

TAXI REGULATION IN THE AGE OF UBER

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Uber and other apps for e-hailing taxis have transformed the taxi business in recent years. However, to date, U.S. regulators have not been especially innovative in responding to the emergence of Uber and the other apps. This article analyzes what taxi regulators should be doing in the age of taxi apps, for both e-hailed taxis and traditional taxis obtained by phone, by outstretched arm on the street, and at cab stands.

I make three main points. First, regulators should establish regulatory standards for e-hailed and traditional taxis as a unit because they are substitutes, and in fact the same vehicle could be picking up people through street hails, phone calls, at cab stands, and by app. Second, I address the level of regulatory standards. Both traditional taxis and e-hailed taxis should be regulated to address market failures for the most part, and this means that there is a strong case for regulating traditional and e-hailed taxis less onerously than traditional taxis historically have been. Different standards might be applied to traditional and e-hailed taxis, but only if differential standards are justified based on the benefits exceeding the costs. Third, I analyze whether the incumbents in the traditional taxi industry that bear the costs of the restructuring of the taxi industry should be compensated by governments. I argue that there is no general economic case for government compensation for the incumbents, who are principally the owners of formerly valuable taxicab licenses. However, there may be a fairness argument for compensating a select number of license owners. If governments opt to compensate license owners for fairness or political reasons, they should do so through monetary compensation, not continued regulatory protections.

To my knowledge, this is the first article offering a comprehensive, theoretically grounded analysis of the appropriate role for taxi regulation in the age of taxi apps, and whether incumbent operators should be compensated to cushion the effects of the advent of taxi apps. Yet how to regulate taxis, and whether to compensate traditional taxi operators for the losses they face due to the new app entrants, are now pressing issues for taxi regulators in the U.S. and around the world.

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INTRODUCTION

In February 2014, New York City auctioned off a new batch of 168 individual taxicab licenses.¹ Often called medallions, these licenses allow those holding them to operate taxis that pick up passengers on the street. At the time, the City's auction seemed like a great success: the number of bids was far higher than the number of licenses that the City was selling, and the successful bidders committed to paying far more than the City's minimum bid of \$650,000 per medallion.² One euphoric buyer, an immigrant taxi driver from Bangladesh, told

provided excellent editorial assistance. The Filomen D'Agostino and Max E. Greenberg Research Fund at New York University School of Law provided financial assistance. All errors are mine. This article was last revised in late 2016 and early 2017.

1. Antonio Antenucci, *Taxi Medallion Auctioned for Record-Setting \$965,000*, N.Y. POST (Feb. 26, 2014), <http://nypost.com/2014/02/26/taxi-medallion-auctioned-for-record-setting-965000/>.

2. *Id.* (“[T]he city received 297 bids and the winners ranged from \$965,000 to \$805,201.97.”). The auction was for individual accessible medallions, which must be attached to vehicles that are accessible to people using wheelchairs.

the *New York Post* that in buying a medallion with a partner for \$910,013, he had purchased an asset that would finance his retirement.³ Like many medallion owners before him, this driver assumed that medallions would continue to increase in value, and that he would be able to lease the medallion to other drivers to generate cash when he no longer wanted to drive. But by the end of 2014, medallion values were falling precipitously and a good number of those who purchased medallions at the City's recent auctions were suffering from buyer's remorse.⁴ Almost a year later, in November 2015, some medallion owners suggested in court papers that the private secondary market for medallions had deteriorated so much that it was "frozen."⁵

What happened? In 2014, Uber,⁶ then only five years old, began making its mark on the New York taxi industry, "poach[ing] . . . [me-

3. *Id.* ("I've been waiting for this for years. I missed out the last time," said Sadar Jaman, 44, who emigrated from Bangladesh 22 years ago and has been a cabbie for ten years Now, Jaman can think about his post-cabbie days. 'If I want to retire in ten years it's easier if I have a medallion.'").

4. In fact, "58 prospective buyers who bid \$47 million in" the auctions "back[ed] out" of completing their purchases. Jennifer Fermino, *Yellow Taxi Industry Loses 58 Prospective Buyers in Auction for Medallions*, N.Y. DAILY NEWS (Dec. 10, 2014), <http://www.nydailynews.com/new-york/yellow-taxi-industry-loses-58-bidders-medallions-article-1.2039989>. It is unclear from Fermino, *supra*, which auction (or auctions) the buyers backed out from. In addition to the February 2014 auction mentioned in the text, New York City auctioned minifleet accessible medallions in 2014 and 2013. *Current and Past Auction Results*, N.Y.C. TAXI & LIMOUSINE COMM'N, http://www.nyc.gov/html/tlc/html/industry/medallion_auction_current_and_past_auction_results.shtml (last visited Jan. 22, 2017).

5. Complaint at 12, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Nov. 17, 2015) ("[T]he value of the medallion has plummeted by more than 40%, and the once vibrant market for the purchase and sale of New York City taxicab medallions is now frozen."); *see also* Amended Complaint at 12, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Mar. 7, 2016) (same).

6. This article uses the terms Uber, taxi apps, app-dispatched taxis, app-hailed taxis, taxis summoned by apps, and transportation network companies to refer to the new entrants to the taxi business that use apps to match taxi drivers and passengers. As my choice of terminology indicates, I consider Uber and the other apps to be in the taxi business, providing point-to-point transportation like traditional taxis, which until recently have been summoned by street hailing (passengers putting up their arms), waiting at cab stands, and phoning ahead. In using the term "taxi" to refer to Uber and other app-dispatched vehicles, I am departing from the tendency among regulators in cities such as New York to refer to these vehicles as "for-hire vehicles," while keeping the term "taxi" for traditional taxis that are street hailed, or summoned at cab standards, or by phoning ahead. I do so because, as the article explains, app-dispatched taxis and traditional taxis are best regarded as being in the same business these days given the congruence of technologies. In suggesting that Uber and similar apps are in the taxi business, I also implicitly am rejecting the argument that the apps are not in the taxi business, but rather in the technology or the logistics business. It is true that these app-based services rely on sophisticated technology, and that some offer more services than traditional taxi companies, such as food delivery. This article

dallion] cab customers by lowering prices and expanding its fleet, from 7,000 to 16,000.”⁷⁷ For the first time in decades, medallion taxis now face competition from new upstarts not required to hold medallions, because the vehicles dispatched by Uber and other apps operate under a different, less stringent, regulatory framework.

Today, regulators in New York City and many other places in the U.S. and around the world are struggling to recast taxi regulation, given the ways that Uber and other taxi apps have fundamentally transformed the market for “point-to-point” transportation. Reacting to the arrival of Uber on their doorsteps, U.S. regulators to date have not been nearly as innovative in their responses to the emergence of the taxi apps as the apps have been in changing the taxi business. This article analyzes what taxi regulators should be doing in the age of taxi apps, for both taxis summoned by apps and traditional taxis obtained by phone, by hailing on the street or at cab stands. I make three main points.

First, regulators should regulate app-dispatched and traditional taxis as a unit because they are substitutes, and in fact the same vehicle could be picking up people through street hails, phone calls, at cab

focuses only on the business of facilitating the provision of point-to-point transportation.

The article uses the terms traditional taxis, incumbents, incumbent taxi industry, and traditional taxi operations or companies to refer to the participants in the taxi business before the creation of Uber. Until recently, traditional taxis provided taxi service in response to street hails, by waiting at cab stands, or through prearranged rides booked by phone. Traditional taxi companies now also are deploying apps.

7. Simon Van Zuylen-Wood, *The Struggles of New York City’s Taxi King*, BLOOMBERG (Aug. 27, 2015), <http://www.bloomberg.com/features/2015-taxi-medallion-king/>; see COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., TRANSP. RESEARCH BD., SPECIAL REPORT NO. 319, BETWEEN PUBLIC & PRIVATE MOBILITY: EXAMINING THE RISE OF TECHNOLOGY-ENABLED TRANSPORTATION SERVICES 21 (2015) [hereinafter COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS.] (“As of March 2015, the number of Uber vehicles in New York had overtaken the number of medallion cabs.”). Uber’s push into New York City also coincided with the licensing of green taxis that are allowed to pick up street hails in New York City’s outer boroughs, in competition with yellow taxis. Fermino, *supra* note 4. New York City has suggested that the City’s licensing of green taxis starting in 2013 may have contributed to the decline in medallion values. Brief for Respondents at 33, 40, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. April 15, 2016). However, it is highly likely that Uber’s arrival has had a much larger effect on medallion values than the green taxis because the green taxis operate in areas that the medallion taxis historically rarely served. In addition, after some initial success, the green taxi business itself has declined due to competition from Uber. Matthew Flamm, *Facing Uber and Accessibility Hurdles, Green Taxi Operators Are Seeing Red*, CRAIN’S N.Y. BUS., (Sept. 25, 2016), <http://www.crainnewyork.com/article/2016-09-25/SMALLBIZ/160929932/the-great-green-cab-experiment-is-on-the-brink-of-crumbling-against-uber-and-wheelchair-accessibility-requirements-that-many-green-cab-operators-say-randomly-change>.

stands and by app. This is not what U.S. regulators currently are doing; instead, they often are reacting to the arrival of app-hailed taxis by establishing distinct, relatively light levels of regulation for them without simultaneously revising the burdensome regulations governing traditional taxis, leaving traditional taxis at a competitive disadvantage.⁸

8. This differential treatment is leading to many claims from the traditional taxi industry that it is unfairly burdened by a more stringent regulatory regime than the new entrants, some of which are formulated as legal claims invoking the Equal Protection Clause. *See, e.g.*, Ill. Transp. Trade Ass'n v. City of Chicago, 839 F.3d 594 (7th Cir. 2016) (reversing district court and ordering dismissal of plaintiffs' equal protection claims); VTS Transp. v. Palm Beach County, No. 9:15-cv-80560 (S.D. Fla. Mar. 8, 2017) (granting summary judgment to defendant Palm Beach County in plaintiffs' equal protection challenge to County's Temporary Operating Agreement with Uber); Cambridge Taxi Drivers & Owners Ass'n v. City of Cambridge, No. 16-11357-NMG, 2017 WL 373491 (D. Mass. Jan. 25, 2017) (dismissing equal protection claim because state law preempts local regulation of transportation network companies); Bos. Taxi Owners Ass'n v. Baker, No. 16-11922-NMG, 2017 WL 354010 (D. Mass. Jan. 24, 2017) (dismissing equal protection claim against Massachusetts defendants); Newark Cab Ass'n v. City of Newark, No. 2:16-cv-04681, 2017 WL 214075 (D.N.J. Jan. 17, 2017) (dismissing equal protection claim); Desoto Cab Co. v. Picker, No. 15-cv-04375-EMC, 2017 WL 118810 (N.D. Cal. Jan. 12, 2017) (dismissing plaintiff taxi company's equal protection claim); Bos. Taxi Owners Ass'n v. City of Boston, No. 15-10100-NMG, 2016 WL 7410777 (D. Mass. Dec. 21, 2016) (dismissing equal protection claim against Boston because state legislation largely preempts local regulation of transportation network companies); Bos. Taxi Owners Ass'n v. City of Boston, No. 15-10100-NMG, 2016 WL 1274531 (D. Mass. Mar. 31, 2016) (refusing to dismiss equal protection claims against City of Boston, but denying preliminary injunction); Gebresalassie v. District of Columbia, 170 F. Supp. 3d 52 (D.D.C. 2016) (granting defendant's motion to dismiss); Melrose Credit Union v. City of New York, No. 1:15-cv-09042 (S.D.N.Y. Jan. 26, 2016) (denying plaintiffs' motion for preliminary injunction); Joe Sanfelippo Cabs, Inc. v. City of Milwaukee, 46 F. Supp. 3d 888 (E.D. Wis. 2014), *aff'd on other grounds*, 839 F.3d 613 (7th Cir. 2016) (denying plaintiffs' motion for preliminary injunction); Taxicab Paratransit Ass'n of Cal. v. Cal. Pub. Utils. Comm'n, No. S220982 (Cal. Nov. 12, 2014) (denying the petition for review); Second Amended Class Action Complaint, Ruffino v. Broward County, No. 0:15-cv-62312 (S.D. Fla. Sept. 20, 2016); Order of Supplemental Motion to Dismiss, Ruffino, No. 0:15-cv-62312 (granting defendants' motion to dismiss); Order of Dismissal Without Prejudice, Ruffino, No. 0:15-cv-62312 (dismissing the case without prejudice pursuant to plaintiffs' request for voluntary dismissal); Second Amended Complaint, Checker Cab v. Phila. Parking Authority, No. 2:16-cv-4669 (E.D. Pa. Jan. 4, 2017); Amended Complaint, Checker Cab v. Phila. Parking Auth., No. 2:16-cv-04669 (E.D. Pa. Nov. 4, 2016); Amended Class Action Complaint and Demand for a Jury Trial, Miadeco Corp. v. Miami-Dade County, No. 16-4244 (Fla. Cir. Ct. May 4, 2016).

European taxi drivers are making similar arguments that Uber is engaging in "unfair competition" because it "does not comply with taxi regulations." Damien Geradin, SHOULD UBER BE ALLOWED TO COMPETE IN EUROPE? AND IF SO HOW? 3 (Competition Policy Int'l June 2015) <https://www.competitionpolicyinternational.com/assets/Europe-Column-New-Format.pdf>.

Second, I argue that traditional taxis and e-hailed taxis generally should be regulated only to address market failures. This means that while there is still a place for regulation to protect the public, regulators should ease the regulatory burden on traditional taxis and avoid imposing unnecessary regulation on app-dispatched taxis. There still may be a basis for different regulatory standards for traditional and e-hailed taxis but any differences in the standards should be justified based on the benefits of differential standards exceeding the costs.

The changes that I endorse will mean large losses for segments of the incumbent taxi industry in the short term, and my third point concerns whether governments should compensate these incumbents for their losses. Traditional taxi operations currently are arguing for compensation for the losses that they are suffering in U.S. jurisdictions where Uber is being allowed to operate, sometimes in legal claims invoking the Takings Clause in the U.S. Constitution.⁹ I argue that there is no compelling economic case for compensating the incumbents in the traditional taxi industry. There may be a case on fairness grounds for compensating some owners of traditional taxicab licenses. If regulators choose to compensate traditional taxicab license holders on fairness grounds or for political reasons, regulators should do so through monetary payments, not regulatory protections that inhibit competition from the new apps.

9. To date the courts have rejected the traditional taxi industry's claims for compensation under the Takings Clause. *See Ill. Transp. Trade Ass'n*, 839 F.3d 594 (affirming district court's dismissal of Takings claim); *Joe Sanfelippo Cabs, Inc.*, 839 F.3d 613 (same); *Cambridge Taxi Drivers & Owners Ass'n*, No. 1:16-cv-11357-NMG, 2017 WL 373491 (dismissing Takings claim); *Bos. Taxi Owners Ass'n v. Baker*, No. 16-11922-NMG, 2017 WL 354010 (dismissing Takings claim against Massachusetts defendants); *Newark Cab Ass'n*, No. 2:16-cv-04681, 2017 WL 214075 (dismissing Takings claim); *Bos. Taxi Owners Ass'n v. City of Boston*, No. 15-10100-NMG, 2016 WL 1274531 (dismissing Takings claim); *Bos. Taxi Owners Ass'n v. City of Boston*, 84 F. Supp. 3d 72 (D. Mass. 2015) (denying plaintiffs' motion for preliminary injunction); *Abramyan v. State*, No. 2015CV262742 (Ga. Super. Ct., Mar. 22, 2016) (granting defendants' motion to dismiss Takings claim); *Glyka Trans LLC v. City of New York*, No. 8962/15, 2015 WL 5320868 (N.Y. Sup. Ct. Sept. 8, 2015) (dismissing Takings claims); Second Amended Class Action Complaint, *Ruffino*, No. 0:15-cv-62312; Order on Supplemental Motion to Dismiss, *Ruffino*, No. 0:15-cv-62312 (granting defendants' motion to dismiss); Order of Dismissal Without Prejudice, *Ruffino*, No. 0:15-cv-62312 (dismissing the case without prejudice pursuant to plaintiffs' request for voluntary dismissal); *see also Gebresalassie*, 170 F. Supp. 3d at 52 (rejecting the substantive due process claim that District of Columbia had deprived plaintiffs of a protected property interest by legalizing "digital dispatch").

There has been no adjudication yet of the Takings claims from the taxi industry or its creditors in: Amended Complaint, *Melrose Credit Union*, No. 1:15-cv-09042; Amended Class Action Complaint and Demand for a Jury Trial, *Miadeco Corp.*, No. 16-4244; Amended Complaint, *Checker Cab*, No. 2:16-cv-04669.

This article's principal contribution is to offer a theoretically grounded proposal for taxi regulation in the age of apps. To my knowledge, there is no existing legal scholarship offering a comprehensive assessment of the appropriate role for taxi regulation in the age of taxi apps, and whether incumbent operators should be compensated to cushion the effects of the advent of taxi apps.¹⁰ Yet how to

10. However, legal and other scholars are beginning to address some of the regulatory implications of taxi apps. *See, e.g.*, ARUN SUNDARARAJAN, *THE SHARING ECONOMY: THE END OF EMPLOYMENT AND THE RISE OF CROWD-BASED CAPITALISM* (2016); Jordan M. Barry & Elizabeth Pollman, *Regulatory Entrepreneurship*, 90 S. CAL. L. REV. (forthcoming 2017); Molly Cohen & Arun Sundararajan, *Self-Regulation and Innovation in the Peer-to-Peer Sharing Economy*, 82 U. CHI. L. REV. DIALOGUE 116 (2015); Benjamin G. Edelman & Damien Geradin, *Efficiencies and Regulatory Shortcuts: How Should We Regulate Companies Like Airbnb and Uber?*, 19 STAN. TECH. L. REV. 293 (2016); Shu-Yi Oei & Diane M. Ring, *Can Sharing Be Taxed?*, 93 WASH. U. L. REV. 989 (2016); Sofia Ranchordás, *Does Sharing Mean Caring? Regulating Innovation in the Sharing Economy*, 16 MINN. J.L. SCI. & TECH. 413 (2015); Daniel E. Rauch & David Schleicher, *Like Uber, but for Local Governmental Policy: The Future of Local Regulation of the Sharing Economy*, 76 OHIO ST. L.J. 901 (2015); Brishen Rogers, *The Social Costs of Uber*, 82 U. CHI. L. REV. DIALOGUE 85 (2015); Kellen Zale, *Sharing Property*, 87 U. COLO. L. REV. 501 (2016); Richard Darbéra, *Principles for the Regulation of For-Hire Road Transport Passenger Services* (Int'l Transp. Forum, Corp. P'ship Bd. Discussion Paper, Oct. 11, 2015), http://www.itf-oecd.org/sites/default/files/docs/1-discussion_paper_darbera_rd15-itf-oecd.pdf; Geradin, *supra* note 8, at 10–11; E. Glen Weyl & Alexander White, *Let the Best 'One' Win: Policy Lessons from the New Economics of Platforms* (Univ. of Chi. Law Sch. Coase-Sandor Inst. for Law & Econ. Working Paper No. 709, 2014); Eric Posner, *Why Uber Will—and Should—Be Regulated*, SLATE (Jan. 5, 2015), http://www.slate.com/articles/news_and_politics/view_from_chicago/2015/01/uber_surge_pricing_federal_regulation_over_taxis_and_car_ride_services.html; K. Sabeel Rahman, *Curbing the New Corporate Power*, BOS. REV. (May 4, 2015), <http://bostonreview.net/forum/k-sabeel-rahman-curbing-new-corporate-power> (and accompanying responses); Cass R. Sunstein, *Uber Cab App Threatens Death of Taxi Dinosaurs*, BLOOMBERG (June 10, 2013), <https://www.bloomberg.com/view/articles/2013-06-10/uber-cab-app-threatens-death-of-taxi-dinosaurs>.

Students have published notes on some of the issues raised by taxi apps. *See, e.g.*, Katie Barglind, Note, *Innovation, Technology, and Transportation: The Need to Address On-Demand Ridesharing and Modernize Outdated Taxi Regulations in the U.S.*, 33 WIS. INT'L L.J. 701 (2015); Emily Dobson, Note, *Transportation Network Companies: How Should South Carolina Adjust Its Regulatory Framework?*, 66 S.C. L. REV. 701 (2015); Rebecca Elaine Elliott, Note, *Sharing App or Regulation Hack(ney)? Defining Uber Technologies, Inc.*, 41 J. CORP. L. 727 (2016); Caleb Holloway, Comment, *Uber Unsettled: How Existing Taxicab Regulations Fail to Address Transportation Network Companies and Why Local Regulators Should Embrace Uber, Lyft, and Comparable Innovators*, 16 WAKE FOREST J. BUS. & INTELL. PROP. L. 20 (2015); Josh Krauss, Note, *The Sharing Economy: How State and Local Governments are Failing and Why We Need Congress to Get Involved*, 44 SW. L. REV. 365 (2014); Hannah A. Posen, Note, *Ridesharing in the Sharing Economy: Should Regulators Impose Uber Regulations on Uber?*, 101 IOWA L. REV. 405 (2015); K. Casey Strong, Comment, *When Apps Pollute: Regulating Transportation Network Companies to Maximize Environmental Benefits*, 86 U. COLO. L. REV. 1049 (2015); David K. Suska, *Regulatory Takings and Ridesharing: "Just Compensation" For Taxi Medal-*

regulate taxis, and whether to compensate traditional taxis for the losses they face due to the new app entrants, are now pressing issues for taxi regulators in the U.S. and around the world.

This article has four main parts. Part I briefly describes the technological and organizational changes introduced by the taxi apps. Part II categorizes the ways that U.S. taxi regulators have responded to the emergence of the taxi apps. Part III analyzes the appropriate role of taxi regulation in the age of apps, for app-dispatched taxis and traditional taxis. Part IV analyzes whether actors in the incumbent taxi industry should be compensated, and if so whether compensation should take the form of monetary compensation or regulatory protection. I then briefly conclude.

I.

CHANGES ATTRIBUTABLE TO TAXI APPS

Uber and the other taxi apps have brought two major changes to the taxi industry.¹¹

The first is new technology that reduces the transaction costs of taxi riding. The taxi apps offer a new way of matching taxi drivers with riders that significantly reduces the “search costs”¹² involved in finding a taxi. To quote Brishen Rogers, “[r]ather than calling a dispatcher and waiting, or standing on the street, users can hail a car from indoors and watch its progress toward their location.”¹³ In addition,

lion Owners?, 19 N.Y.U. J. LEGIS. & PUB. POL’Y 183 (2016); see also Daniel Grossbaum, *An Uber Issue: Regulating Ridesharing Companies in the Modern Day Economy* (unpublished manuscript) (on file with author).

There also are some recent reports on the appropriate role of taxi regulation in the age of Uber, or issues related to this topic. See, e.g., SCHALLER CONSULTING, UNFINISHED BUSINESS: A BLUEPRINT FOR UBER, LYFT AND TAXI REGULATION (2016), <http://www.schallerconsult.com/rideservices/blueprint.pdf>; COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7; COMPETITION BUREAU, GOV’T OF CAN., MODERNIZING REGULATION IN THE CANADIAN TAXI INDUSTRY (2015), <http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04007.html>; Transcript of Workshop, *The “Sharing” Economy: Issues Facing Platforms, Participants, and Regulators*, FED. TRADE COMM’N (June 9, 2015), https://www.ftc.gov/system/files/documents/public_events/636241/sharing_economy_workshop_transcript.pdf [hereinafter FTC Workshop].

