

WHO'S AFRAID OF UBER?

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Ride-sharing has disrupted the transportation-for-hire industry, breaking down barriers to entry that have protected entrenched incumbents for decades. The disruption has led to calls for increased regulation, along with criticisms about the effect of innovation on consumer safety, market stability, rule of law, and other areas. That disruption, however, has also led to tremendous benefits to consumers as they are freed from a regulatory regime that limited their transportation choices and forced them to pay higher prices for lower quality service. The same type of disruptive innovation is upon us in almost every area of our economy. How we deal with it will determine whether the law will finally free consumers from the grasp of entrenched and privileged incumbents or whether the combined forces of those incumbents and their erstwhile allies in academia will lead to a regulatory retrenchment. The Article concludes that opposition to innovation rests on a Galbraithian foundation that holds a dim view of human nature. Greater reliance on Smithian assumptions would serve us better as we decide how to deal with innovation and its disruption. The Article also concludes that innovation is inevitable; if the law seeks to inhibit it, it merely guarantees a greater disruption when it finally arrives.

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INTRODUCTION

On August 14, 2018, the New York City Council froze all new for-hire-vehicle licensing for one year.¹ Given that the number of taxi licenses, or medallions, is already fixed, the practical effect of the law is to freeze the ability of ride-sharing companies—also known as Transportation Network Companies, or TNCs—to expand in the city. A cursory glance past the accepted rationale of the ordinance—to provide “breathing room” to investigate the impact that for-hire vehicles have on the city²—reveals little more than legislative power being wielded for the benefit of the powerful taxi industry. Having enjoyed strong legal protections for almost a century, the combined taxi cartel now finds itself ceding market power to TNCs, and it is flexing its muscles to protect its privileges.

Legal barriers similar to those protecting taxis from competition exist in many areas of the economy, but wave after wave of innovation has begun to erode the legislative and regulatory walls that allow favored incumbents to wield monopoly power. Legal scholarship has begun to grapple with regulation-innovation conflict in the financial sphere³ but has not yet applied the same focused lens on other areas in the economy. To be certain, some commentators

¹ N.Y.C., N.Y., Local Law No. 147 (Aug. 14, 2018).

² E.g., Deepti Hajela & Karen Matthews, *NYC Considers One-Year Cap on Licenses for New Ride-Hail Cars*, MEETINGS & CONVENTIONS (Aug. 8, 2018), <http://www.meetings-conventions.com/News/Transportation/New-York-City-Lyft-Uber-regulations/> [<https://perma.cc/5XPX-R58R>].

³ E.g., Matthew Adam Bruckner, *The Promise and Perils of Algorithmic Lenders' Use of Big Data*, 93 CHI.-KENT L. REV. 3, 6–7 (2018); Brian Knight, *Federalism and Federalization on the Fintech Frontier*, 20 VAND. J. ENT. & TECH. L. 129, 131 (2017); Seth C. Oranburg, *Bridgdfunding: Crowdfunding and the Market for Entrepreneurial Finance*, 25 CORNELL J. L. & PUB. POL'Y 397, 399 (2015).

have weighed in on what they see as potential dangers arising from innovation and the perceived need for regulation. These regulations are presented as necessary to protect consumers and a host of other interests,⁴ but there is a striking lack of attention paid to the costs of attempting to protect society from the effects of innovation.

This Article fills that gap, using the battle between TNCs and the taxi industry as a case study. As a first step, Part I will describe the forces that led cities to regulate the taxi industry in the first place. A wave of innovation in the early twentieth century changed the face of transportation in large cities and forced lawmakers to consider ways to address the perceived flaws in transportation markets.⁵ One plausible solution was a cap on the number of taxis, which would serve to limit traffic congestion and raise wages for taxi drivers. Those goals were achieved, but at a terrible cost to consumers, drivers, and the broader society.

Part II will describe the costs of choosing the path of restrictive regulations. Creating barriers to entry provides an immediate windfall to those fortunate enough to find themselves inside when the walls are erected, but the benefits dissipate rapidly through rising costs of entrance into the market. Given strong limits on total participation, new entrants must buy out existing participants and, while entrants are willing to pay for the right to extract government-sanctioned monopoly profits, the entry price eventually swallows most or all of those profits. As a result, those who pay the higher cost of admission spend their time desperately seeking to avoid losing all that was spent to enter the market rather than defending continued windfalls.

All the while, consumers are exploited by having to pay higher prices for lower quality services—not to mention having fewer options—than they would have in an innovative, competitive market.⁶ Part III shows how TNCs and other disruptive innovators can render moot existing barriers to entry, liberating consumers and, in some cases, producers who have been trapped in inefficient modes of operation. In response to that disruption, and without a trace of irony, consumer “protection” arguments are employed in defense of the regimes that empower incumbents’ exploiting of consumers.⁷ These arguments are not offered directly by the incumbents but by consumer advocates who are willing to stand athwart the tide of innovation and shout “no more.” Because innovation poses an existential threat, not to consumers but to the protected industry and

⁴ E.g., Ryan Calo & Alex Rosenblat, *The Taking Economy: Uber, Information, and Power*, 117 COLUM. L. REV. 1623, 1670–71 (2017).

⁵ See *infra* Section I.B.

⁶ See Judd Cramer & Alan B. Krueger, *Disruptive Change in the Taxi Business: The Case of Uber*, 106 AM. ECON. REV. 177, 177 (2016).

⁷ E.g., Rory Van Loo, *Making Innovation More Competitive: The Case of Fintech*, 65 UCLA L. REV. 232, 250 (2018).

the consumer exploitation it represents,⁸ those producers privileged by government must oppose innovation and the freedom it offers consumers.

Part IV will show how the list of those protected by government barriers to competition in transportation markets goes beyond taxi drivers and taxi companies to encompass the financial institutions who provide capital to pay the high fixed costs of entry. Part V then offers suggestions for how the law should approach innovation and the disruption that comes with it, using ride-sharing versus taxis as a cautionary tale. Bringing together the lessons learned from the history of point-to-point transportation, Part V will show that seeking to tame markets inevitably harms consumers while benefitting wealthy, politically connected industry incumbents. More importantly, when lawmakers choose to erect barriers to competition and innovation, they impede the natural evolution of markets and set the stage for more profound disruption when innovation is finally able to escape the constraints placed on it by lawmakers. By refusing to erect barriers to competition, lawmakers will invite smaller, more manageable disruption that occurs continually in competitive markets.

I. A TALE OF TRANSPORTATION MARKETS

TNCs are the most recent player to make an appearance on a stage that goes back as far as people have needed to travel. In order to understand how we got here and how we might progress into the future, this Part will offer a brief sketch of transportation markets with particular emphasis on the market forces that drive consumers and producers of transportation services. Part of that discussion must include the ways in which markets might perform sub-optimally. This Part will describe the regulatory actions taken by local governments in response to perceived market imperfections, the traditional arguments in favor of those government interventions, and why the diagnosis that led to those policy choices may have been flawed.

A. *The Economics of Transportation*

1. *Supply and Demand*

Getting from point A to point B has never been easy, whether accomplished under one's own power or by purchasing transportation services in the aptly named point-to-point transportation market. As technology advances, individuals are less likely to rely solely on their own physical capacity, but those advances in transportation services cost something to produce. Prior to the industrial revolution, for example, you could avoid walking if you could find an animal to carry you, but that animal needed food, shelter, and other care in order to be healthy enough to provide transportation services. Industrial modes of

⁸ See, e.g., Jeremy Kidd, *Fintech: Antidote to Rent-Seeking?*, 93 CHI.-KENT L. REV. 165, 176 (2018).

transportation also needed food (fossil fuels, for example), shelter (parking), and other forms of maintenance. Modern transportation has the same production costs associated with it, and those costs of production are the primary determinant of supply; as production costs decline, we can produce more and different kinds of transportation at current prices. By the same mechanism, higher prices mean that we can afford to produce more transportation at current production costs.⁹ These facts are represented in what economists call the Law of Supply, that the amount of any good or service (including transportation) increases as prices increase.¹⁰

Demand for transportation services also evolves over time, yet follows similar, recognizable patterns even as the details change. Primarily, individuals need transportation to obtain the various things they need and want. For most of human history, for example, that meant moving to stave off starvation and/or avoid other modes of death. As individuals rise above a subsistence state, transportation also becomes a means to obtain goods and services that aren't essential for survival but are desired for improving quality of life.¹¹ When the things we desire are close at hand, our demand for transportation services will remain low. As more and more desirable things are available only at other locations, we increase our demand for transportation in order to obtain those things. Transportation is therefore what economists call a complementary good—a good that is used in tandem with another—for any good that exists outside of an individual's immediate surroundings.¹²

Demand for transportation responds to a number of factors, apart from our general preferences for things outside of our current surroundings. One of the

⁹ To those not familiar with economic terminology, these two sentences may seem contradictory, but they are not. To see why, imagine the following examples. Farmer A suddenly discovers a new, less expensive fertilizer that reduces the cost of producing each bushel of grain by \$1. Farmer A can produce the same level of output for less, leaving resources available that Farmer A can use to produce additional grain, even if market prices—those paid by consumers—have not changed. Farmer B, on the other hand, has seen the market price for his corn rise by \$1 per bushel. Farmer B will receive greater revenues for selling the same output, providing an expectation of additional resources that Farmer B can use to produce additional grain, even if production costs have not changed. Of course, the traditional economic models—with increasing marginal costs—make a more accurate calculation of output and profits more complicated, but the basic conclusions from these simple examples are still valid.

¹⁰ JEFFREY L. HARRISON, *LAW AND ECONOMICS IN A NUTSHELL* 12–15 (5th ed. 2011).

¹¹ See ACCESS DEV., NATIONAL CONSUMER STUDY SUMMARY: THE IMPACT OF RETAIL PROXIMITY ON CONSUMER PURCHASES 7 (2016–17), https://ww2.accessdevelopment.com/hubfs/Access_Consumer_Spend_Research_Study_2016.pdf [<https://perma.cc/CQH3-HBFC>] (last visited Jan. 29, 2020).

¹² Some economists go one step further, arguing that transportation is “a friction . . . that must be incurred by individuals and firms to complete almost any market transaction.” Clifford Winston, *On the Performance of the U.S. Transportation System: Caution Ahead*, 51 J. ECON. LIT. 773, 773 (2013).

most important is an individual's income.¹³ As incomes rise, mere survival becomes less of an immediate concern.¹⁴ Individuals begin expanding their consumption choices to the things that increase happiness and satisfaction, not just those things that sustain life.¹⁵ The higher the income, the more broad-ranging that list becomes and the more likely an individual will choose to hire transportation services in order to obtain them.¹⁶ Rising incomes should therefore increase the total demand for transportation.¹⁷ Falling incomes push people towards subsistence and make them more likely to be conservative in their consumption choices.¹⁸ For example, many individuals will be more likely to choose local goods rather than expend resources on transportation to access more distant substitutes.¹⁹

A change in income might also change what type of transportation an individual chooses to purchase, and there are many options. The market for transportation can be thought of in broad terms, but that broad market is also divisible into a number of smaller segments. One possible example is the subdivision illustrated in Figure 1. If, for the purpose of this discussion, we define "transportation" as moving people or goods from one place to another, we can think of dividing that market into whether goods or people are moved—whether we are transporting individuals to the goods they want or transporting the goods to them. The former would include things like walking, driving, riding public transportation, etc. The latter would include things like cargo ships, trains, big-rig trucking, and so on, but might also include personal pick-up trucks in rural areas. Each of those sub-categories can be further subdivided, and one of those subdivisions is particularly relevant to the present discussion. Transportation of people to the goods and services they desire can be divided into personal transportation, public transportation, and commercial, point-to-point transportation.

¹³ Obviously, there are many for whom these concerns are more pressing. The point is not to diminish the reality of those concerns for individuals who are close to subsistence level but to note what happens to those who rise above that level.

¹⁴ See David R. Henderson, *Demand*, LIBR. ECON. & LIBERTY, <https://www.econlib.org/library/Enc/Demand.html> [<https://perma.cc/LW3C-S3SE>] (last visited Jan. 29, 2020) ("It is not just price that affects the quantity demanded. Income affects it too. As real income rises, people buy more of some goods (which economists call 'normal goods') and less of others (called 'inferior goods').").

¹⁵ See *id.*

¹⁶ See *id.*

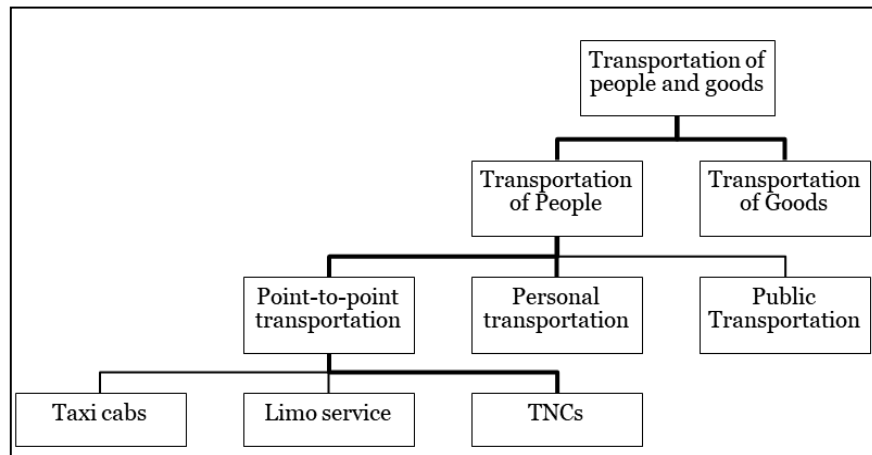
¹⁷ Certain forms of transportation are considered inferior goods, meaning that rising incomes should lead to a decrease in demand. See *id.* Overall, however, demand for transportation services should rise with incomes.

¹⁸ The closer someone is to starvation, the less willing they will be to spend any of their limited resources on non-essential amenities.

¹⁹ Even if Honeycrisp apples (grown in New York and New England) are accepted as having "set themselves apart from other apples," HONEYCRISP.COM, https://honeycrisp.com/honeycrisp_apple.html [<https://perma.cc/M56V-BJUR>] (last visited Jan. 11, 2020), a poor family will likely choose more bland red-delicious apples because doing so leaves more income to be spent on other foods or other necessities.

The first is people transporting themselves by means they own or control, typically by car but also by bike, motorcycle, boat, airplane, etc. The second is paying a municipality or third-party contractor to use the public transportation system (subways, bus systems, trolleys, etc.). The third is people paying a third-party for transport services or point-to-point transportation. Historically, you could hire a carriage for this purpose, but those were almost entirely replaced by buses, trains and, of course, taxi cabs. TNCs fall into this subsector of the market.

FIGURE 1



All forms of transportation are, to some extent, substitutes.²⁰ For example, if individuals want a particular good that is not currently in their homes, they can either pay someone to transport the good to their home or transport themselves to the good. If the choice is self-transport, they can choose between a mode of transport that they own and control, or they can hire someone to transport them. For every good that we purchase, it is likely that a combination of forms has been used, such as when goods are transported as far as a local store and the consumer transported herself to the store. Because individuals have finite budgets,²¹ the relative prices of the various forms of transport will factor heavily into the decision of which form to employ. The negative relationship between price and quantity purchased is what economists call the Law of Demand.²² All consumers will also base their choices on non-price factors,

²⁰ Substitute goods are those that can be used in place of each other. See WALTER NICHOLSON & CHRISTOPHER SNYDER, MICROECONOMIC THEORY: BASIC PRINCIPLES AND EXTENSIONS 184–85 (12th ed. 2017).

²¹ Even the wealthiest individuals have finite budgets, although the constraints imposed by those budgets are significantly less binding than those of more modest means.

²² Henderson, *supra* note 14.

such as aesthetics, convenience, and other amenities.²³ As incomes rise, those non-price factors will become more important.²⁴

If the price of a particular form of transportation is relatively high, there will be few consumers demanding that form of transportation, but more producers will be willing to supply that form.²⁵ Relatively low prices will result in a large number of consumers demanding transportation of that form, but producers will be unable or unwilling to provide that transportation at that price, creating a shortage.²⁶ One of the fundamental truths of economics is that “[p]eople respond to incentives,”²⁷ and either a shortage or a glut (prices too high) will create powerful incentives. With a shortage, there will be a lot of eager consumers; some enterprising individual will raise the price just a little and capture the extra profits that are represented by consumers standing around, unable to get where they need to go.²⁸ That single entrepreneur’s actions will signal to others that extra profits can be made if the price is raised, leading to rising prices and an elimination of the shortage.²⁹ By the same token, when there is a glut, sellers will have lots of unused capacity—either buses that run half-

²³ Consumers choose goods and services based on a combination of price and quality, with “quality” embodying these amenities. One example that has recently gained notoriety is consumers’ lower preference for ugly produce. See *Is “Ugly Produce” the Key to Our Food Waste Problem?*, CBS NEWS (Oct. 12, 2019), <https://www.cbsnews.com/news/ugly-produce-the-key-to-our-food-waste-problem/> [<https://perma.cc/5LKJ-RKUM>].

²⁴ Rising incomes allow consumers to select higher quality goods because price becomes a less-binding constraint. *E.g.*, Mark Pauly, *The Tax Subsidy to Employment-Based Health Insurance and the Distribution of Well-Being*, 69 LAW & CONTEMP. PROBS. 83, 99 (2006) (“[L]ower-wage workers, in an effort to limit the amount of increase in their real income going to medical care, would choose policies that limit cost by providing smaller amounts of new technology; on the other hand, higher-wage workers would be more able and willing to devote more of their income to new medical care, preferring to invest more in higher-quality care.”).

²⁵ This is nothing more than the Law of Supply. *E.g.*, William A. Drennan, *Changing Invention Economics by Encouraging Corporate Inventors to Sell Patents*, 58 U. MIAMI L. REV. 1045, 1066 n.88 (2004); Robert M. Hardaway, *Taxi and Limousines: The Last Bastion of Economic Regulation*, 21 HAMLINE J. PUB. L. & POL’Y 319, 352 (2000).

²⁶ See, *e.g.*, Hugh Rockoff, *Price Controls*, LIBR. ECON. & LIBERTY, <http://www.econlib.org/library/Enc/PriceControls.html> [<https://perma.cc/VFB2-DN3Z>] (last visited Jan. 29, 2020) (explaining the shortage caused when government price controls prohibit relatively low prices from rising in response to market forces).

²⁷ STEVEN E. LANDSBURG, *THE ARMCHAIR ECONOMIST: ECONOMICS AND EVERYDAY LIFE 3* (rev. ed. 2012) (internal quotation marks omitted).

²⁸ *E.g.*, James M. Koelemay, Jr., Case Note, *Mullis v. Arco Petroleum Corp.*, 502 F.2d 290 (7th Cir. 1974), 53 TEX. L. REV. 551, 555 (1975) (“[A] shortage would not reduce the number of suppliers reasonably available to Mullis, but would simply cause prices to rise, allowing Mullis to obtain a supplier by offering a higher price.”).

²⁹ Russell S. Sobel, *Entrepreneurship*, LIBR. ECON. & LIBERTY, <https://www.econlib.org/library/Enc/Entrepreneurship.html> [<https://perma.cc/KKZ7-XAZD>] (last visited Jan. 24, 2020) (explaining the Kirznerian entrepreneur as one who “discovers previously unnoticed profit opportunities” and triggers “a process in which these newly discovered profit opportunities are then acted on in the marketplace until market COMPETITION eliminates the profit opportunity”) (alteration in original).

empty, or cabs that sit idle all day, or car lots that have too many of last year's models.³⁰ To avoid the costs of having idle capacity, an enterprising seller will lower prices and begin to gain profits from utilizing her excess.³¹ That will be a signal to some other sellers to do the same and to high-cost sellers to get out of the market.³² As a result, prices will fall and the glut will go away.³³

2. *Market Perfection and Imperfection*

These market forces work on their own, without any specific direction by government agents; millions of independent producers and consumers just respond to the prices in the market and, by doing so, create tomorrow's prices.³⁴ Those prices cause a new round of reactions and further price changes until, in theory, the market reaches a point where the amount demanded by consumers is exactly the same as the amount supplied, and everyone is happy.³⁵ In the absence of any distortions, the point-to-point transportation market could be left alone and price and quantity would fluctuate as the factors of supply and demand fluctuate.³⁶ Combined with competition between producers, market forces would yield a variety of transportation options at prices that consumers could afford.

Unfortunately, we do not live in a world without distortions, so the market for transportation may not function as well as desired.³⁷ One way that a market

³⁰ Surpluses exist in many markets, when supply outpaces demand. *E.g.*, Ryosuke Kojima, *The Influenza Vaccine Market: From Shortage to Surplus*, 14 GEO. PUB. POL'Y REV. 33, 33 (2009) (describing "millions of doses of influenza vaccine [that] remain unsold" every year). In the market for transportation services, the shortage is not vaccines sitting around on shelves, but transportation options—personal cars, taxis, etc.—sitting around on streets, in garages, or in parking lots.

³¹ *See* Sobel, *supra* note 29.

³² *See id.*

³³ *See id.*

³⁴ *See generally* LEONARD E. READ, I, PENCIL: MY FAMILY TREE AS TOLD TO LEONARD E. READ (1958), available at <https://fee.org/resources/i-pencil/> [<https://perma.cc/SY3S-SUNC>].

³⁵ Economists refer to this point as "market equilibrium." *See* HARRISON, *supra* note 10, at 15–17.

³⁶ The standard assumption of economic models is *ceteris paribus*, that all things remain constant. In an unchanging world, the market would reach and maintain a stable equilibrium price and quantity. F.A. Hayek, *Competition as a Discovery Process*, 5 Q.J. AUSTRIAN ECON. 9, 15 (2002) ("[T]rue equilibrium presupposes that the relevant facts have already been discovered and that the process of competition has thus come to an end."). The world we actually live in, of course, is anything but unchanging; even if the market *could* reach equilibrium, it would only stay there for the briefest of instants—perhaps only seconds—before changing circumstances would force price and quantity to change. Equilibrium, then, should be understood as a point of attraction, towards which market forces move price and quantity, rather than an obtainable result. *See generally* READ, *supra* note 34.

³⁷ Of course, falling short of perfection does not mean that the market is incurably flawed. Rather, it means exactly what it sounds like, that it falls somewhere short of perfection. It may be a small divergence from the ideal outcome, or it may be a major divergence, and only further investigation will reveal whether or not the divergence is sufficiently large as to destroy confidence in the ability of the market to produce beneficial results.

may be distorted is through the presence of externalities, negative or positive.³⁸ An externality occurs when someone outside of the transaction is affected by the transaction.³⁹ If the externality is negative, then the parties to the transaction can shift some of the cost onto innocent bystanders.⁴⁰ As a result, the market price will be too low, and more of that good or service will be produced than is ideal.⁴¹ Any form of transportation that emits exhaust will impose this type of spillover cost, as anyone nearby will breathe in the exhaust, regardless of whether they received transportation services.⁴² If the externality is positive, then bystanders receive a partial benefit from a transaction they had no role in generating, resulting in a price that is too high and a quantity that is too low.⁴³ Other distortions may involve excessive market power,⁴⁴ imperfect information or information asymmetries,⁴⁵ or high transaction costs.⁴⁶ Importantly, while these distortions are often referred to as “market failures,” and used to justify government regulation of the industry, they can just as easily be the result of direct government action and, in that case, should be called “government failures.”⁴⁷

³⁸ See R. H. COASE, *THE FIRM, THE MARKET, AND THE LAW* 23 (1988).

³⁹ *Id.* at 23–24.

⁴⁰ See *id.* at 24.

⁴¹ E.g., Daniel B. Kelly, *Strategic Spillovers*, 111 COLUM. L. REV. 1641, 1644 (2011) (“A party may have an incentive to engage in an activity if the activity’s private benefits exceed its private costs even though, as a result of the externality, the activity is undesirable as its social costs exceed its social benefits.”).

⁴² Lincoln L. Davies, *Energy, Consumption, and the Amoralism of Energy Law*, 109 AJIL UNBOUND 147, 149 (2015) (“Nor does the individual starting the car feel the full consequences of that decision. They do not breathe the exhaust, or taste the water contaminated by the oil spill, or feel the pain of the sage grouse displaced by the extraction well pad, even though that chain of events is put in motion every time they push the gas pedal.”).

⁴³ See Giuseppe Dari-Mattiacci, *Negative Liability*, 38 J. Legal Stud. 21, 22 (2009) (“[N]egative externalities result in oversupply of some dangerous activities, while positive externalities result in undersupply of some beneficial ones.”).

⁴⁴ See Alan J. Meese, *Price Theory, Competition, and the Rule of Reason*, 2003 U. ILL. L. REV. 77, 112 (“Presumably, the less restrictive alternative requirement, if properly enforced, will induce firms to achieve cognizable benefits without simultaneously creating or exercising market power, thus defeating a market failure and maximizing the welfare of consumers.”).

⁴⁵ Rebecca Haw Allensworth, *The Commensurability Myth in Antitrust*, 69 VAND. L. REV. 1, 33 (2016) (“[I]nformation asymmetry, often found in markets for services, can lead to a market failure that results in too-low quality products, leaving consumers who demand—and are willing to pay for—high quality services without any options.”).

⁴⁶ Simone A. Rose, *On Purple Pills, Stem Cells, and Other Market Failures: A Case for a Limited Compulsory Licensing Scheme for Patent Property*, 48 HOW. L.J. 579, 605 (2005) (“[E]xcessive transaction costs and positive externalities create a bottleneck or market failure . . .”). For a simple explanation of the transaction cost concept, see Jeremy Kidd, *Kindergarten Coase*, 17 GREEN BAG 2D 141, 144–45 (2014).

⁴⁷ E.g., Jeremy Kidd & Joseph R. Padgett, *Trucker Shortage as Government Failure*, 1 LOY. U. CHI. J. REG. COMPLIANCE 7, 10–11 (2016). For the general argument about government-created “failures” in the market, see R. H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 28 (1960); Kidd, *supra* note 46, at 149–51.

