or otherwise in violation of current law.[193]

First, some of their complaints about specific practices, which they claim are manipulative, should be rejected, because the practices are either needed to make the sharing economy work or are trivial. For instance, they observe that Uber (and presumably other ridesharing firms) uses its technology to effectively require drivers to pick up all rides without allowing them to choose whom to pick up.[194] But this requirement makes the market more reliable and beneficial for consumers who can be more confident of getting a ride—the very thing that makes Uber attractive and equalizing. Indeed, public regulation legally imposes the same requirement on taxis.[195] They also complain that Uber uses an algorithm to make prices seem attractive to consumers, which they themselves admit is like lot retailers pricing a product for $9.99.[196] If the government does not punish such trivial conduct in the latter case, it should certainly not investigate algorithms for that reason.

More generally, they believe the government should fund researchers to look into the practices of ridesharing companies, even if their practices have not been found to be illegal.[197] This kind of outsourcing of research creates bad incentives, because those who do not like the sharing economy, including incumbents in the same business space, are the ones most attracted to investigating it, giving reason to doubt their findings. For good reason, we do not generally fund volunteers to do the work of law enforcement. Finally, they are sympathetic to punishing behavior even if it is not deceptive, so long as the conduct "involve[s] using information about a consumer against her or introducing other material or structural disadvantages."[198] But retailers even in the nonsharing economy do this all the time, as when they decide to offer discounts to some but not to others based on their past purchasing practices. Furthermore, a sharing economy company will have trouble figuring out ex ante what is prohibited by such a vague prohibition.[199] As a result, that selective invigoration of consumer protection law means we will get less sharing and innovation, and thus fewer equalizing effects.

Another concern is the sharing economy's new threats to third parties—citizens who are neither sellers nor consumers in the sharing economy but

193 *See* Calo & Rosenblat, *supra* note 5, at 1623.

194 *Id.* at 1661.

195 *See* Speta, *supra* note 81, at 109.

196 Calo & Rosenblat, *supra* note 5, at 1658.

197 *Id.* at 1684.

198 *Id.* at 1687–88.

199 Calo and Rosenblat argue that this move will not have bad effects, because it will just involve "*line-drawing*," but they do not offer any substantial lines to make concrete the rather opaque standard of a prohibition against "using information about a consumer against her or introducing other material or structural disadvantages." *Id.* And line drawing is particularly unlikely to give future guidance in an industry which is likely to change quickly because of technology.

who are indirectly affected by the transactions of others.[200] While these regulations are never presented as attempts to protect incumbent businesses against competition, that is often their practical effect and possibly even their true intent. A prime example was the effort of New York City Mayor Bill de Blasio to cap the number of rides Uber and other ridesharing companies could offer in the city.[201] The justification was that limiting ridesharing would relieve congestion in the city.[202] But this policy singles out ridesharing companies for discrimination. When used for individual rides, the ridesharing vehicles cause no more congestion than taxis. In fact, uberPOOL and Lyft Line may reduce congestion, because one car is carrying more than one passenger.[203]

Undaunted by the battle over this ride-cap regulation, regulators in New York City even more recently proposed regulations that would impose on ridesharing companies like Uber and Lyft a minimum earnings requirement of $17.22 per hour, such that if a driver's weekly earnings were less than this amount, the companies would be forced to make up the difference.[204] Though a minimum earnings requirement is not synonymous with a minimum wage requirement, the negative effects are similar: increasing the price of rides, driving down employment in ridesharing, and, ultimately, reducing choice for consumers, who would be forced to take less preferred means of transportation.

New York City's proposed minimum earnings requirement epitomizes the faulty assumption upon which many potential regulations of the sharing economy rest—namely, that jobs in the sharing economy, like driving for Uber or renting out a property through Airbnb, are no different than other jobs with fixed hours and work arrangements, such as working in a restaurant or retail industries. These regulations ignore the tremendous flexibility afforded by jobs in the sharing economy. Setting one's own hours can be significantly beneficial because it allows individuals to pursue other work and interests, address personal issues or limitations, and generally maximize the efficiency with which they go about contributing to society.

Regulators ignore these nonmonetary benefits of the sharing economy at the risk of great detriment to those the regulations are ostensibly designed to help. That is so frequently the case with many of the states' regulatory concoctions: the stated intentions of these schemes are to, among others,

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200 *See* Edelman & Geradin, *supra* note 159, at 309 ("An important set of legal interventions seeks to address circumstances in which companies impact noncustomers and the public at large.").

201 Jared Meyer, *Uber's New York Win*, FORBES (Jan. 19, 2016), https://www.forbes.com/sites/jaredmeyer/2016/01/19/uber-deblasio-new-york-study/#190f80983924.