Edelman & Geradin, cited near the start of this footnote, is likely the closest article to mine in scope and ambition. Geradin, *supra* note 8, at 11–12, briefly argues against compensating the owners of taxi licenses.

11. For other discussions of the changes, see, for example, Rogers, *supra* note 10, at 86–90, and Geradin, *supra* note 8, at 5–6 (discussing “Uber’s disruptive business model”).

12. See, e.g., Rogers, *supra* note 10, at 88.

13. *Id.* See also Edelman & Geradin, *supra* note 10, at 297.

Uber simplifies the process of paying for the ride by automatically billing a credit card account stored with the app.¹⁴

The second change is to the industrial organization of the taxi industry. Historically the taxi industry in many places has been “highly fragmented,” both horizontally and vertically.¹⁵ Taxi operations have tended to be city-specific, with little cross-ownership across cities, at least in recent times.¹⁶ Moreover, within cities taxi operations have been segmented. For example, in New York City, city and state regulations have segmented the industry into medallion (also called “yellow”) taxis with the right to pick up riders through street hails and by prearrangement,¹⁷ “community liveries” and “black cars” (collec-

14. Dobson, *supra* note 10, at 703–04.

15. Rogers, *supra* note 10, at 89.

16. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 60–61. I do not mean to imply there is no common ownership across cities. See, e.g., Jared Meyer, *New York’s Taxi King is Going Down*, THE FEDERALIST (Oct. 26, 2015), <http://thefederalist.com/2015/10/26/new-yorks-taxi-king-is-going-down> (profiling Gene Friedman, “who at one point owned more than 1,000 New York City taxi medallions” and also owned medallions in “New Orleans, Philadelphia, and Chicago”). Early in the twentieth century, there were efforts to create “multicity taxi empires.” GORMAN GILBERT & ROBERT E. SAMUELS, *THE TAXICAB: AN URBAN TRANSPORTATION SURVIVOR* 72 (1982).

17. These taxis are called medallion taxis because they are required to have one of a limited number of medallions to operate. A medallion is a physical object that is on the hood of the taxi. The medallion is the physical evidence that the taxi has one of a limited number of licenses to operate as a taxi picking up people on the street. Medallion taxis are also called yellow taxis because the taxis are painted yellow.

From the late 1980s until the last few years, the ability of medallion taxis to pick up passengers through prearrangement was constrained by regulatory limits on the technology that medallion taxi drivers could use. “Starting in the mid-sixties, taxis began forming associations and serving customers through radio calls. . . . As the number of taxis responding to radio calls grew, it became increasingly difficult for passengers to hail a taxi on the street.” Brief for Respondents at 12–13, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. Apr. 15, 2016). In the 1980s, to increase the number of taxis responding to street hails, the Taxi and Limousine Commission urged “taxi owners” to remove two-way radios from taxis and put them in “non-medallion vehicles known as ‘black cars.’” *Id.* at 14. Eventually, in the mid-1980s, the Commission prohibited taxis from “arranging rides through ‘an actual two-way radio device in their vehicle’” through a “regulation” that remains on the books. *Id.* at 29 (referring to 35 RCNY § 58-34(b)(3)); see also *id.* at 15–16. The Commission created another regulatory barrier to medallion taxis prearranging rides in 1999, when it “prohibited all drivers—taxi drivers and for-hire vehicle drivers—from using cell phones while driving.” *Id.* at 21. The regulatory limits on the use of cell phones subsequently were expanded to cover “all portable electronic devices, not just cell phones.” *Id.* at 21. But recognizing that such devices could assist in the dispatch of for-hire vehicles, the Commission allowed for-hire vehicle drivers to make limited use of devices “in connection with a dispatch from a base,” while maintaining the prohibition on medallion taxi drivers using such devices unless their vehicles were “lawfully standing or parked.” *Id.* at 22 (citing 35 RCNY § 6-16(u); 35 RCNY § 2-25). Even within the confines of these limitations, medallion taxis might have prear-

tively called “for-hire vehicles”) that are allowed to pick up riders through prearrangement but not street hails; and green taxis allowed to pick up riders through street hails and prearrangement but only in northern Manhattan and the outer boroughs.¹⁸ Nothing I have found in my research for this article suggests that cross-ownership is common across the various segments within the City.

In cities limiting the number of taxi vehicles, the industry also has been vertically fragmented. Consider New York City’s yellow medallion taxi sector as an example. The drivers of yellow taxis are independent contractors, not employees.¹⁹ Because they are independent contractors, they receive few benefits, and standard employment

ranged rides, for example, by drivers informally agreeing to pick up passengers at appointed times and places. When smartphone apps first began to be used to summon transportation in the 2010s, medallion taxis could not use them due to the prohibition on drivers using “electronic device[s] while driving.” *Id.* at 27. The Commission allowed medallion taxis to respond to app requests for service on a pilot basis in 2013–2014, and in 2015 formally changed its rules to allow medallion taxis to respond to apps. *Id.* at 27–30; see also Brief for Respondents at 39, *Melrose Credit Union v. City of New York*, No. 2016-02214 (N.Y. App. Div. Aug. 17, 2016).

18. For a description of the various segments of the New York City taxi industry, see *Glyka Trans LLC v. City of New York*, No. 8962/15, 2015 WL 5320868, at *1–2 (N.Y. Sup. Ct. Sept. 8, 2015). Green taxis are allowed to pick up passengers by prearrangement at the airports, as well as in northern Manhattan and the outer boroughs. *Your Guide to Boro Taxis*, N.Y.C. TAXI & LIMOUSINE COMM’N, http://www.nyc.gov/html/tlc/html/passenger/shl_passenger.shtml (last visited Jan. 22, 2017).

19. *Ahmed v. City of New York*, 129 A.D.3d 435, 437 (N.Y. App. Div. 2015). U.S. taxi drivers generally are classified as independent contractors. See DIRECTORATE FOR FIN. & ENTER. AFFAIRS COMPETITION COMM., WORKING PARTY NO. 2 ON COMPETITION & REGULATION, TAXI SERVICES REGULATION AND COMPETITION — UNITED STATES 3 n.6 (Oct. 15, 2007), <https://www.ftc.gov/sites/default/files/attachments/us-submissions-occd-and-other-international-competition-fora/ustaxis.pdf> (“Gilbert et al. . . . report, based on their survey, that 91% of U.S. taxi drivers are now independent contractors rather than employees.”) (citing GORMAN GILBERT ET AL., TRANSP. RESEARCH BD., NAT’L RESEARCH COUNCIL, THE ROLE OF THE PRIVATE-FOR-HIRE VEHICLE INDUSTRY IN PUBLIC TRANSIT 23 (2002)); COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 19 (“[M]ost taxi drivers are independent contractors.”); Seth D. Harris & Alan B. Krueger, *A Proposal for Modernizing Labor Laws for Twenty-First-Century Work: The “Independent Worker”* 26 (Hamilton Project, Discussion Paper No. 2015-10, 2015) (referring to the taxi industry as an industry “where most of the work is already conducted by independent contractors”). For indications that taxi drivers in cities other than New York are classified as independent contractors, see *Sebago v. Bos. Cab Dispatch, Inc.*, 28 N.E.3d 1139 (Mass. 2015) (Boston “licensed taxicab drivers” are independent contractors); *Parks Cabs Co. v. Annunzio*, 412 Ill. 549, 555 (1952) (cab drivers that lease licenses are not employees under Unemployment Compensation Act); COLO. PUB. UTIL. COMM’N, THE TAXI INDUSTRY IN THE DENVER METROPOLITAN AREA 4–5 (2008), <http://www.taxi-library.org/denver-2008-puc-report.pdf> (Denver taxi drivers are independent contractors).

Taxi drivers may be classified as employees for some purposes but not others. *Yellow Cab Coop., Inc. v. Workers’ Comp. Appeals Bd.*, 226 Cal. App. 3d 1288, 1296 n.5 (1991) (citing case law holding that Chicago cab drivers are not employees

protections such as minimum wage laws do not protect taxi drivers.²⁰ The drivers often lease the medallion²¹ and the vehicle required to drive a taxi. Sometimes these are leased directly from owners of medallions and taxicabs; sometimes drivers lease medallions (and/or vehicles) from brokers who are agents for medallion owners.²²

Uber is a new, more horizontally integrated business model for the taxi industry.²³ Uber is not the typical single-city local taxi operator. It is a “virtual global fleet manager”²⁴ with many drivers, in many cities around the world, available to serve the growing numbers of riders who use its app.²⁵ Within a single city like New York, Uber upends the traditional segmentation of taxi services. An app-dispatched taxi is a hybrid between a street-hailed and prearranged taxi. It often arrives with almost the same immediacy as a street-hailed taxi, but the use of the app to obtain the taxi and the short wait time between the request and the arrival of the vehicle echo the steps involved in getting a taxi by calling ahead.²⁶ But an Uber vehicle also might

under the National Labor Relations Act, and case law holding that drivers are covered by workers’ compensation).

20. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 84, 86–87.

21. Katrina Miriam Wyman, *Problematic Private Property: The Case of New York Taxicab Medallions*, 30 YALE J. ON REG. 125, 137 (2013).

22. Rogers, *supra* note 10, at 89. See also the description of the “[m]odels of operation” of New York medallion taxis in N.Y.C. TAXI & LIMOUSINE COMM’N, 2016 TLC FACTBOOK 2 (2016), http://www.nyc.gov/html/tlc/downloads/pdf/2016_tlc_factbook.pdf; and the description of the “four business models under which a taxicab may be put into service” under Boston taxi regulations in *Sebago*, 28 N.E.3d at 1144.

23. See Dobson, *supra* note 10; Rogers, *supra* note 10, at 90.

24. I am borrowing this term from Justin Jenk, *Theory Meets Practice in the Taxi Industry: Coase and Uber 2* (Munich Pers. RePEc Archive, Working Paper No. 63206, 2015) (describing mobile apps as “manag[ing] virtual fleets”).

25. See N.Y.C. COUNCIL COMM. ON TRANSP., REPORT OF THE HUMAN SERVICES DIVISION 6 (June 30, 2015) [hereinafter REPORT OF THE HUMAN SERVICES DIVISION]; Dana Rubinstein, *Uber’s Kalanick Makes a Pitch for a More ‘Prosperous City,’ POLITICO* (June 3, 2015), <http://www.politico.com/states/new-york/city-hall/story/2015/06/ubers-kalanick-makes-a-pitch-for-a-more-prosperous-city-023469>; cf. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 106 (noting that after midnight, more Uber drivers are available than are taxis).

26. See CAL. PUB. UTILS. COMM’N, R. 12-12-001, DECISION ADOPTING RULES AND REGULATIONS TO PROTECT PUBLIC SAFETY WHILE ALLOWING NEW ENTRANTS TO THE TRANSPORTATION INDUSTRY 20–21 (2013) [hereinafter CPUC] (explaining why “Transportation Network Companies” provide prearranged service).

Whether e-hailing should be classified as hailing (or street hailing) on the one hand, or prearrangement on the other, is currently disputed in New York City. Under existing legislation and regulations, medallion taxis have a monopoly on street hails (except in northern Manhattan and the outer boroughs, where green taxis also are allowed to pick up street hails). See Act of Feb. 17, 2012, 2012 N.Y. Sess. Laws 9, § 11 (McKinney) (amending Ch. 602 of Laws of New York 2011); N.Y.C. Admin. Code §§ 19-502(l), 19-504(a)(1), 19-507(a)(4), 19-516(a) (West 2016); 35 RCNY

§ 55-19(a); *see also* Brief for Respondent Eric T. Schneiderman at 4–5, *Melrose Credit Union v. City of New York*, No. 2016-02214 (N.Y. App. Div. Aug. 22, 2016) (noting that the “supposed exclusive right of the taxicab industry to serve the street-hail market in New York City . . . arises from three sources,” citing the HAIL Act, the New York City Administrative Code, and Taxi and Limousine Commission Rules). If e-hailing were considered street hailing, only medallion taxis (and green taxis in northern Manhattan and the outer boroughs) would be able to respond to e-hails, and black cars, which include Uber cars, would no longer be able to respond to e-hails unless they complied with the same rules as medallion taxis. Thus, not surprisingly, the traditional taxi industry argues that e-hailing through Uber and other taxi apps is the equivalent of hailing or street hailing, not prearrangement. Classifying e-hailing as street hailing would prevent Uber from operating under its current business model. *See* Complaint at 19, *CGS Taxi LLC v. City of New York*, No. 653264/2015 (N.Y. Sup. Ct. Sept. 30, 2015) (“An ‘e-hail’ is a hail, not a pre-arrangement.”); Complaint at 18, *Singh v. City of New York*, No. 701402/2017 (N.Y. Sup. Ct. Jan. 30, 2017) (same); Brief for Petitioners-Appellants at 37, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. Nov. 30, 2015) (“E-hails are equivalent to the traditional hail and are therefore exclusively in the domain of medallion taxicab services.”); Brief for Petitioners-Appellants at 2, *Glyka Trans LLC*, No. 2015-11661 (“An e-hail is a hail, not a prearrangement”); Reply Brief for Petitioners-Appellants at 1, *Glyka Trans LLC*, No. 2015-11661 (“[I]f an e-hail is a hail, then an e-hail transmitted from the street is a street hail”); Amended Complaint at 41, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Mar. 7, 2016) (“[E]lectronic ‘hails’ constitute a modern form of traditional street hail—and thus, belong exclusively to medallion taxicabs.”).

New York City maintains that “all trips arranged by smartphone app [are] . . . prearrangements.” Brief for Respondents at 43, *Glyka Trans LLC*, No. 2015-11661; *see also* Brief for Respondents at 53, *Melrose Credit Union*, No. 2016-02214 (“[T]he use of an app to arrange a ride is a prearrangement”). The City denies that an e-hail is a “street hail,” but nonetheless maintains “that an e-hail is a hail” (as well as a prearrangement). Brief for Respondents at 57, *Melrose Credit Union*, No. 2016-02214. The City argues that “hail” is a generic term for summoning a taxi that encompasses street hails and prearrangement, and that e-hails are a sub-category of prearrangement. Brief for Respondents at 53, *Glyka Trans LLC*, No. 2015-11661 (“The Commission’s rules . . . describ[e] several ways to hail a taxi. One is a street hail, which involves ‘a verbal (audio) action such as calling out, yelling, or whistling, and/or a visible physical action such as raising one’s hand or arm.’ 35 R.C.N.Y. § 51-03. Another way to hail a taxi is ‘through an electronic method’ involving a smartphone app. *Id.* Both are hails, but only the first is a street hail; the second is a prearrangement. . . . [S]treet hails and prearrangements are two distinct subsets of ‘hails’”). By characterizing e-hails as a form of prearrangement, rather than a street hail, the City presumably is trying to protect its decision to allow for-hire vehicles (which include black cars), as well as medallion and green taxis, to respond to e-hails. Neither City nor New York State law grants any industry segment a monopoly on providing prearranged service.

In the ongoing litigation, the traditional industry argues that the City has taken inconsistent positions on whether e-hails are a form of pre-arrangement. Brief for Petitioners-Appellants at 17–18, *Glyka Trans LLC*, No. 2015-11661 (“Without any explanation, however, the TLC has now taken the bizarre position that an e-hail is a hail when it comes to yellow taxis, but that an e-hail is a pre-arrangement when it comes to black cars.”); *see also* Brief for Petitioners-Appellants at 42–43, 47–53, *Melrose Credit Union*, No. 2016-02214. The traditional industry argues that the Taxi and Limousine Commission categorized e-hails as a type of hail, “not a pre-arrangement,” in 2015 when it allowed medallion taxis to respond to e-hails, and earlier

arrive after having been prearranged some time earlier, as app companies such as Uber and Lyft move to allow passengers to schedule rides in advance, similar to the way that consumers historically have called ahead for a cab or for-hire vehicle to take them to the airport or other locations.²⁷

Despite the above, the Uber business model is not necessarily more vertically integrated than the traditional taxi industry. Uber is in “a direct contractual relationship with its drivers”—there is no role for a broker leasing medallions (and/or taxi vehicles) as there is in some components of New York’s yellow taxi sector.²⁸ However, Uber classifies its drivers as independent contractors, not employees, much as

defended a pilot program allowing medallion taxis to respond to e-hails when black car companies challenged the authority of the Commission to approve the pilot. Brief for Petitioners-Appellants at 22–23, *Glyka Trans LLC*, No. 2015-11661 (referring to Black Car Assistance Program v. City of New York, No. 100327/13, 2013 WL 1808082 (N.Y. Sup. Ct. 2013), *aff’d* 110 A.D. 3d 618 (N.Y. App. Div. 2013)); *see also* Amended Complaint at 40–43, *Melrose Credit Union*, No. 1:15-cv-09042. The City insists that it has not changed its position, and has “consistently” maintained that e-hails are a form of prearrangement. *See* Brief for Respondents at 53–54, *Glyka Trans LLC*, No. 2015-11661 (“[T]he Commission has consistently treated app-arranged rides as prearrangements, regardless of which type of vehicle is involved. . . . The petitioners’ claim that the Commission has ‘expressly’ argued otherwise demonstrates a singular disregard for the facts.”); Defendants’ Memorandum of Law in Support of Defendants’ Motion to Dismiss the Amended Complaint at 28 n.9, *Melrose Credit Union*, No. 1:15-cv-09042 (“Plaintiffs’ intentional mischaracterization of statements made by TLC and counsel in prior court proceedings . . . , as a means of reaching their desired legal conclusion that rides provided by FHVs using electronic app technology are legally the same as ‘street hails,’ cannot be credited.”). The City’s classification of prearrangements as a subset of hails might be interpreted as an effort to reconcile its position in the current litigation against the medallion industry that e-hailing is a form of prearrangement, with the position that the City took before that e-hailing is hailing when the City was defending against litigation by black car companies that sought to block medallion taxis from responding to e-hails.

27. Russell Dicker, *Flight Booked, Bags Packed, Ride Scheduled*, UBER (June 9, 2016), <https://newsroom.uber.com/scheduledrides/> (Uber will allow customers to “schedule” rides between “15 minutes to 30 days in advance”); *see also* Jelisa Castrodale, *Uber Launches Scheduled Rides, So You Can (Finally) Book a Car in Advance*, USA TODAY (June 14, 2016), <http://www.usatoday.com/story/travel/roadwarriorvoices/2016/06/14/uber-scheduled-rides/85866022/>; Dan Rivoli, *Uber Now Offers Reserved Rides in NYC, Infringing Further On Conventional Taxi Services*, N.Y. DAILY NEWS (Sept. 22, 2016), <http://www.nydailynews.com/new-york/uber-offers-reserved-rides-new-york-city-article-1.2801464>.

28. Rogers, *supra* note 10, at 90. Rogers takes the absence of an intermediary between Uber and its drivers as evidence that Uber’s business model is more vertically integrated than that of the traditional taxi industry. However, there were a number of different relationships between medallion owners and taxi drivers in the traditional taxi industry, and medallion owners did not necessarily rely on an intermediary between them and drivers to lease out medallions. In some instances, medallion owners themselves were leasing out medallions, meaning that, like Uber, they were in a direct contractual relationship with their drivers. In other instances, the medallion owner

traditional taxi drivers usually are independent contractors.²⁹ Because Uber classifies its drivers as independent contractors, they, like traditional taxi drivers, do not benefit from many standard employment protections. Uber charges drivers a service fee on fares, usually consisting of twenty percent of the fare.³⁰ Uber drivers provide their own cars, and pay for “gas, equipment maintenance, and repairs.”³¹ Uber

drove the taxi. *Sebago v. Bos. Cab Dispatch, Inc.*, 28 N.E.3d 1139, 1144–55 (Mass. 2015).

29. The decisions of Uber and Lyft to classify their drivers as independent contractors are being challenged in the public arena and the courts. *See, e.g.*, Lia Eustachewich, *Uber Drivers Sue “Hire”-Ups*, N.Y. POST, Sept. 11, 2015, at 9; Kevin McGowan, *Uber Sued Again Over “Wage Theft” in New York*, BLOOMBERG BNA (Oct. 27, 2016), <http://www.bna.com/uber-sued-again-n57982079217/>. The *Cotter* suit against Lyft was settled, and the trial judge first rejected and then, after renegotiation, granted preliminary approval to the settlement. *Cotter v. Lyft*, No. 13-cv-04065, 2016 WL 3561742 (N.D. Cal. June 23, 2016). Uber recently settled two lawsuits challenging the classification of its drivers as independent contractors (*O’Connor* in California, and *Yucesoy* in Massachusetts); under the settlements, Uber drivers continued to be classified as independent contractors. Mike Isaac & Noam Scheiber, *Uber Settles Cases with Concessions, but Drivers Stay Freelancers*, N.Y. TIMES (Apr. 21, 2016), <http://www.nytimes.com/2016/04/22/technology/uber-settles-cases-with-concessions-but-drivers-stay-freelancers.html>; *see also Growing and Growing Up*, UBER (Apr. 21, 2016), <https://newsroom.uber.com/growing-and-growing-up/>. However, in August 2016, Federal District Court Judge Edward Chen rejected the settlement agreement as “not fair, adequate, and reasonable.” *See O’Connor v. Uber Techs.*, No. 13-cv-03826, 2016 WL 4398271 (N.D. Cal. Aug. 18, 2016); Mike Isaac, *Judge Overturns Uber’s Settlement with Drivers*, N.Y. TIMES (Aug. 18, 2016), <http://www.nytimes.com/2016/08/19/technology/uber-settlement-california-drivers.html>. A subsequent ruling from the Ninth Circuit may complicate the efforts of drivers to challenge their classification status, because the ruling holds that the drivers are subject to arbitration clauses. *See Mike Isaac, Ruling Tips Uber Drivers Away from Class-Action Suits*, N.Y. TIMES (Sept. 7, 2016), <http://www.nytimes.com/2016/09/08/technology/ruling-tips-uber-drivers-away-from-class-action-suits.html>; Joel Rosenblatt, *Uber’s Drivers Win the Backing of U.S. Labor Watchdog*, BLOOMBERG (Nov. 2, 2016), <https://www.bloomberg.com/news/articles/2016-11-02/u-s-labor-panel-backs-uber-drivers-in-class-action-fight>.

There already is a prominent administrative agency decision in California holding that an Uber driver is an employee, not an independent contractor as Uber argues. *Berwick v. Uber Techs.*, No. 11-46739 EK (Cal. Labor Comm’r’s Office June 3, 2015). This decision and another decision from the Oregon Bureau of Labor, holding that “Uber drivers are employees,” are discussed in COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 92–93. State agency decisions going the other way, and finding that Uber drivers are not employees, are discussed in Davy Alba, *Florida Says Uber Driver Isn’t an Employee After All*, WIRED (Oct. 1, 2015), <http://www.wired.com/2015/10/florida-uber-decision-reversal/>. In the UK, an employment tribunal recently held that Uber drivers are “workers” under national employment legislation. *Assam & Farrar v. Uber*, No. 2202550/2015 (Emp’t Tribunal, Oct. 28, 2016) (UK).

30. Ellen Huet, *Uber Tests Taking Even More from Its Drivers with 30% Commission*, FORBES (May 18, 2015), <http://www.forbes.com/sites/ellenhuet/2015/05/18/uber-new-uberx-tiered-commission-30-percent/>.