B. *Evolution of the Modern Taxi*

At the beginning of the Twentieth Century, two factors changed the face of urban America in a way that gave rise to the taxi industry. The first was rapidly rising population density.⁴⁸ The second was the advent of affordable automobiles, subject to constant improvements.⁴⁹ As population density rose and people began to crowd out agricultural space and even some manufacturing space, people needed to travel more to obtain the things they needed. Cars also became much cheaper to buy during this time period,⁵⁰ which would normally result in more car ownership, but the rise in population density also made it far more costly to keep a car in the city, as parking became relatively more scarce.⁵¹ Cities needed a new version of an old form of transportation, and cars quickly replaced horse-drawn carriages in the early years of the Twentieth Century;⁵² most cabbies likely switched to cars, remaining part of the point-to-point transportation industry.

As a concept, taxis had much to recommend them. A personal vehicle usually spends a good deal of the day idle, which makes it relatively costly. However, it also offers the immediate convenience of travel to wherever the owner wishes to go, assuming there are roads. As keeping a car became more expensive, some entrepreneurial individuals likely noticed that the cost of maintaining a car was not prohibitive if it were possible to use the car to generate revenue by keeping the car busy doing what it does best—provide transportation services. Cities were, at this time, building other forms of public transport,⁵³ but

⁴⁸ For example, New York City went from a population of 3,427,202 in 1900 to 6,930,446 in 1930, an increase of 102.2%; Chicago, during the same time period, went from a population of 1,698,575 to 3,376,438 in 1930, an increase of 98.8%. *Fast Facts*, U.S. CENSUS BUREAU, https://www.census.gov/history/www/through_the_decades/fast_facts/ [<https://perma.cc/T99S-LEWV>] (last visited Feb. 7, 2020).

⁴⁹ See Douglas G. Baird, *In Coase's Footsteps*, 70 U. CHI. L. REV. 23, 34–35 (2003) (describing the rapid pace of innovation at Ford Motor Company in the first two decades of the Twentieth Century, which made Ford's cars cheaper and better).

⁵⁰ *Id.*

⁵¹ Even the same number of parking spaces would not suffice to handle all the automobiles brought by new residents.

⁵² GREGORY DROZDZ, *CAB AND COACH* 25–26 (1990).

⁵³ The first elevated railway in New York City, the IRT Ninth Avenue Line, opened July 3, 1868, followed by other elevated lines and, on October 27, 1904, the first underground line. James Nevius, *The Elevated Era*, CURBED N.Y. (June 27, 2018), <https://ny.curbed.com/2018/6/27/17507424/new-york-city-elevated-train-history-transportation> [<https://perma.cc/4JLA-HB57>]; *New York City Subway Opens*, HISTORY (last updated Nov. 6, 2019), <https://www.history.com/this-day-in-history/new-york-city-subway-opens> [<https://perma.cc/3XR5-LXT3>]. The lines were built by the city and leased to private companies to operate. See *New Subways for New York: The Dual System of Rapid Transit (1913)*, https://www.nycsubway.org/wiki/Chapter_1:_Dual_System_of_Rapid_Transit [<https://perma.cc/CF3R-6E4H>] (last visited Feb. 13, 2020). Chicago's "L" first opened for business on June 6, 1892, and the first full circuit of the Loop was finished in 1897. *The Chicago L*, CHI. ARCHITECTURE CTR., <http://www.architecture.org/learn/resources/buildings-of-chicago/building/the-chicago-l/> [<https://perma.cc/AR3A-MZ3S>] (last visited Feb. 8, 2020).

bus routes and subway systems have fixed points for pick-up and drop-off, making them less convenient than a car that could pick you up at your home and drop you off at your desired location.

The problem with this development, as exemplified in the case of New York City, was that the incentives to join the ranks of for-hire cabbies were, perhaps, too great.⁵⁴ Recall that this was an entirely new market or, at least, a complete renovation of the old for-hire carriage market with automobiles. The opening of this market would have appeared to be like the economic equivalent to the Oklahoma land rush,⁵⁵ with tremendous opportunity for those who got in early. The result was a large number of early entrants,⁵⁶ and the seeming overabundance of supply in the point-to-point transportation market led many cabbies to complain that the wages were not sufficient to compensate for the time and cost of being a cabbie.⁵⁷

Faced with these concerns, early Twentieth Century policy makers faced the same difficult decision as faces policy makers today—whether to intervene. Refraining from regulation is so infrequently on the menu that it can be difficult to remember that government regulation is not the only way market conditions change. In the case of taxi drivers and their complaints, it is important to point out that sellers in every market are likely to complain when they have too much competition that it makes it impossible for the complainants to earn a “proper” living. It is human nature to want more money for less work, and cabbies of the early Twentieth Century would not have been immune. One possible policy response, therefore, would be to do nothing and allow market self-regulation to occur. The glut of point-to-point transportation service providers would have led to some cabbies reducing their fares in an attempt to reduce excess capacity—their idle time. That reduction would lead those who had given up the highest-valued alternative forms of employment⁵⁸ to stop being cabbies and would have incentivized more consumers to take a cab. Over time, quantity demanded would have risen and quantity supplied would have declined, reducing the glut.

⁵⁴ See Paul Stephen Dempsey, *Taxi Industry Regulation, Deregulation & Reregulation: The Paradox of Market Failure*, 24 *TRANSP. L.J.* 73, 77 (1996) (“While fewer people could afford to ride a taxi, the number of taxicabs skyrocketed . . . Capacity and demand were moving in opposite directions.”).

⁵⁵ See *Land Run of 1889*, OKLA. HISTORICAL SOC’Y, <https://www.okhistory.org/publications/enc/entry.php?entry=LA014> [<https://perma.cc/M5B8-UPBN>] (last visited Feb. 8, 2020).

⁵⁶ PRICE WATERHOUSE, *ANALYSIS OF TAXICAB DEREGULATION & RE-REGULATION* 4 (1993) (“In an unregulated environment, the low cost of entry attracts individuals who have limited employment options. Thus, during periods of high unemployment [like the Great Depression], independent taxi operators flood the market.”); see also Dempsey, *supra* note 54, at 77.

⁵⁷ “Cut-throat competition in a business of this kind always produces chaos. Drivers are working as long as sixteen hours per day, in their desperate efforts to eke out a living.” Dempsey, *supra* note 54, at 77 (quoting *Taxicab Chaos*, *WASH. POST* (Jan. 25, 1933)).

⁵⁸ In economic terms, those with the highest opportunity costs. Armen A. Alchian, *Cost*, in 3 *INTERNATIONAL ENCYCLOPEDIA OF THE SOCIAL SCIENCES* 404 (David L. Sills ed., 1968).

Cities did not take that path, instead turning to regulatory interventions to “fix” excess supply and too-low prices. Most large cities imposed firm limits on the number of taxis that were allowed to operate in the city.⁵⁹ The typical regulatory form was to implement a medallion system, where a certain number of medallions were sold, and anyone attempting to operate a taxi without a medallion was subject to penalties.⁶⁰ Over the years, most cities have abandoned their medallion systems, but other methods of controlling supply have been tried.⁶¹ In some cities, for example, all taxi drivers must work for one of a small number of licensed taxi companies.⁶² Even setting aside the potential for exploitation of drivers, such a regime grants oligopolistic power to the favored taxi companies, allowing them to restrict supply in order to maintain higher prices.⁶³ Even in cities where express limits on supply have not been implemented, there are often rigid price controls, in the form of detailed fare schedules, which continue to this day.⁶⁴

C. Correcting Externalities

If point-to-point transportation markets work reasonably well, these government interventions would serve only to create barriers to competition. Put another way, government attempts at “fixing” these alleged problems might have exacerbated them or caused entirely new problems. A defense of these interventions is likely to center on the need to minimize harms arising from the market, such as pollution or congestion from additional vehicles on the roads.⁶⁵ If negative externalities exist, government intervention might be able to facilitate more efficient market outcomes. The defining characteristic of a negative externality is that there are costs that should be, but are not, considered when individuals choose to enter transactions.⁶⁶ As a result, the market yields higher

⁵⁹ HARA ASSOCS., INC., TAXICAB REGULATION IN NORTH AMERICA 6–11 (2012), available at <https://studylib.net/doc/5920613/hara-associates---taxicab-regulation-in-north-america-doc> [<https://perma.cc/ZP5J-FWVS>].

⁶⁰ See *id.* at 6, 10–11.

⁶¹ *Id.* at 17–27.

⁶² *Id.* at 45 (describing Los Angeles’ “franchise” system, where companies bid for exclusive service rights to particular areas of the city).

⁶³ Oligopoly is a variation on monopoly, where a single producer has significant control over price. George J. Stigler, *Monopoly*, LIBR. ECON. & LIBERTY, <https://www.econlib.org/library/Enc/Monopoly.html> [<https://perma.cc/4W3J-5PQ7>] (last visited Jan. 24, 2020). An oligopoly differs from a monopoly only in the number of suppliers in the market but, if the numbers are small enough and the existing participants are protected from new competitors, they can jointly act like a monopoly. See *id.*

⁶⁴ E.g., Department of For-Hire Vehicles, DC.Gov, <https://dfhv.dc.gov/page/taxicab-fares> [<https://perma.cc/H366-2LQW>] (last visited Jan. 29, 2020).

⁶⁵ Congestion, of course, is a function of many different factors, including the choices by government officials regarding the capacity of roads and mass transit options. See, e.g., Winston, *supra* note 12, at 784–86.

⁶⁶ Any discussion of externalities should at least mention the critiques of externality theory raised by Nobel Laureate Ronald Coase, who argued that even the terminology presumes

total quantity and lower price than the socially optimal outcome, an outcome consistent with the circumstances at the beginning of the taxi industry.⁶⁷ Government intervention might therefore prevent transactions that are a net drain on society.

The negative-externality story is plausible, but is undercut by the possibility of positive externalities, and the solution imposed by municipalities is fundamentally flawed so that it likely made things worse. First, a negative externality would lead to too many cabs on the roads and prices that were not high enough.⁶⁸ A positive externality—in this case, each taxi can replace more than a single car, and may replace dozens of cars, reducing congestion on the roads and in parking—would result in both output and price being too low. A positive externality operates in similar fashion to a negative externality, but with the total benefit to society being greater than the benefit to the individual.⁶⁹ As a result, individuals don't enter into transactions that would, on net, be beneficial to society.

To combine the two concepts, a negative externality leads to higher social costs while a positive externality leads to higher social benefits. It is therefore possible that the extra costs of taxis are more than offset by the extra benefits of taxis. Similarly, a negative externality leads to inefficiently high production and consumption, while a positive externality leads to inefficiently low production. Whether the total quantity is too high or too low depends on the magnitudes of the externalities, and there is no reason to conclude, *a priori*, that limiting the number of taxis is needed to avoid excessive social costs.

Figure 2 demonstrates how the presence of a positive externality alters the traditional analysis of negative externalities in the taxi industry, pre-regulation. In an unrestricted market with no externality, price and quantity measures would move towards the point where demand (D_1) = supply (S_1). At that point, quantity (q^+) is greater than would be expected if the parties bore all the costs of their transaction (q^*), and price (p^+) is lower than would be expected with all costs considered (p^*). The shaded triangle represents the total extra cost imposed on society from these transactions,⁷⁰ and government intervention might be justified to avoid these costs.

rather than proves the existence of a wrongdoer and a victim. Coase, *supra* note 47, at 2. Instead, Coase argued that a search for solutions should include a willingness to have the “victim” change its behavior, if doing so would minimize the cost of a solution. *Id.* at 2–6.

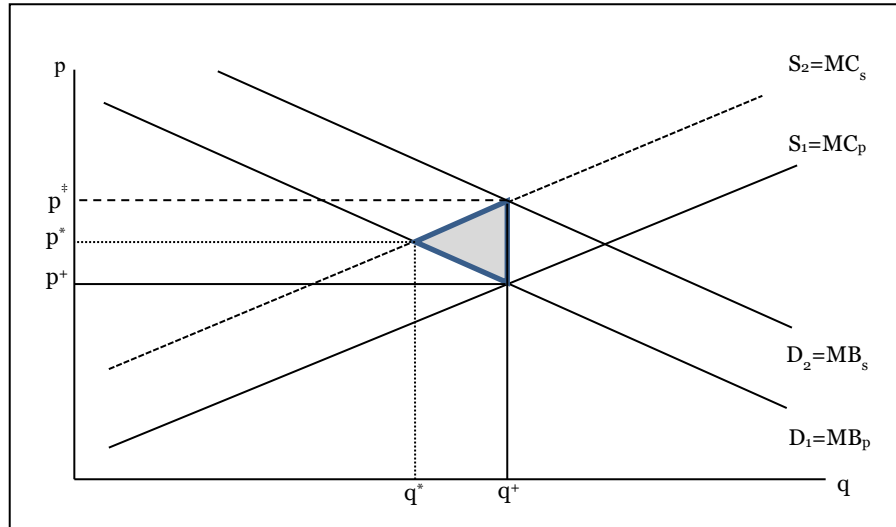
⁶⁷ See, e.g., *id.* at 3–4.

⁶⁸ Although, notice that the reason price should be higher is that it needs to cover all the costs. One of the primary ways in which governments combat negative externalities is to tax transactions in which they arise. A. C. PIGOU, *THE ECONOMICS OF WELFARE* 224 (4th ed. 1932). That means that “solving” a negative externality would likely not have satisfied cabbies, as it would not have increased their wages.

⁶⁹ See Bryan Caplan, *Externalities*, LIBR. ECON. & LIBERTY, <https://www.econlib.org/library/Enc/Externalities.html> [<https://perma.cc/SA8R-LQCB>] (last visited Jan. 24, 2020).

⁷⁰ To be clear, each transaction to the left of q^* has a greater benefit (represented by the marginal benefit (demand) curve) than the total cost (represented by S_2 , the societal marginal

FIGURE 2



A contemporaneous positive externality means that there are also social benefits that are not captured by the individual consumer, so we include D_2 to represent the social marginal benefit (demand) curve. The socially optimal level of output is now q^+ , rather than q^* , and the shaded rectangle no longer represents socially costly transactions because the total value of the transactions is greater than the total cost. Negative externalities reduce social welfare and positive externalities increase it. The net effect in the presence of both positive and negative externalities will depend on their relative magnitudes, but it is possible for the socially desirable outcome to be more taxis, not fewer.

Moreover, even if the market were imperfect, there would be no guarantee that resulting government intervention would not be worse.⁷¹ In every case of a negative externality, the primary difficulty that arises with government intervention is choosing the “correct” level of output.⁷² Deriving the necessary supply and demand curves is largely beyond our analytical capabilities,⁷³ to say nothing of the difficulty—if not impossibility—of predicting the complex hu-

cost (supply) curve). Between q^* and q^+ , the private cost of the transaction (represented by S_1 , the private marginal cost (supply) curve) is still less than the benefit and, because marginal benefits are falling and marginal costs are rising, the excess burden on society increases with every transaction past q^* .

⁷¹ E.g., Kidd, *supra* note 46, at 153 (“Greater obstacles [to efficient markets] will mean greater imperfections from voluntary bargains, but also that any mistakes made during government interventions will be harder to undo, so the harm to individuals and to society will be far more lasting.”); Kidd & Padgett, *supra* note 47, at 16–19 (describing the problems caused by federal trucking regulation).

⁷² See Caplan, *supra* note 69.

⁷³ See, e.g., FRIEDRICH A. HAYEK, *INDIVIDUALISM AND ECONOMIC ORDER* 77–91 (1980).

man interactions that are foundational to any such calculation.⁷⁴ Notwithstanding the ongoing effort by market actors to predict present or future demand, there is no such thing as a real-world supply or demand curve. And yet, regulators would need to set the right number of taxi medallions. Regulators would also need to properly measure the cost of the externality—a complex task but at least within the realm of possibility.⁷⁵

One possible response is that any reduction in output would be beneficial even if it doesn't fully eliminate the waste. That ignores the possibility of positive externalities, as well as the likelihood that regulators will overshoot, rather than undershoot, in their reductive efforts. If regulators set the number of taxi medallions where quantity will be less than the socially optimum level, there is another set of costs to deal with. Consumers and producers are willing to enter into transactions that do no harm to anyone else but are prohibited from doing so for no reason other than that government regulators were off in their calculations. Even worse, governments move slowly and deliberately, while markets are dynamic and constantly changing.⁷⁶ Therefore, even if regulators were lucky enough to get the number of taxi medallions correct at the outset, that lucky guess would not be durable, likely becoming an inefficient level of output within days or hours. Fluctuations in the market would guarantee that the mandated level of output is wrong, possibly catastrophically wrong. For example, issuing too few medallions could result in consumers being stranded at times without access to transportation, increasing the chance that they will become the victims of crime.⁷⁷

D. Transaction Costs

Alternatively, one might argue that the real problem was one of transaction costs. As proposed initially by Nobel Laureate Ronald Coase,⁷⁸ and expanded

⁷⁴ *Id.* at 84, 91; see also LUDVIG VON MISES, *SOCIALISM: AN ECONOMIC AND SOCIOLOGIC ANALYSIS* 97–105 (J. Kahane trans., 1981).

⁷⁵ For example, regulators have been attempting to calculate the “social cost of carbon,” one way of representing the optimal price of greenhouse gas emissions and, indirectly, the cost of the externality. See William Pizer et al., *Using and Improving the Social Cost of Carbon*, 346 *SCIENCE* 1189, 1189–90 (2014). But see Julian Morris, *Climate Change, Catastrophe, Regulation and the Social Cost of Carbon*, REASON FOUND. (Mar. 8, 2018), <https://reason.org/policy-study/climate-change-catastrophe-regulation-and-the-social-cost-of-carbon/> [https://perma.cc/QP5A-U5MP] (describing perceived flaws in the methodology).

⁷⁶ See, e.g., Israel M. Kirzner, *Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach*, 35 *J. ECON. LIT.* 60, 61, 70–73, 81–82 (1997) (describing an Austrian approach toward market equilibrium).

⁷⁷ E.g., *Woman Fatally Shot While Waiting for Taxi in Inglewood; Manhunt Underway*, ABC7 (Sept. 21, 2017), <https://abc7.com/woman-in-inglewood-shot-dead-while-waiting-for-taxi/2438876/> [https://perma.cc/2JGT-MWJJ].

⁷⁸ R. H. Coase, *The Federal Communications Commission*, 2 *J.L. & ECON.* 1, 27 n.54 (1959) (“[T]he legal delimitation of rights provides the starting point for the rearrangement of rights through market transactions. Such transactions are not costless, with a result that the initial delimitation of rights may be maintained even though some other would be more efficient.”).

in economic literature,⁷⁹ transaction costs are often the source of market inefficiencies, and reducing them may solve the market inefficiency.⁸⁰ One possible explanation for the overabundance of taxis in New York streets and elsewhere is that, in the early Twentieth Century, it was difficult to connect someone desiring a ride with someone who operated a cab.⁸¹ Telephone service existed in a much more limited fashion than today, so calling for a taxi would have been difficult. Moreover, the citizens band (CB) radio had not yet been invented,⁸² so even if you could easily call for a taxi, the taxi would have to remain stationary, waiting for an assignment. That would lead to a tremendous amount of down time, when the taxi driver was not making money. The only efficient way of obtaining a fare and making a living would be to drive around, hoping to be hailed. The costs of connecting willing drivers with willing riders were high enough that an inefficiently high number of taxis would have been on the road in order to satisfy the demand for taxi rides. The high number of taxis also meant a high level of competition, so taxi drivers would have found it difficult to pass on any of the costs to riders; hence, the low wages that taxi drivers complained of.

If transaction costs are the cause of excess supply, then what is the solution? Coase's writings encourage two possible paths: first, enact solutions that reduce transaction costs;⁸³ second, if government action is necessary, take great care while attempting to fix market inefficiencies, since transaction costs will cause government failures to linger far longer and impose far higher costs.⁸⁴ Given the level of technology available in the early years of the Twentieth Cen-

⁷⁹ For an expansive explanation of transaction costs and its importance to economic analysis, see MICHAEL C. MUNGER, *TOMORROW 3.0: TRANSACTION COSTS AND THE SHARING ECONOMY* 2–4, 71–72 (2018); see also Brian L. Frye, *Copyright as Charity*, 39 *NOVA L. REV.* 343, 350 (2015) (“[T]hese direct [government] subsidies [to charities] are vulnerable to market failures caused by rent-seeking and transaction costs.”); Merrill F. Hoopengardner, Note, *Nontraditional Venture Capital: An Economic Development Strategy for Alaska*, 20 *ALASKA L. REV.* 357, 367 (2003) (“[S]ome economists believe that the lack of well-developed rural venture capital markets may be caused by ‘market failures that result from imperfect information and high transaction costs.’ ”); George M. Padis, Note, *Overcoming the “Energy Paradox” in the Built Environment*, 42 *TEX. ENVTL. L.J.* 85, 101 (2011) (“[I]n green building there are potential challenges caused by market failure—the high transaction costs associated with differentiated stakeholders—and irrational actors.”).

⁸⁰ See R. H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386, 388 (1937) (describing firms as a solution which facilitates long-term production by reducing the cost of bargaining).

⁸¹ After all, “all most people want is the service the durable good can provide.” MUNGER, *supra* note 79, at 74. “I do not really want to own a car; I want convenient, safe, and reliable transportation services.” *Id.* at 76.

⁸² The CB radio was invented by Al Gross in 1948. *Al Gross: The Walkie-Talkie*, LEMELSON-MIT, <https://lemelson.mit.edu/resources/al-gross> [<https://perma.cc/4T86-25S4>] (last visited Jan. 31, 2020).

⁸³ See Coase, *supra* note 47, at 2; Coase, *supra* note 78, at 15–16 (arguing that allocation of enforceable property rights to radio spectrum would reduce transaction costs and facilitate efficient use of radio spectrum).

⁸⁴ Coase, *supra* note 47, at 19; Kidd, *supra* note 46, at 154.

ture, the first option may have been unavailable but, in adopting fixed limits on taxis—a more traditional, non-Coaseian solution to the problem—civic leaders at the time may have sent their cities down the path that Coase warned about, one with higher costs that linger, perhaps for decades.⁸⁵

It did not take long before technologies arose that would reduce the transaction costs in point-to-point transportation markets. A mere eight years after introduction of the medallion system in New York City, for example, the CB radio was invented, allowing for more efficient connection of riders and drivers.⁸⁶ If cities had waited before imposing a regulatory “solution,” there may never have been a need. Once the regulations were in place and competition was effectively constrained, it was unlikely that the regulations would ever be removed. As discussed in the following Part, those in the industry—who were enjoying the ability to charge above-market rates for taxi services—had become invested in the persistence of the existing regime, making any change unlikely, at best.

II. A SOLUTION, BUT AT WHAT COST?

The choices made by lawmakers and regulators in response to technological changes in the transportation industry may have been motivated by pure intentions, but the consequences were less than desirable. In a classic case of the law of unintended consequences,⁸⁷ policies ostensibly designed to protect drivers and consumers ended up hurting them, as well as society at large, by granting monopoly power to medallion owners. This Part will establish that a medallion system—or any systematic effort to inhibit entry into the market—has a dark side that should be considered but traditionally is not.

To begin, assume that a city implements a medallion system, either to counter a perceived negative externality or perhaps merely to protect favored market incumbents in the point-to-point transportation industry. Either way, the immediate effect of the policy is to restrict taxi services proportional to the number of medallions issued,⁸⁸ likely to a level below what would exist without government restrictions. Each licensed taxi driver is granted some additional

⁸⁵ For an explanation regarding the higher costs associated with the type of barriers to entry that medallion systems represent, see *infra* notes 146–48 and accompanying text. For an explanation of how the taxi industry, once entrenched, will fight to maintain those costly barriers, see *infra* Section III.B.1–4.

⁸⁶ See *Al Gross: The Walkie-Talkie*, *supra* note 82.

⁸⁷ Economist and Nobel Laureate F.A. Hayek was not the originator of the concept of unintended consequences, but he is well known for his quote that “[t]he curious task of economics is to demonstrate to men how little they really know about what they imagine they can design.” 1 F. A. HAYEK, *The Fatal Conceit: The Errors of Socialism*, in *THE COLLECTED WORKS OF FRIEDRICH AUGUST HAYEK* 76 (W. W. Bartley, III et al. eds., 1988).

⁸⁸ There will be some number of illegal taxi services who will risk detection and prosecution, but that number is likely to be low if the city has a reasonable budget for enforcement. If the city chooses not to enforce its medallion system, then the effects described herein will not occur.

level of market power, which the driver can use to raise the price. Because this price will be higher than the cost of producing taxi services,⁸⁹ profits per taxi should increase. These profits will be higher than those obtainable in an unrestricted market, so they represent what economists call *monopoly rents*.⁹⁰ The total rents arising from the government intervention will be divided among market participants that were not forced out of the market by the municipality's implementing the medallion system.

It is important at this juncture to make clear that what is being discussed here are not traditional profits earned by innovative businesses. Profitable innovation includes reduction of production costs or creation of new products that are in high demand because they make consumers' lives better. Those profits serve a useful social function, in that they motivate further innovation that makes all our lives better.⁹¹ Instead, the profits—or monopoly rents—in this scenario are those that arise as governments take action that inhibits competition. Without competition, sellers can maintain high profits without having to cater to the demands of consumers.⁹² Imposing mandatory limits on supply, as with a medallion system, is one way to inhibit markets, protect incumbents, and generate monopoly rents, but there are many others, such as trade barriers (tariffs, quotas, export subsidies) and a host of regulatory barriers, to competition.⁹³

The counterpart to the windfall enjoyed by medallion owners is a loss suffered by other taxi drivers, those who would have provided taxi services but were not granted a medallion, and consumers who are unable to find a taxi because taxi services have been restricted. Even though there are drivers willing to provide a service and consumers willing to pay those drivers, the medallion system prohibits a voluntary bargain between them. Economists refer to this phenomenon as deadweight loss, the loss to society when individuals are prohibited from entering into voluntary transactions solely because government

⁸⁹ This requires a simplifying assumption, that medallions are given to those who are the lowest-cost providers of point-to-point transportation services. In reality, it is likely that politics will enter the initial decision of who will receive medallions, so costs for some sellers may be higher than c , and profits may be lower than indicated here. Over time, however, a higher-cost seller will have strong incentives to sell the medallion to a seller with a lower production cost, who will be willing to pay a premium to gain the extra profits.