202 *See id.*

203 *Cf.* Stephen R. Miller, *Decentralized, Disruptive, and On Demand: Opportunities for Local Government in the Sharing Economy*, 77 OHIO ST. L.J. FURTHERMORE 47, 49 (2016) (noting that the adoption of uberPOOL could "assist with environmental emissions compliance").

204 Emma G. Fitzsimmons & Noam Scheiber, *New York City Considers New Pay Rules for Uber Drivers*, N.Y. TIMES (July 2, 2018), https://www.nytimes.com/2018/07/02/nyregion/uber-drivers-pay-nyc.html.

protect the vulnerable from being taken advantage of, but they often leave us all worse off.

Airbnb is even a more frequent target of legislation ostensibly designed to protect third parties. Legislatures in places as diverse as New York City and Asheville, North Carolina, have tried to prohibit property owners from renting out their homes for short durations.[205] The justifications for these prohibitions are varied. First, supporters of such legislation argue that transient renters disrupt the peace and quiet of a neighborhood.[206] Of course, travelers do the same at hotels, but the legislation never applies to hotels. More focused legislation has attempted to restrict Airbnb in areas that are zoned for residential housing on the theory that the Airbnb hosts are using their property commercially.[207] But even here it is doubtful that property owners renting out their houses to a limited number of occupants are causing any more disruption than their neighbors who have guests and parties.[208] A solution to any incremental rise in disturbances from Airbnb rentals that is more consistent with preserving its equalizing effects would be to more strictly enforce existing regulations against littering and excessive noise.[209]

Much of the legislation against Airbnb has come in cities like San Francisco[210] and New York,[211] which are dominated by cooperatives, condominiums, and rental apartments.[212] In those cities, the government legislation restricting Airbnb because of potential disturbance to neighbors is even less justified because the neighbors most likely to be disturbed by short-term rentals can use co-op, condominium, and rental rules to prevent that activity in

205 Sarah Griffiths, Where Home Meets Hotel: Regulating Tourist Accommodations in the Age of Airbnb 23, 44 (March 10, 2017) (unpublished MPP thesis, Simon Fraser University), http://summit.sfu.ca/item/17183.

206 *See id.* at 1–2 (noting how some concerns over short-term rentals are "complaints over quality of life impacts brought by the increased presence of transient communities in residential neighbourhoods").

207 *See id.* at 1.

208 *See* Alexander W. Cloonan, Comment, *The New American Home: A Look at the Legal Issues Surrounding Airbnb and Short-Term Rentals*, 42 U. DAYTON L. REV. 27, 43 (2017) (citing Ngai Pindell, *Home Sweet Home? The Efficacy of Rental Restrictions to Promote Neighborhood Stability*, 29 ST. LOUIS U. PUB. L. REV. 41, 55 (2009)).

209 *See* Pindell, *supra* note 208, at 55 ("In striking down [short-term rental] regulations, courts have encouraged municipalities to use other measures—such as definitions of family or increased enforcement of nuisance codes—to mitigate the impact of potentially disruptive, short-term renters on a community.").

210 *See* Interian, *supra* note 141, at 146.

211 *See* Roberta A. Kaplan & Michael L. Nadler, *Airbnb: A Case Study in Occupancy Regulation and Taxation*, 82 U. CHI. L. REV. DIALOGUE 103, 107–08 (2015).

212 *See* Interian, *supra* note 141, at 149 ("The situation in New York is unique, however, because the city has a high number of strict co-ops . . . in areas of high rent." (citing Press Release, Liz Krueger, Senator, N.Y. State Senate, Statement on Airbnb Subpoena Agreement (May 21, 2014), http://www.nysenate.gov/press-release/statement-airbnb-subpoena-agreement)).

their buildings.[213] That kind of private ordering at the building level is much more likely to accurately gauge the costs and benefits of permitting short-term rentals than is municipal legislation, because hotel owners will not have as much influence in shaping the rules established by individual buildings.[214]

Indeed, the sharing economy naturally creates markets to address these conflicts, mediating between the different stakeholders in an apartment building and making short-term rentals easier and less disruptive. Pillow Residential, for instance, provides contracts with building management and renters to permit short-term subleases.[215] These agreements specify the number of nights available for rentals and provide mechanisms for monitoring compliance with rules.[216] Both management and owners get part of the revenue earned through such rentals.[217] This is another example of how the sharing economy solves the problem of agency costs: a new kind of agent, made possible by the information age, facilitates an agreement that makes both owner and long-time renters better off.

Another justification for legislation restricting Airbnb is that those rentals raise the costs of housing for local residents by bidding up the price of housing. Analyzing these regulations under an equality framework requires distinguishing between those that restrict the operation of owner-occupied homes and larger commercial enterprises. Both use sites like Airbnb, but it is owner-occupied homes that create more equality for those owning a home, although both may contribute to equality for travelers by reducing prices for short-term rentals in high-priced locations.