31. Oei & Ring, *supra* note 10, at 1002.

drivers may lease the cars that they are driving from a third party, which Uber may facilitate.³²

The technological and industrial organization changes just described are interrelated. Uber's technology is a "two-sided platform" that matches riders and drivers, and has network effects that help to explain why Uber is creating such a large virtual fleet. Riders benefit when more drivers use the app, because more drivers make it easier to get a taxi quickly, while drivers also benefit from the presence of more riders, because this makes it easier to get fares. This contributes to the rise of a large fleet like Uber.³³ To be sure, Uber is not the first two-sided market in the history of the taxi industry—taxi companies in many jurisdictions historically have operated as two-sided platforms, dispatching taxis by radio in response to calls from customers.³⁴ However, Uber's powerful and easy-to-use app technology has facilitated the formation of large collections of drivers and passengers on a global geographic scale that radio taxi companies were not able to realize.

In thinking about the changes wrought by Uber and other taxi apps, it is important to keep in mind the persistence of traditional taxi operations. In New York and other places, the historical incumbent providers of taxi services still remain active market players, although they certainly have been harmed by the advent of apps.³⁵

32. Nitasha Tiku, *Uber and Its Shady Partners Are Pushing Drivers into Subprime Loans*, GAWKER (Nov. 4, 2014), <http://valleywag.gawker.com/uber-and-its-shady-partners-are-pushing-drivers-into-su-1649936785>; *Rent a TLC Vehicle*, UBER, <http://www.driveubernyc.com/get-a-vehicle/> (last visited Nov. 2, 2016); *Uber NYC Marketplace*, UBER, <http://www.ubernycmarketplace.com/> (last visited Dec. 1, 2016). Uber does not own cars or provide financing for buying, leasing, or renting cars. Dobson, *supra* note 10, at 716.

33. For a typology of network effects from platforms, see FTC Workshop, *supra* note 10, at 174–75 (remarks of Maurice Strucke). Arun Sundararajan argues that "two-sided markets network effects" and "learning by doing" are the most common in the sharing economy. *Id.* at 175 (remarks of Arun Sundararajan).

Rauch and Schleicher refer to the potential that there might be diseconomies of scale in two-sided platforms such as taxi apps. Rauch & Schleicher, *supra* note 10, at 918. More generally on the "determinants of" the "size and structure" of two-sided platforms, see David S. Evans & Richard Schmalensee, *The Industrial Organization of Markets with Two-Sided Platforms*, 3 COMPETITION POL'Y INT'L 151, 163–66 (2007).

34. MARK W. FRANKENA & PAUL A. PAUTLER, AN ECONOMIC ANALYSIS OF TAXI-CAB REGULATION 12 (1984).

35. Associated Press, *Yellow Cabs Now Outnumbered by Uber Cars on NYC Streets*, WNYC (Mar. 19, 2015), <http://www.wnyc.org/story/yellow-cabs-now-outnumbered-uber-cars-nyc-streets/>. For indications that New York City's yellow taxis still command significant market share, notwithstanding the arrival of Uber, Lyft and other apps, see *infra* note 121 and accompanying text.

II.

REGULATORY RESPONSES TO TAXI APPS

As mentioned at the outset, regulatory responses to Uber and other apps have not been especially innovative. Below is a preliminary sketch of the regulatory responses in the United States.

First, there remain jurisdictions that are not allowing Uber to operate legally. They are, by definition, not innovating to facilitate adoption of the new technology. Some of these jurisdictions are enforcing regulations against Uber's operations.³⁶ Other jurisdictions are tolerating Uber's operating in apparent contravention of regulatory requirements.³⁷

Second, there are what I call the "welcoming jurisdictions" that are allowing Uber to operate legally. There are now many welcoming jurisdictions in the United States. Over sixty U.S. governments, including over thirty states and the District of Columbia, have passed legislation or regulations to legalize the use of taxi apps such as

36. See, e.g., Madeline Stone, *East Hampton Officials Are Pushing for Jail Time for Uber Drivers, Says Their Lawyer*, BUS. INSIDER (June 15, 2015), <http://www.businessinsider.com/east-hampton-montauk-uber-drivers-could-face-jail-time-2015-6> (describing the plight of Uber in East Hampton, New York). In the European Union, "Uber activities have been banned or subject to serious restrictions in Member States, such as Belgium, Germany, Italy and Spain." Geradin, *supra* note 8, at 3.

37. St. Louis, Missouri might be an example. See, e.g., Danny Wicentowski, *Uber Driver Arrested at Lambert Airport After Dropping Off Passenger*, RIVERFRONT TIMES (July 20, 2016), <http://www.riverfronttimes.com/newsblog/2016/07/20/uber-driver-arrested-at-lambert-airport-after-dropping-off-passenger> ("[A]n uneasy truce has persisted while Uber and the [St. Louis Metropolitan Taxicab Commission] slug it out in federal court."); see also *Wallen v. St. Louis Metro. Taxicab Comm'n*, No. 4:15-cv-1432, 2016 WL 5846825 (E.D. Mo., Oct. 6, 2016) (refusing to dismiss action brought by Uber and others against St. Louis Metropolitan Taxicab Commission for violating the Sherman Act based on treatment of Uber and UberX); Verified First Amended Complaint for Injunctive and Other Relief at 2, *Wallen v. St. Louis Metro. Taxicab Comm'n*, No. 4:15-cv-1432 (E.D. Mo. Oct. 20, 2016) (alleging "anticompetitive conduct" by St. Louis Metropolitan Taxicab Commission and others "to protect the entrenched taxicab industry" from transportation network companies, including Uber and others). Miami-Dade County was an example of a jurisdiction tolerating Uber's operations until recently, when Miami-Dade passed an ordinance legalizing transportation network entities. See Douglas Hanks, *Taxis Suing Miami-Dade for \$1 Billion Over New Uber Law*, MIAMI HERALD (May 4, 2016), <http://www.miamiherald.com/news/local/community/miami-dade/article7555187.html>; Patricia Mazzei, *Lawsuit Reignites Miami-Dade Policy Fight Over Uber, Lyft*, MIAMI HERALD (Feb. 10, 2015), <http://www.miamiherald.com/news/local/community/miami-dade/article9704705.html>.

Barry and Pollman discuss Uber as a paradigmatic example of a "regulatory entrepreneur," for which "changing the law [is] a material part of its business plan." Barry & Pollman, *supra* note 10, at 2.

Uber.³⁸ The jurisdictions that are legalizing Uber and other taxi apps each appear to be taking one of two paths.³⁹

First, many jurisdictions are legalizing Uber and other taxi apps by creating a new regulatory category under which they are regulated more lightly than traditional taxis.⁴⁰ In a rulemaking in 2013, the California Public Utilities Commission established a new category of “Transportation Network Company,” under its statutory authority over “charter-party carriers,” to regulate services such as UberX and Lyft.⁴¹ Other jurisdictions are following California’s lead and enacting provisions to regulate taxi app companies using the term “Transportation Network Company.”⁴²

Second, some jurisdictions, such as New York City, are allowing Uber to operate under a regulatory category that pre-existed the development of apps, and adding regulatory requirements incrementally to address emerging issues raised by the apps.⁴³ New York City has long had a much more lightly regulated “for-hire vehicle” sector in addition

38. See Associated Press, *Uber, Lyft Campaign to Expand Operations into Upstate New York*, *INS. J.* (Apr. 8, 2016), <http://www.insurancejournal.com/news/east/2016/04/08/404672.htm> (“More than 40 states now allow ride-hailing companies to compete with traditional taxis.”); Transportation Network Company States with Enacted Legislation, PROP. CASUALTY INSURERS ASS’N OF AM., <http://viewer.zmags.com/publication/60841263#/60841263/1> (last visited Jan. 22, 2017).

39. See Strong, *supra* note 10, at 1054 (noting that regulators have either applied “existing taxi or ‘private carrier’ regulations . . . or creat[ed] a distinct set of rules” for “Transportation Network Companies”); *id.* at 1077–78.

40. See COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 17 (“TNCs are being regulated, but much more lightly than traditional taxi and other for-hire transportation services.”).

41. CPUC, *supra* note 26, at 7–8. For background on CPUC’s creation of the TNC category, see FTC Workshop, *supra* note 10, at 90–101 (remarks of Catherine J.K. Sandoval).

Uber offers several levels of service. UberX is a low-cost service. See *What is UberX?*, UBER ESTIMATE, <http://uberestimate.com/what-is-uberx/> (last visited Jan. 19, 2017).

The Commission “defines a TNC as an organization, whether a corporation, partnership, sole proprietor, or other form, operating in California that provides prearranged transportation services for compensation using an online-enabled application (app) or platform to connect passengers with drivers using their personal vehicles.” CPUC, *supra* note 26, at 2. The Commission’s rulemaking was not the last word in California on regulating taxi apps. In 2014, the California legislature passed a statute defining a TNC in roughly the same terms, and to increase the insurance coverage that taxi apps must provide, in the wake of a tragic accident involving an UberX driver. See CAL. PUB. UTIL. CODE §§ 5431(a), 5433 (West 2017); Dobson, *supra* note 10, at 705–09.

42. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 52–53.

43. New York City’s approach to regulating Uber and other app-based services is described in *Glyka Trans LLC v. City of New York*, No. 8962/15, 2015 WL 5320868 (N.Y. Sup. Ct. Sept. 8, 2015).

to the heavily regulated yellow taxis. Uber and other taxi app vehicles operate in New York City as licensed for-hire vehicles, usually as “black cars,” which are a sub-category of for-hire vehicles.⁴⁴

The jurisdictions that are allowing Uber to operate, whether under existing or new categories, generally have not also been systematically revisiting the existing regulatory frameworks for historical incumbent taxi operators to examine whether these should be altered in light of the advent of the new apps and other changes over time.⁴⁵ In

44. “Black car” is a defined term in N.Y.C. Admin. Code § 19-502(u): “‘Black car’ means a for-hire vehicle dispatched from a central facility whose owner holds a franchise from the corporation or other business entity which operates such central facility, or who is a member of a cooperative that operates such central facility, where such central facility has certified to the satisfaction of the commission that more than ninety percent of the central facility’s for-hire business is on a payment basis other than direct cash payment by a passenger.” See also 35 RCNY § 51-03 (“All Black Car Vehicles are owned by franchisees of the Base or are members of a cooperative that operates the Base”) (defining “Black Car Base”); 35 RCNY § 55-03(d)(2) (same); 35 RCNY § 59A-03(c)(2) (same); 35 RCNY § 59B-03(c)(2) (same).

On Uber’s use of the “black car” category, see *Glyka Trans LLC*, No. 8962/15, 2015 WL 5320868, at *3.

Incumbents in the yellow taxi sector argue that the City has improperly licensed Uber vehicles as black cars, because they do not satisfy the legal requirements for base licensing—Uber vehicles are not “owned by franchisees of [Uber] base[s] or . . . members of a cooperative that operates a base.” Complaint at 16, *CGS Taxi v. City of New York*, No. 653264/2015 (N.Y. Sup. Ct. Sept. 30, 2015); see also Complaint at 17, *Singh v. City of New York*, No. 701402/2017 (N.Y. Sup. Ct. Jan. 30, 2017); Brief for Petitioners-Appellants at 32, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. Nov. 30, 2015) (“Uber’s drivers are neither franchisees nor cooperative members.”). They also assert that Uber vehicles do not receive rides through prearrangement from a base, as required for black cars. Complaint at 18–19, *CGS Taxi LLC*, No. 653264/2015 (Sept. 30, 2015); Complaint at 17–18, *Singh*, No. 701402/2017 (Jan. 30, 2017); Reply Brief for Petitioner-Appellants at 17–18, *Glyka Trans LLC*, No. 2015-11661; see also Brief for Petitioners-Appellants at 17, *Melrose Credit Union v. City of New York*, No. 2016-02214 (N.Y. App. Div. May 17, 2016) (“§ 55-03(h), § 55-03(g) and § 55-03(d)(1) of the TLC Rules state that for all black car trips, the car must be dispatched through and ‘from’ the ‘physical location’ of its affiliated base station, and for a passenger that has scheduled a pick-up in the future. 35 RCNY §§ 55-03(h), (d)(1) (2015). Uber is violating these rules.”). Moreover, the industry argues that Uber does not comply with the black car rules because Uber vehicles accept street hails, which are within “the exclusive province of yellow taxis (or green taxis, if outside the exclusionary zone).” Complaint at 19, *CGS Taxi LLC*, No. 653264/2015; see also Complaint at 18, *Singh*, No. 701402/2017 (Jan. 30, 2017).

The New York Taxi and Limousine Commission recently established a new regulatory category of “Dispatch Service Provider.” A “Dispatch Service” “is dispatching, reserving, or referring trips to Drivers on behalf of TLC-licensed Bases through a publicly available, Passenger-facing booking tool.” 35 RCNY §51-03; see also 35 RCNY § 77 (Licensing Rules for Dispatch Service Providers).

45. In researching this article, I had two research assistants review legislation passed in many of the U.S. states that have legalized Uber and other transportation network companies. Their survey showed that of twenty-seven states (including for these purposes the District of Columbia) that have legalized taxi apps like Uber, the

other words, regulators generally do not appear to be comprehensively rethinking taxi regulation, but rather reacting ad hoc to the arrival of the new entrants.

III.

THE SCOPE OF TAXI REGULATION IN THE AGE OF UBER

This part analyzes the appropriate objectives of taxi regulation in the age of apps. In re-envisioning taxi regulation to meet the needs of the current era, I generally assume that the taxi sector should be regulated to address market failures. Market failures “refer[] to situations in which free markets do not result in an efficient allocation of resources, resulting in a loss of economic and social welfare. Markets can fail for a variety of reasons, including the presence of a natural monopoly, large sunk costs, information asymmetries, and negative or positive externalities.”⁴⁶

vast majority have not revisited traditional taxi regulation when legislating to legalize “Transportation Network Companies.” Summary Memoranda from Aaron Lichter & André Smith (Jan.–Mar. 2016) (on file with author); *see also* Suska, *supra* note 10, at 194–97 (describing regulatory changes in Chicago and Massachusetts that legalized the operation of Uber and other ridesharing services).

To be sure, there are some jurisdictions that are beginning to re-examine traditional taxi regulation. In Seattle, in 2014, local regulators legalized “Transportation Network Companies” and reduced some restrictions on traditional cab companies, and authorized the issuance of additional taxi cab licenses. *See* Strong, *supra* note 10, at 1086, 1088; Lynn Thompson, *Seattle Council Gives Nod to Compromise Rules for Ride Services*, SEATTLE TIMES (July 14, 2014), <http://www.seattletimes.com/seattle-news/seattle-council-gives-nod-to-compromise-rules-for-ride-services/>. In Los Angeles, the Taxicab Commission has proposed regulatory changes for the taxi industry—including requiring traditional taxis “to become accessible via a mobile application similar to the ones used by Uber and Lyft,” after the California Public Utilities Commission legalized “Transportation Network Companies.” *See* Maria Bustillos, *How L.A.’s Taxi Boss Plans to Take On Uber*, NEW YORKER (Dec. 12, 2014), <http://www.newyorker.com/business/currency/city-los-angeles-plans-make-taxis-like-uber>. In legalizing taxi apps in 2014, Milwaukee eliminated the cap on the number of permits for taxis, but in other respects left in place more stringent requirements for traditional taxis. *See* Complaint at 18–19, *Joe Sanfelippo Cabs, Inc. v. City of Milwaukee*, 46 F. Supp. 3d 888 (E.D. Wis. Sept. 12, 2014) (No. 14-CV-1036). Miami-Dade County significantly overhauled the regulation of traditional taxicabs when it established a framework for legalizing and regulating transportation network companies in 2016. *See* Motion to Dismiss Amended Class Action Complaint at 5–7, 11, *Miadeco Corp. v. Miami-Dade County*, No. 1:16-cv-21976 (S.D. Fla. June 29, 2016). Cambridge, Massachusetts is revisiting its regulation of taxis since the Massachusetts legislature enacted legislation regulating transportation network companies. *See* Adam Vaccaro, *To Take On Uber, Cambridge Taxi Operators to Ask City to Ease Rule*, BOS. GLOBE (Sept. 19, 2016), <https://www.bostonglobe.com/business/2016/09/19/take-uber-cambridge-taxi-operators-ask-city-ease-rules/4XIXRt6eS9FL4ZJVzFIGIL/story.html>.

46. COMPETITION BUREAU, *supra* note 10, at n.40; *see also* Edelman & Geradin, *supra* note 10, at 309 (arguing that regulation of transportation and other platforms is

Because this article is focused on the normative question of what taxi regulation should be doing in the age of apps, the article does not address the politics of taxi regulation. It is worth underscoring the importance of the politics, though, because in practice politics affects the substance of taxi regulation. There is ample evidence that powerful interest groups, such as taxi medallion owners and financiers, historically have distorted local taxi regulation for their benefit.⁴⁷ There is also a strong likelihood that large, well-financed new entrants like Uber will become as politically powerful as the incumbents that they currently are battling, if the new entrants have not already.

This part begins by emphasizing the need for taxi regulators to design regulations for traditional taxis and app-hailed taxis in tandem. Then I outline the need to streamline taxi regulation, generally by eliminating existing regulations that do not address market failures, and focusing on regulations that do address such failures. In advocating a scaling back of taxi regulation for the existing taxi sector and the new app-hailed taxis, I draw on established literature, going back decades, on the appropriate scope for taxi regulation.⁴⁸

A. *Joint Regulation of App and Traditional Taxis*

The failure of U.S. jurisdictions to update the regulations governing incumbent taxi operators when legalizing the new entrants, as explained in Part II, is understandable to a degree given the urgency that regulators likely feel to legalize the new entrants in the face of consumer demand for their services, and regulatory resource constraints that make it difficult to address multiple issues at once. However, this failure is not defensible in economic terms.⁴⁹

justified to address market failures). Cohen and Sundararajan also ground their analysis of where regulation is warranted in market failures, but they adopt a somewhat unusual definition of market failure, that includes situations where the market leads to “inequitable” outcomes, not just “inefficient . . . outcomes,” because of “asymmetric information, the problem of public goods, the threat of monopoly, or the existence of externalities that are not naturally internalized by market participants.” Cohen & Sundararajan, *supra* note 10, at 120.

47. See Edmund W. Kitch et al., *The Regulation of Taxicabs in Chicago*, 14 J.L. & ECON. 285 (1971); Wyman, *supra* note 21.

48. See, e.g., FRANKENA & PAUTLER, *supra* note 34.

49. Early in 2016, it appeared that some courts might provide an impetus for revisiting taxi regulation. As of then, there were some judicial decisions that suggested that some courts might be willing to countenance claims from the incumbent taxi industry that regulating it more stringently than the transportation network companies violates the Equal Protection Clause. See *Desoto Cab Co. v. Picker*, No. 15-cv-04375, 2016 WL 3913643 (N.D. Cal. July 20, 2016) (denying motion to dismiss); *Bos. Taxi Owners Ass’n v. City of Boston*, No. 15-10100-NMG, 2016 WL 1274531 (D. Mass. Mar. 31, 2016) (refusing to dismiss equal protection claims against City of Boston, but

denying preliminary injunction); *see also* VTS Transp. v. Palm Beach County, No. 9:15-cv-80560, 2016 WL 4250684 (S.D. Fla. June 21, 2016) (refusing to dismiss plaintiffs' equal protection claim for damages for the period in which Palm Beach County allowed Uber to operate under a Temporary Operating Agreement "without complying with" Vehicle For Hire ordinance). *But see* VTS Transp. v. Palm Beach County, No. 9:15-cv-80560, (S.D. Fla. July 1, 2016) (rejecting plaintiffs' motion seeking leave to file class certification).

However, the "weight of authority" now solidly rejects arguments from the traditional taxi industry that a dual regulatory regime for traditional and app-dispatched taxis violates the Equal Protection Clause. *Desoto Cab Co. v. Picker*, No. 15-cv-04375-EMC, 2017 WL 118810, at *8 (N.D. Cal. Jan. 12, 2017); *see* *Ill. Transp. Trade Ass'n v. City of Chicago*, 839 F.3d 594 (7th Cir. 2016); *VTS Transp. v. Palm Beach County*, No. 9:15-cv-80560 (S.D. Fla. Mar. 8, 2017) (granting summary judgment to defendant Palm Beach County); *Cambridge Taxi Drivers & Owners Ass'n v. City of Cambridge*, No. 16-11357-NMG, 2017 WL 373491 (D. Mass. Jan. 25, 2017) (dismissing equal protection claim because state law preempts local regulation of transportation network companies); *Bos. Taxi Owners Ass'n v. Baker*, No. 16-11922-NMG, 2017 WL 354010 (D. Mass. Jan. 24, 2017) (dismissing equal protection claim against Massachusetts defendants); *Newark Cab Ass'n v. City of Newark*, No. 2:16-cv-04681, 2017 WL 214075 (D.N.J. Jan. 17, 2017) (dismissing equal protection claim); *Bos. Taxi Owners Ass'n v. City of Boston*, No. 15-10100-NMG, 2016 WL 7410777 (D. Mass. Dec. 21, 2016) (dismissing equal protection claim against City because state legislation largely preempts local regulation of transportation network companies); *Gebresalassie v. District of Columbia*, 170 F. Supp. 3d 52 (D.D.C. 2016); *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Jan. 26, 2016) (denying plaintiffs' motion for preliminary injunction); *Joe Sanfelippo Cabs, Inc.*, 46 F. Supp. 3d 888; *Taxicab Paratransit Ass'n of Cal. v. Cal. Pub. Utils. Comm'n*, No. S220982 (Cal. Nov. 12, 2014) (denying petition for review); Second Amended Class Action Complaint, *Ruffino v. Broward County*, No. 0:15-cv-62312 (S.D. Fla. Sept. 20, 2016); Order of Supplemental Motion to Dismiss, *Ruffino*, No. 0:15-cv-62312 (granting defendants' motion to dismiss); Order of Dismissal Without Prejudice, *Ruffino*, No. 0:15-cv-62312 (dismissing the case without prejudice pursuant to plaintiffs' request for voluntary dismissal).

A Seventh Circuit Court of Appeals decision authored by the influential Judge Richard Posner rejecting equal protection claims from incumbents in the Chicago taxi industry seems to have played an important role in shifting the judicial tide against the industry's equal protection claims. *Ill. Transp. Trade Ass'n*, 839 F.3d 594; *see* *VTS Transp. v. Palm Beach County*, No. 9:15-cv-80560, at 9, 19–20 (citing *Ill. Transp. Trade Ass'n*); *Bos. Taxi Owners Ass'n v. Baker*, 2017 WL 354010, at *6 (same); *Newark Cab Ass'n*, 2017 WL 214075, at *6 (same); *Desoto Cab Co. v. Picker*, No. 15-cv-04375-EMC, 2017 WL 118810, at *7–8 (N.D. Cal. Jan. 12, 2017) (same). The Seventh Circuit ruling upholding a dual regulatory regime is perfectly defensible as a legal matter, since the governing rational basis standard is highly deferential to governments. However, the ruling is problematic to the extent that it can be interpreted as suggesting that it is desirable for governments to establish different regulatory standards for incumbent taxis and transportation network vehicles because they provide "[d]ifferent products." *Ill. Transp. Trade Ass'n*, 839 F.3d at 598. As discussed in the text above, some of the differences between traditional taxis and the new entrants likely are the result of decisions by regulators; the incumbents and the new entrants might not differ so greatly if regulatory requirements were otherwise. For example, one distinction between transportation network company vehicles and traditional taxis is that the former do not accept street hails. But this distinction likely relates to the fact that transportation network company vehicles are legally prohibited from accepting street hails and so this kind of service is legally provided only by incumbent

The regulation of traditional and app taxis poses a “joint optimization” problem.⁵⁰ Regulators should be simultaneously establishing standards for app-dispatched taxis and revisiting standards for traditional taxis because they are substitutes competing in the same “product market.”⁵¹ Both perform the same service of providing consumers with on-demand transportation for a price: a traditional taxi and an app-based taxi both transport passengers from one point to another, with the consumer selecting the point of departure, the destination, and sometimes even the route if the driver obliges.