⁹⁰ E.g., David Hurlbut, *Fixing the Biodiversity Convention: Toward a Special Protocol for Related Intellectual Property*, 34 NAT. RESOURCES J. 379, 382 n.8 (1994) ("Monopoly rents are additional producer earnings that exist because of barriers to competition, and are thus conceptually different from profits that derive from successful market competition.").

⁹¹ Robert Cooter, *An Escape from Poverty: Developing Productive Organizations*, 12 SW. J. L. & TRADE AM. 181, 183 (2006).

⁹² See Kidd, *supra* note 8, at 170.

⁹³ E.g., Jeremy Kidd, *Quacks or Bootleggers: Who's Really Regulating Hedge Funds?*, 75 WASH. & LEE L. REV. 367, 441–42 (2018) (describing how disclosure requirements could hinder the hedge fund model and protect traditional financial institutions' market power).

regulations do not allow it.⁹⁴ Particularly relevant to the present discussion, deadweight loss increases proportionally to the monopoly rents obtained by the protected industry incumbents.⁹⁵

The medallion system purports to fix the problem of too many taxis on the road. The second half of municipal regulation of the point-to-point transportation industry purports to fix the problem of too little remuneration by fixing taxi rates at some level.⁹⁶ Unlike a price floor (e.g., minimum wage laws) or a price ceiling (e.g., rent-control statutes), taxi fare schedules establish a single method for determining the price of a taxi ride.⁹⁷ As a preliminary matter, the fact that prices are prohibited from fluctuating means that most of the equilibrating mechanisms of the market have been eliminated.⁹⁸ In addition, as demonstrated in Figure 3, the refusal to allow price to fluctuate creates additional deadweight loss.

As a baseline, we assume that demand is defined by D_1 and supply by S_1 . Under those circumstances, the market will trend toward a quantity q^+ and a price of p^+ . The medallion system restricts the quantity of taxi services to a maximum of q^* and causes the market price to rise to p^* .⁹⁹ The new higher price increases profits, which would be represented by the rectangle between p^* and c_1 , the cost of producing taxi services at that level of output. The policy also generates deadweight loss, represented by the triangle created by D_1 and S_1 , between q^* and q^+ .

⁹⁴ Salil K. Mehra, *Competition Law for a Post-Scarcity World*, 4 TEX. A&M L. REV. 1, 23 (2016).

⁹⁵ *See id.* at 24.

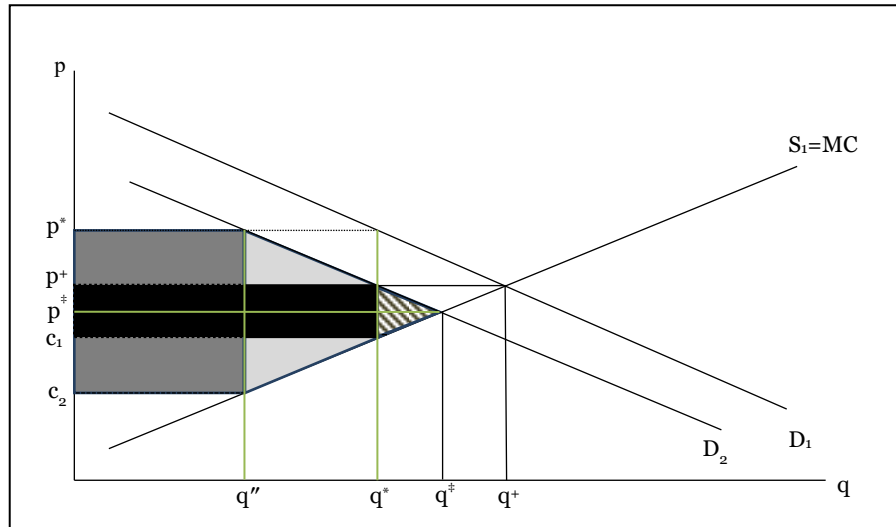
⁹⁶ Fixed rates were designed to halt “fare wars” that were lowering drivers’ wages. U.S. DEP’T OF TRANSP., TAXICAB REGULATION IN U.S. CITIES 6–7 (1983), <https://ia801302.us.archive.org/17/items/taxicabregulatio00shaw/taxicabregulatio00shaw.pdf> [<https://perma.cc/6BGC-5A6W>]. *But see* Dempsey, *supra* note 54, at 107 (“prices rose following taxi deregulation in every documented case.”).

⁹⁷ *E.g.*, Department of For-Hire Vehicles, *supra* note 64.

⁹⁸ *Cf.* READ, *supra* note 34, at 9–10.

⁹⁹ For purposes of illustration, this demonstration will assume that policy makers have chosen a quantity of medallions that is lower than what would be needed to satisfy market demand, leaving some riders unable to obtain rides. It is possible to set the limit above the market equilibrium but that would be a non-binding constraint and would have no impact on the market. A medallion system can only solve the problem of too many taxis on the street if the upper limit is set lower than the market equilibrium.

FIGURE 3



Now, imagine a decrease in income—perhaps due to a recession—which causes demand to fall from D_1 to D_2 . An unfettered market would shift towards q^{\ddagger} and p^{\ddagger} . With the medallion system in place, the market would end up at q^* and p^+ , instead. Profits would fall, now represented by the black rectangle between p^+ and c_1 , and deadweight loss would shrink, represented by the striped triangle between q^* and q^{\ddagger} . If, however, price controls had also been put in place to protect industry profits, the combination of price and quantity restrictions create additional chaos. If price was set at p^* , consistent with the market price when the medallion system was implemented, then a shift in demand to D_2 will cause the actual quantity of taxi services to fall all the way to q'' . Profits under both price and quantity restrictions will be the dark gray rectangle between p^* and c_2 , the cost of producing taxi services at that output level. Profits are higher in this scenario than if price were allowed to fluctuate, although a significant decrease in quantity might mean that some drivers have exited the industry, so it is not an unequivocal improvement for drivers. More importantly, the deadweight loss under both price and quantity controls (represented by the lightly shaded triangle between q'' and q^{\ddagger}) is dramatically higher than under quantity controls, alone, so society pays a heavy cost for the extra regulations.

In other words, if the goal is merely to reduce negative externalities, quantity control mechanisms would be sufficient, if imperfect.¹⁰⁰ Adding a price control mechanism that serves no purpose but to preserve or increase monopoly rents reveals the likely goal of the set of regulations, and that consumer protection and societal welfare were not it. Even taxi drivers suffer in this scenario, as q'' is significantly lower than q^* , the number of medallions outstanding. In other

¹⁰⁰ See *supra* notes 70–72 and accompanying text.

words, there are too few potential riders for all medallions to be effectively used.

While the details differ between municipalities, the point-to-point transportation market exhibited the same basic dynamics in most major cities for almost a century.¹⁰¹ High barriers to entry kept the total number of taxis down, and cities mandated a specific fare schedule.¹⁰² Taxi consumers paid higher prices for transportation from providers who faced minimal incentives to provide high quality service. Rising deadweight losses manifested in many consumers who simply could not obtain taxi services and taxi drivers who couldn't make a living. What was the purpose of all this suffering and consumer exploitation? Protection of the pool of monopoly rents.

III. OF GALBRAITHIAN BAPTISTS AND TULLOCKIAN BOOTLEGGERS

For decades, the benefits to consumers of a free market in point-to-point transportation took a back seat to protection of entrenched interests. In many cases, the taxi industry was largely in charge of taxi regulations, by way of taxi commissions that exercised tremendous power.¹⁰³ One extreme example is the New York City Taxi and Limousine Commission (TLC) which, according to its website, has a nine-member board and approximately 600 employees assigned to various divisions and bureaus throughout city government.¹⁰⁴ Eight of the nine board members receive no salary,¹⁰⁵ but the ninth—the chair—does and is

¹⁰¹ See HARA ASSOCS., INC., *supra* note 59, at 17.

¹⁰² *Id.* at 5, 10.

¹⁰³ In addition to the powerful New York City Taxi and Limousine Commission, discussed *infra*, other cities have seen their taxi commissions—ostensibly public safety entities—acting expressly against ride-sharing in order to defend taxis. *E.g.*, Maria Bustillos, *How L.A.'s Taxi Boss Plans to Take on Uber*, NEW YORKER (Dec. 12, 2014), <https://www.newyorker.com/business/currency/city-los-angeles-plans-make-taxis-like-uber> [<https://perma.cc/Q2KC-SKCC>]. Most major cities have had—and most still have—taxi commissions that establish the requirements for entering the industry and, in those cities with medallion or fixed-limit systems, maintain strong barriers to competition. *See, e.g.*, *About TLC*, N.Y.C. TAXI & LIMOUSINE COMM'N, <https://www1.nyc.gov/site/tlc/about/about-tlc.page> [<https://perma.cc/3V8D-FWK8>] (last visited Jan. 19, 2020); *Commissions*, CITY OF L.A. DEP'T OF TRANSP., <https://ladot.lacity.org/what-we-do/about-us/commissions> [<https://perma.cc/8W9M-ZWS2>] (last visited Jan. 19, 2020); *Department of For-Hire Vehicles*, *supra* note 64; *Hackney Carriage Unit*, BOS. POLICE DEP'T, <https://bpdnews.com/hackney-carriage-unit> [<https://perma.cc/2FNZ-LPSB>] (last visited Jan. 19, 2020); *The Transportation Division*, MD. PUB. SERV. COMM'N, <https://www.psc.state.md.us/transportation/> [<https://perma.cc/3N8G-YYAS>] (last visited Jan. 19, 2020). Some states have even centralized their taxi regulations, in order to limit the power of localities to erect barriers to competition from ride-sharing. *E.g.*, *Transportation Regulation Division*, CITY OF DALL., <https://dallascityhall.com/departments/aviation/Pages/Transportation-For-Hire.aspx> [<https://perma.cc/4D8V-YYLQ>] (last visited Jan. 19, 2020). (including a state-mandated disclosure that ride-sharing companies need not apply to city government for a license to operate in Dallas).

¹⁰⁴ *About TLC*, *supra* note 103.

¹⁰⁵ *Id.* Although that would not preclude them from extracting various other benefits from those being regulated in return for maintaining protections against competition.

responsible for supervising the remaining TLC employees.¹⁰⁶ While not an extremely large number in context of a city the size of New York City, the reach of the TLC is more troubling, giving it the capacity to identify threats to taxis' monopoly power and defeat them, regardless of their source.

The TLC is but one example of the special interests who stand to lose, should the current regime be disrupted. Ride-sharing, as a concept, poses a significant threat to the regime, as it allows consumers to bypass the restrictive barriers that protect the taxi industry, obtaining transportation from other consumers.¹⁰⁷ It also allows individuals with driving skills and equipment (cars) to offer their driving services to consumers without having to obtain the imprimatur of—and pay requisite fees to—city regulatory bodies and entrenched incumbents. Most interestingly, it does this by doing what Coase would have suggested, reducing transaction costs.¹⁰⁸

Figure 4 illustrates what has occurred as ride-sharing emerged as a substantial substitute good to the taxi industry. Ride-sharing, having captured the attention of transportation consumers, reduces demand for taxi rides from D_1 to D_2 . The reduction in demand is high enough that it has caused monopoly rents—the darkly shaded rectangle—to decline significantly. A decline in the pool of monopoly rents should result in a decline in the price of buying into the system by purchasing a medallion. That is, in fact, precisely what is apparent from medallion sales data—in New York City, medallion prices declined from a high of \$1.05 million dollars to less than \$200,000 during 2013 to 2016, a period when TNCs were increasing in popularity.¹⁰⁹ In Chicago, medallion prices declined from \$350,000 to less than \$100,000 during the same period.¹¹⁰ There is still some value to owning a medallion, but that value appears to be shrinking rapidly, and may eventually fall to zero if left unimpeded by government interven-

¹⁰⁶ *Id.*

¹⁰⁷ “Rumor has it that the concept for Uber was born one winter night during the [2008 LeWeb tech] conference when [a] pair [of friends] w[ere] unable to get a cab.” Dan Blystone, *The Story of Uber*, INVESTOPEDIA, <https://www.investopedia.com/articles/personal-finance/111015/story-uber.asp> [<https://perma.cc/8K6P-BK35>] (last updated June 25, 2019).

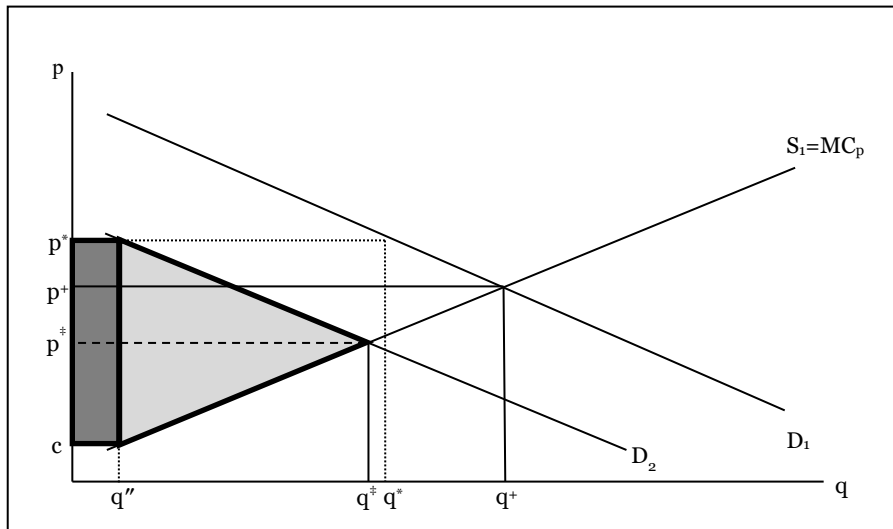
¹⁰⁸ MUNGER, *supra* note 79, at 75–83; Brishen Rogers, *The Social Cost of Uber*, 82 U. CHI. L. REV. DIALOGUE 85, 87 (2015) (“Uber’s key innovation lies in having reduced the transaction costs that otherwise plague the sector . . .”).

¹⁰⁹ A September 2017 foreclosure sale of 46 medallions occurred for \$8.65 million, or approximately \$186,000 per medallion. Raul Hernandez, *A Mysterious Hedge Fund Just Scooped Up the Foreclosed Medallions from New York City’s ‘Taxi King’*, BUS. INSIDER (Sept. 19, 2017), <http://www.businessinsider.com/nyc-taxi-king-foreclosed-medallions-scooped-up-by-hedge-fund-2017-9> [<https://perma.cc/D6T7-DW83>].

¹¹⁰ CITY OF CHI. BUS. AFFAIRS AND CONSUMER PROT., MEDALLION TRANSFER PRICES FROM 1/1/2013 TO 12/31/2013, <https://www.cityofchicago.org/content/dam/city/depts/bacp/publicvehicleinfo/medallionowners/taxicabtransferprices01022013.pdf> [<https://perma.cc/74D8-TEGY>] (last updated Jan. 1, 2014); CITY OF CHI. BUS. AFFAIRS AND CONSUMER PROT., 2016 MEDALLION TRANSFER PRICES, <https://www.cityofchicago.org/content/dam/city/depts/bacp/publicvehicleinfo/medallionowners/2016ListMedallionTransferPrices132017.pdf> [<https://perma.cc/Q9GB-MGZC>] (last updated Jan. 13, 2017).

tion.¹¹¹ The other notable result of a significant fall in demand with price restrictions in place is the size of the deadweight loss. Fortunately, in a market with close substitutes, at least half of the deadweight loss equation—consumers—still have transportation. Those who have invested in the ability to transport others by taxi are left without the ability to make a profit off their services, but the culprit is not TNCs. Instead, the culprit is the pricing restrictions imposed by the city. Without those, existing taxi drivers would be able to sell q^* rides, instead of q'' .

FIGURE 4



This change is unambiguously good for consumers, but the entrenched interests suffer losses and should be expected to push back against this kind of disruptive innovation. And so they have, with restrictions on TNCs being passed by many municipal bodies.¹¹² In some cities, those restrictions were

¹¹¹ See, e.g., *infra* Figure 5.

¹¹² E.g., Sandra Baker, *Fort Worth Updating Vehicle-For-Hire Rules*, FORT WORTH STAR-TELEGRAM (Feb. 8, 2016, 5:17 PM), <https://www.star-telegram.com/news/local/article59204168.html> [<https://perma.cc/7NVL-H5MG>]; Aman Batheja, *With New Rules, Will Uber, Lyft Stay in Austin?*, TEX. TRIB. (Dec. 17, 2015, 9:00 PM), <https://www.texastribune.org/2015/12/17/austin-city-council-approves-new-uber-regs-uber-th/> [<https://perma.cc/UDG4-SKJD>]; Austin Berg, *Chicago Passes New Rules on Uber and Lyft*, ILL. POL'Y (June 22, 2016), <https://www.illinoispolicy.org/chicago-passes-new-rules-on-uber-and-lyft/> [<https://perma.cc/7TLE-CFYW>]; William Crum, *Oklahoma City Traffic Commission Approves Regulating App-Based Ride Services*, OKLAHOMAN (July 22, 2014, 12:00 AM), <https://oklahoman.com/article/5011736/oklahoma-city-traffic-commission-approves-regulating-app-based-ride-services> [<https://perma.cc/WK87-KYM4>]; Drew Joseph, *Uber Says Policy Changes Still Not Enough to Stay in SA*, SAN ANTONIO EXPRESS-NEWS, <https://www.mysanantonio.com/news/local/article/Taxi-industry-protests-ahead-of-council-vote-on-6114>

eventually rescinded, city officers bowing to the pressure of the consuming public.¹¹³ In other cities, however, the restrictions remain strong, inhibiting the expansion of TNCs and a corresponding reduction in demand, which might eventually eliminate the feasibility of taxis as a form of transportation. Notice, however, that taxis become infeasible, not unwanted. In a free market, taxis would likely remain a viable alternative; only the mandated fare schedule keeps individual taxi drivers from making a profit. Consumers, too, would be ill-served if taxis ceased to operate, as that would eliminate a substitute for TNCs and allow TNCs to exercise market power, albeit based on network effects rather than government restrictions.¹¹⁴

Given the threat to the taxi regime posed by TNCs, it should not be surprising that current industry incumbents have pushed back against the advent of ride-sharing. The criticisms have been withering, at times, such as the President of a Philadelphia taxi company's¹¹⁵ comparing TNCs to a terrorist organization, or European taxi drivers' comparing TNCs to rampaging Vikings.¹¹⁶ Criticisms have also come from outside the industry, often from academia.¹¹⁷ These out-

552.php [https://perma.cc/Y2YZ-HNBQ] (last updated Mar. 4, 2015, 6:22 PM); Jared Meyer, *Seattle Doesn't Care About Part-time Ridesharing Drivers*, FORBES.COM (Dec. 6, 2016, 7:00 PM), <https://www.forbes.com/sites/jaredmeyer/2016/12/06/seattle-doesnt-care-about-part-time-ridesharing-drivers/#6472337e47b0> [https://perma.cc/9QPK-9SBX]; JC Reindl, *Higher Taxi Rates but Fewer Shenanigans*, DETROIT FREE PRESS, <https://www.freep.com/story/money/business/michigan/2014/10/27/taxi-regs-rewrite-detroit-uber-lyft/17963613/> [https://perma.cc/V2BD-R2GC] (last updated Oct. 27, 2014, 10:40 AM). *But see* Alex Samuels, *Uber, Lyft Return to Austin as Texas Gov. Abbott Signs Ride-Hailing Measure into Law*, TEX. TRIB., <https://www.texastribune.org/2017/05/29/texas-gov-greg-abbott-signs-measure-creating-statewide-regulations-rid/> [https://perma.cc/6ESV-QNTD] (last updated May 29, 2017, 11:00 AM) (describing a Texas law that created statewide regulations for TNCs and superseded more onerous local regulations).

¹¹³ Fort Lauderdale is such a city. While ride-sharing services are currently available at the Fort Lauderdale Airport, that was not always the case, with Broward County maintaining restrictions on Uber and other ride-sharing companies until pressured to rescind the restrictions. *See* Brittany Wallman, *Uber Stops Pickups at Lauderdale Airport, Port*, SOUTH FLA. SUN SENTINEL (June 23, 2015, 9:39 PM), <https://www.sun-sentinel.com/local/broward/fl-uber-broward-court-20150623-story.html> [https://perma.cc/Q4R2-3TKB].

¹¹⁴ “Network effects occur, quite simply, when the value of a product increases through a rise in the number of people using it.” Catherine Tucker & Alexander Marthews, *Social Networks, Advertising, and Antitrust*, 19 GEO. MASON L. REV. 1211, 1217 (2012). Network effects can inhibit competition by making it difficult for new market entrants to convince consumers to use a product with a smaller network. *E.g., id.* at 1218–19.

¹¹⁵ Alexis Kleinman, *President of Taxi Association Compares UberX to ISIS*, HUFFINGTON POST, https://www.huffpost.com/entry/uberx-isis_n_6070472 [https://perma.cc/L7XH-ZJY6] (last updated Oct. 30, 2014) (While speaking at a public hearing, Alex Friedman, President of the Pennsylvania Taxi Association said, “I try to equate this illegal operation of UberX as a terroristic act like ISIS invading the Middle East . . .”).

¹¹⁶ Guy Hedgcock, *Can This Man Kill Uber?*, POLITICO, <https://www.politico.eu/article/tito-alvarez-uber-battle-ccj-decision/> [https://perma.cc/N5GP-MF8X] (last updated July 3, 2017, 1:17 PM) (Tito Álvarez, spokesman for Élite Taxi, a European taxi cooperative argued “[t]hey [Uber] are illegal, they pillage countries—they have to go . . .”).

¹¹⁷ *See* discussion *infra* Section III.C.2.

side criticisms often have a more subtle and scholarly tone but serve the same end, protection of incumbent interests. The combination provides an excellent example of what Bruce Yandle referred to as “bootleggers and Baptists.”¹¹⁸

A. *Bootleggers and Baptists Basics*

Notwithstanding the strong criticisms of some in the industry and others in politics and academia, ride-sharing continues to be popular with the riding public.¹¹⁹ The continued opposition to TNCs in many large cities—running, as it does, counter to the obvious will of consumers—would seem illogical without the insights of Yandle’s Bootlegger and Baptist theory. Yandle showed how the combined efforts of anti-liquor Baptists and pro-moonshine bootleggers in the southern United States combined to push and maintain restrictions on the sale of alcohol on Sunday long after prohibition-era preferences for abstinence had passed.¹²⁰ Applying the theory more broadly, the allegorical Baptists are the morally persuasive advocates and the bootleggers secretly and financially support the crusade with profits, rather than morality, in mind.¹²¹

For a Baptist, regulation is justified by a desire to correct perceived market failures,¹²² but the bootlegger sees it as an opportunity to pursue private gain

¹¹⁸ Bruce Yandle, *Bootleggers and Baptists in Retrospect*, 22 REGULATION 5, 5 (1999).

¹¹⁹ Tony Arevalo, *40 Fascinating Uber Statistics and Facts in 2020*, CARSURANCE (Jan. 7, 2020), <https://carsurance.net/blog/uber-statistics/> [<https://perma.cc/79EB-PEAA>] (reporting that “Uber facilitates as many as 40 million rides per month in the U.S. alone.”).

¹²⁰ Yandle, *supra* note 118, at 5.

¹²¹ Interestingly, while the theory has far broader application, occasionally the Baptists are actually Baptists and the bootleggers are actually the purveyors of alcoholic beverages. In Arkansas, for example, counties must go through a complicated process to permit alcohol sales. Those efforts are almost always opposed by a combination of local Baptist churches and the owners of alcohol stores that sit just across the county lines in a wet county. Jeremy Horpedahl, *Bootleggers, Baptists, and Ballots: Spending on Alcohol Legalization Elections in Arkansas* (working paper) (on file with author).

¹²² See J. Robert Brown, Jr., *Corporate Governance, Shareholder Proposals, and Engagement Between Managers and Owners*, 94 DENV. L. REV. ONLINE 300, 311–18 (2017) (arguing that the market for corporate control has ceased to function, removing essential market mechanisms for policing director behavior); Bruce Yandle & Stuart Buck, *Bootleggers, Baptists, and the Global Warming Battle*, 26 HARV. ENVTL. L. REV. 177, 185–86 (2002) (describing the public interest theory of regulation). The term “market failure” has a reasonably precise definition: some circumstance that interferes with market mechanisms and precludes prices from adjusting to achieve efficient outcomes. See e.g., COASE, *supra* note 38, at 133 (“The kind of situation which economists are prone to consider as requiring corrective governmental action is, in fact, often the result of governmental action. Such action is not necessarily unwise. But there is a real danger that extensive governmental intervention in the economic system may lead to the protection of those responsible for harmful effects being carried too far.”); see also HENRY N. BUTLER ET AL., *ECONOMIC ANALYSIS FOR LAWYERS* 125–26 (3d ed. 2014). The term is used colloquially in far less precise fashion, often referring to any market outcome that does not match the speaker’s normative view of what the world *should* look like. As it turns out, those suboptimal outcomes can be the result of prior government action, making further government intervention unwise. See Kidd, *supra* note

outside of a market context by having the government erect barriers to entry.¹²³ As barriers go up, competition falters and monopoly profits rise.¹²⁴ Those barriers protect industry incumbents, which is why those incumbents lobby heavily for regulations to be imposed on competitors and themselves.¹²⁵ This type of anti-consumer action is touted as necessary to protect consumers,¹²⁶ but that moralizing just conceals—often barely so—the naked self-interest of those who position themselves to garner rents.

Once this principle is understood, many regulations make more sense. Seemingly futile regulations—including those that harm consumer welfare—persist because the goals they are designed to achieve are those of the bootlegger, rather than the Baptist. In other words, the common references to the law of unintended consequences might be naïve, offered because the individual simply has not thought clearly about who the policy choice was *really* intended to benefit.