Restricting the ability of owners to rent out their apartments is hard to justify under the idea of making housing more affordable. First, this supply is not likely to be available but for services like Airbnb. Thus, not surprisingly, the empirical work that has been done suggests that permitting owner-occupied housing to list rental space for short-term allotments has relatively little effect on home prices.[218] Moreover, an equality perspective on Airbnb reminds us that its services should help affordability in an important respect:

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213 *See* Kevin Davis, *Guest Wrong*, A.B.A. J., Apr. 2014, at 19–20 (noting that Airbnb "is careful to inform its users that they're responsible for . . . conferring with condo and co-op boards" before renting through Airbnb).

214 *Cf.* Pindell, *supra* note 208, at 59 ("Developers, in turn, can design a community without conforming to standardized requirements ill-suited to a planned community. Moreover, future residents of these communities benefit because negotiation often results in more thoughtful inclusion and placement of amenities than does the application of a rigid standardized zoning and development code.").

215 PILLOW, https://www.pillow.com/ (last visited Feb. 19, 2018).

216 *Id.*; *see also* Ryan Lawler, *With $13.5M in New Funds, Pillow Partners with Building Owners to Make Rentals Airbnb-Friendly*, TECHCRUNCH (June 21, 2017), https://techcrunch.com/2017/06/21/pillow-residential-13-5-million/ (describing this new focus on Pillow Residential).

217 *Id.*

218 *See* Lisa Ward, *This Is How Much Airbnb Is Driving Up Home Prices and Rents*, WALL ST. J.: MARKETWATCH (Oct. 31, 2017), https://www.marketwatch.com/story/this-is-how-much-

in a well-functioning market, the opportunity for short-term rentals should actually *lower* the effective cost of housing for those renting out their home on occasion. Those who are financially constrained can now use their property to take in short-term renters on occasion, defraying their housing expense.

The effect of housing listed by those who do not occupy it is more complicated. Researchers have suggested that easier access to listing commercial housing on Airbnb drives up the price of housing, no doubt because owners can get more money for some properties by short-term rentals than by long-term ones.[219] But it is not clear that in the long run, as opposed to the short run, such rentals will increase the cost of housing. By giving owners the opportunity to switch from long-term rentals to short-term rentals depending on circumstances, it will provide developers with greater incentives to build new housing, which will increase the supply of housing in a given area. Basic principles of economics make this self-evident: developers will want to build more houses because Airbnb makes them more valuable to the owner. Another way of putting this is that many owners will now be able more easily to rent out their homes or portions of their homes. This added source of income effectively makes homes more affordable and thus effectively cuts their price.

It is true that existing zoning laws may prove to be an obstacle to building more housing units in cities like San Francisco and New York in the long run. Regulation can prevent supply from meeting new demand. But in that case, an approach more consistent with promoting equality is not to restrict Airbnb, but instead to relax existing zoning laws. Numerous studies have shown that it is restrictive zoning regulations that drive up the price of housing, making housing in such cities unaffordable to the middle class.[220]

All of these regulations ignore the advantages of permitting easier short-term rentals by those who want to visit rather than live in a jurisdiction. Increasing the ability to travel widely and affordably is one of the best ways to equalize the life experiences of the rich and the rest of society. How to weigh these advantages against any higher housing costs for those who want to live in the jurisdiction is a difficult question. But these advantages need to be considered in any evaluation of whether restricting the sharing economy in housing contributes to the equality of material condition.

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airbnb-is-driving-up-home-prices-and-rents-2017-10-31 (describing new research into the effect of Airbnb on housing prices).

219 *Id.*

220 *See, e.g.*, Edward L. Glaeser & Joseph Gyourko, *The Impact of Zoning on Housing Affordability* (Nat'l Bureau of Econ. Research, Working Paper No. 8835, 2002), http://www.nber.org/papers/w8835.

V. The More General Implications of the Sharing Economy for Equality

The sharing economy has more general implications for the debate over inequality. It shows that the dematerialization of the world brought on by information technology creates important equalizers between the wealthy and most of the rest of society. First, even were we only interested in income, the sharing economy shows how technology can make that hard to calculate by changing the structure of work. The sharing economy can outrun taxation and thus make it hard for government to measure unreported income.[221]

But more importantly, income is only a proxy for material inequality. In fact, what we are most interested in is total utility from work together with consumption. The sharing economy creates good conditions of employment for people that may not have had that before. Driving for a ridesharing service is more flexible than a limousine service and safer than taxis.[222] And while the changes made by the sharing economy can dramatically improve the utility from work, it seems very likely that working conditions outside the sharing economy are generally improving. Millions of people telecommute, a working condition that gives valuable flexibility and avoids the monetary costs and physical hassles of commuting as well as a better balance of work and family life.[223] Tens of millions of people today, for instance, have access to a computer at work of which they also utilize for personal use. That too is a valuable kind of flexibility, previously available to the well-off through control over their time or access to secretaries. A world where the conditions of work are converging among income classes is a more equal world, even if that equality is not reflected in income.