Underscoring the extent to which traditional taxis and new entrants like Uber operate within the same product market, a recent New York City report refers to yellow taxis and “e-dispatch[ed]” vehicles such as Uber’s as substitutes, specifically indicating that “[i]ncreases in e-dispatch trips are largely substituting for yellow taxi trips in the” city’s Central Business District.⁵² Although Uber sometimes argues

taxis. *Id.* at 596–97. It seems “circular” for governments to regulate two providers differently on the basis of distinctions that the government itself has created. *Bos. Taxi Owners Ass’n*, No. 15-10100-NMG, 2016 WL 1274531, at *6. In addition, as discussed above, the products offered by traditional taxis and the new entrants are growing more similar as the former are adapting innovations pioneered by the new entrants and the new entrants are increasing their offerings. Indeed, in the companion case of *Joe Sanfelippo Cabs, Inc.*, 839 F.3d 613, decided on the same day as *Ill. Transp. Trade Ass’n*, Judge Posner recognizes the similarity between traditional taxis and Uber, in rejecting a Takings claim from the traditional taxi industry in Milwaukee after the entry of Uber. Notably, while Judge Posner insists on the differences between Uber and traditional taxis in *Ill. Transp. Trade Ass’n*, in *Joe Sanfelippo Cabs, Inc.*, he describes Uber as “provid[ing] [a] close though not identical substitute [] for conventional taxi services,” and later refers to Uber and other “app-based . . . companies” as “substitutes” and “taxi substitutes.” 839 F.3d at 614–15. In upholding the authority of governments to establish less stringent regulatory standards for transportation network companies, the Seventh Circuit panel in *Ill. Transp. Trade Ass’n* portrayed itself as enabling governments to introduce competition in the for-hire sector. 839 F.3d at 597–98. But given the presence that Uber has established in many jurisdictions, it may be time to think about promoting competition by relaxing the restrictions on the traditional taxi industry that are inhibiting it from competing with Uber and other new entrants.

50. I borrow the use of the term “joint optimization problem” to describe the need to regulate new and old sources together from Richard L. Revesz & Allison L. Westfahl Kong, *Regulatory Change and Optimal Transition Relief*, 105 *Nw. U. L. REV.* 1581, 1618 (2011).

51. Verified First Amended Complaint for Injunctive and Other Relief at 20, *Walten v. St. Louis Metro. Taxicab Comm’n*, No. 4:15-cv-1432 (E.D. Mo. Oct. 20, 2016).

52. OFFICE OF THE MAYOR, CITY OF NEW YORK, FOR-HIRE VEHICLE TRANSPORTATION STUDY 5 (2016), <http://www1.nyc.gov/assets/operations/downloads/pdf/For-Hire-Vehicle-Transportation-Study.pdf>.

Federal District Court Judge Gorton nicely captured the need to see through the effects of existing regulations in examining the relationship between traditional taxis and transportation network companies in refusing to dismiss an equal protection claim from the traditional taxi industry:

that it is not “a transportation provider,”⁵³ Uber itself suggests that it competes in the same “product market” as traditional taxi operations in a complaint filed in St. Louis, Missouri.⁵⁴ In this case, Uber and other plaintiffs are suing the St. Louis taxi regulatory commission for acting anticompetitively to protect the incumbent industry from competition from Uber and other transportation network companies.⁵⁵

[P]laintiffs have stated at least a plausible claim that the Equal Protection Clause requires that the two groups [i.e., “taxi operators” and “transportation network companies” (TNCs)] be treated alike.

First, the Court finds persuasive plaintiffs’ argument that many of the obvious differences between taxis from TNCs, such as the kind of vehicle used and the fact that taxicabs must be clearly labeled, are caused by the City’s application of the requirements of [City] Rule 403 to taxi operators but not to TNCs. The City may not treat the two groups unequally and then argue that the results of that unequal treatment render the two groups dissimilarly situated and, consequently, not subject to equal protection analysis. Such circular logic is unavailing.

Bos. Taxi Owners Ass’n, No. 15-10100-NMG, 2016 WL 1274531, at *6. For a contrasting perspective, which insists that the transportation network companies and the traditional taxi industry offer “[d]ifferent products,” justifying different regulatory regimes notwithstanding the Equal Protection Clause, see the decision of a panel of the Court of Appeals of the Seventh Circuit rejecting the Chicago taxi industry’s equal protection claims in *Ill. Transp. Trade Ass’n*, 839 F.3d 598. In December 2016 and January 2017, Judge Gorton dismissed equal protection claims brought by the incumbent Boston taxi industry against the City of Boston and a set of Massachusetts defendants. In dismissing the case against the Massachusetts defendants, Judge Gorton cited *Ill. Transp. Trade Ass’n*, among other cases, as “persuasive authority.” *Bos. Taxi Owners Ass’n v. City of Boston*, No. 15-10100-NMG, 2016 WL 7410777; see also *Bos. Taxi Owners Ass’n v. Baker*, No. 16-11922-NMG, 2017 WL 354010, at *6 (referring to *Ill. Transp. Trade Ass’n*).

53. Sam Schechner, *Uber’s ‘Not a Taxi Company’ Defense on Trial in EU*, WALL STREET J. (Nov. 29, 2016), <http://www.wsj.com/articles/ubers-not-a-taxi-company-defense-on-trial-in-eu-1480427094> (“Uber Technologies Inc. has long tried to fight local transportation laws by saying it isn’t a transportation company It is arguing at the EU’s Court of Justice that [‘national transportation regulations’] don’t apply to Uber because it is an online-service provider, rather than a transportation provider—a designation that it says should give it protection under existing EU laws.”); see also Mark Scott, *In Europe, Is Uber a Transportation Service or a Digital Platform?*, N.Y. TIMES (Nov. 27, 2016), <http://www.nytimes.com/2016/11/27/technology/uber-europe-court-ecj.html>. For a U.S. case where Uber denies it is “a transportation company,” see *Meyer v. Kalanick*, 174 F. Supp. 3d 817, 820 (S.D.N.Y. 2016) (“Uber states that it is not a transportation company.”). An employment tribunal in the UK recently held that it is “unreal to deny that Uber is in business as a supplier of transportation services.” *Assam & Farrar v. Uber*, No. 2202550/2015, at 27 (Emp’t Tribunal, Oct. 28, 2016) (UK).

54. Verified First Amended Complaint for Injunctive and Other Relief at 20, *Wallen*, No. 4:15-cv-1432.

55. *Id.* at 1–2; see also *Wallen v. St. Louis Metro. Taxicab Comm’n*, No. 4:15-cv-1432, 2016 WL 5846825, at *1 (E.D. Mo. Oct. 6, 2016) (refusing to dismiss action brought by Uber and others against St. Louis Metropolitan Taxicab Commission for violating the Sherman Act based on its treatment of Uber and UberX).

Uber and the other plaintiffs assert that “taxicab companies, livery companies, and independent drivers using TNCs [transportation network companies, such as Uber] or associations of independent drivers who share dispatch services” are “competitors” in “the market for passenger motor vehicle transportation services” in which “consumers purchase point-to-point transportation services as riders.”⁵⁶ Uber and other plaintiffs maintain that “[e]xcept for the fact that the MTC [St. Louis Metropolitan Taxicab Commission] has restrained competition, . . . consumers would view all of these competitors as offering services that are reasonably interchangeable substitutes.”⁵⁷

Uber and the traditional taxi industry are not only substitutes, but their services also could evolve to more closely resemble each other. Indeed we are already seeing changes to the services that are making

56. Verified First Amended Complaint for Injunctive and Other Relief at 20, *Walen*, No. 4:15-cv-1432.

57. *Id.*

The full two paragraphs from the Complaint are as follows:

63. The relevant product market is the market for passenger motor vehicle transportation services (the “Transportation Market”). In this market, consumers purchase point-to-point transportation services as riders. Competitors in this market include individuals and entities that offer or could offer point-to-point transportation services to consumers, such as taxicab companies, livery companies, and independent drivers using TNCs or associations of independent drivers who share dispatch services.

64. Except for the fact that the MTC has restrained competition, as further alleged below, consumers would view all of these competitors as offering services that are reasonably interchangeable substitutes. There is a high cross-elasticity of demand among those competing services, such that, for example, an increase in the price of traditional taxi services will result in a relatively high increase in demand for drivers using the uberX platform.

Id.

Later, the complaint states:

118. Within the St. Louis area, for-hire transportation service providers (including dispatch and/or TNC services that are used to arrange such for-hire transportation services) directly compete with one another. In the Transportation Market, riders who hail taxicabs from the street may instead use the Uber App to arrange for transportation, and vice-versa. Similarly, riders who call taxicab or livery vehicle dispatchers to arrange for taxicab or livery vehicle rides may instead use the Uber App to arrange for transportation, and vice-versa.

Id. at 40.

As discussed above, Judge Posner also refers to Uber and other “app-based . . . companies” as “substitutes for conventional taxicab service” and “taxi substitutes” in *Joe Sanfelippo Cabs, Inc.* See *supra* note 49.

In arguing that the plaintiff’s antitrust suit for violations of the Sherman Act and its New York State equivalent should be dismissed in *Meyer v. Kalanick*, Uber argued that the relevant product market for the antitrust inquiry includes not only “taxis,” “car services,” and ridesharing services, “but also . . . public transit such as subways and buses, personal vehicle use, and walking.” 174 F. Supp. 3d at 827.

them more like each other where regulatory rules permit. Perhaps the principal meaningful difference between the services is how the passenger initiates the request for a vehicle: by app, by outstretched arm, by waiting in line at a cab stand, or by phone. Uber and other transportation network company vehicles usually are summoned by app; traditional taxis are summoned by street hails, waiting in line at a cab stand, by phone, and may be called by app. But the differences in how the vehicles are summoned likely are related to regulators segmenting the market for taxi services: transportation network company vehicles are often not legally allowed to accept street hails,⁵⁸ and there are regulatory barriers to them waiting in the same cab stand lines as traditional taxis.⁵⁹ There is evidence that when there is no regulatory

58. In researching this article, I asked two research assistants to review legislation that has been passed in multiple states to legalize “Transportation Network Companies.” They found that sixteen of twenty-seven states (including the District of Columbia) that had legalized Uber and other “Transportation Network Companies,” as of the time of their survey, prohibited drivers for these companies from picking up street hails. Lichter & Smith, *supra* note 45.

Although transportation network company vehicles are not legally allowed to accept street hails, they may be illegally picking up street hails. There are reports that some Uber drivers in New York City are illegally picking up passengers on the street. Dan Rivoli, *Uber Cars Rack Up Violations for Illegal Street Hails as NYC Proposes Crackdown*, N.Y. DAILY NEWS (Apr. 6, 2016), <http://www.nydailynews.com/new-york/nyc-proposes-crackdown-uber-cabs-picking-street-fares-article-1.2591233>; see also Amended Complaint at 53, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Mar. 7, 2016) (referring to “the open and notorious proliferation of e-hailing FHV’s trolling the streets of Manhattan attempting to pick up traditional street hails”).

59. Consider the 2009 rules of the Port Authority of New York and New Jersey, which regulates the provision of ground transportation at New York area airports. Under these rules, “ground transportation services shall be provided . . . pursuant to specific pre-arrangement.” PORT AUTH. OF N.Y. AND N.J. AIRPORT, RULES AND REGULATIONS § V(D)(1), at 12 (Aug. 4, 2009), http://www.panynj.gov/airports/pdf/Rules_Regs_Revision_8_04_09.pdf. The only vehicles that are allowed to pick up passengers who have not pre-arranged rides are vehicles “licensed” to pick up passengers by “hails” by the municipality in which the airport is located. *Id.* § V(D)(2). At airport terminals within the boundaries of New York City, vehicles licensed as “taxi-cab[s]” by the New York City Taxi and Limousine Commission—in other words, medallion or yellow taxis—count as vehicles allowed to pick up passengers who have not pre-arranged rides. *Id.* The rules of the New York City Taxi and Limousine Commission also prohibit for-hire vehicles (including black cars, which is the category under which many Uber vehicles are licensed) from picking up passengers at cab stands at the New York airports. See 35 RCNY §55-19(b) (“A For-Hire Driver must not pick up a Passenger at an authorized taxi stand.”); 35 RCNY § 55-19(c) (“A Driver must not accept a dispatch while parked or otherwise located at Kennedy Airport or La Guardia Airport unless the Driver is parked in an area other than the airport’s designated passenger pick up locations.”); 35 RCNY § 59B-25(g) (“A Base Owner must not dispatch a Vehicle parked or otherwise located at Kennedy Airport or La Guardia Airport unless the Vehicle is parked in an area other than the airport’s designated passenger pick up locations.”).

segmentation of the market, the same vehicle will use multiple technologies to obtain passengers. In New York City, for example, yellow medallion taxis can now be hailed on the street by an outstretched arm, by waiting in line at cab stands, and through prearrangement—including by apps such as Arro and Curb, introduced in response to the competition from Uber and other transportation network companies, and changes in regulatory rules in New York.⁶⁰ As mentioned above, Uber itself also is evolving to allow riders to obtain Uber vehicles in multiple ways, when not inhibited by regulatory constraints. Uber's app now provides not only immediate, on-demand service analogous to street hails, but also allows riders to schedule trips well in advance, similar to traditional taxi and livery services. Sometimes, riders also may be able to obtain Uber vehicles through lines that re-

60. 35 RCNY § 78 (“Licensing and Rules for Providers of E-Hail Applications”); N.Y.C. Taxi & Limousine Comm’n, Notice of Promulgation of Rules on Licensure of E-Hail Applications (2015), http://www.nyc.gov/html/tlc/downloads/pdf/newly_passed_rules_ehail.pdf; Brief for Respondents at 27–30, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. Apr. 15, 2016) (describing the evolution of the New York Taxi and Limousine Commission’s e-hail rules allowing yellow taxis to deploy apps); Cristian Salazar, *Taxi App Test-Drive: Uber, Lyft, Gett, Arro vs. Hailing a Yellow Cab by Hand*, AMNEWYORK (Dec. 6, 2015), <http://www.amny.com/transit/uber-lyft-gett-arro-vs-hailing-a-yellow-cab-by-hand-taxi-app-test-drive-1.11134578>. For examples of medallion-taxi apps, see *Arro—Safe. Fast. Easy*. ARRO, INC., <https://www.goarro.com/> (last visited Jan. 22, 2017); CURB, <https://gocurb.com/curb-here/> (last visited Nov. 2, 2016).

According to the New York City Taxi and Limousine Commission, however, “the overwhelming majority of [yellow] taxi rides [in New York City] . . . are still street hails,” with few yellow taxi rides arranged by app, notwithstanding the ability to arrange rides by app. Brief for Respondents at 57, *Glyka Trans LLC*, No. 2015-11661, at 57. In contrast, medallion owner and financier plaintiffs in *Melrose Credit Union v. City of New York* suggest that the share of medallion taxi trips originating through e-hails is much larger than the City estimates—indeed, they state that “[o]n information and belief, approximately one-third of medallion taxicab hails on average are now being made through E-Hails—i.e., approximately 131,000 hails per day are E-Hails and approximately 262,000 per day are made through traditional taxi street hails.” Amended Complaint at 52–53, *Melrose Credit Union*, No. 1:15-cv-09042. If the City’s statistics are accurate, it would be interesting to know why few yellow taxi rides are arranged by app, and whether regulatory restrictions (such as regulated fare levels that keep yellow taxis from competing on price) are part of the reason.

The incumbent taxi industry in other cities also is adopting new technology. For example, in Milwaukee, traditional taxis also can now be obtained by phone, using an app, by outstretched arm on the street, and at cab stands. *Joe Sanfelippo Cabs Inc. v. City of Milwaukee*, 46 F. Supp. 3d 888, 891 (E.D. Wis. 2014), *aff’d*, 839 F.3d 613 (7th Cir. 2016) (noting that traditional taxis can also operate as network vehicles under Milwaukee ordinance); see also COMPETITION BUREAU, *supra* note 10 (reporting that four Vancouver taxi companies “have . . . jointly launched a software application that allows passengers to request and track taxis, pay with their credit card and rate their driver”).

semble cab stands at a transportation hub like a train station.⁶¹ In a part of Florida, Uber is now “experimenting” with allowing customers to call a central dispatch line and obtain an Uber ride by phone.⁶²

Other distinctions between traditional taxis and new entrants like Uber also are not fixed. For example, the Curb app for obtaining yellow taxis in New York requires passengers to set up an account, which, echoing the Uber experience, enables riders to follow their trip on a map as it progresses, bill their trip automatically to a credit card and receive an emailed receipt, rate their trip experience afterwards, and reduce the anonymity of the rider-driver interaction.⁶³ On the flip side, the Uber trip experience also could become more like that of a traditional taxi cab trip. While Uber is associated with seamless credit card payment in the United States, in some developing countries Uber drivers take cash, similar to traditional taxis in the United States.⁶⁴

Because app and traditional taxis are substitutes competing in the same market, the stringency of regulations governing each type of taxi will affect the supply of, and demand for, the other type of taxi. Less stringent regulation of app-dispatched taxis will lead to less consumer demand for traditional taxis, because app-dispatched taxis will be

61. See, e.g., Carl Bialik, *How Uber’s Truce with Regulators Played Out During the DNC*, FIVETHIRTYEIGHT (July 29, 2016), <http://fivethirtyeight.com/features/how-ubers-truce-with-regulators-played-out-during-the-dnc/> (referring to Uber’s “dedicated pickup spot on the 30th Street side of the station” during the Democratic Convention in Philadelphia); *Drive with Uber Philadelphia*, UBER, <http://philadelphia.ubermovement.com/uber-at-30th-st-station/> (last visited Jan. 19, 2017).

62. Spencer Woodman, *Uber Is Experimenting with a Phone Dispatch System*, VERGE (June 14, 2016), <http://www.theverge.com/2016/6/14/11933140/uber-phone-dispatch-system-florida> (“The call-in feature is part of a local program that will grant publicly subsidized Uber rides to low-income residents who do not have cars or easy access to the area’s bus-based public transit system.”)

63. See Andrew J. Hawkins, *Taxi-Hailing App Curb to Relaunch with a New Attack Plan Against Uber*, VERGE (Mar. 23, 2016), <http://www.theverge.com/2016/3/23/11294758/curb-app-taxi-hail-uber-nyc-verifone>; CURB, *supra* note 60; see also COMPETITION BUREAU, *supra* note 10, at 3 (four Vancouver taxi companies “have . . . jointly launched a software application that allows passengers to request and track taxis, pay with their credit card and rate their driver”). As mentioned above, however, New York City maintains that few yellow taxi trips are booked through apps such as Curb in New York City today. Taxi industry plaintiffs in ongoing litigation in the City suggest otherwise. See *supra* note 60.

64. Jon Russell, *Uber Begins to See the Payout from Accepting Cash Payments*, TECHCRUNCH (Feb. 8, 2016), <https://techcrunch.com/2016/02/08/uber-begins-to-see-the-payout-from-accepting-cash-payments/>. In New York City, Uber would have difficulty operating under “black car” base licenses if it moved to accept cash payments from riders, because black car bases are required by regulation to be paid for over 90 percent of their business through non-cash means. See *supra* note 44. Also, allowing passengers to use transportation network company vehicles without credit cards might reduce the safety of drivers, because passengers could no longer be easily identified. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 142.

cheaper and consequently attract more consumers. It will also lead to a reduction in the supply of traditional taxis, as the number of traditional taxis will fall to reflect the erosion of demand for them.

In major cities where apps are well-established, the taxis affiliated with them are already providing a growing number of taxi trips in response to growing consumer demand.⁶⁵ The supply of traditional taxis is falling as drivers are migrating from the traditional to the app-based sector, and driving for Uber and its competitors.⁶⁶ Driving for Uber may be more profitable for drivers, because they avoid paying medallion leasing fees; an Uber vehicle does not require a medallion, though drivers pay Uber a service fee on fares.⁶⁷ Medallion owners are responding by reducing the rates that they charge drivers to lease medallions, and by keeping taxis off city streets due to the erosion in demand for their services.⁶⁸

It may be that app-dispatched taxis are the wave of the future and that they will entirely supplant traditional taxis. But as of now traditional taxis are still being demanded and supplied, albeit it at reduced levels. This may be because not all consumers have the credit cards that are required to use taxi apps such as Uber in the United States.⁶⁹

65. See *infra* note 121 and accompanying text.

66. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 89. New York City Council has enacted legislation that will make it easier for drivers to switch between driving yellow taxis and for-hire vehicles (such as Uber), by creating a “universal driver’s license.” N.Y.C., N.Y., Law 2016/051 (Apr. 21, 2016) (concerning a universal driver’s license for taxicab and for-hire vehicle drivers). The legislation “codif[ied]” the Taxi and Limousine’s “practice” since 2015 “of issuing a ‘Universal License.’” *Hearing on Intros Nos. 658, 1080, 1092, 1095 & 1096 Before the N.Y.C. Council Transp. Comm.* (Feb. 29, 2016) (testimony of Meera Joshi, Commissioner & Chair, N.Y.C. Taxi & Limousine Comm’n) [hereinafter Joshi Testimony].

67. Complaint at 21, *CGS Taxi LLC v. City of New York*, No. 653264/2015 (N.Y. Sup. Ct. Sept. 30, 2015); Complaint at 20, *Singh v. City of New York*, No. 701402/2017 (N.Y. Sup. Ct. Jan. 30, 2017).

68. Jennifer Bain et al., *Why Uber Is to Blame for Yellow Cabs Hogging Street Parking*, N.Y. POST (Aug. 26, 2015), <http://nypost.com/2015/08/26/why-uber-is-to-blame-for-yellow-cabs-clogging-street-parking/>.

69. One possible proxy for the number of people without credit cards is the number without bank accounts, which is almost ten percent of the population in New York State. John Aldan Byrne, *1 in 10 New Yorkers Doesn’t Have a Bank Account*, N.Y. POST (June 7, 2014), <http://nypost.com/2014/06/07/1-in-10-new-yorkers-dont-have-bank-accounts/>. For national estimates, see COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 142. We might think that people without bank accounts—and credit cards—would lack the means to take taxis, but these individuals also may be less likely to own cars, which might leave them dependent on taxis when public transit is not an option. There are studies indicating that taxi riders include low-income persons, including in New York City. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 135 (“Low-income households use taxis more often than middle-income households and at about the same rate as high-income

Also, cab stands, in which traditional taxis line up for passengers, remain an entrenched mechanism of obtaining taxis at hubs such as airports and train stations.⁷⁰ Lightly regulating app-dispatched taxis, without reducing the regulatory burden on traditional taxis, could impose social losses, as unnecessary regulatory burdens translate into higher taxi fares for consumers of traditional taxis.⁷¹

households.”) (citations omitted); *Id.* at 140; Wyman, *supra* note 21, at 161 n.183 (citing sources).

As mentioned above, the mandatory use of credit cards is not integral to the app-technology, and Uber might be able to devise ways to incorporate people without access to such cards into its platforms. Abroad, Uber does accept payment in cash, where there is limited access to credit cards. Russell, *supra* note 64.