The coalition of bootleggers and Baptists is a strong one. Separately, money and morality are powerful tools; combined, they gain strength beyond what can be explained by mere summation of their efforts. Baptists bring an organizational strength and an ability to use that strength publicly, filling airwaves or protest spaces with moral arguments—verbal or written on placards—in favor of government action. Bootleggers bring financial and other pressures to bear, including a willingness to spend in anticipation of some expected future income to be derived from government action.¹²⁷

Each can achieve some desired results alone, but if their interests align, each one reduces the marginal costs of the other. Convincing government agents to change policy is a costly endeavor, especially when the Baptist wish-

46, at 149; Kidd & Padgett, *supra* note 47, at 11 (arguing that the U.S. trucker shortage is the result of unhelpful Department of Transportation safety regulations).

¹²³ See Bruce Yandle, *Bootleggers and Baptists: The Education of a Regulatory Economist*, 7 REGULATION 12, 13 (1983).

¹²⁴ See discussion *supra* Part II; see also Jonathan H. Adler et al., *Baptists, Bootleggers & Electronic Cigarettes*, 33 YALE J. ON REG. 313, 348 (2016).

¹²⁵ An early example is the London weavers' demanding and receiving specific regulatory mention in the Magna Carta. Yandle, *supra* note 123, at 12.

¹²⁶ An example can be drawn directly from the history of the legal profession. During the 1930s, the organized bar lobbied heavily for imposition of sanctions for the unauthorized practice of law. See Laurel A. Rigertas, *Lobbying and Litigating Against "Legal Bootleggers"—The Role of the Organized Bar in the Expansion of the Courts' Inherent Powers in the Early Twentieth Century*, 46 CAL. W. L. REV. 65, 103–18 (2009). Publicly, the lobbying efforts centered around the alleged need to protect consumers from unqualified practitioners, but the driving motivation was a dramatic reduction in the legal profession's income due to "overcrowding of the profession and to competition from nonlawyers." *Id.* at 67–68, 114–15.

¹²⁷ The bootleggers are engaged in what public choice scholars term "rent-seeking," seeking to gain extra-market returns through the use of government barriers to competition. Kidd, *supra* note 8, at 168–69. Those engaged in rent-seeking will invest resources up to the amount they expect to gain, once the barriers are in place. Gordon Tullock, *The Welfare Costs of Tariffs, Monopolies and Theft*, 7 W. ECON. J. 224, 229–30 (1967).

es to shift government policy away from public preferences.¹²⁸ Material support from the bootlegger increases the productivity of the Baptist's efforts.¹²⁹ Similarly, when rents are being sought in an area of government that is likely to attract public interest or controversy, such as when regulation will run counter to public preferences, rent-seeking expenditures will be more productive if they can hide behind a morally acceptable front.¹³⁰ Neither can fully achieve its goals without the specialized skills of the other; combined, the range of possibilities increases.¹³¹

Although an alignment of interests is essential for both groups to enjoy the full benefits of their collusion, their interests align procedurally far more often than would be expected of other political coalitions.¹³² This is because bootleggers care little for the overall social purpose of the regulation and Baptists care about that aspect almost exclusively.¹³³ Bootleggers will focus on the details of the regulation because that is where profits are made, and Baptists will remain largely unconcerned about the details.¹³⁴ The bootlegger will choose, from the many options for achieving the Baptist's broad goals, the route that offers the highest profits and trust that the Baptist's zeal for the regulation will assure reasonable enforcement.¹³⁵ As a result, there are far fewer opportunities for bootleggers and Baptists to find themselves at cross-purposes.¹³⁶

It should be obvious that there are limits to what bootleggers and Baptists can achieve with their resources and moralizing. First, regulation is subject to increasing marginal costs and decreasing marginal benefits, and the electorate will eventually reject even the most convincing Baptist if the costs rise high enough or the benefits fall low enough. Also, money and morals are ineffective if the regulation cannot take a form acceptable to the regulator,¹³⁷ as regulators have their own incentives. Some of those incentives will be outcome specific, if

¹²⁸ *E.g.*, Horpedahl, *supra* note 121 (describing the efforts of actual Baptist churches to defeat public referenda to reinstate alcohol sales in dry Arkansas counties, funded largely by alcohol retailers in neighboring counties).

¹²⁹ Because Baptists do not gain monetarily from their preferred change in policy, they can only invest resources currently on hand. Bootleggers, on the other hand, can invest not only current funds but can borrow against expected funds to be obtained once the policy is changed. Most Baptists, therefore, will be money-poor and their efforts are less likely to succeed. An infusion of resources from the bootlegger can vault a money-poor Baptist into contention.

¹³⁰ *See* Yandle & Buck, *supra* note 122, at 188.

¹³¹ Kidd, *supra* note 93, at 402–03; Yandle, *supra* note 123, at 14.

¹³² *See* Yandle, *supra* note 118, at 6.

¹³³ *See id.* at 5–6.

¹³⁴ *See id.* at 5 (“It is worth noting that it is the details of a regulation that usually win the endorsement of bootleggers . . .”).

¹³⁵ *Id.*

¹³⁶ *See id.*

¹³⁷ The term “regulator” here is used in its broadest sense, to include any who regulate business. It therefore includes not only those who work for the administrative state, but also those in the legislative and judicial branches.

the regulator has been “captured.”¹³⁸ More generally, however, regulators must maximize their budgets or minimize costs, subject to certain baseline goals.¹³⁹ Of course, the costs to be minimized are the regulator’s costs, not costs to consumers or producers, so regulators probably want rules that are easy to enforce and unlikely to generate mistakes or political costs.

Simple rules that can be generally applied most often meet these criteria. Regulators want fewer points where discretion must be exercised, as each point can lead to a disgruntled politician or powerful voter, imperiling future budgets.¹⁴⁰ Simple rules requiring uniform behavior also make compliance easier and violations less likely, so detection and enforcement costs will be lower. The influence of the Baptist allows the regulator to credibly claim that there are solutions at hand,¹⁴¹ and the bootlegger’s attention to detail can help craft a simple rule that achieves its ends. The bootlegger also has the finances needed to “grease the political machinery”¹⁴² and buy off more tepid opposition.

B. *Bootleggers and Transitional Gains*

Who are the bootleggers in the ridesharing scenario? At one level, the question is simple—who is financially invested in the protectionist regime that preserves the pool of monopoly rents? Identifying bootleggers is always an imprecise endeavor, as bootleggers are usually content to remain behind the scenes¹⁴³—the success of their endeavors may depend on it. Some bootleggers have an obvious link to the industry being protected by government regulation while others require greater scrutiny to identify.¹⁴⁴ In order to proceed methodi-

¹³⁸ See MANCUR OLSON, *THE RISE AND DECLINE OF NATIONS: ECONOMIC GROWTH, STAGFLATION, AND SOCIAL RIGIDITIES* 90–91 (1982). Early capture theories of regulation were proposed by MARVER H. BERNSTEIN, *REGULATING BUSINESS BY INDEPENDENT COMMISSION* 156 (1955), and GABRIEL KOLKO, *THE TRIUMPH OF CONSERVATISM: A REINTERPRETATION OF AMERICAN HISTORY, 1900-1916* 103 (1963). Regulatory capture is not just a danger from the regulated industry, because other groups can have strong interests in regulatory outcomes. See Robert A. Prentice & David B. Spence, *Sarbanes-Oxley as Quack Corporate Governance: How Wise Is the Received Wisdom*, 95 *GEO. L.J.* 1843, 1847 (2007).

¹³⁹ See Yandle, *supra* note 123, at 13.

¹⁴⁰ See *id.*

¹⁴¹ When the solutions fail, the complexity of the system gives the regulators cover for claiming good faith in attempting to solve the problem.

¹⁴² Yandle, *supra* note 118, at 5.

¹⁴³ Yandle & Buck, *supra* note 122, at 188 (“[Baptists] take the moral high ground, while the bootleggers persuade politicians quietly, behind closed doors.”). Given the potential for political and economic backlash, it would seem foolhardy for an individual or company to boast about convincing regulators to enact policies that inhibit competition and allow the bootlegger to gain monopoly profits.

¹⁴⁴ For example, when scrubbers were mandated on all coal-fired power plants, it is easy to identify the bootleggers—the owners of high-sulfur coal deposits—whose coal gained a purely regulatory advantage over the owners of low-sulfur coal. Yandle, *supra* note 118, at 6. Conversely, when the northern spotted owl was protected by closing off millions of acres of public forest, it would not have been obvious that the bootlegger was Weyerhaeuser, who

cally, the search for bootleggers should begin by identifying: (1) destructive policies that persist in a way that suggest the presence of a bootlegger,¹⁴⁵ and (2) groups that benefit from the policy's results.

In the case of ride-sharing, there are any number of policies that create barriers to entry into the market. Some are obvious, such as the medallion system (or other quantity restrictions) and price-control regimes. Other smaller barriers inhibit entry by raising fixed costs. These barriers include dress codes, drug testing, language proficiency rules, and fire extinguisher requirements¹⁴⁶ or even more costly barriers such as high insurance premiums for part-time drivers, costly background checks, and so on.¹⁴⁷ In every case, these barriers are defended on consumer-protection grounds, although many bear only tangentiality on actual consumer safety, and all of them are substitutes for market regulation, which can protect consumers without inhibiting competition.¹⁴⁸

As for those who benefit from these barriers and the pool of monopoly rents that they generate, the list begins with taxi drivers, but it does not end there. A helpful exercise is to imagine who would find their lives significantly disrupted if ride-sharing eliminated the pool of monopoly rents overnight, possibly even eliminating the taxi industry, in its entirety. More than just taxi drivers, who would lose employment in the taxi industry, would be hurt. Taxi companies, who have accumulated large amounts of physical capital, would find that capital somewhat devalued and their business model disrupted in a TNC-dominated world. Taxi commissions, like the aforementioned New York City TLC, wield significant political power that would likely disappear—along with

owned the adjacent private timber that became significantly more valuable because it was not subject to the regulations. *See id.*

¹⁴⁵ Government rarely achieves its goals in a cost-effective manner. A government program might fail for a host of reasons or might achieve some stated goals but in an inefficient manner, so failure is neither a necessary nor sufficient condition. What is most important is that the policy imposes costs on society to the benefit of a special interest.

¹⁴⁶ As an interesting contrast, the New York City Taxi and Limousine Commission has promulgated extensive rules for TNCs, N.Y.C., N.Y., § 78-01 (2020), while Chicago requires only a chauffeur's license and a car less than six years old. Brett Helling, *The Complete Guide to Driving for Uber and Lyft in Chicago*, RIDESTER (Feb. 1, 2020), <https://www.ridester.com/drive-uber-lyft-chicago/>. Houston originally had its own TNC license and set of regulations, but the Texas government has now standardized ride-sharing rules across Texas. TEX., OCC. CODE § 2402.001 (2017).

¹⁴⁷ *E.g.*, Sandra Baker, *Uber, Lyft Win Deregulation Efforts in Fort Worth*, FORT WORTH STAR-TELEGRAM (June 28, 2016, 9:19 PM), <https://www.star-telegram.com/news/local/fort-worth/article86557452.html> [<https://perma.cc/QXV9-TC85>] (describing elimination of the requirement of expensive fingerprint background checks); Berg, *supra* note 112 (describing previous Chicago rules requiring drug testing and physical exams for drivers); Ryan Poe, *5 Things to Know About Memphis' Proposed Ride-Sharing Rules*, COM. APPEAL (Feb. 26, 2015), <http://archive.commercialappeal.com/news/government/city/5-things-to-know-about-memphis-proposed-ride-sharing-rules-ep-956165667-324455001.html> [<https://perma.cc/2RPG-J8Z3>] (describing a requirement to collect and turn over to the city significant data about rides and riders).

¹⁴⁸ *See* Kidd, *supra* note 8, at 187–91.

the benefits it generates—if taxis were no longer a dominant mode of municipal transportation. Finally, the financial institutions who have financed a significant portion of the debt required to afford the high cost of a medallion or other fixed costs of entry into the industry would find the value of that debt reduced to zero. Other interests might indirectly benefit from the pool of monopoly rents, such as companies that manufacture industry-specific equipment like taxi meters. Without barriers to entry into those markets, however, they would be unable to charge above-market rates for their products, so they are likely not sharing in the pool of monopoly rents.

Each group of potential bootleggers has something to lose if TNCs crowd out taxis in the point-to-point transportation market. In order to determine the strength of the incentives to engage in bootlegging activity, those potential losses should be measured against the gains that they would achieve in a TNC-heavy market.

1. *Taxi Drivers*

The San Francisco Municipal Transportation Agency estimates that the average number of rides per taxi declined 65 percent between 2012 and 2014, while ride-sharing was increasing its penetration into the market.¹⁴⁹ In an extreme case, taxi drivers could lose their livelihood if ride-sharing dominates the transportation market. Even in a less extreme case, however, if a medallion system is effectively defeated by ride-sharing, wages for taxi drivers will decrease.¹⁵⁰

On the other hand, it would not be unexpected for the advent of ride-sharing to increase the total demand for point-to-point transportation; simply affording consumers more choice increases consumer welfare, but other factors could also increase demand. Increased competition should lead to drivers being more courteous, especially in those cases where the transportation company uses consumer feedback to determine continued employment.¹⁵¹ Other consumer-

¹⁴⁹ Megan Garber, *After Uber, San Francisco Has Seen a 65% Decline in Cab Use*, ATLANTIC (Sept. 17, 2014), <https://www.theatlantic.com/technology/archive/2014/09/what-uber-is-doing-to-cabs-in-san-francisco-in-1-crazy-chart/380378/> [<https://perma.cc/B7BP-V6ZW>]. *But see* TIM O'REILLY, WHAT'S THE FUTURE AND WHY IT'S UP TO US 57 (2017) (“In the long run, Uber and Lyft are not competing with taxicab companies, but with car ownership. After all, if you can summon a car and driver at low cost via the touch of a button on your phone, why should you bother owning one at all, especially if you live in the city?”).

¹⁵⁰ See Joshua D. Angrist et al., *Uber vs. Taxi: A Driver's Eye View 2* (Nat'l Bureau of Econ. Research, Working Paper No. 23891, 2017), <http://www.nber.org/papers/w23891> [<https://perma.cc/L8KP-NNC2>].

¹⁵¹ Consumer feedback, of course, allows all potential future customers to know the nature of the services provided by the driver, including the level of courtesy, presumably an amenity for most consumers. Drivers will therefore have an incentive to provide courtesy to current riders in an attempt to attract more future riders. See ADAM SMITH, THE WEALTH OF NATIONS 20 (Prometheus Books 1991) (1776) [hereinafter WEALTH OF NATIONS] (“It is not

friendly shifts might also arise from the need to attract customers, all raising the overall quality of the service and, *ceteris paribus*, increasing demand.

Moreover, the taxi industry is kept from competing with ride-sharing by onerous regulations;¹⁵² remove those regulations and open the taxi industry to free competition, and the industry could innovate in unforeseen ways that would allow taxi drivers to remain competitive.¹⁵³ Notwithstanding all of these possibilities for improvement in the market, if the taxi industry were forced to contract in response to competition, some or all of the displaced drivers would find a home in the ride-sharing sector.¹⁵⁴ The most fundamental skills required of taxi drivers and drivers using TNC software are the same,¹⁵⁵ so the human capital built up by taxi drivers over their years of driving would transition well.¹⁵⁶ Some of them, perhaps a great many, who currently earn very low rents from the current regime if they do not own their own taxi or medallion,¹⁵⁷ might actually see an increase in their income.¹⁵⁸ In sum, taxi drivers appear to

from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest.”)

¹⁵² See, e.g., James Briggs, *7 Rules Indy Taxis Follow, but Not Uber*, INDYSTAR (Apr. 28, 2017, 2:44 PM), <https://www.indystar.com/story/news/local/marion-county/2017/04/28/7-rules-indianapolis-taxis-dont-apply-uber-lyft/100948002/> [<https://perma.cc/3SKT-763L>].

¹⁵³ Indeed, some cities have begun freeing up taxi companies to innovate. Fort Worth, Texas, for one, has begun setting basic standards and allowing each taxi company to determine the best way to meet that standard. Other cities have been pressured to go in the opposite direction. See Rachel Riley, *Colorado Springs Taxi Drivers Seeking Level Playing Field with Ridesharing Services*, GAZETTE (Mar. 19, 2017), https://gazette.com/business/colorado-springs-taxi-drivers-seeking-level-playing-field-with-ridesharing/article_ce496f1a-7a3c-5019-b7b6-b9dcf05e2268.html [<https://perma.cc/7JTT-YHYE>] (describing taxi industry efforts to impose the same burdensome regulations that taxis must abide on TNCs).

¹⁵⁴ This transition has likely already begun. See Thor Berger et al., *Drivers of Disruption? Estimating the Uber Effect*, 110 EUR. ECON. R. 197, 198 (2018).

¹⁵⁵ First and foremost, the ability to drive a car in a safe, efficient, and speedy manner is key for any successful for-hire transportation provider. Likewise, some measure of customer service is required for both taxi drivers and ride-share drivers if they wish to be successful. Some knowledge of the streets upon which the driver is travelling is helpful, but not essential, given the availability of GPS technology to guide the driver in unknown areas.

¹⁵⁶ There is also certain to be some industry-specific human capital that will be wasted in a transition to a TNC format—the ability to operate a taxi meter, for example—but most of the skills necessary to drive a taxi will be the same as those required to drive their own car while using TNC software.

¹⁵⁷ There are occasional stories relating the plight of taxi drivers who, having saved all their pennies to buy a medallion, then see the value of the medallion degraded by the success of TNCs. E.g., Reihan Salam, *Taxi-Driver Suicides Are a Warning*, ATLANTIC (June 5, 2018), <https://www.theatlantic.com/ideas/archive/2018/06/taxi-driver-suicides-are-a-warning/561926/> [<https://perma.cc/B9QH-3XTC>]. As a general rule, however, medallions are not typically owned by taxi drivers but by wealthy investors, taxi companies, or others with greater access to financial capital. See Pranay Gupte, *New York's Biggest Owner of Taxi Medallions*, N.Y. SUN (Aug. 8, 2005).

¹⁵⁸ Berger et al. discovered that the introduction of ride-sharing reduces the wages of taxi drivers but that self-employed drivers, including ride-sharing drivers, see their incomes rise. Berger et al., *supra* note 154, at 198. Angrist et al. also find that when the cost of leasing a medallion is high, Boston taxi drivers who choose to drive for Uber see an increase in their

be enjoying only a minimal share of the monopoly rents, so they have only weak incentives to become bootleggers in the fight to inhibit innovation and competition.

2. Taxi Companies

The second set of potential bootleggers is taxi companies that own multiple taxis and medallions, the value of which have declined precipitously and will continue to do so if TNCs are allowed to compete with taxis in the absence of protectionist regulations. Even in cities where the number of medallions is not fixed, restrictions on ride-sharing would still inhibit competition and increase the monopoly rents available to incumbent firms. Taxi companies almost certainly arise as a way of minimizing transaction costs and capturing economies of scale. Ride-sharing is an alternative—and arguably more efficient—way of minimizing transaction costs, so taxi companies' profits would likely decline if ride-sharing were allowed to expand. Unlike taxi drivers, who are likely too dispersed to effectively lobby against ride-sharing, there are a relatively small number of taxi companies in each large city,¹⁵⁹ allowing taxi companies to coordinate their efforts to head off a disruptive potential competitor.

As with taxi drivers, however, there may be a valuable place for taxi companies in a TNC-heavy market. The economies of scale that taxi companies currently enjoy could still be exploited in a ride-sharing world. One possible analogy is the electricity market. A stable base load is needed on a constant basis to handle the majority of society's needs, typically provided by burning cheap fossil fuels or using nuclear energy.¹⁶⁰ Other energy sources can be used to provide "peak power," handling the spikes in demand that occur throughout the day and night.¹⁶¹ In transportation, taxi companies might provide transpor-

wages. Angrist et al., *supra* note 150, at 29. At a more basic, intuitive level, it should be apparent that individuals who have spent significant portions of their lives transporting individuals from point to point within a given city will have a greater understanding of city roads, traffic patterns, and even the traffic signals. That knowledge should provide former taxi drivers with an advantage over the average driver, allowing them to handle more fares per hour and, as a result, collecting higher incomes.

¹⁵⁹ For example, as of May 2019, there were 16 taxi companies licensed by the Nevada Taxicab Authority that provide services to Las Vegas, Nevada. NEVADA TAXICAB AUTHORITY, TAXICAB INDUSTRY STATISTICS (2019), http://taxi.nv.gov/uploadedFiles/taxi.nvgov/content/About_Us/ALL/Statistics/May_%202019_COMBINED.pdf [https://perma.cc/7L2T-DSCD] (last visited Jan. 7, 2020). Of those, three are consolidated into Yellow-Checker-Star Transportation, and four others appear to be new licensees, leaving an effective number of licensed companies at ten. See YELLOW CHECKER STAR TRANSP., <https://www.ycstrans.com/> [https://perma.cc/G628-WRHA] (last visited Jan. 7, 2020). In Los Angeles, California, there are only 9 companies operating under franchise licenses in the city. CITY OF L.A. TAXI SERV., <http://www.taxicabsla.org/> [https://perma.cc/DNK5-N4Q6] (last visited Jan. 7, 2020).

¹⁶⁰ Fred Bosselman, *The Ecological Advantages of Nuclear Power*, 15 N.Y.U. ENVTL. L.J. 1, 5 (2007).

¹⁶¹ *Id.* at 7.

tation base load, giving each city sufficient transportation-for-hire options most of the time. Ride-sharing fills in the gaps, providing transportation options above and beyond what traditional taxis cannot. This is clearly so during times of extreme demand, where ride-sharing services implement “surge pricing” to draw more drivers and cars into the market to take advantage of increased rates.¹⁶² It is possible that ride-sharing could provide all of a city’s transportation for hire needs, but there is no large city where that scenario has been tried.

In the end, a world in which ride-sharing dominates might simply see taxi companies shift their fleets to ride-sharing. It is possible that this shift has already begun, with many taxi companies using their own Uber-like apps to gain the convenience of ride-sharing within the taxi industry.¹⁶³ If the industry were freed from onerous regulations and allowed to innovate, that transition might occur much more rapidly. This is not to say that taxi companies are not part of a bootlegger coalition against ride-sharing, only that their incentives are not strongly opposed to ride-sharing per se, but to the unfair competition an unregulated ride-sharing market poses to a highly regulated taxi industry. Of course, in cities with a fixed number of taxis, companies who own medallions would want to defend the future rents represented by those medallions and would fight far longer against ride-sharing.

3. *Taxi Commissions*

The third set of potential bootleggers is the industry associations that facilitate protectionist measures and extract some of the monopoly rents. As discussed above, the New York City TLC has employees throughout New York City government.¹⁶⁴ Viewed through the lens of public choice, that fact is troubling, as it gives the TLC influence throughout the government in addition to control over a vital part of the transportation infrastructure of the largest city in the United States. That level of power and the rent-seeking expenditures that will be directed at the TLC are not something that will be surrendered without a struggle.

The most obvious way that a taxi commission can use its power is to maintain restrictions on the supply of taxis, which generates the pool of monopoly

¹⁶² See Claire A. Hill, *Repugnant Business Models: Preliminary Thoughts on a Research and Policy Agenda*, 74 WASH. & LEE L. REV. 973, 994 (2017) (“Uber’s business model includes getting more drivers on the road by offering the drivers more money.”). New York City adopted a “surge pricing” model for its taxicabs in 2015, adding a flat \$4.50 surcharge for all flat-rate trips between Manhattan and JFK Airport for the hours of 4:00 pm to 8:00 pm. *Taxis: Yellow Taxi Fare*, NYC311, <https://portal.311.nyc.gov/article/?kanumber=KA-01245> [<https://perma.cc/7RAQ-CN6C>] (last visited Jan. 7, 2020).

¹⁶³ One of the most popular and successful taxi-hailing apps is Easy Taxi, founded in Brasil and based on the Cabify platform, which operates in 30 countries, providing many of the same features as ride-sharing apps, such as the ability to track taxis in real time. *Passengers, EASY: UM APP DA CABIFY*, <http://www.easytaxi.com/br/passageiros/> [<https://perma.cc/FSQ4-9JPD>] (last visited Jan. 9, 2020).

¹⁶⁴ *Supra* notes 27–29 and accompanying text.

rents.¹⁶⁵ Those who benefit from the restrictions and resulting profits will endeavor to curry favor with the taxi commission, directing lobbying efforts at the commission. Perhaps this view is too cynical; the commission might be restricting supply for other reasons. It is plausible that the crowded streets of large cities would be even worse if taxis were unregulated, so perhaps the price of taxi service includes a premium for being able to transverse the city more rapidly.¹⁶⁶

Commissions also set rates, almost certainly higher than the price that would prevail in a competitive market but lower than the price that would be set by a monopolist.¹⁶⁷ As TNCs gain market power, demand for taxi services would likely decline and the pool of monopoly rents would begin to dissipate. Medallion prices would then begin to fall, and the taxi commission's power could be threatened. A taxi commission does not profit directly from the sale of medallions, but medallion prices are an indication of the available monopoly rents;¹⁶⁸ a reduction in rents means lower incentives to curry favor with the commission that, in turn, would create pressure to reduce personnel and budget at the commission.¹⁶⁹ In order to protect its rent-seeking income, the taxi commission and its employees could be expected to mobilize and exert political pressures in opposition to ride-sharing.

It is possible that many individuals who merely want to assure a safe and affordable point-to-point transportation market would find commission employment appealing. Even these individuals would face incentives to engage in bootlegging behavior, but their personal preferences might enable them to resist the temptation. However, the near certainty of rent-seeking makes it a near certainty that those with pure motives would be driven out, as those willing to ex-

¹⁶⁵ *Supra* note 54 and accompanying text.

¹⁶⁶ New York City has debated implementation of a program that would make this theoretical idea into a reality, charging a tax for driving in certain areas of Manhattan. Those willing to incur the tax would have a less congested driving experience. See Winnie Hu, *Congestion Pricing Falts in New York, Again*, N.Y. TIMES (Mar. 31, 2018), <https://www.nytimes.com/2018/03/31/nyregion/congestion-pricing-new-york.html> [<https://perma.cc/DVG3-MN7L>].

¹⁶⁷ *E.g.*, Louis Kaplow, *Extension of Monopoly Power Through Leverage*, 85 COLUM. L. REV. 515, 520–21 (1985) (describing the ability of the antitrust regulator to limit a monopolist's ability to freely set prices).