Finally, the consumption created by the sharing economy redounds particularly to those who are not rich. They can now summon quality rides from the comfort of their homes and gain access to meals and housing in the center of places they would love to be. Who is enjoying the consumer surplus of the new economy is yet another issue that is needed to evaluate equality. To provide another example of the consumption of the new economy, it is almost impossible to count all the free goods that people enjoy today. But one can begin with the free good that connects more than a billion people and is also an example of the sharing economy more broadly considered, because an intermediary connects people virtually. The average time people spend on Facebook is fifty minutes per day.[224] That comes to a total of 304 hours per year. To estimate that consumption, let us assume that it is worth a modest value close to the minimum wage of ten dollars per hour or at about

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221 *See supra* notes 190–92 and accompanying text.

222 *See supra* notes 110–14 and accompanying text.

223 Edward E. Potter, *Telecommuting: The Future of Work, Corporate Culture, and American Society*, 24 J. Lab. Res. 73, 79 (2003).

224 James B. Stewart, *Facebook Has 50 Minutes of Your Time Each Day. It Wants More.*, N.Y. Times (May 5, 2016), https://www.nytimes.com/2016/05/06/business/facebook-bends-the-rules-of-audience-engagement-to-its-advantage.html.

3000 dollars over what they could otherwise do with their time.[225] Given that the cost is free, these are equalizing dollars, available to the rich and those of modest means.

It might be objected that Facebook is not really free. To get access, we give up personal data that is valuable to Facebook since they can steer advertisers to us. First, the data is not worth much, if anything at all, until it is aggregated. Facebook is creating value of something that without its own or similar technology would be close to worthless, just as Airbnb is creating value by pooling information about properties. But let us assume that the data could be sold in an individuated market. Its value then cuts in favor of the even greater equalizing force of Facebook. In general, the wealthier a user, the more valuable is his or her data.[226] Thus, if we are to calculate the net benefits from Facebook, those of modest means are getting a substantially greater boost than the wealthy.

It is hard to dismiss these issues as anomalies of the sharing economy, because recognizing the advantages to the nonrich of the sharing economy immediately calls to mind other examples. That is not surprising, because the same dematerialization that permits segmentation of property and reduction of agency costs is going on elsewhere. It is that fundamental trend that is responsible for phenomenon as disparate as telecommuting and Facebook. Only by understanding how the fundamental change created by the information society is affecting the material conditions of life can we hope to gauge the direction of the material conditions of equality.

Conclusion

The entrepreneurial sharing economy is a force for equalizing life experiences, broadly reflecting the capacity of innovative technologies to dematerialize the economy by facilitating electronic transactions. Because these economic connections are so inexpensive, they help the middle class more than wealthy individuals. For middle-class consumers, the sharing economy creates deeper and more liquid markets and reduces prices by increasing the available supply of goods and services. Through the use of online agents, collaborative platforms can elevate the experiences of the average consumer closer to the experiences of the wealthy who have their own agents, like chauffeurs and cooks. The sharing economy democratizes the ability of consumers to have distinctive experiences, like renting properties

225 *Cf.* Tim Worstall, *Facebook Doesn't Waste Trillions in Time: That's the Value Facebook Adds for Us*, Forbes (Feb. 4, 2016), https://www.forbes.com/sites/timworstall/2016/02/04/facebook-doesnt-waste-trillions-in-time-thats-the-value-facebook-adds-for-us/#3657d4a06d57 (suggesting that total consumption value of Facebook is $900 billion); *see also* Austan Goolsbee & Peter J. Klenow, *Valuing Consumer Products by the Time Spent Using Them: An Application to the Internet* (Nat'l Bureau of Econ. Research, Working Paper No. 11995, 2006), http://www.nber.org/papers/w11995 (using wage to calculate value of time spent on internet).

226 Gianclaudio Malgieri & Bart Custers, *Pricing Privacy— The Right to Know the Value of Your Personal Data*, 34 Computer L. & Security Rev. 289, 291 (2018).

through Airbnb in unique surroundings or enjoying the company of tour guides in distant locations tailored to their particular interests.

The peer production economy also provides new sources of income for providers that are predominantly enjoyed by the middle class, because people of modest means are now able to easily rent out their real and personal property. The emerging sharing economy also provides new kinds of jobs that have the flexibility and autonomy that workers greatly value. The most important way to promote equality in this area is to prevent burdensome regulation from slowing down the equalizing dynamic of the sharing economy.