70. Geradin, *supra* note 8, at 9. However, the persistence of cab stands may be partly the result of decisions by regulators, not a reflection of consumer demand. Regulators may be choosing to continue to maintain cab stands to steer passengers to traditional taxis, which may be the only vehicles legally authorized to pick up passengers at these stands. *See supra* note 59 (describing the rules of the Port Authority of New York and New Jersey and the New York Taxi & Limousine Commission).

71. *See also* COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 68 (“[I]f TNCs weaken or bankrupt many taxi services, then those without credit cards and smartphone access may find themselves with fewer mobility options than before.”).

My argument that new and old actors need to be jointly regulated when they are substitutes extends an argument made in environmental law.

Revesz & Kong analyze whether, when establishing more stringent environmental standards for new sources such as new power plants, regulators should establish the higher standards for the new sources and then determine in a second step whether to apply them to existing sources, or establish standards for new and old sources in one step. Revesz & Kong, *supra* note 50, at 1618. They argue that “the socially optimal approach is to jointly determine the new source standard and the” rule for existing sources. *Id.* at 1582–83. The reason is “the disparity between the regulatory stringency that applies to new sources and” existing sources “has on the rate at which” existing sources “close down and are replaced by new sources.” *Id.* at 1617. As the history of regulating power plants under the Clean Air Act demonstrates, establishing stringent standards for new sources, while not requiring existing sources to meet these higher standards, may mean that the environmental benefits of the more stringent standards are not realized, because few new sources will be built and the owners of the old sources will prolong their useful lives. *Id.* at 1582.

There are differences between taxi regulation and the environmental regulatory context that concerns Revesz & Kong. In the environmental context, regulators are establishing more stringent standards for new sources that have yet to be built, with the risks described in the above paragraph. In the taxi context, regulators are establishing less stringent standards for new sources than for the incumbent sources, both of which are already driving on city streets. So, unlike environmental regulators, taxi regulators do not have to worry that the standards they are establishing will discourage the entry of new sources (assuming they establish standards for the new sources at the optimal level). They face the risk of social welfare losses from excessive regulation of the traditional taxi fleet, which seems likely to have some market share for the foreseeable future.

Though the risk concerns new sources in the environmental context and existing sources in the taxi context, the source of the risk is the same: any disparity between the standards applicable to new and old sources will affect entry and exit of the substi-

Nonetheless, it is important to recognize that differential standards for traditional taxis and transportation network companies still could be welfare-enhancing, even though traditional taxis and transportation network companies are substitutes, and the distinctions between them are—and could be increasingly—blurry. Different standards would be justified if the benefits of such standards exceed the costs from a societal perspective.⁷² For example, as discussed below, there may be reasons to regulate the fare levels of street-hailed taxis but not e-hailed taxis. However, there should be compelling evidence that differential standards are cost-justified before allowing them, because of the likelihood that different regulatory standards for different taxi services could create opportunities for “regulatory arbi-

tute source in unintended ways. The best way of addressing the risk is to simultaneously establish standards for new and old sources, in the taxi context as in the environmental context.

72. Revesz & Kong recognize—as I do, above—that establishing standards for old and new sources simultaneously does not require that the standards for both be identical. *Id.* at 1620–21 (examples three and four recommend different standards for new and existing sources). The issue in the environmental context that concerns Revesz & Kong is often that regulators are establishing new, more stringent sources for new sources; the question is whether to apply the more stringent standard to an old polluter that already has invested in pollution control equipment to satisfy a pre-existing regulatory standard. *Id.* at 1582. Steven Shavell argues that it might not be justified on social welfare grounds to apply the new standard to the old source, if the benefits of applying the new standard (the incremental reduction in pollution it will yield) are lower than the costs (what the firm will have to pay for additional pollution control equipment to meet the new standard). See Steven Shavell, *On Optimal Legal Change, Past Behavior, and Grandfathering*, 37 J. LEGAL STUD. 37, 37–39 (2008). Revesz & Kong agree with Shavell that less stringent standards might be justified for old sources compared with new sources on social welfare grounds, but they suggest that it would in a narrower range of circumstances than Shavell argues, because of strong assumptions in his model. Revesz & Kong, *supra* note 50, at 1615.

As Richard Revesz pointed out to me, the taxi context is the mirror image of the environmental context that drives the analysis by Shavell and by Revesz & Kong. In the taxi context, regulators are establishing a less stringent regime for new sources (app-dispatched vehicles), not a more stringent regime for old sources. The issue is whether the old sources (traditional taxis) should benefit from the new, less stringent regime, or continue to be regulated under the pre-existing more burdensome regime. As indicated in the text, under a social welfare analysis, the question should be framed in terms of whether the benefits of retaining the pre-existing regime outweigh the costs of operating under it. *Id.* at 1593–94. Even if the old regulatory standard might not be justified in cost-benefit terms at this point, it still might be desirable to retain it for old sources because the benefits of retaining the standard exceed the costs. As explained above, I think that we should be careful in assuming that the social benefits of retaining the old regulatory regime for the traditional taxi industry exceed the social costs.

Thank you to Richard Revesz for his comments on the relevance of his work with Kong, and Shavell’s work, for the taxi context.

trage” by market players and inhibit meaningful competition.⁷³ Thus in determining regulatory standards for taxis in the age of Uber, regulators should treat all vehicles providing point-to-point transportation in response to customer requests as a unit, and establish differential standards for vehicles providing different types of services only if such standards can be justified.

B. *Rethinking the Pillars of Taxi Regulation*

I now consider more concretely how we should be regulating both traditional and e-hailed taxis.

There historically have been five pillars of taxi regulation.⁷⁴ First, regulators have limited entry to the taxi business by limiting the number of taxis. Limits on entry often have been enforced by requiring taxis to have one of a limited number of licenses, often called medallions, to operate. Second, regulators have regulated taxi fares, often by

73. Edelman & Geradin, *supra* note 10, at 327 (“[W]hen these services take regulatory shortcuts, it is difficult to know whether the services gain traction through genuine excellence and efficiency, or through regulatory arbitrage.”).

While I lean toward thinking that the same standards should apply to traditional and e-hailed taxis, as the text indicates, I recognize that differential standards might be cost-justified. Others are more insistent that the same standards should apply to traditional and e-hailed taxis. *See, e.g.*, FTC Workshop, *supra* note 10, at 153 (remarks of Adam Thierer) (advocating “deregulating down to give everybody an equal level playing field”).

Although my concern is what is best from a societal point of view, it is interesting to note that parts of the incumbent taxi industry now seem to think that from their point of view, it would be better to reduce the stringency of the regulations imposed on them to the level imposed on app-based services, to enable the incumbents to compete. After initially seeking to block the entry of Uber and other e-hailing services or to require that they are regulated to the same extent as traditional taxis, the incumbent taxi industry in some places is now arguing that the regulatory burden it faces is unfairly excessive given the less stringent regulations for apps like Uber. *See, e.g.*, Plaintiff’s Opposition to Defendants’ Motion to Dismiss at 9, Cambridge Taxi Drivers & Owners Ass’n v. City of Cambridge, No. 1:16-cv-11357-NMG (D. Mass. Jan. 25, 2017), 2017 WL 373491 (case dismissed) (“It is within Defendants’ discretion and ability to revisit existing Taxi Regulations, for example, to lessen the burden, particularly financially, to which medallion owners and taxicab operators are subject.”); Vaccaro, *supra* note 45 (Cambridge taxi companies “want Cambridge to lighten the regulatory load on taxis,” for example by allowing taxis to establish “their fares”).

74. Different authors refer to different numbers of pillars (or categories) of regulation. *See, e.g.*, FRANKENA & PAUTLER, *supra* note 34, at 16–28 (five pillars); Christian Seibert, *Taxi Deregulation and Transaction Costs*, 26 *ECON. AFF.* 71 (2006) (three pillars); Geradin, *supra* note 8, at 4 (four pillars).

In some jurisdictions taxi regulators also have sought to advance environmental objectives by encouraging taxis to purchase hybrid or energy efficient vehicles. These efforts have met with mixed success due to legal impediments. *See* Christina Ma, *Hybridizing Federal and State Regulation of Clean Taxis Introduction*, 42 *ENVTL. L. REP. NEWS & ANALYSIS* 10840 (2012); Sarah E. Light, *Precautionary Federalism and the Sharing Economy*, 66 *EMORY L.J.* 333, 374–76 (2017).

establishing uniform fares that prevent “fare competition.”⁷⁵ Third, they have imposed health and safety regulations to protect consumers, such as background checks and insurance requirements for drivers, and standards or model types for vehicles. Fourth, regulators have imposed some regulations to protect the economic interests and health and safety of taxi drivers, such as requirements that drivers be covered by workers’ compensation insurance. Fifth, regulators have imposed universal service requirements, which require taxis to serve customers unless there are justifiable reasons for not doing so.⁷⁶ I recommend restructuring all five pillars to varying degrees, and adding a new pillar, which would charge regulators with guarding against the formation of a new taxi monopoly.⁷⁷

Entry Regulation

Since before World War II, many cities have limited the number of taxis.⁷⁸ Historically, a number of reasons have been offered for limiting entry, including reducing traffic congestion, controlling pollution, protecting driver incomes, and reducing accidents caused by taxis competing aggressively with each other for fares.⁷⁹ The most salient of these justifications today is the idea that we need to limit (or cap) the number of taxis to reduce the congestion that taxis cause on city streets.

With the growing popularity of taxi apps, the number of vehicles providing taxi services in cities like New York and London is increasing, leading to recent calls in both cities to limit the number of app-dispatched taxis in the name of addressing traffic congestion.⁸⁰ For example, in the summer of 2015, New York City Mayor Bill de Blasio advocated severe constraints on the growth in the number of for-hire vehicles, including Uber vehicles, although he then dropped this proposal after Uber launched a highly public campaign against it.⁸¹ In

75. FRANKENA & PAUTLER, *supra* note 34, at 22–23.

76. *See, e.g.*, N.Y.C. Admin. Code § 19-507(a)(2) (West 2016) (“No driver of a taxicab shall refuse, without justifiable grounds, to take any passenger or prospective passenger to any destination within the city.”); 35 R.C.N.Y. § 54-20 (“Operations—Refusing Passengers”).

77. *See also* Edelman & Geradin, *supra* note 10, at 308 (“Whatever the difficulty of revisiting applicable regulation, the task appears to be compulsory.”).

78. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 41.

79. *See* Wyman, *supra* note 21, at 149, 168.

80. *See* Rory Cellan-Jones, *Will London’s Mayor Put the Brakes on Uber?*, BBC NEWS (May 22, 2015), <http://www.bbc.com/news/technology-32842332>.

81. Colleen Wright, *Uber Says Proposed Freeze on Licenses in New York City Would Limit Competition*, N.Y. TIMES (June 30, 2015), <http://www.nytimes.com/>

January 2016, the City released a report that concluded that increasing numbers of Uber vehicles are not “driv[ing] the recent increase in congestion in the” city’s Central Business District, because trips by Uber and other for-hire vehicles “are largely substituting for yellow taxi trips.”⁸²

Traffic congestion is an externality because a taxi does not experience the full cost of the space it is taking up on the street.⁸³ However there is little basis for limiting the number of taxis to reduce traffic congestion.

If we want to reduce congestion, we should start by defining a targeted level of congestion, and then introducing policy changes to achieve that goal “‘in the least-cost way,’” by enlisting sources to reduce congestion in line with their costs of congestion reduction.⁸⁴ There are many different sources of congestion in addition to taxis: other vehicles, such as private cars and bicycles; other uses of the streets, such as bike lanes, and pedestrian plazas; and “[p]opulation and job growth,” among other factors.⁸⁵ Most likely, there is signifi-

2015/07/01/nyregion/uber-says-proposed-freeze-on-licenses-would-limit-competition.html.

Technically, the proposal to limit the growth in for-hire vehicles was embodied in a bill introduced in the City Council, which was supported by Mayor de Blasio. The bill would have severely interfered with the ability of taxi apps like Uber to expand in the next year by “limiting the issuance of new for-hire vehicle licenses,” pending the completion of an analysis of the pollution and congestion impacts of the recent increase in the number of for-hire vehicles on New York City streets. REPORT OF THE HUMAN SERVICES DIVISION, *supra* note 25, at 2.

82. OFFICE OF THE MAYOR, CITY OF NEW YORK, *supra* note 52, at 5. The report emphasizes that it “*does not recommend a cap on for-hire vehicles at this time.*” *Id.* at 11. An even more recent report, from one of the authors of the City’s study, finds that TNC ridership has continued to increase since the period examined in the City’s report. SCHALLER CONSULTING, UNSUSTAINABLE? THE GROWTH OF APP-BASED RIDE SERVICES AND TRAFFIC, TRAVEL AND THE FUTURE OF NEW YORK CITY 9 (2017), <http://www.schallerconsult.com/rideservices/unsustainable.pdf> (“Fall 2016 [TNC] ridership averaging 15 million passengers per month was more than triple ridership levels in Spring 2015, the period studied in the City FHV report.”); *see also id.* at 16 (comparing the most recent analysis to that in the City’s report).

83. Tizra S. Wahrman, *Breaking the Logjam: The Peak Pricing of Congested Urban Roadways Under the Clean Air Act to Improve Air Quality and Reduce Vehicle Miles Traveled*, 8 DUKE ENVTL. L. & POL’Y F. 181, 196 (1998) (“Congestion is a classic negative externality. As additional road users occupy the road, the quality of service provided to all users declines.”); *see also* Jonathan Remy Nash, *Economic Efficiency Versus Public Choice: The Case of Property Rights in Road Traffic Management*, 49 B.C. L. REV. 673, 685–86 (2008).

84. Wyman, *supra* note 21, at 149 n.126 (excerpting Richard B. Coffman, *The Economic Reasons for Price and Entry Regulation of Taxicabs: A Comment*, 11 J. TRANSPORT ECON. & POL’Y 288, 295 (1977)).

85. OFFICE OF THE MAYOR, CITY OF NEW YORK, *supra* note 52, at 5. This report usefully distinguishes the factors that contribute to congestion in Manhattan’s Central

cant variation among jurisdictions in the relative contributions of these different sources of congestion and accordingly, in the costs and benefits of curtailing those sources.

There are reasons to believe that taxis, at least in certain places, might alleviate, rather than exacerbate, congestion.⁸⁶ Taxis can substitute for private cars if there are enough taxis to eliminate the need to own a car.⁸⁷ Multiple passengers travelling in the same taxi at the same time can further reduce congestion by reducing the number of private cars and taxis required to provide transportation services—and Uber, Lyft and other companies are now offering taxi pooling services in major U.S. cities that enable multiple customers to share a ride.⁸⁸ Then there is the effect of taxi availability on the use of mass transit. If taxis are cheap and accessible relative to mass transit, people might substitute taxis for mass transit, thereby increasing congestion.⁸⁹ But

Business District into “those that affect the volume (demand) of travel and those that affect the capacity (supply) of the roadway.” *Id.* at 4.

86. There is very limited empirical evidence about the impact of Uber and other apps on congestion, “although at least one study has shown that TNCs may be substituting for both transit and driving trips.” COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 29 (citing Lisa Rayle et al., *App-Based, On-Demand Ride Services: Comparing Taxi and Ridesourcing Trips and User Characteristics in San Francisco* (presented at the 2015 Annual Transportation Research Board Meeting, Washington, D.C. Jan. 2015)). As already mentioned, New York City released a study showing that the growth in for-hire vehicles attributable to Uber and other companies is not a major contributor to increasing congestion in the City’s Central Business District. OFFICE OF THE MAYOR, CITY OF NEW YORK, *supra* note 52, at 5.

87. Wyman, *supra* note 21, at 152 n.136 (citing sources). As one attentive reader pointed out to me, reducing private car ownership also might reduce congestion by reducing the number of cars driving around searching for parking places in crowded places such as Manhattan.

88. A report for the Transportation Review Board refers to pooling as “concurrent sharing of vehicles among strangers,” a phenomenon it contrasts with “sequential sharing of vehicles.” COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 2.

The text assumes that concurrent sharing displaces private cars and taxis, but if passengers shift from mass transit to concurrent sharing of taxis, then congestion could increase because taxis hold fewer passengers than mass transit vehicles. OFFICE OF THE MAYOR, CITY OF NEW YORK, *supra* note 52, at 6.

For a humorous article discussing the social counters facilitated by car-pooling services offered by Uber, Lyft and especially Via in New York City, see Caroline Tell, *With Via, Sharing More Than Just a Ride*, N.Y. TIMES (Dec. 30, 2015), <http://www.nytimes.com/2015/12/31/fashion/with-via-sharing-more-than-just-a-ride.html>.

89. Wyman, *supra* note 21, at 151; *see also* Dobson, *supra* note 10, at 703 (discussing a study that “found that TNCs both compete with and supplement public transit”) (citing Lisa Rayle et al., *App-Based, On-Demand Ride Services: Comparing Taxi and Ridesourcing Trips and User Characteristics in San Francisco* (Univ. of Cal. Transp. Ctr., Working Paper UCTC-FR-2014-08, Nov. 2014)); SCHALLER CONSULTING, *supra* note 82, at 18 (noting that in 2016, in New York City, as “taxi/for-hire ridership

the availability of cheap and accessible taxis also might increase mass transit use, and therefore reduce congestion, because taxis can be used to transport people from transit stops to their homes or offices.⁹⁰ In Manhattan, for example, seventy-six percent of households do not own a car,⁹¹ likely due partly to the ease of access to public transportation, as well as taxis.

Assume that taxis are a major contributor to congestion in a jurisdiction, and that the costs of curtailing taxi use make it worthwhile to target taxis as part of a package of policies to reduce congestion. Midtown Manhattan on a business day *might* be a place where it makes sense to curtail taxi use to reduce congestion: there is evidence that before Uber, yellow medallion taxis accounted for forty to sixty percent of the vehicles on city streets in Manhattan's central business district.⁹² Airports might be another place where taxis are major contributors to congestion, and restrictions might be justified as a low-cost way of addressing it, given limited space at airports. Nonetheless, a city-wide cap on the number of medallion taxis, like New York City's current cap of 13,587 medallion taxis,⁹³ is unlikely to be the lowest-cost method of curtailing taxi use in a place like Manhattan's central business district or at an airport. Jurisdiction-wide caps are blunt tools that limit the number of taxis even in places and at times where there are no congestion concerns, such as the city outside the

increase[ed],” “[s]ubway ridership declined for the first time in years and bus ridership dropped for the third consecutive year”).

90. Rayle et al., *supra* note 89, at 17 (providing “evidence,” based on survey and other data, “that ridesourcing both complements and competes with public transit”). Some transit agencies are taking steps to facilitate transit riders using Uber and Lyft to travel to and from transit stops, including incorporating the app services into the transit agency app. See Ellen Powell, *MBTA, Uber and Lyft Join Forces: Is This the Future of Paratransit?*, CHRISTIAN SCI. MONITOR (Sept. 17, 2016), <http://www.csmonitor.com/USA/2016/0917/MBTA-Uber-and-Lyft-join-forces-Is-this-the-future-of-paratransit-video>. A recent report recommends that transit agencies embrace transportation network services and other “‘emerging mobility’ services” as a “complement” to mass transit and provides examples of such cooperation, but also acknowledges that “there can . . . be tensions.” TRANSITCENTER, PRIVATE MOBILITY, PUBLIC INTEREST: HOW PUBLIC AGENCIES CAN WORK WITH EMERGING MOBILITY PROVIDERS 20 (2016).

91. Wyman, *supra* note 21, at 127 n.2 (citing HENNINGSON, DURHAM & RICHARDSON ARCHITECTURE & ENG'G, P.C., TAXI MEDALLION INCREASE: DRAFT ENVIRONMENTAL IMPACT STATEMENT ES-3 (May 2012)).

92. Wyman, *supra* note 21, at 149 & n.123. I use the term “might” advisedly. As mentioned above, New York City recently released a report that concluded that growth in the number of Uber vehicles is not “driv[ing] . . . the recent increase in congestion in the [Central Business District].” OFFICE OF THE MAYOR, CITY OF NEW YORK, *supra* note 52, at 5.

93. Van Zuylen-Wood, *supra* note 7.

central business district or the airports.⁹⁴ Perversely, these caps often lead taxis to concentrate in the areas of the city that are the most congested, because these also are the places where it is easiest for taxis to find passengers.⁹⁵ The caps also create barriers to entry that may increase taxi fares, and reduce service quality and innovation.⁹⁶

Congestion charges likely will be a lower-cost way of reducing congestion than limiting the number of taxis. They can be applied only to the areas of the city prone to congestion, such as the airport, and vary depending on the levels of congestion at a given place and time.⁹⁷ Economists have advocated congestion charges for all vehicles (not just taxis) for decades.⁹⁸ They have been implemented in some places such as London, though in a relatively crude manner.⁹⁹ In New York City and other places, there have been powerful political impediments to implementing congestion charges for vehicles.¹⁰⁰ There also may be legal impediments to local governments implementing congestion charges, as local governments may require state approval to implement such charges.¹⁰¹

The advent of e-hailing services such as Uber might provide the occasion for implementing congestion charging *for taxis* in specific areas such as an airport where traffic congestion is a major issue, and where taxis are a major contributor and a low-cost source of reductions. The technology that Uber uses for “surge pricing” could be adapted to implement a very sophisticated form of congestion charge

94. Wyman, *supra* note 21, at 150.

95. In New York City, for example, yellow taxis concentrate in the Central Business District of Manhattan, a few parts of Brooklyn, and the airports. *Id.* at 160.

96. *Id.* at 159–60.

97. *Id.* at 149–52 (citing sources).

98. For an interesting intellectual history of congestion pricing focusing on the British context, but discussing the American contributions to the idea of congestion pricing, see David Rooney, *The Political Economy of Congestion: Road Pricing and the Neoliberal Project, 1952-2003*, 25 TWENTIETH CENTURY BRIT. HIST. 628 (2014).

99. Darbéra, *supra* note 10, at 11 (“[T]he present London congestion charge scheme is far from being economically optimal . . .”).

100. *See, e.g.*, Nash, *supra* note 83; Bruce Schaller, *New York City’s Congestion Pricing Experience and Implications for Road Pricing Acceptance in the United States*, 17 TRANS. POL’Y 266 (2010). William Vickerey, who “offered the first detailed account of a practical congestion charging system,” anticipated that congestion pricing would be politically difficult to implement. Rooney, *supra* note 98, at 632.

101. In analyzing why then New York City Mayor Michael Bloomberg’s 2007 proposal for congestion pricing failed, Schaller observes that “congestion pricing in New York City needed approval by three legislative bodies (the City Council and each house of the [New York State] Legislature) as well as the Governor [of New York State].” Schaller, *supra* note 100, at 271.

for taxis.¹⁰² The charge could be varied based not only on where the vehicle is driving and when to reflect its contribution to congestion, but also the number of passengers, to credit individuals who are reducing the number of vehicles on the road by pooling. Revenues from the charge must flow to either state or local governments or airport authorities, not taxi drivers, lest the charge incentivize drivers to use congested city streets to earn higher fares. The time is ripe for moving from using a relatively crude cap on the number of taxis, implemented through property-like taxi medallions, to using a sophisticated pricing mechanism that builds on Uber's surge pricing.¹⁰³ But regulators should be cautious about imposing a congestion charge on taxis in the absence of concrete evidence that taxis contribute to congestion and that reducing the number of taxis is a low-cost way of reducing congestion. In particular, congestion pricing for taxis only might discourage the use of taxis, which might increase congestion by increasing the use of private cars and/or reducing the use of public transportation. It likely would be preferable to apply congestion charges to vehicles generally within the congested areas, at the congested times.