¹⁶⁸ See Jeremy Horpedahl, *Ideology Uber Alles? Economics Bloggers on Uber, Lyft, and Other Transportation Network Companies*, 12 ECON J. WATCH 360, 362 (2015) (“The fact that individual taxicab drivers and corporate taxicab companies are willing to pay such large sums for the permits is a strong indication that monopoly rents are being earned.”).

¹⁶⁹ See Omar Al Ubaydli, *Economics 101: Right from the Start, Governments Really Have Not Liked Uber*, NATIONAL (June 10, 2017), <https://www.thenational.ae/business/economics-101-right-from-the-start-governments-really-have-not-liked-uber-1.62851> [<https://perma.cc/A2BM-ZKDJ>] (“[B]ureaucrats fear that they will always be one step behind Uber and its offspring, which may in turn cause senior policymakers to simply give up.”).

tract rents would be far more likely to invest the time and resources to obtain a position where rent-extraction was available.¹⁷⁰

Taxi commissions have strong incentives to engage in bootlegging behavior, and yet taxi commissions—or the personnel, at least—will likely have little difficulty adapting to a world where TNCs have come to dominate. Government bureaucracies are notoriously resilient; even if there were not a single taxi to regulate, a commission would find some way to expand its mandate to encompass other areas of transportation and/or consumer protection.

4. *Financial Institutions*

The fourth and perhaps least obvious group that stands to lose with the advent of ride-sharing is comprised of financial institutions that finance the fixed costs of the taxi industry, primarily taxis and medallions. Given the high price that medallions once commanded—and still do, to a certain extent—at auction, it should come as no surprise that medallions are highly leveraged.¹⁷¹ Financial firms are willing to finance medallions because they represent a future stream of income that is “guaranteed” by the measures put in place to protect the monopoly rents by restricting supply of taxis.¹⁷² Those barriers to entry raise the price of a medallion, which increases monthly loan payments by medallion purchasers and, correspondingly, reduces their returns.¹⁷³ In effect, this is a transfer from the owner of the medallion to the owner of the debt, who will receive the higher principle and interest payments.

As ride-sharing enters the picture, the risk associated with holding taxi-related debt will rise as the point-to-point transportation market becomes more competitive. Increased competition will drive down demand for taxi services, reducing the monopoly rents available to medallion owners. Those owners will find it more difficult to generate sufficient revenues to cover their monthly

¹⁷⁰ Basic principles of public choice economics argue that individuals seeking benefits from government agents will be willing to expend significant amounts, up to the value of the benefits, during the seeking process. See Tullock, *supra* note 127, at 228. The same will be true for those government officials who see an opportunity to extract rents, as they will be willing to expend more effort and resources to achieve the position where extraction is a feasible option. See Fred S. McChesney, *Rent Extraction and Rent Creation in the Economic Theory of Regulation*, 16 J. LEGAL STUD. 101, 105–09 (1987).

¹⁷¹ See Brian M. Rosenthal, *Facing Ruin, Taxi Drivers to Get \$10 Million Break and Loan Safeguards*, N.Y. TIMES (June 12, 2019), <https://www.nytimes.com/2019/06/12/nyregion/nyc-taxi-medallions.html> [<https://perma.cc/C6FA-ZVDW>] (describing the loans that medallion owners entered in order to buy their medallions).

¹⁷² AJ Eschle, *Tax Medallion Loans Lose Value, Burdening Financial Institutions*, CLA (Nov. 3, 2017), <https://www.claconnect.com/resources/articles/2017/taxi-medallion-loans-lose-value-burdening-financial-institutions>.

¹⁷³ That this is true should be obvious, as loan payments are a cost that must be subtracted from gross revenues in calculating return on investment. Andrew Beattie, *A Guide to Calculating Return on Investment*, INVESTOPEDIA (July 1, 2019), <https://www.investopedia.com/articles/basics/10/guide-to-calculating-roi.asp>.

payments, eventually leading to default.¹⁷⁴ Consequently, financiers will experience a greater risk of non-payment. This risk is not uncommon to financial institutions, as economic shifts—notably recessions—can increase the risk of nonpayment on car loans, home loans, and a host of commercial loans.¹⁷⁵ Taxi-medallion financiers face an additional risk arising from ride-sharing—the risk that the financed asset's value will decline to zero.

With most financial assets, the value of the asset and the ability of the borrower to repay the loan are, at best, indirectly connected. A homeowner may lose her job and fail to make monthly mortgage payments, for example, but the bank still has the right to take possession of the home, which has a value independent of the borrower's monthly earnings. A financier who has financed the purchase of a taxi medallion will have rights to repossess the medallion, but its value will have declined in proportion to the reduction in the borrower's monthly earnings, and the lender will realize a loss.¹⁷⁶ If the loan is a recourse loan, there may be some ability to recover the shortfall from the medallion's owner, but bankruptcy laws will limit that avenue of recourse.¹⁷⁷ To the extent that the medallion is owned by a corporation or LLC, recovery will be limited to the total assets held by the entity.¹⁷⁸ From a historical perspective,¹⁷⁹ that

¹⁷⁴ E.g., Aamer Madhani, *Once a Sure Bet, Taxi Medallions Becoming Unsellable*, USA TODAY, <https://www.usatoday.com/story/news/2015/05/17/taxi-medallion-values-decline-uber-rideshare/27314735/> [<https://perma.cc/4NK9-PNNU>] (last updated May 18, 2015, 8:22 AM) (“In New York, taxi mogul Eygeny Friedman is locked in a court battle with Citibank, to whom he owes some \$31 million after some medallion loans matured.”); Polly Mosendz & Shahien Nasiripour, *Taxi Medallion Prices Are Plummeting, Endangering Loans*, BLOOMBERG (Jan. 30, 2017, 9:14 AM), <https://www.bloomberg.com/news/articles/2017-01-30/taxi-medallion-prices-are-plummeting-endangering-loans> [<https://perma.cc/9W6S-FK57>] (“According to a recent presentation prepared for Capital One Financial Corp. investors, some 81 percent of its \$690 million in loans for taxi medallions are at risk of default.”).

¹⁷⁵ E.g., Brett McDonnell, *Don't Panic! Defending Cowardly Interventions During and After a Financial Crisis*, 116 PENN. ST. L. REV. 1, 9 (2011) (“The slowdown in the real economy then feeds back into the financial system, as distressed consumers and businesses default on loans, worsening bank balance sheets.”).

¹⁷⁶ As a rough estimate, the 13,587 taxi medallions in New York City were worth, in 2013, as much as \$17.6 billion. See, e.g., Ameena Walker, *In NYC, 139 Prized Yellow Taxi Medallions Will Hit the Auction Block*, CURBED N.Y. (June 11, 2018, 4:16 PM), <https://ny.curbed.com/2018/6/11/17450366/nyc-taxi-medallions-bankruptcy-auction> [<https://perma.cc/KFA2-QTNF>] (“The 139 medallions are part of a collection of the 13,587 licensed medallions that are required to operate a yellow taxi in New York City. In 2013, a medallion was worth as much as \$1.3 million . . .”). At more recent prices, those same medallions are worth just over \$2.2 billion, a reduction in value of \$15.4 billion. *Id.* (“[C]ompetition from ride-hailing apps like Uber and Lyft has driven medallion prices down to as low as \$160,000.”). There is no good estimate for how much of that \$15.4 billion loss lenders suffered, but there is reason to suspect that it is a significant portion. That amount is not likely enough to seriously damage any financial institution—particularly given that the losses were likely spread across numerous institutions—but neither is it an insignificant amount.

¹⁷⁷ Ron Harris & Asher Meir, *Non-Recourse Mortgages—A Fresh Start*, 21 AM. BANKR. INST. L. REV. 119, 126 (2013).

¹⁷⁸ See *Walkovszky v. Carlton*, 223 N.E.2d 6, 9 (N.Y. 1966).

should offer, at best, only limited reassurance to someone trying to recoup a loss.

The close relationship between medallion value and monthly stream of income makes the risk born by the financier fundamentally different. Importantly, when much of the financing was arranged, a taxi medallion would have seemed like a relatively riskless investment. An individual borrower might not have been a sound money manager, or may have fallen on hard times, but repayment default would have resulted in the financier taking possession of a still-valuable asset, which could be immediately resold to another willing buyer, recouping losses. So long as the barriers to entry were maintained—an almost certain proposition even two decades ago—the financier incurred relatively little risk. As the specter of ride-sharing approached, the risk of non-payment became compounded with the risk of total asset loss¹⁸⁰ in a way not easy to anticipate when the loan originated. Faced with this new and changed risk, financiers have a strong incentive to engage in bootlegging, opposing ride-sharing in order to maintain the monopoly rents that could stabilize their risk.

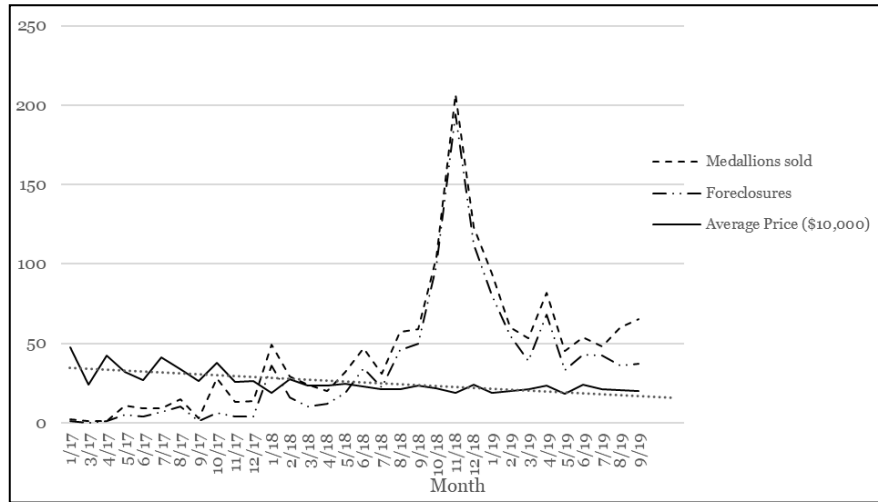
Figure 5 shows the data from New York City medallion transfers from January 2017 through September 2019.¹⁸¹ Two obvious trends present themselves. First, the average price of medallions had been falling during that time period, continuing the decline that had begun after the peak in 2013. Second, there was an increasing trend of foreclosure sales of medallions, which appears to drive most of the increase in total sales volume during 2018–19. If these medallions were purchased anywhere near the peak, then the financial institutions who were forced to foreclose on the medallions would have taken a loss on each sale. Many more medallions in this situation—representing bad debt for those same financial institutions—might still remain under immediate threat of foreclosure. If the trend is not reversed, it could mean continued losses—perhaps in the billions of dollars—to various financial institutions; that magnitude of potential losses would incentivize anyone to take action.

¹⁷⁹ The classic case of *Walkovszky v. Carlton* shows how corporations that own taxi medallions have traditionally been intentionally under-capitalized, in order to defeat lawsuits. *See id.*

¹⁸⁰ The dramatic reduction in the value of the medallions, discussed in Part II, *supra* and represented graphically in Figure 5, *infra*, would have increased both risks. The risk of non-payment would rise because lower medallion prices indicate lower profits from operation of a taxi within the medallion system. The risk of total asset loss would need to be considered, as well, given that there must be at least *some* non-zero probability that the trend downward will continue if ride-sharing continues to increase in popularity.

¹⁸¹ *Medallion Transfer Reports*, N.Y.C. TAXI & LIMO. COMM'N, <https://www1.nyc.gov/site/tlc/businesses/medallion-transfers.page> [<https://perma.cc/3NS4-YW5M>] (last visited Jan. 7, 2020) (raw data source).

FIGURE 5



If financial institutions have joined the bootlegging coalition, it could explain why ride-sharing continues to face significant obstacles. The taxi industry has amassed significant political power in some large cities over the last century, and entrenched political interests are very difficult to dislodge,¹⁸² but is the combination of taxi drivers, companies, and commissions sufficient to explain why ride-sharing has had success in some cities but failed in others? To be certain, cultural factors will also play a role, and there may be regional and local dynamics that can never be accounted for, but it is possible that financial interests are strong enough in some cities to add hidden strength to the public anti-ride-sharing coalition.

5. A Word on Transitional Gains

Before identifying the Baptists to our taxi bootleggers, it is important to specify the nature of the pool of monopoly rents and its effect on the wealth of those who share it on an ongoing basis. Once the pool is created, so is a concentrated group who will do much to sustain it.¹⁸³ That is standard public

¹⁸² A. Michael Froomkin, *The Empire Strikes Back*, 73 CHI.-KENT L. REV. 1101, 1108 (1998) (“Established interests that profit from a given legal regime will ordinarily be the ones with the most cash to spend on lobbying and other activities designed to lock in their advantages or to head off upstart competitors using upstart technologies.”); accord Stephen R. Barnett, *Cable Television and Media Concentration, Part I: Control of Cable Systems by Local Broadcasters*, 22 STAN. L. REV. 221, 326 (1970) (“By now the Commission should have learned that ownership interests once entrenched are difficult, if not impossible, to dislodge.”); Louis Michael Seidman, *J. Skelly Wright and the Limits of Legal Liberalism*, 61 LOY. L. REV. 69, 89 (2015) (“Legal rhetoric alone cannot dislodge powerful and deeply entrenched interests.”).

¹⁸³ MANCUR OLSON, *THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS* 5–8 (1971); see also WILLIAM N. ESKRIDGE, JR. & PHILIP P. FRICKEY, *CASES AND*

choice theory, but the entrenched interests might not be realizing as much wealth as it might initially appear. The reason is something that economist Gordon Tullock referred to as the transitional gains trap.¹⁸⁴ Briefly, those who are granted the initial medallions receive tremendous profits, and are significantly better off, but those who purchase the medallion in the future are likely to spend a significant portion of the monopoly rents to obtain the medallion, so that the stream of monopoly rents are, in effect, merely compensating the owner for the purchase price, rather than enriching the owner with new profits.¹⁸⁵ An inspection at any point in time would reveal medallion owners who are unwilling to surrender the monopoly grant, but not solely because they fear losing an easy source of profits. Instead, they will refuse because doing so would mean they would not recoup the amount they spent purchasing the medallion.¹⁸⁶

Moreover, Tullock postulated that medallion owners were not even efficiently exploiting consumers.¹⁸⁷ Consumers were harmed by the medallion system, to be sure, but medallion holders were not able to effectively utilize their market power because of the inability to effectively adjust the number of medallions.¹⁸⁸ As the population of a city rises, so does the demand for taxi services, but the medallion system does not adjust rapidly with rising population.¹⁸⁹ The result is that monopoly rents cannot be effectively maximized. No medallion owner will willingly accept a dilution of the medallion's market value by giving out new medallions, and increasing medallion value by a fractional value is nonsensical—what would it mean to be permitted to operate 1.37 taxis?¹⁹⁰ The number of medallions will therefore tend to increase only in clumsy fashion, in big increments, if at all.¹⁹¹

MATERIALS ON LEGISLATION: STATUTES AND THE CREATION OF PUBLIC POLICY 51–56 (1988); THE POLITICS OF REGULATION 367–70 (James Q. Wilson ed., 1980).

¹⁸⁴ Gordon Tullock, *The Transitional Gains Trap*, 6 BELL J. ECON. 671, 671 (1975). The taxi medallion system was, in fact, the primary example of the transitional gains trap used by Tullock. *Id.* at 672.

¹⁸⁵ *Id.* at 672. Tullock points out that the owners of the medallions would still earn “normal profits,” *id.*, an economic term that means the amount that would make them indifferent between owning a medallion and investing in the next best alternative. Kevin S. Marshall, *Free Enterprise and the Rule of Law: The Political Economy of Executive Discretion (Efficiency Implications of Regulatory Enforcement Strategies)*, 1 WM. & MARY BUS. L. REV. 235, 276–77 (2010).

¹⁸⁶ Others have argued that it is never socially beneficial to deregulate, as the loss to the monopolist would exceed the social gain arising from the deregulation. *See, e.g.*, Robert D. Tollison & Robert E. Wagner, *Romance, Realism, and Economic Reform*, 44 KYKLOS 57, 62 (1991). If the amount spent on the preferential barriers are sunk, the economy may be left permanently worse off, and deregulation may only impose greater costs. Robert E. McCormick et al., *The Disinterest in Deregulation: Reply*, 76 AM. ECON. REV. 564, 564 (1986).

¹⁸⁷ Tullock, *supra* note 184, at 673.

¹⁸⁸ *See id.* at 672.

¹⁸⁹ *Id.* at 673.

¹⁹⁰ *See id.*

¹⁹¹ *See id.*

In light of this discussion and the fact that, for many decades, medallions continued to sell for extremely high prices,¹⁹² it bears asking whether the strongest form of the transitional gains trap theory is applicable. In other words, can it be true that all of the gains from owning a medallion are expended in purchasing the medallion? The likely answer is no, as that would make every purchaser indifferent to buying a medallion or spending the funds on some other endeavor. The high price of medallions can be accounted for by the existence of the transitional gains trap, as a seller will insist on extracting the value of the protected position conferred by the medallion.¹⁹³ The volume of medallion sales, however, indicates that buyers are not indifferent to paying the purchase price for those medallions. Some of the affirmative interest in medallions might be a difference in expectations for the future, with buyers anticipating an arbitrage opportunity. It is also possible, however, that there is some residual benefit to owning a medallion; not worth the full value of the medallion, but greater than just breaking even. Given the existence of a transitional gains trap, existing market participants will oppose a change in regime, in part to avoid transitional losses¹⁹⁴ and in part to preserve any additional monopoly rents.¹⁹⁵

Relevant to our taxonomy of taxi bootleggers, if Tullock's theory is true, the only set of bootleggers who enjoy the full benefits of the pool of monopoly rents are the financiers. The reason why is simple. For the taxi drivers, taxi companies, and taxi commissions, the high cost of entry predicted by Tullock draws down the net value of the pool of rents. For financiers, however, the higher costs must be financed; even if financiers are unable to charge above market interest rates for these loans, the higher principle value means that financiers were able, for decades, to realize reliable returns on much larger sums. Understanding transitional gains also helps explain why financiers—who have far greater flexibility to invest in either a taxi-dominated world or a TNC-dominated one—would be sufficiently motivated to oppose ride-sharing innovations. Not only do financiers stand to lose the entirety of their investment, but they have also been enjoying benefits derived from a greater portion of the pool of monopoly rents.

¹⁹² See N.Y. CITY TAXI & LIMOUSINE COMM'N, 2002 ANNUAL REPORT TO THE NEW YORK CITY COUNCIL 7–8, www1.nyc.gov/assets/tlc/downloads/pdf/annual_report03.pdf [<https://perma.cc/2ULV-AY6J>].

¹⁹³ As discussed *infra* Section III.B.5, even complete dissipation of the monopoly rents into the purchase price still benefits one group, the financiers who provide funds to purchase medallions. A higher price means a higher loan balance and higher principle and interest payments. Therefore, to the extent that the strong form of Tullock's theory is applicable, it strengthens the argument that financial institutions who provide loans to the taxi industry are the most likely to oppose diminishing barriers to entry.

¹⁹⁴ Tullock, *supra* note 184, at 673.

¹⁹⁵ Tullock proposes one way to escape from the transitional gains trap. In essence, we find those riders who would like to use a taxi, but will not at the mandated price, tax them and save the money to buy back and destroy all medallions. *Id.* at 672. That solution has no practical chance of being implemented, however. *Id.*

C. *Academic Baptists?*

Consumers and potential consumers of point-to-point transportation have suffered for years under government price and quantity controls over taxis.¹⁹⁶ The advent of a technology that breaks through the barriers and introduces competition into a stagnant market should be greeted with cheers. There has been some of that, to be sure, but much of the response, particularly from the halls of academia, has been less laudatory.¹⁹⁷ It is within the academy that we find the majority of taxi-Baptists, those who oppose ride-sharing and other innovations based on perceived risks to consumers, market stability, the rule of law, and so on. These taxi-Baptists have their allies outside of the academy, in legislatures and regulatory agencies, but academics have proven to be the loudest and most vociferous opponents of these innovations and the disruption they bring.¹⁹⁸

Opposition to new technologies is not a recent phenomenon, with fear of how they change our world motivating many critiques in the past.¹⁹⁹ Innovators who take risks in pursuit of that change are often rewarded by consumers who purchase their products but are also castigated by others and accused of destruction, rather than creation. Of course, as Joseph Schumpeter pointed out more than seventy years ago, all progress comes at the expense of existing technologies. This “[c]reative [d]estruction”²⁰⁰ leaves behind those goods and

¹⁹⁶ *Supra* Part II.

¹⁹⁷ One example—that doesn’t bother to hide its disdain for these technological advances—is Calo & Rosenblat, *supra* note 4, at 1628, who refer to the sharing economy as the “taking” economy. They are hardly the only ones. See Kathrine T. Bartlett, Response, *Sharing Sexism*, 43 *FORDHAM URB. L.J.* 1163, 1164–65 (2016); Naomi Schoenbaum, *Gender and the Sharing Economy*, 43 *FORDHAM URB. L.J.* 1023, 1026–27 (2016); Inara Scott & Elizabeth Brown, *Redefining and Regulating the New Sharing Economy*, 19 *U. PA. J. BUS. L.* 553, 556–57 (2017); Abbey Stemler, *Feedback Loop Failure: Implications for the Self-Regulation of the Sharing Economy*, 18 *MINN. J.L. SCI. & TECH.* 673, 675–76 (2017); Abbey Stemler, *The Myth of the Sharing Economy and Its Implications for Regulating Innovation*, 67 *EMORY L.J.* 197, 200–01 (2017); Kellen Zale, *When Everything is Small: The Regulatory Challenge of Scale in the Sharing Economy*, 53 *SAN DIEGO L. REV.* 949, 956–57 (2016); Brett Harris, Note, *Uber, Lyft, and Regulating the Sharing Economy*, 41 *SEATTLE U. L. REV.* 269, 270 (2017).

¹⁹⁸ Two important caveats must be made at this point, however. First, the claim is *not* that academia is opposed to the sharing economy—it is not—but that much of the opposition to the sharing economy (and certainly some of the most forceful) comes from academia, rather than from consumers or producers, broadly. Second, not all academics who distrust sharing economy technologies are severe enough in their opposition that they are worthy of the moniker, Galbraithian Baptist. *Infra* Section III.C.2.c.ii.

¹⁹⁹ *E.g.*, JOHN KENNETH GALBRAITH, *THE NEW INDUSTRIAL STATE* 41 (1985) (“The enemies, in both cases, are advanced technology, the specialization and organization of men and process that this requires and the resulting commitment of time and capital.”). For an extended treatment of the objections raised by those who are concerned about the changes the future brings, see VIRGINIA POSTREL, *THE FUTURE AND ITS ENEMIES* xv–xvi (1998).

²⁰⁰ JOSEPH SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* 83 (1943).

services that no longer satisfy the desires of consumers;²⁰¹ specific producers may lose, but others gain, and every consumer benefits from improvements in price and quality. A careful analysis will always consider the relative benefits and costs of an innovation before passing judgment. Before cataloging the criticisms of the taxi-Baptists, this subpart will offer a summary of the benefits that ride-sharing and the sharing economy offer, broadly.

1. *Benefits of Ride-Sharing*

The benefits of ride-sharing technology—and most of the sharing economy, for that matter—are often misunderstood. One analysis, for example, described the primary benefit as “help[ing] people collaborate economically at scale.”²⁰² This perspective fundamentally misses the primary benefit; it is not the grand scale of TNCs platforms that makes the technology so useful but rather the minute scale of facilitating two complete strangers’ coordinating for mutual benefit.²⁰³ One random person with an available car and one random person in need of a ride would never, in a world without TNCs, be able to enter into a mutually-beneficial transaction. TNCs make that possible, and it is that amazing feat—individual and personal in nature, not economic collaboration “at scale”—that makes TNCs so beneficial. It is also essential to keep in mind that the benefits of ride-sharing are individual and personal in nature, in that they help individuals lead better lives. That the sharing economy has aggregate benefits should not become a distraction from the reality that it is individuals whose lives are improved.

In addition to improving lives through lowering prices and improving the availability of transportation options,²⁰⁴ TNCs provide many improvements in quality. These benefits come in part from the nature of ride-sharing and, in part, as a condition of a competitive market. For example, ride-share vehicles are more likely to be clean and safe because drivers are more likely to take care of cars that they personally own.²⁰⁵ This is particularly the case if a driver uses ride-sharing as a way of affording a new vehicle for her personal use. By the same token, TNCs face reputational pressures that lead them to require newer cars, and individual drivers will receive higher ratings—allowing them to keep

²⁰¹ It is true that this disruption is “annoying” to those whose jobs are impacted, Calo & Rosenblat, *supra*, note 4, at 1628, but that innovation also brings tremendous benefits.

²⁰² *Id.* at 1635.

²⁰³ It is also flawed to consider that the real “promise of the sharing economy” is based “on ideas of social reciprocity.” *Id.* at 1636. The individual who makes that little extra bit of income—thereby avoiding eviction—and the individual who gets a ride to an important interview—gaining the job that gives her the first step to achieving her life’s dreams—are the promise of ride-sharing.

²⁰⁴ *Supra* Section III.C.1.