To be clear, the above analysis suggests that the number of app-dispatched taxis should not be limited, even if it can be demonstrated that they contribute to congestion in a particular community, because congestion charges are a more efficient way of reducing congestion from these vehicles. Congestion charges would be more efficient if applied to vehicles generally,¹⁰⁴ but subject to the just mentioned caveats, a congestion charge for taxis only in a specific area might be an

102. Surge pricing is a form of dynamic pricing. Under surge pricing, Uber fares increase when passenger demand for vehicles is high, for example on a busy Friday night. *What is Surge?*, UBER, <https://help.uber.com/h/e9375d5e-917b-4bc5-8142-23b89a440eec> (last visited Nov. 3, 2016). Surge pricing may bring demand and supply into balance, by attracting more drivers to the areas where prices are surging and reducing demand for rides in these areas. On the reasons why surge pricing can work to bring demand and supply into balance, see COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 74–76. For an interesting discussion of whether Uber's surge-pricing encourages more drivers to drive for Uber, see Nicolas Diakopoulos, *How Uber Surge Pricing Really Works*, WASH. POST (Apr. 17, 2015), <https://www.washingtonpost.com/news/wonk/wp/2015/04/17/how-uber-surge-pricing-really-works/>.

103. Darbéra also supports using a more sophisticated form of congestion pricing. Darbéra, *supra*, note 10, at 11. For a recent, relatively crude, proposal to apply a form of congestion charge on traditional New York taxis (and app-dispatched taxis), see MOVE NY, THE MOVE NY FAIR PLAN 19–20, 22, 26 (Feb. 2015).

104. For a discussion of how congestion pricing for vehicles generally would work, and some examples of congestion pricing in the U.S., see Nash, *supra* note 83, at 708–15, 723–25. For a call for congestion pricing in New York City in light of the growth in the number of for-hire vehicles, see SCHALLER CONSULTING, *supra* note 82, at 23–24.

efficient way of reducing congestion if taxis are contributors, and if curtailing their use is a low-cost way of reducing congestion. Limits on the number of traditional taxis also should be eliminated. These limits will not reduce congestion in a world where other forms of taxis are unlimited; limits on traditional taxis will merely induce consumers to substitute app-hailed for street-hailed and other pre-booked taxis, because app-hailed taxis will be more available as their numbers are unlimited.

This last proposal to remove limits on the number of traditional taxis, including street-hailed taxis, might strike some observers as unwise. For example, a 2015 report from the Transportation Research Board's Committee for Review of Innovative Urban Mobility Services cautioned against removing regulatory barriers to entering the street-hail taxi industry (or other regulations imposed on street-hailed taxis).¹⁰⁵ The Committee seemed to be of the view that because there are few natural barriers to entering the street-hail industry, if the number of street-hailed taxis is not regulated,¹⁰⁶ removing caps on the number of these taxis would increase the number of taxis, leading to problems of "oversupply," and greater traffic congestion in already-congested areas of the city, such as in "dense downtowns [and] airports."¹⁰⁷ The Committee pointed to the increase in the number of taxis in the relatively small number of jurisdictions that removed limits on the number of taxis in the late 1970s and early 1980s in the United States.¹⁰⁸ These arguments ignore the fact that Uber and other app-dispatched vehicles currently are essentially substitutes for street-hailed taxis because these vehicles often arrive with virtually the same immediacy as street-hailed taxis. So while New York City, for example, still legally limits the number of yellow taxis, it has functionally

105. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 80 ("Lessons from taxi deregulation suggest that allowing TNCs [transportation network companies] to compete in the street-hail market would lead to oversupply and excess competition; thus, the street-hail business does not appear to be a promising area for lighter regulation."). *But see* COMPETITION BUREAU, *supra* note 10 (recommending the elimination of "restrictions on the number of taxi plates" and that "all drivers" be allowed to "respond to street hails, regardless of whether they work for a taxi company or ride-sharing service, unless there is a compelling policy reason" to restrict picking up street hails).

106. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 70 ("The street-hail business—if unregulated—entails very low barriers to entry. A person with a vehicle can drive along crowded streets and find riders.").

107. *Id.* at 71, 77–79.

108. *Compare id.* at 49–51 (providing a generally negative account of experiments with taxi deregulation in the U.S.), *with* Wyman, *supra* note 21, at 147–48 n.121 (discussing efforts to deregulate the taxi industry in the U.S. and other countries).

removed the limit on the number of street-hailed vehicles by allowing for-hire vehicles to pick up passengers through e-dispatch.

Technology might be harnessed to address concerns that formally removing the existing legal limits on the number of street-hailed taxis might lead to oversupply in certain geographic areas. As mentioned above, variable congestion charges might be used to signal to street-hailed and other taxis the areas of the city that they should avoid, and the app provider might be charged with collecting the congestion charge on behalf of the governmental authority. Also, all taxis accepting street hails might be required to affiliate with at least one taxi app.¹⁰⁹ App companies with taxis picking up street hails might be required to provide affiliated drivers with constantly updated information about where and when taxis are needed in a jurisdiction, given the current demand for, and supply of, taxis.¹¹⁰ These requirements would enable street-hailed taxis to have information to tailor their work to areas and times of unmet passenger demand, and avoid adding to congestion by cruising in already well-serviced areas or times. More generally, the affiliation requirement would enable the City to recruit the app companies to aid in enforcing taxi regulations to protect public safety. For example, app companies could be required to ensure that vehicles affiliating with their apps meet certain standards. The technology that companies such as Uber have pioneered means that the situation is very different from the late 1970s and early 1980s. Regula-

109. On the idea of requiring taxis to affiliate with an app, see generally BUREAU DU TAXI DE MONTRÉAL & WINDELS MARX LANE & MITTENDORF, LLP, STUDY FOR A CENTRALIZED APPLICATION FOR TAXIS IN MONTRÉAL (Apr. 2016), <http://www.windelsmarx.com/resources/documents/Study%20for%20a%20Centralized%20Application%20for%20Taxis%20in%20Montreal%20-%20April%202016.pdf>. This report includes a discussion of the experiences of jurisdictions that have considered requiring taxis to join an app.

A precedent for an app-affiliation requirement might be New York City's existing requirement that for-hire vehicles affiliate with a base. N.Y.C. TAXI & LIMOUSINE COMM'N, *supra* note 22, at 2 ("TLC-Regulated Industries").

As implied in the idea that street-hailed taxis could be required to affiliate with at least one app, I would not require that street-hailed taxis be required to affiliate with only one app. Requiring them to affiliate with only one app would encourage them to affiliate with the app with the most customers and drivers, because that is the app through which they are most likely to gain business. In turn, limiting taxis to a single app would enhance the dominant app's market power.

110. The Committee for Review of Innovative Urban Mobility Services makes an important point when it observes that, to avoid drivers "clustering in areas" where they are not needed, it is necessary to provide drivers "with real-time information on places where the *ratio* of drivers to customers [is] . . . high and where it [is] . . . low." COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 78–79. Simply providing information on where demand is high, without information on the supply of taxis, could lead taxis to drive to areas where there are many passengers, but already enough taxis to serve them.

tors should not dismiss proposals for removing limits on entry now based on past experience, but rather should consider how technological changes might be enlisted to further public policy goals.¹¹¹

Fare Regulation

Many cities historically have regulated the fare levels of taxi services.¹¹² The standard justification for regulating the level of taxi fares for street-hailed taxis is imperfect information.¹¹³ When passengers hail taxis on the street, they are poorly positioned to assess whether a fare that a taxi is proposing is reasonable because riders lack essential information. The passenger will not know when the next taxi will come by and what it will charge, and searching for additional taxis to compare the prices that they would charge will be costly.¹¹⁴ Regulated fares avoid these search costs. Importantly, imperfect information does not justify regulating the level of taxi fares when taxis are booked by phone or summoned by app. When passengers call ahead, they can price shop by calling multiple taxi companies, provided the taxi companies will provide fare estimates that can be compared. Similarly, passengers using an app can compare prices of different companies using the companies' apps, assuming again that the companies will provide fare estimates that can be compared.¹¹⁵

111. See also COMPETITION BUREAU, *supra* note 10 (“[N]ew technologies which provide real-time data on the taxi industry may mitigate [congestion] problems which previously arose in deregulation experiments.”).

112. “In nearly all cities, taxi fares are set by regulation The regulations most commonly set a fixed fare rate that applies uniformly across all companies [F]ares are calculated on the basis of an initial charge (the ‘drop’), along with mileage and time charges.” COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 40. For the current regulated rates for New York City medallion taxicabs, see 35 RCNY § 58-26.

113. Seibert, *supra* note 74, at 72 (discussing imperfect information and imperfect coordination).

114. The driver also may lack information to negotiate a fare, because he or she will not know when the next passenger will come by or his or her destination, and searching for other passengers will be costly to the driver. Reflecting the potential that the rider’s and the driver’s information base could be improved by seeking out other drivers and riders, Gallick and Sisk argue in a well-known article that search costs are the basis for fare regulation. The idea is that a uniform fare avoids the need to engage in costly searches that could be used to establish a reasonable fare. Edward C. Gallick & David E. Sisk, *A Reconsideration of Taxi Regulation*, 3 J. L. ECON. & ORG. 117 (1987); see also Edelman & Geradin, *supra* note 10, at 303 (explaining why “dynamic pricing” is not generally permitted “for curbside hails”).

115. In June 2016, Uber announced that it will be moving to providing riders with “upfront fares” before riders book a ride, to enable them to know the cost of their ride before they book, not just to obtain an estimate of the likely fare. See Douglas Mac-Millan, *Uber Customers Will Get Upfront Pricing in New App Version*, WALL STREET J. (June 23, 2016), <http://www.wsj.com/articles/uber-customers-will-get-upfront-pric>

Economies of scale in the dispatch market may justify regulating the level of taxi fares for taxis that are obtained by phoning ahead, and potentially app-dispatched taxis. As mentioned above, traditional taxi companies that dispatch taxis by radio, and e-hailing services such as Uber, are two-sided markets.¹¹⁶ Several decades ago, economists recognized that there are economies of scale in dispatching taxis by radio that might enable a small number of companies to dominate the market in a jurisdiction, and that justify regulating the level of taxi fares. Customers benefit when a taxi company has more drivers, because it is easier to get a taxi quickly; drivers benefit when the company has more customers, because it is easier to get a fare.¹¹⁷ Likewise today, many argue that there are economies of scale in using apps to match passengers and drivers, because passengers benefit when a platform like Uber has large numbers of drivers, and drivers benefit when the platform has a large network of passengers. Some commentators even suggest that Uber is a natural monopoly because of these economies of scale, and that regulating the level of its fares is warranted given the potential that it may charge “above cost” fares using its market power.¹¹⁸

ing-in-new-app-version-1466731781; Arundhati Singh & Dennis Zhao, *Upfront Fares: No Math and No Surprises*, UBER (June 23, 2016), <https://newsroom.uber.com/upfront-fares-no-math-and-no-surprises/>.

It is now possible to compare online the prices that Uber and Lyft charge for the same trip. See Yoni Heisler, *You Can Now Figure Out if Uber or Lyft Is More Expensive Before You Ride*, N.Y. POST (Mar. 31, 2016), <http://nypost.com/2016/03/31/you-can-now-figure-out-if-uber-or-lyft-is-more-expensive-before-you-ride/>; Aimee Picchi, *Uber vs. Taxi: Which Is Cheaper?*, CONSUMER REP. (June 10, 2016), <http://www.consumerreports.org/personal-finance/uber-vs-taxi-which-is-cheaper/>.

116. See *supra* note 33 and accompanying text.

117. FRANKENA & PAUTLER, *supra* note 34, at 54–55; see also COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 70 (stating that “dispatch taxi firms [have] some qualities of a natural monopoly” because of “high barriers to entry”); Darbéra, *supra* note 10, at 12 (“The market for taxis booking by telephone is” a natural monopoly in Paris, where it is controlled by the “G7 monopoly.”).

118. Posner, *supra* note 10. For other commentators who suggest that Uber is a natural monopoly, see Weyl & White, *supra* note 10; Darbéra, *supra* note 10, at 12, 15–16; FTC Workshop, *supra* note 10, at 21 (remarks of Glen Weyl). On the other hand, Joshua Gans doubts that Uber is a monopoly. FTC Workshop, *supra* note 10, at 35, 38 (remarks of Joshua Gans). Edelman and Geradin maintain that “the growth of software platforms [including Uber] seems to trigger few competition law concerns.” Edelman & Geradin, *supra* note 10, at 304. Liran Einav suggests that there are powerful network effects at play that may diminish competition. FTC Workshop, *supra* note 10, at 38 (remarks by Liran Einav). For a nuanced discussion of the potential for a transportation network company to evolve into a monopoly, see COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 76–77.

Viscusi et al. state that “[a] market is a *natural monopoly* if, at the socially optimal quantity, industry cost is minimized by having only one firm produce.” W. KIP VISCUSI ET AL., *ECONOMICS OF REGULATION AND ANTITRUST* 376 (2005).

It is important to recognize that the case for regulating the level of taxi fares based on economies of scale in the dispatch service is contingent on the dispatch service having sufficient market power to dictate prices. Before the advent of Uber, there may have been economies of scale that enabled a single taxi company to exert market power in some jurisdictions. But with Uber, these traditional taxi companies face new competition and they are no longer monopolies, which suggests that there is less justification for regulating fare levels. Likewise, if the levels of these companies' fares are not set by regulators, these companies could compete with Uber on price, and therefore reduce the likelihood that Uber itself will evolve into a monopoly. Moreover, some jurisdictions might have "good substitutes [for taxis], such as public transit,"¹¹⁹ that compete with Uber and traditional taxi companies for passengers, based partly on price.

What does this analysis imply for the regulation of taxi fares? First, it suggests that we should not be regulating the fare levels of apps such as Uber, at least at this point in time.¹²⁰ There is no rationale for doing so based on imperfect information. Also, Uber is not yet a monopolist dictating market prices. In many places it seems to still have many competitors that collectively have significant market share, including both traditional taxis and competing apps, such as Lyft. As an indication, in New York City, as of April 2016, yellow taxis made 65 percent of trips, compared with 27 percent for Uber, 4 percent for Lyft, 3 percent for Via, and 1 percent for Gett, though the share of trips by yellow taxis was down from "84 [percent] . . . in April 2015."¹²¹ Moreover, it is not yet clear that Uber will evolve into

119. FRANKENA & PAUTLER, *supra* note 34, at 55.

120. As others have noted, Uber sets the prices that its drivers charge. It "is a critical price-setting intermediary," Rogers, *supra* note 10, at 89, that "uses a version of average-cost pricing; all Uber drivers charge you the same amount, based on congestion as well as distance," Posner, *supra* note 10. The way that Uber sets prices for rides through contracts with drivers recently has led to allegations that it is engaging in price-fixing, contrary to the Sherman Act. First Amended Complaint, *Meyer v. Kalanick*, 174 F. Supp. 3d 817 (S.D.N.Y. 2016) (No. 1:15-cv-09796), 2016 WL 950376. Judge Jed Rakoff denied the defendant's motion to dismiss in this case. *Meyer*, 174 F. Supp. 3d 817.

121. Elena Holodny, *Uber and Lyft Are Demolishing Yellow Taxi Drivers*, BUS. INSIDER (Oct. 12, 2016), <http://www.businessinsider.com/nyc-yellow-cab-medallion-prices-falling-further-2016-10> (reporting data shared by Morgan Stanley); *see also* SCHALLER CONSULTING, *supra* note 82, at 9 (noting that in the fall of 2016, Uber provided "72 percent . . . of all TNC trips in" New York City, Lyft provided "12 percent," and "Via, Juno and Gett" provided the rest); COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 21 (noting that in New York City, "[a]s of March 2015," yellow cabs are making "10 times the number of trips made by Uber cars"); *id.* at 22 ("Lyft provided 30 percent of trips" by 380 TNC users surveyed

a monopoly. New players could enter the app market, as there are relatively low fixed costs in establishing a taxi app, and it is easy for passengers and drivers “to join and use several platforms.”¹²² Even if Uber evolves into a monopoly that can dictate taxi fares, the case for regulating fare levels may be selective, rather than general. Some cities might be justified in not regulating its fare levels because their residents have other sources of transportation, such as mass transit. Other cities may be required to regulate fares because there are no substitutes.

The levels of fares charged by traditional taxi companies dispatching taxis in response to phone calls also should no longer be regulated. Imperfect information does not justify regulating these companies’ fares, as passengers can comparison shop by calling around to different taxi companies or comparing the fares charged by Uber and traditional taxi companies. If there historically was a single traditional taxi company because of economies of scale, the advent of Uber means that the traditional monopoly now has competition and so economies of scale no longer argue in favor of regulating fare levels. Indeed, as mentioned above, it may be helpful to deregulate the fare levels of traditional taxi companies to enable them to compete on price with Uber, to reduce the likelihood that it will evolve into a monopoly.¹²³

The most difficult question is whether fare levels should continue to be regulated for street-hailed taxis. Requiring street-hailed taxis to use government determined fares inhibits these taxis from competing with transportation network companies on price,¹²⁴ and leaves these

in San Francisco, while UberX provided fifty-three percent of trips and “other Uber services . . . represented another 8 percent.”).

However, there are indications that Uber may be becoming a significant provider of taxi services in some places in the United States. *See, e.g., Meyer*, 174 F. Supp. 3d at 821 (“Uber’s own experts have suggested that in certain cities in the U.S., Uber captures 50% to 70% of business customers in the combined market of taxis, cars for hire, and mobile-app generated ride-share services.”).

In China, Didi Chuxing, not Uber, is the leading taxi app, and Uber sold its Chinese operations to Didi Chuxing. Paul Masur & Mike Isaac, *Uber to Sell to Rival Didi Chuxing and Create New Business in China*, N.Y. TIMES (Aug. 1, 2016), <http://www.nytimes.com/2016/08/02/business/dealbook/china-uber-didi-chuxing.html>.

122. Evans & Schmalensee, *supra* note 33, at 166. Switching between platforms is often referred to as multihoming.

123. Consistent with what I am suggesting, New York City historically has not regulated the fare levels of for-hire vehicles not providing street-hailed service, because passengers using such vehicles have the opportunity to comparison shop. Brief for Respondents at 18–19, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. Apr. 15, 2016).

124. The traditional taxi industry argues that government fare regulation inhibits it in the current competitive environment. Amended Complaint at 8–9, 55, *Melrose Credit*

companies free to set their fares below the regulated fare levels of street hailed taxis to attract riders away from them.¹²⁵ But the problem of imperfect information remains today, as passengers hailing a cab on the street still may be poorly positioned to evaluate the reasonableness of the fare that the driver offers or to negotiate a fare with the driver. The problem is much less acute than in the past because many of the people hailing taxis on the street have smartphones that they easily can use to check when an Uber vehicle might arrive at their location, and know the fare that the Uber vehicle would charge.¹²⁶ Since search costs now are lower for passengers hailing from the street, they are better positioned to evaluate the reasonableness of fares proposed by drivers. Drivers have access to the same information, and presumably would be disciplined in the fares they propose by competition from transportation network vehicles such as Uber cars.¹²⁷ Nonetheless, until everyone has a smartphone, there still will be some potential taxi

Union v. City of New York, No. 1:15-cv-09042 (S.D.N.Y. Mar. 7, 2016) (referring to “inflexible metered fare restrictions”). Medallion owners suggest that government-determined fares impede the industry from competing for drivers as well as passengers. *See, e.g.*, Complaint at 8, Newark Cab Ass’n v. City of Newark, No. 2:16-cv-04681 (D.N.J. Jan. 17, 2017), 2017 WL 214075 (case dismissed) (“By requiring traditional taxis to operate under burdensome regulations and to charge only City-dictated prices, while allowing the *de facto* taxis to pay lower fees and charge fares that escalate well above taximeter fares at times of high demand, the City has given the *de facto* taxi companies an unfair advantage in recruiting drivers. Transportation Plaintiffs have, as a result, lost many drivers to the *de facto* taxi companies, resulting in lost revenue and a higher percentage of idle taxis.”); *id.* at 27–28 (“The absence of required, uniform rates gives Uber a substantial competitive advantage over Transportation Plaintiffs These pricing differences help Uber attract customers (and build brand loyalty) at certain times and give them an edge over Transportation Plaintiffs in the recruitment of drivers.”).

125. For an interesting article comparing the fares of Uber and traditional taxis, see Picchi, *supra* note 115. In arguing that New York City medallion taxis should have greater pricing flexibility, the medallion owner and financier plaintiffs in *Melrose Credit Union* note that “Uber announced on January 26, 2016, that it was going to dramatically slash its fares in New York City to further accelerate ridership gains, rendering them as much as 35% lower than regulated medallion taxicab fares.” Amended Complaint at 64, *Melrose Credit Union*, No. 1:15-cv-09042.

126. “Currently, [sixty-four] percent of Americans own smartphones, a percentage that reflects rapid growth (from 35 percent in 2011) across all common demographic categories (income, gender, age, and race).” COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 143. For a discussion of the ease of obtaining fare information about Uber rides, see *supra* note 115.

127. Also, if regulators require street hailed taxis to affiliate with at least one app, then one or more of the apps may determine the fare that the driver charges. As mentioned above, Uber today determines the fares that drivers charge. *See supra* note 120. If an app company determines the fare, even when the taxi is street hailed, then there is no scope for bargaining between the passenger and the driver, and no room for the driver to take advantage in fare-setting of the passenger’s lack of information about when the next taxi will be available and what it might charge.

riders who lack the ability to compare competing fares and who could be vulnerable to high fares from taxi drivers if drivers and riders were left to determine fares on an individualized basis. Taxi fares increased in jurisdictions that deregulated taxi fares (and entry) in the late 1970s and early 1980s, before the spread of smartphone technology.¹²⁸

The idea of drivers and riders determining fares in an unregulated environment points to another reason to retain fare level regulation for street-hailed taxis: in the absence of the government establishing fare levels, it will be necessary for drivers and riders to bargain. This will make it more cumbersome for passengers to use street haled taxis and possibly encourage a shift to Uber and other transportation network companies with standardized pricing, and thus increase the likelihood that Uber will gain market dominance. Allowing bargaining over fares also might lead to discrimination against passengers based on prohibited grounds such as their destination or race, as drivers could insist on higher fares to take different passengers.¹²⁹ Moreover, the need for riders and drivers to bargain could give rise to congestion externalities on the streets and at cab stands as taxis take up space on the street while riders and drivers bargain.

There are intermediate options that regulators might consider to provide the street-hailed sector with greater latitude to compete with transportation network company vehicles on price, but not go so far as to completely delegate fare-setting to driver-passenger negotiations. For example, government fare level regulation might take the form of establishing maximum fares, rather than prescribing uniform fares.¹³⁰

128. Wyman, *supra* note 21, at 160 n.178 (discussing the effects of experiments with the removal of entry and fare regulation); *see also* COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 50.

129. On the universal service requirement for taxis, *see infra* notes 201–203 and accompanying text.

130. *Cf.* COMPETITION BUREAU, *supra* note 10 (recommending the “eas[ing] of price controls, such as regulated taxi fares, to allow fares to be adjusted during periods of varying demand, such as weekends, evenings and bad weather”). The Canadian Competition Bureau seems to think that “maximum fares” might be desirable, as it refers positively to the introduction of maximum fares in Australia. COMPETITION BUREAU, *supra* note 10, at n.53.