²⁰⁵ *E.g.*, Kathleen Elkins, *A Day in the Life of an Uber, Lyft and Juno Driver Who Makes About \$6,000 a Month in NYC*, CNBC, <https://www.cnbc.com/2019/01/30/a-day-in-the-life-of-a-full-time-uber-lyft-and-juno-driver-in-nyc.html> [<https://perma.cc/BT9C-KF5V>] (last updated Jan. 31, 2019, 12:19 PM).

driving—and even receive tips if they have a nicer, safer car.²⁰⁶ TNC drivers are also likely to drive more safely than taxicab drivers, both to achieve higher ratings and for the simple fact that the car is their personal car; getting in an accident would not only affect their work lives but all aspects of their lives. The rating systems provide meaningful feedback opportunities to customers, so that TNC customers enjoy a level of control over the services provided to them that does not exist in many areas of transportation outside of the sharing economy.²⁰⁷

The TNC business model provides other benefits to riders. Centralized payment is the easiest and most reliable way of ensuring that TNCs are paid for their facilitation services. As a result, riders can purchase a ride without carrying a card or cash. This is not only an added convenience but also increases safety. There are many convenience benefits, as would be expected when a customer can be instantly connected to any driver in the vicinity, rather than relying on finding a vacant taxi or arranging with a specific taxi company. Convenience also extends to drivers, who can enjoy the benefits of working whenever is suitable for their lifestyles and schedules.²⁰⁸ They can choose to use ride-

²⁰⁶ Uber drivers must maintain a minimum driver rating—on a five-star scale—to avoid having their account “deactivat[ed].” Henry Ross, Comment, *Ridesharing’s House of Cards: O’Connor v. Uber Techs., Inc. and the Viability of Uber’s Labor Model in Washington*, 90 WASH. L. REV. 1431, 1440–41 (2015); see also Alison Griswold, *Uber is Finally Making Riders Explain Themselves When They Rate a Driver Below Five Stars*, QUARTZ (July 25, 2017), <https://qz.com/1038285/uber-will-make-riders-explain-when-they-rate-a-driver-below-five-stars/> [<https://perma.cc/DSM9-QMZG>]. The required minimum varies by city. *Uber Community Guidelines*, UBER <https://www.uber.com/legal/community-guidelines/us-en/> [<https://perma.cc/XR9T-GFBT>] (last visited Jan. 23, 2020). Uber followed Lyft’s example in allowing riders to tip drivers in 2017. Marco della Cava, *Uber Adds Tipping Feature, Matching Lyft*, USA TODAY, <https://www.usatoday.com/story/tech/news/2017/06/20/uber-adds-tipping-feature-matching-lyft/103039304/> [<https://perma.cc/3PWE-97UG>] (last updated June 21, 2017, 6:58 AM). Because the safety and comfort of the car is an important part of the quality of the ride-share service, those who have better cars should expect to receive greater tips.

²⁰⁷ While the ability to provide ex-post feedback may not initially appear to grant the rider control, it will after further reflection on the importance of reputational factors in the ride-sharing industry. A driver knows that the rider can give a low rating if the ride is not satisfactory, and a low rating will have a negative impact on the driver’s ability to continue accepting rides through the service. As a result, the driver is more disposed to accede to reasonable requests by the rider than many providers of goods or services would be. See Alex Rosenblat et al., *Discriminating Tastes: Customer Ratings as Vehicles for Bias*, INTELLIGENCE & AUTONOMY 5–6 (2016), https://datasociety.net/pubs/ia/Discriminating_Tastes_Customer_Ratings_as_Vehicles_for_Bias.pdf [<https://perma.cc/Z8A4-JYY8>]. But see *infra* Section III.C.2.b.

²⁰⁸ Jonathan V. Hall & Alan B. Krueger, *An Analysis of the Labor Market for Uber’s Driver-Partners in the United States* 11 (Nat’l Bureau of Econ. Research, Working Paper No. 22843, 2016), <http://www.nber.org/papers/w22843.pdf> [<https://perma.cc/G35G-L65U>]. This flexibility has significant positive spillovers into other areas of drivers’ lives—increased flexibility in earnings opportunities means that employers particularly of part-time workers, must treat employees better or they will leave to operate in the sharing economy. Strangely, some critics of ride-sharing argue that this benefit of flexibility is part of a “utopian vision of

sharing as a part-time supplement to an existing job, or they can drive full time, each according to individual circumstances and desires.²⁰⁹ In doing so, drivers put to use what would otherwise be dead capital—a car that sits idle most of the week—into an income opportunity.²¹⁰ The increased income that drivers obtain can make a tremendous difference, as it could allow them to purchase a more reliable vehicle, move to a safer neighborhood, afford better educational opportunities for their children, and so on.²¹¹ Driving for a TNC might also smooth the transition between jobs, keeping incomes higher—thereby mitigating a decline in aggregate spending in the economy—and limiting the need for government assistance.²¹²

These benefits are particularly relevant to individuals who live in poorer neighborhoods, as well as those who live around them.²¹³ Many of their neighbors, for example, will have few transportation options, but a TNC driver who begins each day in the neighborhood can supplement regular income while providing neighbors with more convenient transportation.²¹⁴ Some researchers

workers who work by ‘uncoerced choice,’ ” an ideal that is fractured by the fact that some drivers are dependent upon the work. Calo & Rosenblat, *supra* note 4, at 1638. The benefits of driving in a ride-share capacity are independent of other difficulties that the individuals face in their lives. They are, however, real benefits that, without the existence of ride-sharing technology, would not accrue to the drivers, leaving them even worse off. That those benefits may not solve all other problems is hardly reason to disparage them.

²⁰⁹ It may be that the greatest benefits of ride-sharing flow to members of marginalized groups, who may have greater difficulty making a living in more traditional employment. See Calo & Rosenblat, *supra* note 4, at 1642.

²¹⁰ See Orly Lobel, *The Law of the Platform*, 101 MINN. L. REV. 87, 108 (2016) (“A key principle of the platform is putting idle capacity to work. The platform enables a more efficient use of private resources.”); see also Yochai Benkler, *Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production*, 114 YALE L.J. 273, 297 (2004) (describing the benefits of exploiting “excess capacity”); Christopher Koopman et al., *The Sharing Economy and Consumer Protection Regulation: The Case for Policy Change*, 8 J. BUS. ENTREPRENEURSHIP & L. PEPP. U. SCH. L. 529, 531 (2015).

²¹¹ See, e.g., Calo & Rosenblat, *supra* note 4, at 1643 (“Supplementary income from part-time work in the sharing economy may enable people to pay their rent, cover daily living expenses, or pursue their passions or goals.”); see also Cramer & Krueger, *supra* note 6, at 177.

²¹² Hall & Krueger, *supra* note 208, at 12.

²¹³ Tawanna R. Dillahunt & Amelia R. Malone, *The Promise of the Sharing Economy Among Disadvantaged Communities*, 2015 CHI CROSSINGS, 2285, 2293 (S. Kor.), <https://doi.org/10.1145/2702123.2702189> [<https://perma.cc/57BB-8A9W>]; see also Gordon Burtch et al., *Can You Gig It?: An Empirical Examination of the Gig-Economy and Entrepreneurial Activity*, 64 MGMT SCI., 1, 23–24 (2018), available at <https://doi.org/10.1287/mnsc.2017.2916> [<https://perma.cc/CQW7-AU28>].

²¹⁴ Or, the TNC driver who now owns a better, more reliable car, might provide transportation for neighbors in need for free, out of a desire to help. When one is further away from subsistence, one can indulge the more humane urges to help others. See e.g., ADAM SMITH, *THE THEORY OF MORAL SENTIMENTS* 132 (Knud Haakonssen ed., 2002) [hereinafter *THEORY OF MORAL SENTIMENTS*] (“Man naturally desires, not only to be loved, but to be lovely.”).

have concluded that the consumer surplus associated with just the UberX service was \$6.76 billion in 2015.²¹⁵

The benefits keep going. As mentioned earlier, society benefits to the extent that TNCs lower transaction costs and reduce the total number of vehicles on the streets.²¹⁶ Success by TNCs might be enough to eliminate the need for public transportation,²¹⁷ saving taxpayers a significant amount of money. By making point-to-point transportation easier and more convenient, TNCs can also reduce drunk driving, fatal crashes, and crime.²¹⁸ The first two reductions run counter to intuition that taxi drivers, who are required to possess a commercial driver's license, will be better and more conscientious drivers.²¹⁹ Crime could be reduced through reducing the time spent waiting for transportation—time when one is more likely to be a target of criminals.²²⁰

The most important benefits to society from the advance of ride-sharing, however, are likely to come in the long run, as they change the way we think about car ownership.²²¹ Recall that most cars sit idle for most of the time,²²² which leads to a different kind of car—one built to withstand the passage of time—rather than one built for more constant use. Cars could therefore become more durable. As cars are used more often, but generate income while they are used, the type of cars we see on the roads might be better in a variety of ways.

²¹⁵ 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), <http://www.nber.org/papers/w22627> [<https://perma.cc/U5ZB-XCJ4>]. The term “consumer surplus” is how economists describe the difference between what a consumer was *willing* to pay for a good or service and the amount the consumer *actually* paid. Christina Majaski, *Consumer Surplus vs. Economic Surplus: What's the Difference?*, INVESTOPEDIA, <https://www.investopedia.com/ask/answers/041715/what-difference-between-consumer-surplus-and-economic-surplus.asp> [<https://perma.cc/7SJT-5W9D>] (last updated Apr. 14, 2019). Another way to think of it is that consumer surplus is the value of the other things that the consumer was able to buy because the good was cheaper than the maximum the consumer was willing to pay. *See id.*

²¹⁶ Rogers, *supra* note 108, at 90.

²¹⁷ *See* Calo & Rosenblat, *supra* note 4, at 1644–45 (“Some cities . . . are even experimenting with subsidizing ride-hail services like Uber and Lyft to meet the cities’ transportation needs.”).

²¹⁸ Angela K. Dills & Sean Mulholland, *Ride-Sharing, Fatal Crashes, and Crime*, 84 S. ECON. J. 965, 988–89 (2018); Brad N. Greenwood & Sunil Wattal, *Show Me the Way to Go Home: An Empirical Investigation of Ride-Sharing and Alcohol Related Motor Vehicle Fatalities*, 41 MIS Q. 163, 183 (2017).

²¹⁹ Dills & Mulholland, *supra* note 218, at 968.

²²⁰ *Id.* at 969.

²²¹ *E.g.*, SHARED-USE MOBILITY CTR., SHARED MOBILITY AND THE TRANSFORMATION OF PUBLIC TRANSIT 5–9 (Mar. 2016), <https://www.apta.com/wp-content/uploads/Resources/resources/reportsandpublications/Documents/APTA-Shared-Mobility.pdf> [<https://perma.cc/5TZM-XGCP>].

²²² Shannon Bouton et al., *Urban Mobility at a Tipping Point*, MCKINSEY & CO. (Sept. 2015), <https://www.mckinsey.com/business-functions/sustainability/our-insights/urban-mobility-at-a-tipping-point#> [<https://perma.cc/QP4Y-6YQJ>] (“Most cars sit idle 90 percent of the time or more.”).

As transaction costs are reduced to zero, what is now an extravagance²²³—a personal driver—would become commonplace and fewer cars would be on the road, but the characteristics of those cars would change for the better.

2. *What About the Costs?*

Ride-sharing is at the vanguard of the sharing economy, but all aspects of the sharing economy have common characteristics. Specifically, it disrupts the marketplace in ways that provide new and better services for consumers and draw new individuals into the market as producers.²²⁴ The latter effect increases competition and expands the stock of productive capital.²²⁵ Yet, for all these benefits, it has earned another nickname—the taking economy²²⁶—from those who believe that sharing technology has a darker side. As described by its detractors, the taxi-Baptists, the dangers of the “taking economy,” generally, and TNCs, specifically, come in three forms: threats to riders, threats to drivers, and threats to society. The first category consists of ways that the TNC business model allegedly puts riders at risk of discrimination, as well as real risk of injury.²²⁷ The second category consists of ways that TNCs allegedly exploit the drivers who use their services.²²⁸ The third category consists of ways that TNCs exploit regulatory gaps and utilize their “deeply asymmetric information” to manipulate riders and drivers in ways that destabilize markets.²²⁹

It is the third category of criticisms that merits particular concern. The first two categories are certainly of interest to any who might suffer harm as a rider or as a driver in a ride-sharing transaction. However, those transactions are voluntary, which should give rise to a strong presumption that the transaction was value enhancing for the parties that agreed to it.²³⁰ That presumption could be overcome by a showing of market inefficiencies—externalities, information asymmetries, excess market power, etc.²³¹—but those inefficiencies are, by definition, far more likely in the third category.

²²³ One internet job site reports that the national average wage for personal drivers is \$19 per hour, at an average annual salary of \$40,249. *How Much Do Personal Driver Jobs Pay Per Hour?*, ZIPRECRUITER, <https://www.ziprecruiter.com/Salaries/How-Much-Does-a-Personal-Driver-Make-an-Hour> [<https://perma.cc/38VE-M8S9>] (last visited Jan. 14, 2020).

²²⁴ *Supra* notes 202–04, 209 and accompanying text.

²²⁵ *Supra* Section III.B.4.

²²⁶ See Calo & Rosenblat, *supra* note 4, at 1627.

²²⁷ *Infra* Section III.C.2.a.

²²⁸ *Infra* Section III.C.2.b.

²²⁹ *Infra* Section III.C.2.c.

²³⁰ See Paula M. Taffe, Note, *Imputing the Wealth Maximization Principle to State Legislators*, 63 CHI.-KENT L. REV. 311, 313–14 (1987).

²³¹ *Supra* Section I.D.

a. *TNCs and Riders*

When riders enter a for-hire transportation vehicle, they are, to greater or lesser extent, subject to the control of the driver. At the extreme end of the spectrum, a driver could be abusive, physically or verbally assaulting the rider. A driver might also be guilty of false imprisonment, refusing to let the rider exit the vehicle until the rider agrees to pay more, for example. These possibilities exist because there is a power disparity when one individual is riding in a vehicle under the control of another, particularly when the driver is a stranger. Importantly, however, the risks do not just exist when the vehicle is being used in ride-sharing but also exist when the vehicle is a traditional cab.

TNCs have come under criticism with allegations that their technology facilitates racial discrimination.²³² To the extent anyone is subject to racial discrimination, it is troubling and worthy of condemnation, and that includes a long history of discrimination claims against taxi companies around the country.²³³ When it comes to potential discrimination on the part of TNCs, it is important to point out that certain features of existing TNC-driver agreements limit the likelihood of discrimination. First, drivers who accept too few potential rides—or cancel too many—will be terminated, so drivers have an incentive to accept all fares.²³⁴ Second, drivers are given a quality rating by every rider, which would disincentivize abusive behavior by drivers.²³⁵ Third, there would be a documented record of discrimination with a ride-sharing app that would not exist with taxis, and that documentation might deter some drivers from discriminating who might otherwise never worry about getting caught.²³⁶ Fourth, TNC riders are typically identified only by name, so a driver would have to guess regarding the ethnicity or race of a rider.²³⁷ More importantly and

²³² Calo & Rosenblat, *supra* note 4, at 1647.

²³³ See Cornell Belcher & Dee Brown, *Hailing While Black—Navigating the Discriminatory Landscape of Transportation: Key Findings from a Survey of Chicagoans*, BRILLIANT CORNERS RES. & STRATEGIES 1, 3 (2015), <http://www.brilliant-corners.com/post/hailing-while-black> [<https://perma.cc/C9YY-ZQGT>]; Yanbo Ge et al., *Racial and Gender Discrimination in Transportation Network Companies* 1 (Nat'l Bureau of Econ. Research, Working Paper No. 22776, 2016) (collecting sources), <http://www.nber.org/papers/w22776.pdf> [<https://perma.cc/KAK8-HU8H>].

²³⁴ Calo & Rosenblat, *supra* note 4, at 1661.

²³⁵ *See id.*

²³⁶ *See id.*

²³⁷ *But see* Ge et al., *supra* note 233, at 1–2 (describing experimental results where a rider with a “distinctively black name” waited 16 to 28 percent longer for an UberX ride request to be accepted). In the experiment, however, drivers did not see any information about the rider until after the ride was accepted, making it difficult to identify discriminatory intent on the part of drivers. *Id.* at 6. It is possible that other sharing economy providers may have more of a problem with this than TNCs. In the case of Airbnb, for example, the capital being shared is a home and people may be more insistent on knowing details about an individual who will be sleeping in the home than one riding in a car. As a result, it would appear more likely that home-sharing might facilitate discrimination better than ride-sharing. *E.g.*, Benjamin Edelman et al., *Racial Discrimination in the Sharing Economy: Evidence from a Field*

more generally, market forces discourage any form of discrimination, incentivizing a pursuit of money, irrespective of the characteristics of the individual spending the money.²³⁸ A driver who chooses racial bias—or gender bias, or sexual orientation bias, or any other form of abhorrent bias—will be poorer as a result of fewer rides provided.²³⁹ That result will be the same, irrespective of whether the driver is employed by a cab company or uses a TNC app to generate rides.

It has been alleged that other forms of discrimination are also possible under a TNC business model. Given the novel structure of the enterprise, some critics have argued that individuals with disabilities will receive fewer accommodations in ride-sharing than they would under a traditional taxi model.²⁴⁰ One study also found that female riders are driven farther, likely being charged more than males.²⁴¹ Any form of discrimination is abhorrent, and traditional forms of transportation can be even worse,²⁴² yet reputation factors—driver ratings, for example—and market forces provide at least some incentive for racist drivers to keep their biases to themselves.

Potentially more troubling are the criticisms regarding actual rider safety, that drivers working through TNCs are subject to less stringent background checks and, as a result, are more likely to commit crimes against riders.²⁴³ Taxi companies are, under most municipal regulations, required to conduct fingerprint background checks on all drivers,²⁴⁴ something TNCs rarely do.²⁴⁵ This

Experiment, 9 AM. ECON. J.: APPLIED ECON. 1, 1–2 (2017). At any rate, that argues for further anonymization of user profiles—something that will become increasingly more plausible as reputational scores become more robust—not against the sharing economy, generally. *See id.* at 3.

²³⁸ *See* GARY S. BECKER, *THE ECONOMICS OF DISCRIMINATION* 20–21 (2d ed. 1971); Ben Southwood, *Markets Don't Like Racism*, ADAM SMITH INST. (Oct. 3, 2014), <https://www.adamsmith.org/blog/liberty-justice/markets-dont-like-racism> [<https://perma.cc/B44R-C2HS>]; *How Free Markets Break Down Discrimination*, FOUND. ECON. EDUC. (Apr. 1, 2008), <https://fee.org/articles/how-free-markets-break-down-discrimination/> [<https://perma.cc/8WRB-ZKFP>].

²³⁹ *See* BECKER, *supra* note 238, at 20. One possible counter to this is that a racist driver might choose never to drive where minority riders are likely to request transportation, similar to the claims against cab companies being unwilling to send their cars into certain minority neighborhoods. It is entirely possible for a single driver to do so. However, to the extent that many drivers choose that path, it merely increases the opportunities for non-racist drivers to fill the resulting shortfall in minority-majority neighborhoods. More rides will be available, so a non-racist driver's time will be more effectively used and higher profits will result.

²⁴⁰ Calo & Rosenblat, *supra* note 4, at 1627 (citing THOMAS P. MURPHY, *LEGAL RIGHTS OF INDIVIDUALS WITH DISABILITIES* § 8.3.5 (2d ed. 2015)).

²⁴¹ Ge et al., *supra* note 233, at 18.

²⁴² *See id.* at 3 (“[W]e do not claim that TNC networks are ‘worse’ than the status quo.”).

²⁴³ *See, e.g.*, Jason Hancock, *Police Pan Bill to Exempt Uber and Taxis from Local Regulations at Missouri Senate Hearing*, KAN. CITY STAR (Mar. 16, 2016, 10:11 AM), <http://www.kansascity.com/news/local/news-columns-blogs/the-buzz/article66388242.html> [<https://perma.cc/KKN3-S9N8>].

²⁴⁴ Other possible safety precautions at the municipal level include mandatory vehicle inspection, provision of information to public officials regarding passenger names and pick-up

issue has received substantial media attention, particularly in cities like Austin, where passage of a mandate for fingerprint background checks left Uber and Lyft unable to operate in the city.²⁴⁶

Traditional taxi background checks are far more expensive—in monetary and time costs²⁴⁷—so it might be tempting to assume that TNCs avoid them solely for profit. The comparison between taxi background checks and TNC background checks, however, is not that simple. Fingerprint background checks are more expensive and more burdensome, as potential drivers must find a location to have their fingerprints taken.²⁴⁸ There are other disadvantages, as well, such as the fact that they may not be as comprehensive, due to the fact that local law enforcement is not required to submit records to the FBI.²⁴⁹ Some of those disadvantages are harmful to drivers, rather than to the TNCs, directly.²⁵⁰ For example, the background checks conducted by Uber are covered by state consumer protection laws, so that aspiring drivers are not rejected for a

and drop off of customers, and provision of official driver records showing lack of violent offenses, drunk or reckless driving, and a maximum number of moving violations. *See, e.g., Poe, supra* note 147.

²⁴⁵ *See, e.g.,* Mike McPhate, *Uber and Lyft End Rides in Austin to Protest Fingerprint Background Checks*, N.Y. TIMES (May 9, 2016), <https://www.nytimes.com/2016/05/10/technology/uber-and-lyft-stop-rides-in-austin-to-protest-fingerprint-background-checks.html> (describing how Uber and Lyft left the Austin market rather than conduct fingerprint background checks).

²⁴⁶ *Id.*

²⁴⁷ Fingerprint background checks take up to sixteen weeks and involve employment of FBI resources, with commensurate costs. Adrienne LaFrance & Rose Eveleth, *Are Taxis Safer Than Uber?*, ATLANTIC (Mar. 3, 2015), <https://www.theatlantic.com/technology/archive/2015/03/are-taxis-safer-than-uber/386207/> [<https://perma.cc/6C9G-AMHW>].

²⁴⁸ An FBI background check—which will require fingerprints—costs, on average, around \$50 plus fees. *E.g., FAQs*, FIELDPRINT, https://www.fieldprintusa.com/FBISubPage_FullWidth.aspx?ChannelID=272 [<https://perma.cc/D6A2-BAD2>] (last visited Jan. 10, 2020) (“The total cost for this service is \$50.00. This cost includes Livescan fingerprint collection, the FBI fee and access to the Report Management Portal for 30 days.”) (last visited Jan. 10, 2020); *Frequently Asked Questions*, NAT’L BACKGROUND CHECK, INC., <https://www.nationalbackgroundcheck.com/faq-background-checks.htm> [<https://perma.cc/4QA9-JMP2>] (“How much does an FBI background check cost? Answer. \$50/per person per request + shipping fees.”) (last visited Jan. 10, 2020). Potentially more difficult for lower-income workers is the time commitment, including finding or printing the fingerprint form and obtaining fingerprints at a fingerprint collection location, which may not be anywhere nearby. By comparison, a non-fingerprint background check can cost as little as \$8 for a federal criminal records check, \$9 for a state criminal records check, and \$5 for a county criminal records check. *How Much Does It Usually Cost to Run a Background Check?*, TRUSTED EMPS. (June 20, 2018), <https://www.trustedemployees.com/learning-center/articles-news/how-much-does-it-usually-cost-to-run-a-background-check/> [<https://perma.cc/37YN-ML4U>].

²⁴⁹ LaFrance & Eveleth, *supra* note 247.

²⁵⁰ Anything that keeps drivers from applying is indirectly harmful to a TNC, since the business model relies on a critical mass of drivers. Murat Uenlue, *Business Model Canvas Uber*, INNOVATION TACTICS (Jan. 13, 2018), <https://www.innovationtactics.com/business-model-canvas-uber/> [<https://perma.cc/TA4B-SQVZ>].

baseless arrest²⁵¹ or because of a name that matches theirs.²⁵² A fingerprint background check is therefore more likely to disadvantage drivers who come from communities that have poor relations with the police.

On a more foundational level, TNCs have strong market incentives to provide a safe environment for both drivers and riders. TNCs are, in effect, providing access to the transportation market to both; they make money only when drivers are willing to drive, and riders are willing to ride. If riders felt unsafe when utilizing ride-share services, that would spell the beginning of the end for TNCs. There are occasional crimes committed by TNC drivers against riders,²⁵³ but they appear to be the exception, rather than the rule. Moreover, given the market incentives for safety and the relative lack of serious crimes being committed,²⁵⁴ we should withhold judgment and let market forces determine the appropriate level of scrutiny for aspiring TNC drivers.

²⁵¹ See LaFrance & Eveleth, *supra* note 247. (“[T]he Fair Credit Reporting Act limits the amount of information [Uber’s background-check company] is able to uncover[;] . . . adverse matters that did not result in a conviction are only reportable for seven years.”).

²⁵² State consumer protection laws give consumers the right to challenge false positives in their criminal background checks which, in at least one case, involved a consumer being denied employment because an individual with the same name had been convicted of a felony, “even though that person shared nothing else in common . . .” Megan Cerullo, *What Everyone Should Know About Employer Background Checks*, CBS NEWS (June 28, 2019, 3:23 PM), <https://www.cbsnews.com/news/what-job-candidates-should-know-about-employer-background-checks/> [<https://perma.cc/M33P-UWC8>].

²⁵³ *E.g.*, Riley, *supra* note 153 (recounting two instances of alleged misconduct: a driver arrested for attempting to break into a customer’s home after dropping the customer off at the airport, and a driver accused of sexual assault).

²⁵⁴ Not surprisingly, the Department of Justice does not maintain a separate set of crime statistics for ride-sharing services. However, a regional transportation company in the Southeast (and in competition with ride-sharing companies) maintained, for the years 2013 to 2016, a blog cataloging “incidents” linked to Uber and Lyft. *Our Blog: Reported List of Incidents Involving Uber and Lyft*, ATCHISON TRANSP. SERVS., <https://www.atchisontransport.com/blog/reported-list-of-incidents-involving-uber-and-lyft/> [<https://perma.cc/WNS2-RKQQ>] (last visited Feb. 2, 2020) [hereinafter *Incidents Involving Uber and Lyft*]. From 2014 through 2016, fifteen deaths were listed, but nine were from automotive crashes, not crimes. *Id.* The remaining 6 were from a single serial killer, but none of his crimes were committed as an Uber driver. John Bacon, *Uber Driver Arraigned on 6 Murder Counts: What We Know*, USA TODAY, <https://www.usatoday.com/story/news/nation/2016/02/22/uber-driver-accused-killing-6-what-we-know/80725680/> [<https://perma.cc/H24Y-4PBT>] (last updated Feb. 22, 2016, 2:56 PM). Sexual assault allegations were more common, with 114 reported incidents. *Incidents Involving Uber and Lyft, supra*. While each of these events is horrifying, they are relatively rare, given the millions of ride-share trips every year, *see* Arevalo, *supra* note 119, particularly in comparison to overall crime rates in the U.S. According to the Bureau of Justice Statistics, there were 284,350 cases of rape or sexual assault in 2014, and 431,840 in 2015. JENNIFER L. TRUMAN & RACHEL E. MORGAN, U.S. DEP’T OF JUSTICE, CRIMINAL VICTIMIZATION, 2015 2, <https://www.bjs.gov/content/pub/pdf/cv15.pdf> [<https://perma.cc/7BKV-DVZD>] (last revised Mar. 22, 2018). While that number dropped to 298,410 in 2016, RACHEL E. MORGAN & GRACE KENA, U.S. DEP’T OF JUSTICE, CRIMINAL VICTIMIZATION, 2016: REVISED tbl.1 (2018), <https://www.bjs.gov/content/pub/pdf/cv16re.pdf> [<https://perma.cc/NEY7-GM4K>], the numbers are still unconscionably high. Importantly for the present discussion, however, is how miniscule the number of reported sexual assaults in

One final set of criticisms is specific to the relationship between the rider and the TNC, itself. These criticisms typically allege that riders are manipulated into using the TNC's app²⁵⁵ or that TNCs are not properly safeguarding personal rider information.²⁵⁶ TNCs may have their own counter-explanations for the offending phenomena, but the answer to critics is actually much simpler. In brief, riders who feel manipulated—or who feel their privacy is violated—will find alternative transportation, virtually guaranteeing that TNCs will be restrained in their desires to manipulate or exploit.

b. TNCs and Drivers

TNCs have also been accused of being unfair to the drivers who use their apps, exploiting drivers' relative lack of technological and legal sophistication. One complaint on behalf of drivers is a common one in contract law—drivers are not sophisticated enough to appreciate the import of all of the terms in their contracts—augmented by the speed at which TNCs often require drivers using their services to agree to modified terms.²⁵⁷ It is true that some drivers may not have a level of sophistication equal to that of those drafting the initial contract and the many and varied modifications, but that is not unique to TNC contracts. Moreover, the argument that drivers will be confused by the rapid succession of modifications²⁵⁸ ignores certain market realities that work in favor of the drivers. First of all, TNCs must have drivers who agree to use the software; TNCs have no power to coerce any driver. Second, the world of the sharing economy is one of rapid informational transfer, so that what one driver knows, others will quickly discover, until that information is diffused throughout the pool of potential drivers. Third, the TNC market is highly competitive, providing competing TNCs with strong incentives to discover and reveal any disadvantageous and unnecessary contract terms. Put together, there is simply no reason to suspect that there are secret, “shadow terms”²⁵⁹ that drivers are not aware of, because those would be revealed by competitors and rapidly distributed to all existing and potential drivers.

Several specific concerns raised regarding TNC technology are troubling as individual events but unconvincing as general critiques of the TNC model.

which a ride-sharing driver is the accused is, especially spread over four years, in which the total number of sexual assaults would have been well over one million.

²⁵⁵ See Calo & Rosenblat, *supra* note 4, at 1630 (describing reports that the Uber app shows multiple available cars up to the point where the rider requests a ride, after which most of the cars disappear and the rider is forced to wait).

²⁵⁶ *Id.* at 1647–48.

²⁵⁷ See *id.* at 1661.

²⁵⁸ Professor Oren Bar-Gill argues that this increasing complexity is intentional, designed to gain an advantage over unsophisticated counter parties. OREN BAR-GILL, *SEDUCTION BY CONTRACT: LAW, ECONOMICS, AND PSYCHOLOGY IN CONSUMER MARKETS* 18–20, 141–45 (2012).

²⁵⁹ See David Horton, *The Shadow Terms: Contract Procedure and Unilateral Amendments*, 57 UCLA L. REV. 605, 608–10 (2010).

Uber requires drivers to wait five minutes for a rider to show up before canceling without penalty, but some drivers complain that the app underestimates the time spent waiting.²⁶⁰ Uber also requires drivers to accept a certain percentage of ride requests, but some drivers complain that ride requests appear too rapidly to accept.²⁶¹ These occurrences are troubling as evidence of lingering transaction costs in an industry premised on the ability to reduce or eliminate transaction costs. However, they are quite limited in their frequency²⁶² and are far more likely to be the result of technological glitches than intentional abuse.²⁶³

Finally, it is possible that TNCs could facilitate racial or other forms of discrimination by riders against drivers.²⁶⁴ Riders are not typically shown any details about their driver prior to requesting a ride, so there is no opportunity to discriminate at that point, but a bigoted rider might be tempted to cancel the ride once more information about the driver is made available. Fortunately, TNCs often charge a cancellation fee,²⁶⁵ which would impose a monetary cost on that type of discriminatory behavior, but that would not curtail all forms of discrimination. The easiest and most obvious mode would be for a bigoted rider to intentionally and unfairly rate a driver lower because of the characteristic objected to by the bigot. Doing so would lower the overall rating of the driver and put continued employment at risk.²⁶⁶

c. TNCs and Society

Although all riders and drivers in the TNC system are subject to some costs and risks, those risks are frequently and loudly proclaimed by TNC opponents and those concerned with consumer safety. It is therefore difficult to imagine that a significant number of riders or drivers are unaware of those potential costs. As a result, riders' and drivers' using a TNC app reveals that the benefits

²⁶⁰ Calo & Rosenblat, *supra* note 4, at 1631.

²⁶¹ *Id.*

²⁶² The latter complaint was categorized as “rare,” *id.* at 1631, and was drawn from a non-representative sample of 400 interviews and comments on an online forum for drivers, the participants in which were not screened. *Id.* at 1628–29 n.28 (describing the data-collection methodology). The former complaint was categorized as being more common, but without any indication of frequency. *See id.* at 1631.

²⁶³ Calo and Rosenblatt concede that “it can be challenging to dissect which part of the problem is a business practice, a technical issue, or a sociotechnical misunderstanding[.]” *id.* at 1660, but conclude that a TNC is “not necessarily absolve[d] . . . of fault under existing law.” *Id.* at 1631 n.38. While true as a technical legal matter, the market realities make it very difficult to imagine a company in a highly competitive and innovative market desiring to abuse customers in this way or succeeding in the long run, even if they were so suicidal as to abuse those who might provide them with revenues.

²⁶⁴ *See* Rosenblat et al., *supra* note 207, at 7.

²⁶⁵ *E.g.*, *Am I Charged for Cancelling?*, UBER HELP, <https://help.uber.com/riders/article/am-i-charged-for-cancelling-an-uber-ride-?nodeId=5f6415dc-dfdb-4d64-927a-66bb06bc4f82> [https://perma.cc/BVV8-YWSS] (last visited Feb. 2, 2020).

²⁶⁶ Rosenblat et al., *supra* note 207, at 8.

of ride-sharing outweigh the costs to the individuals that participate.²⁶⁷ That is not the only consideration in any market analysis, however, as discussed *supra*,²⁶⁸ certain conditions may lead to inefficient markets, leading to sub-optimal outcomes even though market participants believe that they are making choices where benefits outweigh costs.

i. Regulatory Avoidance

The first area where the operation of TNCs might raise concerns of sub-optimal outcomes is in the grey area between regulated and non-regulated activity. TNCs operate within this grey area; they are not traditional point-to-point transportation providers, but they are involved in the point-to-point transportation industry. Into this grey area TNCs enter, beginning operations in a municipal market without jumping through the hoops that would be required of a new taxi driver or taxi company. Some scholars refer to this behavior as “regulatory entrepreneurship,”²⁶⁹ others more pejoratively as “regulatory arbitrage.”²⁷⁰ The difference between the two would appear that those in the former camp view TNCs as merely seizing a profitable business opportunity while those in the latter camp view TNCs as exploiting technical loopholes to gain a profit at the expense of society and individuals. In both cases, however, there is a presumption that ride-sharing is properly subject to regulation; TNCs enter the picture with the intent of flouting the law for profit and doing so can be detrimental.

By entering the market without complying with important regulations, the story goes, TNCs are more likely to impose costs on society. Operating outside of a strict limit on taxis might increase congestion on city roads.²⁷¹ Avoiding health and safety regulations might put drivers and riders—and possibly innocent bystanders—at greater risk.²⁷² Bypassing labor regulations might allow

²⁶⁷ Cf. Richard A. Epstein, *Happiness and Revealed Preferences in Evolutionary Perspective*, 33 VT. L. REV. 559, 561 (2009) (“[T]he most accurate guide to what people want lies not in what they say, but what they do.”).

²⁶⁸ *Supra* Section I.D.

²⁶⁹ Elizabeth Pollman & Jordan M. Barry, *Regulatory Entrepreneurship*, 90 S. CAL. L. REV. 383, 384–85 (2017).

²⁷⁰ Calo & Rosenblat, *supra* note 4, at 1645.

²⁷¹ Congestion could increase if individuals used ride-sharing as a substitute for non-driving trips (mass transit, walking, biking), but could decrease if ride-sharing reduces overall car ownership. Lauren P. Alexander & Marta C. Gonzalez, *Assessing the Impact of Real-Time Ridesharing on Urban Traffic Using Mobile Phone Data*, (Aug. 10, 2015), https://userpages.umbc.edu/~nroy/courses/fall2018/cmistr/papers/Real-time-Ridesharing_Alexander.pdf [<https://perma.cc/7LYU-BURF>]. *But see* Ziru Li et al., *Do Ride-Sharing Services Affect Traffic Congestion? An Empirical Study of Uber Entry*, SSRN 1, 11–13, <http://ssrn.com/abstract=2838043> [<https://perma.cc/5Y2A-UPM7>] (last revised July 10, 2017) (finding evidence that Uber’s entry into the market correlates with decreases in congestion).

²⁷² See LaFrance & Eveleth, *supra* note 247.

TNCs to exploit drivers.²⁷³ In *O'Connor v. Uber Technologies, Inc.*,²⁷⁴ for example, Uber drivers filed a class action lawsuit seeking a declaration that they were employees of Uber, rather than independent contractors—as asserted by Uber—so that they were entitled to protection under California labor law.²⁷⁵

If the view one takes of TNCs is that they are “essentially running a taxi dispatch service for the smartphone age,”²⁷⁶ then it will be easy to draw the conclusion that TNCs are flouting the law. There is an alternative way to view the TNC business model, however, and that view changes the entire analysis. It is that TNCs are merely providing access to software that allows individuals to connect with each other, and that software has a per-use licensing fee. This story has some weaknesses, to be sure, since TNCs impose restrictions on who is allowed to access their software, either as a driver or as a rider, but given the strong reputational component of the TNC business model, restricting access is fully consistent with the TNC-as-facilitator explanation.

How one views the tendency of innovators to avoid regulations likely depends on whether one views markets as largely beneficial or largely detrimental to human flourishing. Under the first, regulation should be imposed only when necessary to remedy market failures and, even then, only when government action will not result in even greater costs.²⁷⁷ Under the latter, regulation should be imposed in order to minimize the harms—necessary though they may be—that arise from market interactions. Antitrust laws, for example, are a form of regulation that inhibits aggregation of market power, and market power can be used to exploit consumers or to create efficiencies that can lead to lower prices for consumers.²⁷⁸ If one views markets as largely beneficial, then antitrust should step in only when it can be shown that consumers will be adversely affected, preferably after imposing a high evidentiary burden.²⁷⁹ Alternatively, if one believes markets are largely detrimental, then antitrust authorities should actively police all actions that lead to increased market power.

Most commentators, scholars, and politicians will fall somewhere between these two extremes, which can obscure the importance of the underlying principles. When markets are viewed favorably, that which is not prohibited will be permitted. Under a regime of that sort, the innovative TNC technology and business model should be free to operate in any market it chooses, subject to the potential government regulation of its activities if those activities prove

²⁷³ See Calo & Rosenblat, *supra* note 4, at 1646.

²⁷⁴ *O'Connor v. Uber Techs., Inc.*, 82 F. Supp. 3d 1133 (N.D. Cal. 2015).

²⁷⁵ *Id.* at 1135.

²⁷⁶ Pollman & Barry, *supra* note 269, at 385.

²⁷⁷ See, e.g., ADAM THIERER, PERMISSIONLESS INNOVATION: THE CONTINUING CASE FOR COMPREHENSIVE TECHNOLOGICAL FREEDOM 1–2 (2016).

²⁷⁸ See, e.g., Maurice E. Stucke, *Reconsidering Antitrust's Goals*, 53 B.C. L. REV. 551, 559–62 (2012).

²⁷⁹ E.g., Jonathan B. Baker, *Exclusion as a Core Competition Concern*, 78 ANTITRUST L.J. 527, 546–47 (2013) (describing the rule of reason standard).

harmful. When markets are viewed skeptically, however, all that is not permitted will be prohibited, to a greater or lesser extent, and a TNC that enters a market without permission will be acting in a lawless fashion.²⁸⁰

Moreover, there are many regulations that might be viewed as ineffective or bad policy choices²⁸¹ and others that are actively harmful, not only from an efficiency standpoint but also from a safety standpoint.²⁸² Removing those regulations would be beneficial to individuals, regulated entities, and society, as a whole, so the ultimate outcome of the change could be cheered. Indeed, one of the primary complaints regarding TNCs is that they are competing unfairly because they are not subject to the same regulations as taxi companies.²⁸³ If the regulations are not necessary for market efficiency, consumer protection, or safety, however, the proper action would be to remove the regulatory burden from taxis rather than impose the unnecessary burden on TNCs.²⁸⁴ The concern about regulatory avoidance is, at some level, a distraction because it paints regulations with a broad brush, assuming validity. A more useful and appropriate analysis would, instead, concern itself with specific regulations, to determine whether they are needed or whether they serve the interests of industry incumbents.

²⁸⁰ Kidd, *supra* note 8, at 179–80. This path imposes significant costs on society, not least of which is lower innovation, as entrepreneurs are either forced into the grey market or driven out of the market entirely. *Id.*

²⁸¹ In the wake of the Enron scandal, Congress passed the Sarbanes-Oxley Act, which, among other things, mandated that corporations establish independent audit committees, even though a consensus existed that such a mandate would have no impact. *See, e.g.,* Sanjai Bhagat & Bernard Black, *The Uncertain Relationship Between Board Composition and Firm Performance*, 54 BUS. LAW. 921, 942–44 (1999) (summarizing the consensus in the literature on board independence and firm performance); Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521, 1530 (2005) (“[I]ndependent boards do not improve performance and . . . boards with too many outsiders may, in fact, have a negative impact on performance.”). Similarly, the Dodd-Frank Act, passed in the wake of the financial crisis of 2007–08, contained numerous provisions that were known to have effectively zero chance of achieving any of the bill’s stated goals. *See* Stephen M. Bainbridge, *Dodd-Frank: Quack Federal Corporate Governance Round II*, 95 MINN. L. REV. 1779, 1783 (2011).

²⁸² Bainbridge, *supra* note 281, at 1783, 1797–1815 (concluding that some of Dodd-Frank’s corporate governance provisions are likely to have adverse consequences); Kidd, *supra* note 47, at 18 (concluding that federal trucking regulations, designed to increase safety by mandating rest periods, inevitably lead to big trucks being on the road at the busiest times of the day). A sizeable percentage of regulations—in addition to whatever benefits they might confer on society—serve to entrench industry incumbents. Kidd, *supra* note 8, at 180; Kidd, *supra* note 93, at 371, 441–43 (describing how hedge fund regulation under Dodd-Frank entrenches traditional financial institutions). Those incumbents not only gain additional monopoly rents, *supra*, Part II, but also have weaker incentives to consider consumer safety, amelioration of negative externalities, and so on, due to the lack of competitive pressures.

²⁸³ Calo & Rosenblat, *supra* note 4, at 1626.

²⁸⁴ While “misery loves company” is a popular proverb, it should not motivate public policy.

There is, however, something disconcerting and troubling about the process described by TNC opponents—a company openly flaunting the rules²⁸⁵ in such a way as to generate support among the population, effectively forcing regulators to make a change. One might argue that this has more than a whiff of abusing the rule of law.²⁸⁶ And yet, if all that is happening is that TNCs avoid regulation because regulators feel compelled to follow the will of the public, democratic norms might support TNCs' "entrepreneurship." By entering a market that does not currently regulate their innovative business model,²⁸⁷ TNCs can demonstrate that, by reducing transaction costs, the point-to-point transportation market can function without heavy regulation. Whether regulators see the value in that argument or are merely cowed into adopting a deregulatory posture, the first—and most important—question is whether the market is functioning efficiently, sans regulation, not why regulators have chosen not to intervene.

There are simply too many flaws with the regulatory-avoidance critique of TNCs for it to be a significant counterbalance to the benefits of ride-sharing. Within the critique, it is typically assumed, rather than proven, that existing regulations apply, in the first place, or that they are beneficial. Innovation will end up being broadly stifled if every innovator must abide by the regulations that govern what the innovation replaces. More importantly, the popularity of TNCs among both riders and drivers is strong evidence that the regulations do not provide a net benefit. Instead of banging a drum for TNCs to face archaic, badly designed regulations, policy makers should clear the field of those regulations that have long inhibited other participants in the point-to-point transportation market, like taxis and limos.

ii. *Information Asymmetries*

Some commentators are increasingly concerned with information asymmetries in the age of big data, including its application to the sharing economy.

²⁸⁵ Critics are fond of citing the "Greyball" scandal, where Uber sent images of nonexistent cars and drivers to certain users. Mike Isaac, *How Uber Deceives the Authorities Worldwide*, N.Y. TIMES (Mar. 3, 2017), <https://www.nytimes.com/2017/03/03/technology/uber-greyball-program-evade-authorities.html?searchResultPosition=1> [<https://perma.cc/ZXL2-Z9QB>].

This practice is derided as an attempt to avoid enforcement officials, and those officials did receive the fake images. *Id.* Uber justified the practice by saying that it was attempting to foil individuals who were attempting to fraudulently use the app. *Id.* Municipal officials who are not looking for a ride would look suspiciously like other types of fraudulent riders, so Uber's explanation is plausible. More importantly, if Uber is not properly subject to taxi regulations, then Uber's efforts are nothing more than a legitimate attempt to avoid abusive tactics by overzealous government agents.

²⁸⁶ See Calo & Rosenblat, *supra* note 4, at 1640.

²⁸⁷ Importantly, Pollman and Barry define regulatory entrepreneurship in terms of whether there is "significant uncertainty" about whether regulations apply. Pollman & Barry, *supra* note 269, at 392. In markets where this is the case, it is unclear why the unquestioned default should be that the regulations *do* apply.

This “foundational critique”²⁸⁸ arises from the concern that big data will allow TNCs and other sharing economy companies to “extract[] more and more value from participants,”²⁸⁹ diminishing any value they might bring to consumers with their innovations. These concerns are both independent of²⁹⁰ and more serious than those discussed *supra*, because they go to the heart of whether a point-to-point transportation market can function properly without government regulation.

As a preliminary matter, it is important to note that this is not a traditional economic argument about information asymmetries, which typically take the form of adverse selection,²⁹¹ moral hazard,²⁹² or principal-agent problems.²⁹³ In each of these examples, markets break down because the price mechanism does not work properly when information is withheld from the market.²⁹⁴ In a classic case of adverse selection, for example, buyers of used cars do not have good information about the quality of cars being offered.²⁹⁵ Only the sellers have that information—therein lies the asymmetry—and buyers will discount their offering price in order to account for the probability that the car they are considering is a “lemon.”²⁹⁶ Sellers of higher-quality used cars will be unwilling to accept the lower price, leading to a worsening of quality in the used car market.²⁹⁷ Buyers will further lower the price they offer, driving the best remaining cars out of the market, and so on, until only the worst cars are left.²⁹⁸ Again, the information asymmetry between buyers and sellers causes the market to break down, which is the defining characteristic of a market failure.²⁹⁹

²⁸⁸ Calo & Rosenblat, *supra* note 4, at 1649.

²⁸⁹ *Id.* at 1627–28.

²⁹⁰ *Id.* at 1649.

²⁹¹ See Rick Swedloff, *Uncompensated Torts*, 28 GA. ST. U. L. REV. 721, 746 (2012) (“[A]dverse selection is really a problem of information asymmetry: the insured presumably knows more about his own riskiness than the insurer.”).

²⁹² See Christopher D. Dodge, Note, *Doomed to Repeat: Why Sequestration and the Budget Control Act of 2011 are Unlikely to Solve Our Solvency Woes*, 15 N.Y.U. J. LEGIS. & PUB. POL’Y 835, 875 (2012) (“Moral hazard often arises in cases where there is an information asymmetry . . . as the principal cannot adequately monitor the actions of [his or her] agent.”).

²⁹³ See Jacob E. Gersen & Matthew C. Stephenson, *Over-Accountability*, 6 J. LEGAL ANALYSIS 185, 210 (2014) (“One way to address the problem might be to adopt institutional reforms that ameliorate the underlying principal-agent problem, for example by reducing the information asymmetry between principals and agents.”).

²⁹⁴ Cf. *Market Failures*, LIB. ECON. & LIBERTY, <https://www.econlib.org/library/Topics/HighSchool/MarketFailures.html> [<https://perma.cc/69H4-6VFW>] (last visited Feb. 2, 2020).

²⁹⁵ See George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488, 489 (1970).

²⁹⁶ *Id.*

²⁹⁷ *Id.* at 490–91.

²⁹⁸ *Id.* at 490.

²⁹⁹ A similar situation often arises in health insurance markets, where community rating precludes consideration of all relevant characteristics of the potential insureds. A price—the premium—is set based on the average risk of the pool of insureds, but those with the lowest risk will often be unwilling to pay the premium, so the average risk will rise, premiums will

The type of information asymmetry that is concerning to TNC critics is something else, entirely. In the TNC market, riders and drivers are connected by TNC software, and that software has the ability to track both groups and gather significant amounts of data about them.³⁰⁰ TNC critics are concerned that this gives TNCs a strong informational advantage over riders and drivers, which could lead to exploitation.³⁰¹ While certainly a legitimate potential concern, this is not an argument about information asymmetry—which has a well-understood technical meaning in economics—and it is improper to mislead readers in this way.

Having said that, critics' real arguments about exploitation of consumers and producers in the sharing economy deserve a fair hearing, as it is perfectly reasonable to argue that big businesses seek to exert market power or informational advantages to increase their profits. In addressing critics' exploitation concerns, it is important to keep in mind the insights of Adam Smith, whose writings in 1759³⁰² and 1776³⁰³ still hold tremendous insights about human nature,³⁰⁴ as well as those of John Kenneth Galbraith, whose influential work, *The Affluent Society*,³⁰⁵ continues to fuel suspicion of capitalism and the innovation it generates.

Adam Smith's insights into human nature are the foundation of modern economics,³⁰⁶ but they are often misunderstood, even by modern economists.³⁰⁷

rise, and more low-risk individuals will drop out. Eventually, only those with high risk will be left in the insurance pool. *Id.* at 492–94.

³⁰⁰ Calo & Rosenblat, *supra* note 4, at 1652.

³⁰¹ *See id.* at 1651.

³⁰² *E.g.*, THEORY OF MORAL SENTIMENTS, *supra* note 214, at xxv.

³⁰³ WEALTH OF NATIONS, *supra* note 151.

³⁰⁴ Contrary to the caricature of economic modelling offered by proponents of behavioral law and economics, *e.g.*, Calo & Rosenblat, *supra* note 4, at 1650, Smith did not presume absolute rationality by individuals. In *Theory of Moral Sentiments*, for example, he proposed that individuals have a desire both “to be loved, [and] to be lovely,” THEORY OF MORAL SENTIMENTS, *supra* note 214, at 132, which opens the door for much that would appear irrational under a strict homo economicus model. *E.g.*, Joseph Persky, *Retrospectives: The Ethology of Homo Economicus*, 9 J. ECON. PERSPECTIVES 221, 223, 230 (1995). Moreover, his much-remarked discussion of the “invisible hand” just pointed out that selfish motives can yield tremendous benefits to others, WEALTH OF NATIONS, *supra* note 151, at 351–52 (“[E]very individual . . . neither intends to promote the public interest, nor knows how much he is promoting it. . . . [H]e is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention.”), something that is often ignored in critiques of capitalism, as if the desire for self-enrichment was inherently opposed to the welfare of others.

³⁰⁵ JOHN KENNETH GALBRAITH, *THE AFFLUENT SOCIETY* (3d ed., rev. 1976).

³⁰⁶ Adam Smith is widely considered the “father of modern economics.” *See, e.g.*, Ugo Mattei, *The Rise and Fall of Law and Economics: An Essay for Judge Guido Calabresi*, 64 MD. L. REV. 220, 232 (2005); Robert J. Rhee, *A Price Theory of Legal Bargaining: An Inquiry into the Selection of Settlement and Litigation Under Uncertainty*, 56 EMORY L.J. 619, 628 n.28 (2006); Alice M. Thomas, *Re-Envisioning the Charitable Deduction to Legislate Compassion and Civility: Reclaiming Our Collective and Individual Humanity Through Sustained Volunteerism*, 19 KAN. J.L. & PUB. POL'Y 269, 284 (2010).

At the risk of gross over-simplification, Smith first argued that individuals are complicated, motivated by a desire not only to be *thought* a good person, worthy of praise, but also to actually *be* a good person, worthy of praise.³⁰⁸ Only later, when answering the question of why some countries became wealthy while others struggled, did he offer the insights that have since been caricatured—that individuals motivated by self-interest regularly benefit those around them.³⁰⁹ In a Smithian view of the world, each individual strives to be a praise-worthy person while they seek to meet their material needs. In a free market, individuals can specialize, allowing them to be praise-worthy by meeting the needs of others, who then provide compensation.³¹⁰

Understanding how markets function, in Smithian terms, requires understanding that they are merely the aggregation of millions or billions of individual transactions—in short, markets are all of us, going about the business of making our individual lives better.³¹¹ Some poor formulations insist that individuals need to be perfectly informed about their decisions, or that individuals do not make mistakes.³¹² Not only are these assumptions demonstrably false, but they are unnecessary to explain Smith's understanding of markets. All that is needed is individuals' planning for their own lives—mistakes and all—rather than insisting on planning on a societal level.³¹³ As a result of voluntary transactions by trillions of individuals,³¹⁴ prices emerge, motivating further individual responses, as described *supra*.³¹⁵

³⁰⁷ *E.g., infra*, note 329–30 and accompanying text.