There are longstanding arguments that taxi fare level regulation should take the form of maximum fares, not uniform fares. FRANKENA & PAUTLER, *supra* note 34, at 37–66. Frankena and Pautler’s analysis is somewhat dated, however, and additional economic analysis would be beneficial of the merits of using maximum fare regulation given today’s market conditions in the taxi industry.

Miami-Dade County is an example of a jurisdiction using maximum fare regulation for incumbent taxis in the age of Uber. Miami-Dade County allows traditional taxis “to establish their own rates, with the exception of the airport or seaport, as long as those rates do not exceed a maximum rate established by the County Commission.” Motion to Dismiss Amended Class Action Complaint at 6–7, n.3, *Miadeco Corp. v.*

Street-hailed taxis could be allowed to charge fares below the maximum levels, but obligated to disclose their fare structures and potentially how they depart from the maximum fare levels. Still, allowing taxis to set their own fares as long as they remain below a maximum fare would lead to drivers and riders bargaining with the risks identified above, unless drivers somehow were aggregated into fleets that adopted a common fare structure, perhaps by joining an app, and found a way to signal to customers the group's fare structures before the customers entered the vehicle. Another intermediate option would be for regulators to set a small number of regulated fare levels—say, “high,” “medium,” and “low.”¹³¹ Regulators could require street-hailed drivers to choose among these fare levels, and signal their choice to consumers, perhaps by displaying a colored light on the outside of the cab. Different colored lights could be used to signal each of the regulated fare levels, with the number of possible fare levels (and therefore light colors) limited to reduce consumer confusion. Such a system would give street-hailed taxis some, but not total, flexibility to compete based on price without requiring drivers and passengers to engage in costly fare negotiations for every ride. However, allowing drivers to choose a fare level might facilitate discrimination against passengers based on prohibited grounds such as destination or race, because drivers might insist on the highest fare level if they do not want to drive a passenger.

If the fare levels of street-hailed taxis remain regulated, even through maximum fares or a limited menu of fare levels from which drivers select, regulators will need to grapple with the fact that taxis that take street hails also may be picking up passengers by phone and by app. This raises the question of whether to regulate the fare levels of street-hailed taxis not only when they are picking up street hails, but also when they are picking up passengers by phone and by app. As discussed above, there is not a strong argument for regulating the fare levels of taxis summoned by phone or app based on information costs or economies of scale. Also, regulating the fare levels of taxis that take street hails when they are summoned in these ways will inhibit the ability of taxis to compete on price with other vehicles, such as Uber vehicles currently, that pick up passengers only through app. On the other hand, it might seem administratively simpler to regulate all the fares of taxis that can be street hailed, regardless of whether the taxi is in fact picking up passengers through street hails. Regulating

Miami-Dade County, No. 1:16-cv-21976 (S.D. Fla. June 29, 2016) (referring to Ordinance No. 16-43).

131. Thank you to Marcel Kahan for this suggestion.

the fares of taxis only when they are engaged in a street-hailed ride, but not when driving a passenger met through an app, raises the question of how to set the regulated fare given that the driver potentially has the option of picking up by app and earning the prevailing market fare instead of the regulated fare for street hails. It is possible that the behavior of taxi drivers will not be heavily influenced by the potential to charge different fares depending on how they pick up passengers and so regulators could ignore the market fare option in establishing the regulated fare for street hails. Drivers may take the first passenger that they encounter, regardless of whether they encounter that person through a street hail or by app, because they prefer a “bird in the hand to two in the bush.”¹³² However, in theory, taxis could behave strategically if their fares are regulated for street-hailed passengers, but not other passengers. Taxis required to charge a regulated fare when picking up a street hail might avoid such hails if the regulated fare is below the market price that they can obtain by picking up a passenger by app. Conversely, if the regulated fare is higher than the market price, taxis might prefer to pick up passengers through street hails, even if consumers prefer to summon taxis by app.

New York City currently takes two different approaches to the issue of regulating fares of taxis legally authorized to pick up by street hail and other means. As mentioned above, yellow taxis are allowed to pick up passengers by street hail and through pre-arrangement, including by app. The Taxi and Limousine Commission currently sets the fares for all trips taken by yellow taxis, a decision that it is defending in litigation.¹³³ The City points out that while “[yellow t]axis make hundreds of thousands of trips every day,” “[a]pp-arranged rides constitute a tiny fraction of these rides.”¹³⁴ It argues that “if it were to

132. Thank you again to Marcel Kahan for this observation.

133. The plaintiffs in *Melrose Credit Union* argue that “medallion taxicabs should be free to engage in flexible rate structures, just as e-hailing companies such as Uber are permitted, at least for those passengers who utilize E-Hails to secure medallion taxicabs, in order to ensure that these similarly situated services are not treated disparately.” Amended Complaint at 54, *Melrose Credit Union v. City of New York*, Case No. 1:15-cv-09042 (S.D.N.Y. Mar. 7, 2016); see also *id.* at 70 (“[T]here is no justification for the disparate regulatory treatment in fare restrictions, such that when a passenger raises their arm or swipes a button to E-Hail a medallion taxicab, that passenger must not only know the rate of fare in advance, but also that this rate of fare be determined by Defendants; but if the same passenger decides to swipe that smartphone button in the opposite direction and E-Hails a company such as Uber, Lyft or Gett, those rules no longer apply.”).

134. Brief for Respondents at 56, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. Apr. 15, 2016). In support of this statement, the City indicates that “[d]uring the two-year e-hail pilot program, only 0.39 percent of yellow taxi rides were arranged by a smartphone app.” *Id.* The program to which the City is referring

permit a two-tiered pricing system that allowed app-arranged rides to be more lucrative, drivers might focus on app-arranged rides to the detriment of street hailers.”¹³⁵ However, New York City does allow a “two-tiered pricing system” for the green taxis that service upper Manhattan and New York City’s outer boroughs through street hails and prearrangement, including by app.¹³⁶ The Taxi and Limousine Commission now “sets the fare when the [taxi] . . . is hailed” (including e-hailed through an app), while “the base [dispatching the vehicle] sets the fare when the fare is pre-arranged.”¹³⁷ The Commission-set fares for green taxis are the same as the regulated fares for yellow taxis.¹³⁸ The Commission’s practice suggests that it is not concerned about the incentive effects of the dual pricing regime on green taxi drivers, even while it is arguing that incentive effects justify maintaining a single pricing structure for yellow taxis.¹³⁹

In summary, fare levels should not be regulated for taxis that provide only pre-arranged taxi service, whether that service is arranged

was implemented in 2013–14. *Id.* at 27–30; *see also* Black Car Assistance Program v. City of New York, No. 100327/13, 2013 WL 1808082 (N.Y. Sup. Ct. 2013), *aff’d* 110 A.D. 3d 618 (N.Y. App. Div. 2013); N.Y.C. TAXI & LIMOUSINE COMM’N, E-HAIL PILOT PROGRAM FINAL REPORT (Jan. 28, 2015), http://www.nyc.gov/html/tlc/downloads/pdf/ehail_q5_report_final.pdf. In contrast, medallion owner and financier plaintiffs in *Melrose Credit Union* suggest that the share of medallion taxi trips originating through e-hails is much larger than the City estimates—indeed, they state that “[o]n information and belief, approximately one-third of medallion taxicab hails on average are now being made through E-Hails—i.e., approximately 131,000 hails per day are E-Hails and approximately 262,000 per day are made through traditional taxi street hails.” Amended Complaint at 52–53, *Melrose Credit Union*, No. 1:15-cv-09042.

135. Brief for Respondents at 57, *Glyka Trans LLC*, No. 2015-11661.

136. Matthew Flamm, *Taxi-Hailing App Takes On Uber with a New Weapon*, CRAIN’S N.Y. BUS. (Mar. 23, 2016), <http://www.crainsnewyork.com/article/20160323/TECHNOLOGY/160329946/verifones-taxi-hailing-app-curb-takes-on-uber-with-advance-booking>; Andrew J. Hawkins, *Meet the Taxi Industry’s Last, Best Hope to Survive Uber Age*, CRAIN’S N.Y. BUS. (Aug. 27, 2015), <http://www.crainsnewyork.com/article/20150827/BLOGS04/150829899/meet-arro-the-yellow-taxi-industrys-last-best-hope-to-compete-with-uber>; *Your Guide to Boro Taxis*, N.Y.C. TAXI & LIMOUSINE COMM’N, http://www.nyc.gov/html/tlc/html/passenger/shl_passenger.shtml (last visited Jan. 22, 2017).

137. N.Y.C. TAXI & LIMOUSINE COMM’N, *supra* note 22, at 2 (“TLC-Regulated Vehicles”). The Curb and Arrow apps charge the regulated fares for green taxis summoned by the app. *See* Flamm, *supra* note 136; Hawkins, *supra* note 136.

138. *Your Guide to Boro Taxis*, N.Y.C. TAXI & LIMOUSINE COMM’N, http://www.nyc.gov/html/tlc/html/passenger/shl_passenger.shtml (last visited Jan. 22, 2017).

139. In arguing for greater pricing flexibility, medallion taxi owners and financiers in *Melrose Credit Union v. City of New York* indicate that Chicago has amended its taxi ordinances to allow “the use of ‘surge pricing’ when taxis are dispatched from an app or digital platform.” Amended Complaint at 73, *Melrose Credit Union*, No. 1:15-cv-09042. From the context, it appears that traditional Chicago taxis are given the flexibility to engage in surge pricing.

by app or by phone call.¹⁴⁰ If Uber or another app emerges as a monopoly and uses its market power to dictate high fares, then regulators could institute fare level regulation for pre-arranged service. At this time, regulators likely are justified in requiring the disclosure of fares for pre-arranged service and regulating the format in which fares are disclosed, to address information problems that consumers may face in comparison shopping among services.¹⁴¹ Regulators also should revisit fare level regulation of street-hailed taxi service. Requiring street hailed taxis to charge a regulated fare inhibits them from competing with pre-arranged service providers, such as the transportation network companies, on price. Nonetheless, such fare level regulation still may be justified given the information problems burdening passengers hailing cabs on the street or at cab stands, the potential for fare discrimination to emerge on prohibited grounds if fares are not standardized, and the externalities that individualized fare negotiations between riders and drivers might generate for other users of street space. However, it might be desirable to allow taxis that pick up street hails to charge unregulated fares when they are picking up passengers in other ways, for example by app or phone call, to enable these taxis to compete on price with the providers of only prearranged taxi service when the taxis are providing similar services.

Consumer Safety Regulation

Cities regulate the attributes of taxi drivers, for example by requiring that they are a certain age; that they undergo training, drug

140. Posner may acknowledge that it is premature to regulate Uber fares now. *See* Posner, *supra* note 10; *see also* Rauch & Schleicher, *supra* note 10, at 937 n.204 (“The firms do not appear to have any substantial market power yet, and while there are some economies of scale and network effects, two-sided markets do not, as a general matter, regularly result in monopolies.”).

141. In April 2016, the New York City Council passed legislation requiring that “black car base[s],” “luxury limousine base[s],” and “dispatch service provider[s]” “allow prospective passengers to request a fare quote prior to booking transportation”; the legislation also prohibits the passenger from being charged “more than 120 percent of the price quoted unless such passenger takes any action to alter the estimated route.” N.Y.C., N.Y., Law 2016/049 (Apr. 21, 2016). The legislation built on existing Taxi and Limousine Commission rules, and followed similar legal requirements as those in Chicago. *See* 35 RCNY §§ 77-15, 77-20(a), (d); REPORT OF THE HUMAN SERVICES DIVISION, *supra* note 25, at 7; Joshi Testimony, *supra* note 66, at 2–4. As the chair of the Taxi and Limousine Commission noted in testimony on the bill, legislating that fare quotes be binding may not have been necessary given “that market-driven customer service concerns [should] . . . largely prevent companies from charging above a fare estimate.” Joshi Testimony, *supra* note 66, at 3. As previously noted, Uber now provides upfront fares, and it is possible to compare online the prices that Uber and Lyft charge for the same trip. *See supra* note 115.

testing and criminal background checks; and that they are certified as fit for the job of taxi-driving by a physician.¹⁴² Cities also require that taxis are insured in case of accidents,¹⁴³ and that the vehicles meet certain specifications.¹⁴⁴ Regulating attributes of drivers and vehicles for health and safety is justified based on asymmetric information. Taxi riders presumably want to ride in taxis that are well maintained, driven by safe drivers, and insured in case of accidents. But it is costly for riders to verify whether drivers and vehicles have these attributes (information which likely is known to the driver).¹⁴⁵ Regulating some driver and vehicle attributes also may be justified based on externalities. Unsafe drivers and improperly maintained vehicles can endanger third parties, such as pedestrians and other drivers injured in accidents.¹⁴⁶

There is a strong case, justified by asymmetric information and potential externalities, that the same minimum standards that apply to traditional taxis and their drivers should apply to the drivers of app-dispatched taxis and their vehicles.¹⁴⁷ As with traditional taxis, consumers presumably want to know that Uber drivers are safe drivers and do not have criminal backgrounds, that their vehicles are mechani-

142. See 35 RCNY § 54-04; *Ill. Transp. Trade Ass'n v. City of Chicago*, 134 F. Supp. 3d 1108, 1110–11 (N.D. Ill. 2015), *aff'd in part & rev'd in part*, 839 F.3d 594 (7th Cir. 2016) (“[T]axis must undergo Chicago Police Department background check . . . [and] submit annual drug tests conducted by authorities approved by the Commissioner Taxi drivers must have a chauffeur license, requiring a background check by the Chicago Police Department, training, safety courses and continuing education.”).

143. See 35 RCNY § 58-13 (detailing the insurance requirements for New York City medallion taxicabs); *Ill. Transp. Trade Ass'n*, 134 F. Supp. 3d at 1110 (noting the insurance requirements for Chicago taxicabs). See generally COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 114–15 (describing local and state insurance requirements for traditional taxi industry); Darbéra, *supra* note 10, at 3.

144. *Ill. Transp. Trade Ass'n*, 134 F. Supp. 3d at 1111 (explaining that Chicago “[t]axis must meet certain vehicle requirements under the Ordinance, including age and condition”); see also COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 104–05 (describing vehicle inspection requirements).

145. See Wyman, *supra* note 21, at 152–53 (citing sources); COMPETITION BUREAU, *supra* note 10 (“[P]assengers are not well-placed to judge the mechanical safety of a vehicle or rate the quality of insurance.”).

146. See Edelman & Geradin, *supra* note 10, at 311; CPUC, *supra* note 26, at 3. Taxi passengers—and taxi drivers—also may have cognitive biases that lead them to underestimate the risks of unsafe vehicles and driving and to undervalue safety. Edelman & Geradin, *supra* note 10, at 317–18.

147. See COMPETITION BUREAU, *supra* note 10. But see Edelman & Geradin, *supra* note 10, at 305, 317–18 (suggesting that there might be a case, on cost-benefit grounds, for less stringent safety standards for drivers driving commercially for only a minimal amount of time).

cally sound, and that there is insurance in the event of an accident. Riders still will have difficulty verifying these attributes, even though Uber allows passengers to rate drivers, because riders cannot easily check the conditions of cars and driver qualifications. In addition, people on the street, who are not in the taxi, should not have to bear the cost of dangerous drivers or vehicles. Not surprisingly, a considerable amount of the initial regulation introduced by jurisdictions like California that have been open to the taxi apps is focused on establishing minimum standards for drivers, vehicles, and insurance in the case of accidents.¹⁴⁸ The insurance requirements for app-dispatched taxis have proven to be an especially contentious issue, as Uber and other app companies have been accused of providing insurance with gaps in coverage. Legislative interventions in many states have required companies like Uber and Lyft to increase the insurance coverage that they provide.¹⁴⁹ Whether transportation network company drivers should

148. See, e.g., *Ill. Transp. Trade Ass'n*, 134 F. Supp. 3d at 1115 (describing regulatory requirements imposed on “Transportation Network Providers” as including background checks, drug tests, vehicle inspection and insurance requirements, but emphasizing that the requirements imposed on TNPs are much less stringent than the requirements imposed on traditional taxis); CPUC, *supra* note 26; FTC Workshop, *supra* note 10, at 94–96 (remarks of Catherine Sandoval).

149. FTC Workshop, *supra* note 10, at 130 (remarks of Ashwini Chhabra) (“[N]ow there’s model legislation that’s being implemented in several states that puts the onus on Uber and any other TNC to carry coverage for all instances where the driver hasn’t purchased his or her own TNC-specific policy. . . . [The insurance industry is] developing insurance products specifically for TNC drivers.”).

For a lucid discussion of the insurance issues raised by the transportation network companies, the innovations that these companies have prompted in insurance, and a comparison of the insurance requirements for the traditional taxi industry and the new entrants, see COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 114–20; see also NATIONAL ASS’N OF INS. COMM’RS, TRANSPORTATION NETWORK COMPANY INSURANCE PRINCIPLES FOR LEGISLATORS AND REGULATORS (2015), http://www.naic.org/documents/committees_c_sharing_econ_wg_exposure_adopted_tnc_white_paper_150331.pdf.

The insurance coverage of taxi app drivers varies depending on the jurisdiction’s local legal requirements. In New York City, for-hire vehicle owners, which include Uber drivers, must carry a certain amount of liability insurance under Taxi and Limousine Commission rules. See 35 RCNY § 59A-12(c)(1) (requiring “\$200,000 per person, payable for those expenses specified in paragraphs 1, 2 and 3 of subdivision a of section 5102 of the New York State Insurance Law” and “\$100,000 minimum liability and \$300,000 maximum liability for bodily injury and death, as those terms are described and defined in section 370(1) of the Vehicle and Traffic Law”). These insurance coverage requirements, which apply twenty-four hours a day, seven days a week, mirror the amounts for New York City medallion taxis. See 35 RCNY § 58-13(a)(1), (d). These New York City rules make Uber’s generic insurance coverage irrelevant in New York City. See *Certificates of Insurance—U.S. Ridesharing*, UBER (Jan. 11, 2015), <http://newsroom.uber.com/2015/01/certificates-of-insurance-u-s-ridesharing/>.

be fingerprinted also has been a flashpoint.¹⁵⁰

Notwithstanding the market failure justifications for consumer safety regulation of traditional and app-based taxis, the existing regulatory regime for protecting passengers and third parties needs to be rethought along two dimensions. The ambit of consumer safety regulation needs to be carefully targeted to address only market failures. The stringency of consumer safety regulation also needs to be calibrated to ensure that it is set at levels that are cost-beneficial.

As part of ensuring that consumer safety regulation targets market failures, there is scope for narrowing the ambit of such regulation.¹⁵¹ The incumbent taxi industry likely is burdened with

150. Writing generally, and not referring to practices in specific jurisdictions such as New York City, the Transportation Research Board's Committee for Review of Innovative Urban Mobility Services explained that traditional taxi drivers may be subject to fingerprint checks as well as other criminal background checks. On the other hand, "the background checks" done for Uber and Lyft "do not include fingerprinting but do include checks of government criminal records in drivers' counties of residence." COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 101. The Committee did not locate "any careful empirical studies on the effectiveness" of the different methods of vetting drivers in protecting "passenger safety." *Id.* at 104; *see also id.* at 108–09.

In Austin, TX, in May 2016, a majority of voters voted to maintain municipal requirements that Uber and Lyft drivers be fingerprinted, like taxi drivers, even though Uber and Lyft threatened to leave Austin if the fingerprinting requirement was maintained. The referendum result is evidence of public support for similar consumer protection measures for traditional taxi drivers and Uber and Lyft drivers. *See* Mike McPhate, *Uber and Lyft End Rides in Austin to Protest Fingerprint Background Checks*, N.Y. TIMES (May 9, 2016), <http://www.nytimes.com/2016/05/10/technology/uber-and-lyft-stop-rides-in-austin-to-protest-fingerprint-background-checks.html>; Richard Parker, *Opinion, How Austin Beat Uber*, N.Y. TIMES (May 12, 2016), <http://www.nytimes.com/2016/05/12/opinion/how-austin-beat-uber.html>. Uber and Lyft withdrew from Austin after the referendum, but Uber has expressed interest in returning to Austin. Alex Samuels, *Uber Wants to Return to Austin, Spokesman Says*, TEX. TRIB. (Nov. 17, 2016), <https://www.texastribune.org/2016/11/17/uber-spokesman-austin-says-ride-hailing-app-may-re/>. In New York City, transportation network company drivers, like other taxi and for-hire drivers, "are fingerprinted for . . . criminal background check[s]." Karizza Sanchez, *How Safe Is Uber in New York City?*, COMPLEX (May 20, 2016), <http://www.complex.com/life/2016/05/uber-new-york-city-safety>.

For a report recommending the fingerprinting of "all for-hire ground transportation drivers," including taxi drivers and transportation network company drivers, using "biometric fingerprints," see MATTHEW W. DAUS & PASQUALINO RUSSO, ONE STANDARD FOR ALL: CRIMINAL BACKGROUND CHECKS FOR TAXICAB, FOR-HIRE, AND TRANSPORTATION NETWORK COMPANY (TNC) 4 (2015). The report advocates fingerprinting, not just name checks, because "[t]he fingerprint . . . is the one true identifier that cannot be stolen or falsified by the applicant." *Id.* at 11. However, the report also states that "[i]t is important to run both name and fingerprint checks for maximum reliability of the background check record." *Id.* at 18–19.

151. *See* Alex Tabarrok & Tyler Cowen, *The End of Asymmetric Information*, CATO UNBOUND (Apr. 16, 2015), <https://www.cato-unbound.org/2015/04/06/alex-tabarrok>

regulations justified in the name of consumer safety, which are unrelated to information asymmetries or externalities. Unjustified regulations should be eliminated for the incumbent industry and not applied to the new entrants. Consider, for example, the New York Taxi and Limousine Commission's ongoing "Taxi of Tomorrow" initiative to require that most yellow taxis in the future use a specific vehicle, a Nissan NV200 designed specifically to be a New York taxi. The Commission defends the decision to mandate that most taxis going forward use this vehicle as promoting "safety, health and comfort."¹⁵² But the decision seems at least partly rooted in a governmental desire to establish a new "iconic" taxi that will become as famous as the old Checker cab that many people still associate with New York City.¹⁵³ The ambit of consumer safety regulation also might be reduced because requirements that were once established to protect safety now no longer are needed due to technological advances that address the informational asymmetries that formerly necessitated regulation.¹⁵⁴

tyler-cowen/end-asymmetric-information; FTC Workshop, *supra* note 10, at 151–55 (remarks of Adam Thierer); CHRISTOPHER KOOPMAN ET AL., MERCATUS CTR., THE SHARING ECONOMY AND CONSUMER PROTECTION REGULATION: THE CASE FOR POLICY CHANGE (2014), <https://www.mercatus.org/system/files/Koopman-Sharing-Economy.pdf>.

152. Emma G. Fitzsimmons, *Top State Court Backs New York City's Taxi of Tomorrow*, N.Y. TIMES (June 25, 2015), <http://www.nytimes.com/2015/06/26/nyregion/top-state-court-backs-new-york-citys-taxi-of-tomorrow.html>.

153. Greater N.Y. Taxi Ass'n v. N.Y. City Taxi & Limousine Comm'n, 25 N.Y.3d. 600, 602 (2015) (upholding the Commission's authority to prescribe use of single vehicle).

154. See Cohen & Sundararajan, *supra* note 10 (discussing potential for self-regulation to deal with asymmetric information and externalities in the sharing economy); FTC Workshop, *supra* note 10, at 85, 87–88, 158–59, 166–68 (remarks of Arun Sundararajan). Sundararajan argues that platforms "seem like they would be quite effective" in addressing market failures due to information asymmetry, but not externalities, which a third party may need to address. FTC Workshop, *supra* note 10, at 87–88 (remarks of Arun Sundararajan). He notes, however, that self-regulation is not a "panacea." *Id.* at 166 (remarks of Arun Sundararajan).