³⁰⁸ THEORY OF MORAL SENTIMENTS, *supra* note 214, at 133 (“The most sincere praise can give little pleasure when it cannot be considered as some sort of proof of praise-worthiness.”). Smith acknowledges that this motivation exists in greater or lesser degree in each individual, *e.g., id.* at 136 (“It is only the weakest and most superficial of mankind who can be much delighted with that praise which they themselves know to be altogether unmerited.”), including those who seem not to be motivated by the desire “to be loved, [and] to be lovely,” but it is a dominant factor in many, if not all, human decisions. *Id.* at 132.

³⁰⁹ WEALTH OF NATIONS, *supra* note 151, at 20 (“It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest.”).

³¹⁰ *See id.* at 19–23 (describing the importance of expanding markets to specialization, division of labor, and the ability of individuals to improve their lot by “truck, barter, and exchange [of] one thing for another.”).

³¹¹ *See* Kidd, *supra* note 8, at 188.

³¹² *E.g.,* F. A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519, 523 (1945) (critiquing the trend in economics to presume that production decisions are easily and routinely made); Padis, *supra* note 79, at 100 (“The argument . . . relies on the assumption of perfect information. The reality is that (sadly for economists) we do not live in a world of perfect information.”).

³¹³ Hayek, *supra* note 73, at 78–79.

³¹⁴ For a helpful example of how many decisions go into the simplest production process, *see* READ, *supra* note 34, at 5–7.

³¹⁵ *Supra* Section I.A.2.

In contrast, a Galbraithian view of the world sees individuals as inherently corruptible, easily led astray by savvy marketing schemes.³¹⁶ Individuals are not made better by having additional things to buy but are only convinced that they are better off because those who have invented new things have fooled consumers into *thinking* their lives are better.³¹⁷ Instead of allowing continued investment in consumer research or innovation, government should regulate with the goal of maintaining a stable consumption regime and direct all excess income to spending on public goods, like libraries, museums, and so on.³¹⁸ The weakness of the Galbraithian perspective is demonstrated in the fact that *The Affluent Society* was published in 1952, and individuals and society have been made immeasurably better off by the advent of innovations since then.³¹⁹ Moreover, it is difficult to honestly claim that future innovations—cheap solar power, automated and electric cars, and quantum computing—will also fail to make individuals' lives better.

At its core, the exploitation critique offered by opponents of the sharing economy is Galbraithian. Take one criticism of TNCs: that they are engaged in “self-dealing.”³²⁰ Read in its most broad form, this is absolutely correct and also perfectly unhelpful, because every market participant is engaged in meeting its own material needs. As described by Smith, this is a good thing because that self-dealing, in a market context, is possible only to the extent that TNCs meet the needs of consumers. To the Galbraithian critic, self-dealing is a pejorative; to the Smithian, it is a positive statement about the expected behavior of all market participants. In the context of a legal analysis, the term is likely intended to invoke negative reactions based on perceived breaches of fiduciary duty,³²¹ but this language is manipulative, since a TNC owes no fiduciary duties to a rider or a driver.

³¹⁶ See GALBRAITH, *supra* note 305, at 129 (“[The] central function [of modern advertising and salesmanship] is to create desires—to bring into being wants that previously did not exist.”), 198 (“[G]iven that consumer wants are created by the process by which they are satisfied—the consumer makes no such choice. He [or she] is subject to the forces of advertising and emulation by which production creates its own demand.”).

³¹⁷ *Id.* at 131 (“[I]t can no longer be assumed that welfare is greater at an all-round higher level of production than at a lower one. It may be the same.”), 232 (“To create the demand for new automobiles, we must contrive elaborate and functionless changes each year and then subject the consumer to ruthless psychological pressures to persuade him [or her] of their importance.”).

³¹⁸ See *id.* at 235 (“The solution is a system of taxation which automatically makes a pro rata share of increasing income available to public authority for public purposes.”).

³¹⁹ Galbraith offered minimal revisions to the foundational claim of the book as he revised it for new editions over the years. The language of the book makes clear he believed that the U.S. had reached peak utility in the 1950s. Less clear is whether he had revised his estimation with each new edition—establishing as the new baseline for sufficient affluence at 1969, then 1976, then 1998—or whether he still believed that 1958 was the time when peak affluence was achieved.

³²⁰ Calo & Rosenblat, *supra* note 4, at 1649.

³²¹ “Many forms of conduct permissible in a workaday world for those acting at arm’s length, are forbidden to those bound by fiduciary ties. A trustee is held to something stricter

Galbraithian thought pervades much of the critical analysis of TNCs, largely based on a concern that TNCs will exploit consumers by using large amounts of consumer data to determine what will make riders more likely to use their software.³²² To a Galbraithian, this sounds like exploitation of consumer gullibility; to a Smithian, this sounds like a company seeking to discover and provide something that more closely matches the consumer's exact preferences. To take but one example, TNC opponents worry that TNCs have discovered that individuals are likely willing to pay more for a ride when their phone battery is low.³²³ To a Smithian, this is hardly surprising, since modern consumers know that they have more transportation options as long as their phone is working; as the phone threatens to cease working, those options fade, and the consumer faces the real prospect of having no transportation, at all. How can it be surprising that a consumer, faced with that scenario, would be willing to pay a premium to avoid the risk that comes from reduced transportation options?

Critics also complain that TNCs will be able to exploit cognitive biases, perhaps leading to overconsumption of TNC services.³²⁴ While it is certainly true that each TNC would like consumers to use its software more frequently, it is not clear how anyone would know whether a rider is consuming too many TNC rides or why that would continue indefinitely. It is certainly true that some research has shown the existence of cognitive biases, such as believing that \$9.99 is closer to \$9.00 than to \$10.00.³²⁵ But would this bias result in riders hiring a driver to take them somewhere they do not wish to go? More importantly, a rider who pays \$9.99 for a ride is still: (1) marginally better off than someone who paid \$10.00 for a ride,³²⁶ and (2) \$9.99 poorer and one ride richer. Over time, budget constraints are binding, pennies add up, and riders will learn exactly how much they can spend on ride-sharing without adversely impacting their other consumption choices. In the long run, even cognitive bi-

than the morals of the market place. Not honesty alone, but the punctilio of an honor the most sensitive, is then the standard of behavior." *Meinhard v. Salmon*, 164 N.E. 545, 546 (N.Y. 1928). Whether in a partnership or corporation, or in a trustee relationship, those with fiduciary duties are in a special relationship of trust and are held to a higher standard. *See id.*

³²² *See Calo & Rosenblat, supra* note 4, at 1654–59. Going by the name of “digital market manipulation,” Ryan Calo, *Digital Market Manipulation*, 82 GEO. WASH. L. REV. 995, 1002–03 (2014), the argument is that, by knowing so much about each user, TNCs can trick them into doing things they wouldn't otherwise because they have teased out of the data patterns that reveal individual user idiosyncrasies. *Id.* Interestingly, this is not secret information known only to the TNC, but information that is individually available to each rider and driver. The TNC does not generate this information, but merely aggregates it in a useful form. This aggregation is one of the primary benefits of our digital age, because we are largely unable to identify patterns in our own preferences but, through aggregation of our data, a TNC can anticipate what we will want, perhaps even better than we can. *Id.* at 1003.

³²³ Calo & Rosenblat, *supra* note 4, at 1630. It is never described exactly how TNCs would be able to discern the phone's battery level.

³²⁴ *Id.* at 1628.

³²⁵ *See* John D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: The Problem of Market Manipulation*, 74 N.Y.U. L. REV. 630, 739–42 (1999).

³²⁶ A penny saved is a penny earned.

ases will be overcome because individual budget constraints will impose a discipline stronger than biases.

On a broader scale, critics complain that TNCs will be able to manipulate the market with their control over both riders and drivers.³²⁷ This concern fundamentally misunderstands markets, in that the market is not a machine with buttons and levers that can be pushed. Rather, it is effectively a complex organism that resists manipulation, except for the type of manipulation Smith envisioned, providing something the individuals want to purchase so that they will hand over their money. Only in a Galbraithian world are individuals—riders and drivers—susceptible to the type of manipulation that would give TNCs any market power beyond what is voluntarily given them by consumers who wish to use their products. Coincidentally, it is precisely this type of Galbraithian concern over manipulation that leads to government regulation, erecting barriers to entry that give incumbents market power and enabling them to do, post-regulation, what they could not achieve in its absence.³²⁸

In the end, Galbraithian critics of TNCs fear the future and what it might hold. The future is always uncertain and, therefore, inherently risky, so it is understandable that it induces fear in many people. The type of risks that bother TNC critics, however, are a parade of horrors, possible only in a world without competition or the Smithian human desire to be lovely. One of the most palpable examples of this is the claim that TNCs might be able to identify when individuals are depressed and use it to extract greater profits.³²⁹ It is possible that one or more TNCs might be led by greed-obsessed individuals, and those individuals might have a strong desire to exploit, manipulate, and otherwise bleed dry TNC riders, even depressed ones. In a competitive market, however, it would take only one “good” company to buck the “evil” trend and loudly proclaim to the riding public how they were being taken advantage of by the other TNCs. The evil TNCs would be forever ruined, and consumer-friendly business practices would once again be restored.

3. Will Regulation Help?

Even if the parade of horrors imagined by TNC critics were realistic, it would still bear asking whether the proposed solutions—typically disclosure, disclosure, and more disclosure³³⁰—would make any meaningful difference. Disclosures made to consumers can have some positive impacts,³³¹ but the gov-

³²⁷ See Calo & Rosenblat, *supra* note 4, at 1652.

³²⁸ See Kidd, *supra* note 8, at 172.

³²⁹ Calo & Rosenblat, *supra* note 4, at 1651.

³³⁰ See, e.g., *id.*, at 1633 (demanding more “granular” data from TNCs).

³³¹ As a general matter, then, product sellers have an incentive not to disclose risk-related information that would reduce consumer estimates of the product’s net benefit. But why do consumers not acquire this information on their own? The reason is simple: If information were free, everyone would be perfectly informed about everything, making questions of disclosure irrelevant. Information about product risks, however,

ernment may be bad at determining what information will actually be helpful to users of TNC software,³³² including that users may not be sophisticated enough to make use of the information.³³³ Even worse are mandates of disclosures to the government, which are often merely a way to increase the cost to new competitors, increasing the market power of industry incumbents.³³⁴ Even if not intended to serve that purpose, disclosures alone appear little more than a concession that regulators are ignorant of any real risks but believe that, given enough time and data, a regulatory “solution” to an as-yet-identified problem will emerge. At best, regulations of this sort are unnecessary costs that burden innovation; at worst, they are intentional barriers to entry, designed to give current industry incumbents protection against competition.

Whether the government “solution” is outright barriers to entry or indirect barriers through regulation, a movement away from a free market is likely to benefit someone. Given the market power and corresponding monopoly rents generated by existing taxi regulations, the incentives are strong for those groups that gain from the present system to engage in what public choice economists call “rent-seeking” to maintain the system. That is not to say that opposition to ride-sharing is motivated by bad faith. To the contrary, there are many who hold sincere beliefs that the risks of innovation in this area are too great to leave without regulation. However, as described herein, those concerns are largely hypothetical and improbable, while the benefits are real and tangible, making opposition counter majoritarian.

IV. INNOVATION UBER ALLEGORY

What can ride-sharing teach us about the sharing economy, innovation, and how the law should react in the face of significant disruption? As a preliminary matter, the entire history of the taxi industry is characterized by protectionism. What is more, that protectionism came about because of an apparent attempt to correct a perceived market failure. Whether that attempt was sincere but misguided or the result of bootlegger pressures to create a pool of monopoly rents, it fails a Coaseian analysis because it failed to focus on transaction costs and their role in creating the market imperfection. Then, as now, there is much

is often costly to obtain. Moreover, given the low level of risk posed by most products and the widespread lack of consumer knowledge about the risk, any given individual often will find the benefits of acquiring the information about any one product are not worth the costs. Thus, unless product sellers disclose risk-related information, consumers are not likely to have such information available to them when they make decisions about the purchase and use of products.

Mark Geistfeld, *Inadequate Product Warnings and Causation*, 30 U. MICH. J.L. REFORM 309, 318 (1997).

³³² One need only consider how often the small print in bank disclosures and credit card disclosures are actually read by consumers—almost never—to know that government mandates of disclosure do not mean that the information will be helpful.

³³³ See Rory Van Loo, *Rise of the Digital Regulator*, 66 DUKE L.J. 1267, 1310 (2017).

³³⁴ E.g., Kidd, *supra* note 93, at 436.

noise about needing to do *something* but little attention paid to whether letting the technologies settle in and generate further innovation might lead to lower transaction costs and, eventually, elimination of the market imperfection. While it is impossible to know what an alternative timeline would have looked like, it is at least plausible that, had municipal governments withheld their regulatory powers, perceived imperfections in point-to-point transportation markets would have resolved themselves organically, obviating the need for expensive and distortionary government interventions.

LESSON #1: PATIENCE IS A VIRTUE, EVEN WHEN REGULATING

It is unlikely that we will ever again inhabit a world with slow, methodical innovation, so formal and informal rules will need to adapt to the new reality of accelerated innovation. Lesson #1 may be counter-intuitive, that increasing innovation should call for *more* patience—certainly our regulatory speed must keep pace—but making decisions based on short-term data could be disastrous. Rather than react out of fear of market failures, resulting in longer-lasting government failures, we should remember that today's ill-conceived regulation could be tomorrow's transaction cost, and adopt an attitude of regulatory humility. The remainder of this Part will identify other "life lessons" from our recent history with TNCs and the taxi industry that can help lawmakers and regulators protect consumers while preserving consumer choice and the market discipline that results.

TNCs, like many modern innovators, do not just enter an existing market. Instead, they often create an entirely new one, often by reducing transaction costs in a way that allows entirely new connections between potential buyers and sellers.³³⁵ Many critics miss this important distinction and accuse innovators of intentionally and wrongfully violating existing regulatory regimes by operating without permission. This criticism is founded upon the assumption that all that is not expressly permitted is prohibited, an assumption that would stymie innovation and limit human flourishing. This criticism also mistakes the very nature of innovation and does so, interestingly enough, by underestimating the importance of what has been accomplished. Rather than modify, innovators often create an entirely new thing and do so completely outside the regulated sphere. What the innovators have done is, of course, detrimental to entrenched incumbents but very beneficial to consumers, who can obtain goods and services—transportation services in the case of TNCs—more cheaply and, given the increase in competition, likely with far better quality.³³⁶

³³⁵ MUNGER, *supra* note 79, at 85–86.

³³⁶ See, e.g., FED. TRADE COMM'N, THE "SHARING" ECONOMY: ISSUES FACING PLATFORMS, PARTICIPANTS & REGULATORS 1 (Nov. 2016) ("[Firms in the sharing economy] have brought substantial benefits to consumers and suppliers alike, while challenging incumbents who have traditionally served those sectors."), <https://www.ftc.gov/system/files/documents/>

LESSON #2: JUST BECAUSE IT EXISTS DOES NOT MEAN IT IS (OR SHOULD BE)
REGULATED

More important, from a legal standpoint, is precisely why innovators create entirely new areas of economic activity beyond the bounds of existing regulation. In a competitive market with low barriers to entry, innovation would happen on a continuous basis, with every market participant seeking new ways of pleasing consumers, so as to generate higher profits. Under those market circumstances, consumers continually enjoy improvements in the goods and services that they buy, and producers are rarely able to collect more than normal market profits, so consumers pay the lowest price possible. Markets that function in this way experience a smooth evolutionary process, always improving but rarely in a disruptive way.

In a market with high barriers to entry, disruption is far more likely because those barriers stymie the smooth evolution brought on by continuous innovation. In a market with high entry barriers, innovation is largely unnecessary because internal competition is minimal, at best, and no external competition is allowed. At least, no competition is allowed using the traditional methods of the industry being protected. No one from the outside can develop a mode of transportation that looks like a taxi service, for example, because regulators would easily recognize that for what it is, swoop in, and exclude the innovations as counter to the regulatory regime. It is only when innovation occurs so far outside of the regulated sphere that it may avoid the attention of regulators long enough to gain a foothold and flourish. Innovation that arrives in this fashion will bypass existing regulations and create chaos among existing market participants, and it is the barriers to entry that guarantee greater disruption.

LESSON #3: HIGH ENTRY BARRIERS DELAY INNOVATION, BUT INCREASE THE LEVEL OF
INEVITABLE DISRUPTION

TNCs, like other innovators, also have the capacity to break through the transitional gains trap. Recall that the trap exists because those obtaining benefits from the barriers to entry will not voluntarily relinquish their protected position, and because legislative and/or regulatory solutions are intractable. TNCs operate in an unregulated space and, as such, are able to begin operations outside the restrictions on the taxi industry. The facilitation function of TNCs leads to corresponding increases in both the supply of ride-share drivers and the demand for ride-sharing. In other words, by reducing transaction costs, TNCs have allowed an unregulated market for point-to-point transportation to flourish. Regulators eventually caught on that there was a form of transportation not covered by the regulations, and a backlash occurred, but consumers had already

developed an affinity for ride-sharing, making regulation politically infeasible in most—though not all—cities.³³⁷

LESSON #4: INNOVATION, IF NOT INHIBITED, CAN DIMINISH THE POWER OF SPECIAL INTERESTS

One relevant critique of this research is that there is no evidence of bootleggers at work. While the theoretical foundations are solid, it is true that there is minimal empirical evidence to support the theory. The primary reason for that is the lack of reliable data on market penetration by TNCs, ideally in number of TNC drivers per capita.³³⁸ Given the constant threat of litigation faced by TNCs,³³⁹ it is understandable that they would be reluctant to share operational data like the number of Uber drivers for given cities, but that reluctance makes empirical work in this area very difficult. However, there is hope for the future of research in this area. First, even the limited existing data provides glimpses of possible evidence that bootleggers are active.

For example, using a limited sample of Uber drivers available publicly,³⁴⁰ it is possible to compare seventeen of the top fifty cities by population, across a number of variables, including Uber drivers per capita. New York City provides an intriguing case study, as compared to the larger sample. With a very high population density (nearly six times the average of seventeen major cities),³⁴¹ the need for point-to-point transportation should be exceptionally high. Even with a much more elaborate subway system, New York City does have a higher than average number of taxis per capita, but at less than twice the aver-

³³⁷ A similar event occurred in the Fourteenth and Fifteenth Centuries in Cologne, where brewing was tightly controlled within city limits but not in the countryside, and innovation in the unregulated territory broke the transitional gains trap. See Diana W. Thomas, *Deregulation Despite Transitional Gains: The Brewers Guild of Cologne 1461*, 140 PUB. CHOICE 329, 332, 332, 336–37 (2009).

³³⁸ It is possible that cultural factors might mean a lower level of interest in being a driver for hire in a particular community, but it is difficult to imagine what cultural norms might be, so it is reasonably safe to assume that most large cities will have equivalent numbers of for-hire drivers using TNC technology. Moreover, controlling for the relative prevalence of taxis within a city should minimize this source of potential bias in the results.

³³⁹ One legal case, filed against two of Uber's founders, Travis Kalanick and Garrett Camp, alleges that they should be personally liable for damages arising out of a misclassification of Uber drivers as independent contractors, rather than employees. Complaint at 2–3, *James v. Kalanick*, (Super. Ct. Cal., L.A. Cty. June 22, 2017) (No. BC666055). This follows another class action, filed against Uber Technologies, Inc., alleging harms from misclassification. Complaint at 2, *O'Connor v. Uber Techs., Inc.*, (N.D. Cal. Sept. 1, 2015) (No. C-13-3826 EMC), 2015 WL 5130897. The California Labor Commissioner has already ruled that drivers using Uber's technology are employees under California law, rather than independent contractors. *Berwick v. Uber Techs., Inc.*, Case No. 11-46739 EK, 2015 WL 4153765, at *4, *6 (Cal. Dept. Lab. Order, Decision or Award, June 3, 2015).

³⁴⁰ *E.g.*, Hall & Krueger, *supra* note 208, at 5–6.

³⁴¹ Data on population density was obtained from the United States Census datasets, census.gov. Data on file with author.

age of these seventeen cities.³⁴² These results would seem to indicate a significant amount of pent-up demand for transportation services, presenting an ideal opportunity for TNCs, yet the number of Uber drivers per capita is less than one-fourth the average of the sample of large cities.³⁴³ Some of this may be that New York also has a significantly lower per household income, after adjusting for cost of living,³⁴⁴ so New York residents simply cannot afford to hire a TNC driver. However, New York also exhibits much higher influence of the financial sector on the local economy,³⁴⁵ so financiers might be exercising their influence to protect their investments.

The second reason to hope is the development of proxies for TNC market penetration,³⁴⁶ which will allow greater understanding of the impacts of TNC operations nationally and globally. It will also allow for a more detailed analysis of bootlegger activity that could, in turn, encourage greater skepticism about who truly benefits from regulatory barriers.

LESSON #5: SEEK FIRST TO UNDERSTAND, THEN SEEK TO REGULATE

This last lesson is essential to follow in a political age where every election is the “most important election of our lifetime.”³⁴⁷ There will always be a strong incentive for lawmakers and regulators to address problems as they arise, yet today’s ill-conceived regulation is tomorrow’s transaction cost, and crises can be used by bootleggers to motivate regulation that has not been narrowly tailored to the perceived problem. More importantly, bootleggers will try very hard to create the perception of problems when doing so could lead to barriers to entry and additional exploitation of consumers. Waiting to adopt new

³⁴² Data on taxi numbers were gathered from a variety of municipal and industry sources. Data on file with author.

³⁴³ The author requested and obtained Uber data from internal Uber sources, as it was used to generate Figure 3 in Hall & Krueger, *supra* note 208, at 15, fig.3. Data on file with author.

³⁴⁴ Household income data was obtained from census.gov, adjusted according to bankrate.com’s cost of living calculator. Data on file with author.

³⁴⁵ Data was gathered from U.S. Census sources on the percentage of local jobs and local payrolls accounted for by various subcategories of the financial sector. Data on file with author; see also James Orr, *How Important Is the Finance Sector to the New York City Economy?*, ECON. STUD. GROUP (June 9, 2017), <https://esg.gc.cuny.edu/2017/06/09/how-important-is-the-finance-sector-to-the-new-york-city-economy/> [<https://perma.cc/79X2-9APR>].

³⁴⁶ See Jonathan D. Hall et al., *Is Uber a Substitute or Complement for Public Transit?*, 108 J. URB. ECON. 36, 38 (2018).

³⁴⁷ E.g., Michael Brenes, *Why 2018 May Be The Most Important Election Of Our Lifetime*, WASH. POST (Nov. 5, 2018, 3:00 AM), https://www.washingtonpost.com/outlook/2018/11/05/why-may-be-most-important-election-our-lifetime/?utm_term=.dd150bd2083f [<https://perma.cc/3652-Q9A3>] (internal quotation marks omitted); David Corn, *The Most Important Election of Our Lives*, MOTHER JONES (Nov./Dec. 2018), <https://www.motherjones.com/politics/2018/10/the-most-important-election-of-our-lives-1/> [<https://perma.cc/5DVN-5KK4>]; Franklin Graham, *Why This Is the Most Important Election of Our Lifetime*, DECISION MAG. (Oct. 29, 2018), <https://decisionmagazine.com/why-this-is-the-most-important-election-of-our-lifetime/> [<https://perma.cc/KMY6-Q7HG>].

“solutions” will always be difficult for politicians, but a true concern for consumer welfare requires it, especially when the perceived harms are highly speculative and remote.

CONCLUSION

The world we live in is changing and at an ever-increasing rate. One could just as easily thwart the passing of the Mississippi River as thwart the innovative forces that have been unleashed on the world. Those forces come with disruption in their wake, but the ways that the law responds to innovation can minimize the size and duration of the harm caused by those disruptions. Choosing the right approach to innovation and its disruptions requires understanding innovation and the ways that the various affected groups will react. For example, it is understandable that those who benefit from the status quo will oppose any change that disrupts their ability to collect monopoly rents, but disruption of those rents is a disruption in favor of consumers, who have been exploited under any regime that bestows monopoly power on any individual or group.

A century ago, taxis changed the world as they emerged to satisfy a need for point-to-point transportation in increasingly population-dense cities, where the cost of owning a personal vehicle was skyrocketing. Today, TNCs and their transaction-cost-reducing technologies are changing the world in ways that disrupt the established and entrenched taxi industry, and that industry is pushing back. A collection of taxi drivers, taxi companies, taxi commissions, and financial institutions that hold taxi-industry debt all have strong incentives to oppose change that threatens to diminish the monopoly rents currently being collected, but by doing so, they are perpetuating needless exploitation of consumers who have few transportation alternatives.

Sharing economy technology not only reduces transaction costs but allows innovation outside of the currently regulated sphere of activity. By doing so, it offers a real chance to break the transitional gains trap and frees both drivers and riders from the grasp of the taxi monopoly. When the entrenched incumbents refuse to surrender their ill-gotten gains, the fight is on. Because protection of consumer-exploiting monopoly rents is hardly the foundation for a winning marketing campaign, entrenched incumbents enlist assistance from academic Baptists, and many are willing to step forward and lend their aid. Unconvincing arguments about consumer safety have failed to convince consumers to ignore their real-life experience with the sharing economy, so opponents of change have adopted a Galbraithian view of human nature, cynically arguing that sharing economy technology and the corresponding market processes that accompany it will result in manipulation. This view differs dramatically from that of Adam Smith, who viewed individuals as social creatures, seeking the welfare of others as its own laudable goal, but also because it allowed individuals to benefit themselves.

This Article pushes back against the moralizing of Galbraithian Baptists and counsels caution before making the same mistakes that were made in the early days of the taxi industry. Rather than accept the impassioned pleas of the Baptists and hand monopoly power back to the entrenched incumbents who have—and will continue to—exploit consumers, lawmakers should respond to innovation with a Smithian faith in humanity and its ability to flourish, if allowed to seek new and exciting solutions to our current problems. Lawmakers should also heed the warnings of Ronald Coase, that transaction costs are key, and that government interventions that do not reduce transaction costs will inevitably lead to greater stagnation. That stagnation, in turn, will only delay and amplify the inevitable disruption.