In April 2016, the New York City Council passed legislation eliminating the requirement that black cars be retired once they reach a certain age. Under the new legislation, black cars can continue to be used if they pass inspections. N.Y.C., N.Y., Law 2016/050 (Apr. 21, 2016). In 2008, the New York Taxi and Limousine Commission had introduced rules requiring the retirement of the black cars "with the purpose of improving vehicle quality and service" but already had relaxed these rules considerably in 2015 because the increasingly competitive market for black car services now provided incentives to retire cars in line with consumer preferences. REPORT OF THE HUMAN SERVICES DIVISION, *supra* note 25, at 8–9 (Apr. 7, 2016). As the Chair of the Commission told the Council's Committee on Transportation, the upshot of the Commission's rule changes in 2015 is that the legislation will "eliminate the retirement requirement for the approximately 28% of black cars in service today that are Model Year 2012 or earlier." Joshi Testimony, *supra* note 66, at 2.

To some extent, the ambit of consumer safety regulation may need to be expanded to address new issues, such as privacy protection for consumer data. Service providers have been collecting credit card and trip data electronically for traditional taxis since the 2000s in New York City, but this data collection historically did not enable the service providers or taxi drivers to know the identity of taxi passengers in real time.¹⁵⁵ Uber collects location and financial information about its passengers that enables it to identify its passengers and their location in real time, and Uber has been criticized for misusing consumer data.¹⁵⁶ Regulations to protect passenger privacy might be grounded in information problems such as imperfect information (because riders and possibly the app companies themselves may not foresee uses of the data that they are collecting),¹⁵⁷ or asymmetric information (because the apps have better information about how they use consumer data than consumers, perhaps because it is too costly for riders to understand firm privacy policies),¹⁵⁸ or the idea that privacy is a public good that is likely to be under-provided by the market.¹⁵⁹

155. See 35 R.C.N.Y. § 75 (“Rules for Authorization of Taxicab Technology Service Providers”); *Alexandre v. N.Y.C. Taxi & Limousine Comm’n*, No. 07-cv-8175, 2007 WL 2826952, at *1 (S.D.N.Y. Sept. 28, 2007); *Taxicab Passenger Enhancements Project Archive*, N.Y.C. TAXI & LIMOUSINE COMM’N, http://www.nyc.gov/html/tlc/html/industry/taxicab_serv_enh_archive.shtml (last visited Jan. 22, 2017).

156. Electronic Privacy Info. Ctr., *Complaint, Request for Investigation, Injunction, and Other Relief in the Matter of Uber Technologies, Inc.* (Fed. Trade Comm’n June 22, 2015), <https://epic.org/privacy/internet/ftc/uber/Complaint.pdf>; see also Geradin, *supra* note 8, at 11; Natasha Singer & Mike Isaac, *Uber Data Collection Changes Should Be Barred, Privacy Group Urges*, N.Y. TIMES (June 22, 2015), <http://www.nytimes.com/2015/06/23/technology/uber-data-collection-changes-should-be-barred-privacy-group-urges.html>.

Concerns also have been raised about the use of data collected from the traditional taxi industry. For example, the New York Taxi and Limousine Commission has been criticized for releasing data about taxi drivers that could be easily de-anonymized. See Paul Ducklin, *New York City Made a Hash of Taxi Driver Data Disclosure*, NAKED SECURITY (June 24, 2014), <https://nakedsecurity.sophos.com/2014/06/24/new-york-city-makes-a-hash-of-taxi-driver-data-disclosure/>.

157. Megan Cox asks: “[I]f Uber or Lyft decided to offer grocery delivery service of the future, should it be able to use data collected from users at its transportation service?” FTC Workshop, *supra* note 10, at 171 (remarks of Megan Cox).

158. Maurice Strucke refers to the related potential that a platform could “use[] its market power to extract more data than what consumers might otherwise want.” FTC Workshop, *supra* note 10, at 162 (remarks of Maurice Strucke).

159. Glen Weyl suggests that privacy might be a public good. FTC Workshop, *supra* note 10, at 28 (remarks of Glen Weyl).

For differing views on whether regulation is necessary to protect consumer privacy, see Rogers, *supra* note 10, at 94 (arguing that “privacy issues will largely self-correct” because “[u]nlike Facebook and Google, sale or exploitation of user data does not seem to be a major revenue source for Uber”); FTC Workshop, *supra* note 10, at 171–72 (remarks of Sofia Ranchordás) (advocating platforms be treated as fidu-

Second, the level of consumer protection likely needs to be calibrated to reflect the costs and benefits of safety regulation. There is a lack of empirical evidence about the costs and benefits of safety regulations applied to the taxi industry, both the traditional industry and the new transportation network companies.¹⁶⁰ But some of the consumer safety regulations currently applicable to the incumbent taxi industry may be excessively stringent, given the benefits that they yield relative to their costs. For example, some of the requirements that taxis install certain forms of technology may be excessively stringent, given the benefits of the technology, or the possibility that newer technologies could yield the same benefits at lower cost.¹⁶¹ It is also likely

ciaries for information, drawing on ideas of Jack Balkin); and FTC Workshop, *supra* note 10, at 172–73 (remarks of Adam Thierer) (underscoring the “tension” between protecting privacy and addressing information asymmetries, and arguing against imposing fiduciary obligations on platforms, because they need access to information to address information asymmetries). For a survey of scholarship on the economics of information, highlighting that there are costs, and benefits, to regulating for the protection of privacy, see Alessandro Acquisti et al., *The Economics of Privacy*, 54 J. ECON. LITERATURE 442 (2016).

In April 2016, the New York City Council passed legislation requiring “[a]ll entities licensed by the [Taxi and Limousine] [C]ommission, or authorized by the commission to provide services regulated by the commission, that collect or maintain passenger personal information or passenger geolocation information” to “file with the commission an information security and use of personal information policy” that includes certain minimum requirements. N.Y.C., N.Y., Law 2016/043 (Apr. 21, 2016). As the Taxi and Limousine Commission chair noted in testimony on the bill, “the Council [was] not writing on a blank slate. TLC licensees are already subject to a complex set of federal and state laws, as well as TLC rules, governing the use of personal and credit card information.” Joshi Testimony, *supra* note 66, at 8.

160. Edelman & Geradin, *supra* note 10, at 311–12; COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 104.

161. *See, e.g.*, Amended Complaint at 35, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Nov. 17, 2015) (stating that “TLC [Taxi and Limousine Commission] specifications for taximeters, partitions, in-vehicle camera systems, credential holders, and ‘T-PEP’ taxicab technology” are among the rules that taxis, but not for-hire vehicles such as Uber vehicles, must follow). However, some of these tools, such as partitions and in-vehicle camera systems, may be more necessary to protect drivers in traditional taxis than they would be in transportation network company vehicles, because the identity of passengers in these vehicles is known to the TNC, unlike the identity of passengers in traditional taxis if the passengers are picked up through street hails. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 98–100. As the Committee reports, “[d]riving a taxi . . . is quite dangerous relative to other occupations” because drivers are allowing “strangers into their vehicles.” COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 99; *see also* Complaint at 10, *Bos. Taxi Owners Ass’n v. Baker*, No. 1:16-cv-11922-NMG (D. Mass. Jan. 24, 2017), 2017 WL 354010 (case dismissed) (noting that partitions “not only protect drivers from assault and theft but also protect the driver from impaired passengers that may interfere with the driver’s ability to operate the taxi”); Second Amended Complaint at 11, *Bos. Taxi Owners Ass’n v. City of Boston*, No. 1:15-cv-10100-NMG (D. Mass. Dec. 21, 2016), 2016 WL 7410777 (case

that some existing consumer safety regulations applicable to the incumbent taxi industry are insufficiently stringent in cost-benefit terms, and that these regulations should be made more stringent for both incumbents and new app-entrants. In particular, the minimum insurance requirements applicable to traditional taxis in New York City and other cities arguably are insufficiently protective in the event of a car accident.¹⁶² Notably, Uber's insurance coverage for passengers when a vehicle is "engaged in a prearranged ride" is more protective of passenger well-being than existing regulatory requirements for taxicabs in some cities.¹⁶³ The difference suggests the need to review the minimum insurance requirements that should apply to all forms of taxis, based on an analysis of the costs and benefits of different levels of insurance coverage.

An interesting question is whether the means of implementing and enforcing consumer safety regulations should be changed, given the emergence of large scale providers of taxi services such as Uber that rely on consumer rating systems and that have an incentive to protect their brands.¹⁶⁴ For example, cities might consider allowing

dismissed) (same). The New York Taxi and Limousine Commission recently changed its rules to allow the owners of all medallion taxis to install in-vehicle camera systems instead of partitions, but black cars (which include many Uber cars) are not required to install either device. N.Y.C. TAXI & LIMOUSINE COMM'N, Notice of Promulgation of Rules on In-Vehicle Camera Systems and 496 Waivers (2016), http://www.nyc.gov/html/tlc/downloads/pdf/newly_passed_rule_ivcs_496_waiver.pdf.

162. 35 RCNY § 58-13(a)(1), (d) (describing the insurance requirements for New York City medallion taxis, which are the same as the insurance requirements for New York City for-hire vehicles, which include Uber vehicles (35 RCNY § 59A-12(c)(1))); *see also* COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 119–120 (referring to the potential for innovation in insurance coverage for traditional taxis).

163. FTC Workshop, *supra* note 10, at 111 (remarks of Ashwini Chhabra); *see also* Edelman & Geradin, *supra* note 10, at 313; Christian Denmon, *Ride Sharing vs. Traditional Taxis: How Do Injury Insurance Claims Compare?*, HUFFINGTON POST (May 7, 2014), http://www.huffingtonpost.com/christian-denmon/ride-sharing-vs-tradition_b_5273964.html ("While there are still concerns over Lyft and Uber's personal property coverage for the driver, the bottom line is that the passenger in a Lyft or Uber vehicle often has more coverage available than if he or she was injured in an identical situation but in a taxi cab. In some states like Florida, that coverage can be more than 400 percent greater than the taxi cab's comparable coverage.").

164. Apps like Uber enable consumers to rate their drivers, which they presumably do based on features that are observable to consumers, such as the politeness of the driver and the cleanliness of the vehicle. Uber removes drivers from its system if their ratings fall below a certain level. *See* Berwick v. Uber Techs., No. 11-46739 EK (Cal. Labor Comm'r's Office June 3, 2015); James Cook, *Uber's Internal Charts Show How Their Driver-Rating System Actually Works*, BUS. INSIDER (Feb. 11, 2015), <http://www.businessinsider.com/leaked-charts-show-how-ubers-driver-rating-system-works-2015-2>; *see also* Edelman & Geradin, *supra* note 10, at 315–17 (analyzing ratings systems).

taxi services meeting a certain threshold of size to ensure compliance with driver and vehicle requirements established by regulators, subject to audits and spot checks by regulators.¹⁶⁵ Large virtual fleet managers like Uber are more likely to have the resources to establish inspection facilities and systems, and the reputational incentive to do so, than the historically fragmented taxi industry.¹⁶⁶ A drawback of allowing the large operators to self-regulate, albeit subject to oversight from regulators, is that self-regulation may provide the large operators like Uber with a cost advantage over smaller players. Thus allowing the larger operators to self-regulate might be in tension with guarding against the emergence of monopoly, a new function I discuss below for taxi regulators.

Worker Protections

Many taxi drivers currently are classified as independent contractors for many purposes.¹⁶⁷ Nonetheless, legislators and regulators have in some instances adopted limited measures to protect the health, safety and economic interests of taxi drivers. Medallion owners in some jurisdictions are required to purchase workers' compensation insurance for taxi drivers to whom they lease medallions, even though the drivers are otherwise considered independent contractors.¹⁶⁸ Cities

165. See, e.g., CPUC, *supra* note 26, at 26–33, 40–44 (imposing safety requirements on TNCs); FTC Workshop, *supra* note 10, at 159 (remarks of Arun Sundararajan) (advocating “delegated regulation by data” under which platforms enforce standards); FTC Workshop, *supra* note 10, at 126–27 (remarks of Matthew Daus) (referring to the Federal Motor Carrier Safety Administration approach for interstate trucking and other interstate transportation industries as an example of self-regulation subject to enforcement).

166. See Cohen & Sundararajan, *supra* note 10 (discussing the potential for self-regulation to deal with asymmetric information and externalities in the sharing economy).

167. See *supra* note 19.

168. See *Yellow Cab Coop., Inc. v. Workers' Comp. Appeals Bd.*, 226 Cal. App. 3d 1288, 1296 (1991) (stating that ten state courts have held that lessee cabdrivers “are or may be” employees for workers' compensation, while four state courts have held that they are not); COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 87 (“In several major jurisdictions in which taxi drivers are classified as independent contractors—including the states of Washington, Colorado, and New York, plus San Francisco and Chicago, among others—they nonetheless receive workers' compensation.”) (citation omitted).

In New York City and Chicago, legislation and regulations require medallion owners to purchase workers' compensation insurance. See N.Y. WORKERS' COMP. LAW §§ 2(3), 2(4), 18-c (McKinney 2014); 35 RCNY §§ 58-03(y), 58-14(a); Ill. Transp. Trade Ass'n v. City of Chicago, 134 F. Supp. 3d 1108, 1110 (N.D. Ill. 2015), *aff'd in part & rev'd in part*, 839 F.3d 594 (7th Cir. 2016) (noting that taxis must have “workers' compensation insurance, typically costing well over \$4,000 per year per taxi for coverage”); *FAQs – Medallion Owners & Agents*, N.Y.C. TAXI & LIMOUSINE

such as New York also cap the rates at which medallion owners can lease their medallions to taxi drivers.¹⁶⁹ Lease caps likely have less effect now because taxi drivers are switching to Uber and away from driving medallion taxis,¹⁷⁰ but when the demand from drivers to lease medallions routinely exceeded the supply of medallions, the lease caps likely often set lease prices. In doing so, the lease caps allocated fare revenues between medallion owners and taxi drivers, and effectively reserved some minimum share of the revenues for drivers, much like a collective agreement would have done if the drivers bargained collectively. The lease caps, which New York City introduced in 1996,¹⁷¹ functioned this way because they were combined with regulated taxi fare levels: through fare level regulation, the Taxi and Limousine Commission set the fares that drivers collected from passengers, and through the lease caps the Commission ensured that drivers retained some share of the fares, by preventing medallion owners from charging drivers all of the fares for the medallion.¹⁷²

As a historical matter, the health, safety and economic protections for taxi drivers were likely introduced due to concerns about inequality of bargaining power between taxi drivers and medallion owners.¹⁷³ This inequality of bargaining power is likely related to the

COMM'N, http://www.nyc.gov/html/tlc/html/faq/faq_medallion_owners_and_agents.shtml (last visited Nov. 13, 2016) (“You need Workers’ Compensation if you lease your medallion out to a driver.”); *Workers’ Compensation Coverage: Taxi Cabs—Most Taxi Cab Operators Are Considered Employees*, N.Y. ST. WORKERS’ COMPENSATION BD., <http://www.wcb.ny.gov/content/main/onthejob/CoverageSituations/taxi-Cabs.jsp> (last visited Nov. 12, 2016). New York City medallion owners also must provide drivers leasing medallions with disability benefits. *See Ahmed v. City of New York*, 129 A.D.3d 435, 437 (N.Y. App. Div. 2015).

In contrast, Boston taxi drivers are not covered by workers’ compensation (or unemployment insurance or income tax withholding requirements). *Sebago v. Bos. Cab Dispatch, Inc.*, 28 N.E.3d 1139, 1153 (Mass. 2015).

169. 35 RCNY § 58-21(c) (setting caps on standard lease rates). In Boston, police department rules established “flat lease rate[s]” for drivers leasing medallions and taxis. *Sebago*, 28 N.E.3d at 1145.

170. New York medallion owners seem to be reducing lease rates below the lease caps to attract drivers, although there may still be lucrative shifts (such as Fridays) when the lease caps set leasing rates. *See* Amended Complaint at 13, 33, 61, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Mar. 7, 2016).

171. *See* N.Y.C. TAXI & LIMOUSINE COMM'N, Notice of Final Rule Promulgation Adjusting the Maximum Lease Rates a Medallion Owner May Charge a Licensed Taxicab for Various Shifts (2004), http://www.nyc.gov/html/tlc/downloads/pdf/lease_rates.pdf.

172. *See* 35 RCNY § 58-21(c)(7) (codifying that lease caps do not apply if a collective agreement governs).

173. For indications that lease caps were intended to protect drivers against economic exploitation by medallion owners, *see*, for example, N.Y.C. TAXI & LIMOUSINE COMM'N, Notice of Final Rule Promulgation Adjusting the Maximum Lease Rates a

high costs of collective action that drivers face. Taxi drivers are not currently easy to organize in large cities like New York, where there are many taxi drivers, they work in individual cars that are constantly in motion, and there is the legal obstacle to unionizing if drivers are independent contractors.¹⁷⁴ Since many other low-income workers face prohibitively high costs of collective action, we might ask if there are special reasons for protecting the health, safety and economic interests of taxi drivers in particular.

Some of the existing protections for taxi drivers might be justified as a response to externalities, although I am unaware of empirical evidence tying protections for drivers to increased public safety. Theo-

Medallion Owner May Charge a Licensed Taxicab for Various Shifts (2004), http://www.nyc.gov/html/tlc/downloads/pdf/lease_rates.pdf (“[A] substantial increase in lease rates would have an adverse impact upon a driver’s income.”); Press Release, N.Y. State Office of the Attorney Gen., A.G. Schneiderman and TLC Secure First-of-Its-Kind Agreement Protecting Rights of Taxicab Drivers (Dec. 19, 2013), <http://www.ag.ny.gov/press-release/ag-schneiderman-and-tlc-secure-first-its-kind-agreement-protecting-rights-taxicab-0>; Richard Perez-Pena, *Cab Fleet Coalition Seeks Increase of 27% in Fares*, N.Y. TIMES, Sept. 20, 1995, at B4; Richard Perez-Pena, *Taxi Board Votes Age Limit for Cabs, and a Rise in Fares*, N.Y. TIMES, Jan. 26, 1996.

174. The National Labor Relations Act (NLRA) does not apply to independent contractors. 29 U.S.C. § 152(3) (1947); *see also* NLRB v. Friendly Cab, 512 F.3d 1090 (9th Cir. 2008) (upholding an NLRB order that Oakland taxi drivers are covered by the NLRA); AAA Transportation/Yellow Cab, No. 28-RC-106979 (N.L.R.B. Oct. 23, 2015) (finding that taxi drivers in Tucson are employees, not independent contractors, who can unionize); ELLEN DICHNER, AM. BAR ASS’N, INDEPENDENT CONTRACTORS AND CONTINGENT WORKERS UNDER THE NATIONAL LABOR RELATIONS ACT 3 (2010), http://www.americanbar.org/content/dam/aba/administrative/labor_law/meetings/2010/annualconference/018.authcheckdam.pdf (discussing how the NLRB approaches the question of whether taxi drivers are employees or independent contractors); Jon Weinberg, *NLRB Finds Tucson Taxi Drivers Employees, and Uber Drivers Could Be Next*, ONLABOR (Dec. 14, 2015), <https://onlabor.org/2015/12/14/nlrp-finds-tucson-taxi-drivers-employees-and-uber-drivers-could-be-next/> (analyzing the NLRB decision). For a brief discussion of the difficulties of unionizing taxicab drivers, *see* GILBERT & SAMUELS, *supra* note 17, at 94–96.

There is a New York Taxi Workers Alliance, which describes itself as “a membership based non-profit union fighting for the rights of NYC’s 50,000+ taxi drivers.” N.Y. TAXI WORKERS ALL., <http://www.nytwal.org/> (last visited Nov. 12, 2016). Historically, before leasing of medallions became widespread, many taxi drivers were employees of large fleets and drivers were unionized in New York from “the mid-1960s until the late 1970s or the early 1980s.” Wyman, *supra* note 21, at 158.

The International Brotherhood of Electrical Workers has filed a petition before the National Labor Relations Board to represent Uber drivers at LaGuardia airport. To succeed, the union would have to establish that Uber drivers are employees, not independent contractors, under the NLRA. Conor Skeling, *Uber Files to Represent Uber Drivers Serving LaGuardia*, POLITICO (Feb. 3, 2016), <http://www.politico.com/states/new-york/city-hall/story/2016/02/union-files-to-represent-uber-drivers-serving-laguardia-030906>; *see also* Jon Weinberg, *Gig News: Union Files NLRB Petition to Represent Uber Drivers in New York*, ONLABOR (Feb. 3, 2016), <http://onlabor.org/2016/02/03/gig-news-union-files-nlrp-petition-to-represent-uber-drivers-in-new-york/>.

retically, protecting drivers from medallion owners through lease caps might have discouraged dangerous driving by taxi drivers. In the absence of lease caps, drivers might have been more inclined to drive extended hours or compete more aggressively with each other for fares, resulting perhaps in more accidents involving taxis.¹⁷⁵ Injured taxi drivers without workers' compensation also might be more likely to return to taxi driving before fully recovering, thereby jeopardizing public safety.

Like many players in the incumbent taxi industry, Uber and Lyft treat their drivers as independent contractors. The companies' classification of their drivers as independent contractors is controversial. Worker protection advocates have criticized Uber and Lyft for classifying their drivers in this way,¹⁷⁶ transforming Uber in particular into a symbol of the rise of the "contingent workforce,"¹⁷⁷ populated by

175. See, e.g., Defendants' Memorandum of Law in Support of Defendants' Motion to Dismiss the Amended Complaint at 32–33, *Melrose Credit Union*, No. 1:15-cv-09042 ("Lease caps were enacted as a means of protecting the riding public, as well as taxi drivers from untoward leasing practices by medallion owners and agents. Because drivers previously working on commission-based models would be compelled to work long hours and drive aggressively to maximize the number of trips in any given shift, TLC passed the lease cap rule to improve taxi service.").

The recent Seattle ordinance creating a framework for for-hire vehicle drivers to bargain collectively draws a link between working conditions for drivers and public safety, stating: "Establishing the drivers' contractual terms through a collective negotiation process will also help ensure that the compensation drivers receive for their services is sufficient to alleviate undue financial pressure to provide transportation in an unsafe manner (such as by working longer hours than is safe, skipping needed breaks, or operating vehicles at unsafe speeds in order to maximize the number of trips completed) or to ignore maintenance necessary to the safe and reliable operation of their vehicles." Seattle, Wash., Ordinance 124968, Version 4 § 1.1.2 (Dec. 23, 2015) (relating to taxicab, Transportation Network Company, and for-hire vehicle drivers).

It should be noted that there is empirical evidence that taxi drivers are safer drivers than "noncommercial drivers." Edelman & Geradin, *supra* note 10, at 310 (citing data from Schaller Consulting); see also COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 116 (same). Also, there may be other ways of promoting driver—and passenger and pedestrian—safety than through workers' compensation and lease caps. For example, New York City regulates the maximum number of hours that medallion taxi and for-hire drivers can drive, to reduce the likelihood of accidents due to driver fatigue. N.Y.C. TAXI & LIMOUSINE COMM'N, Notice of Promulgation of Rules to Reduce the Risks of Fatigued Driving by Licensed Drivers (2016), http://www.nyc.gov/html/tlc/downloads/pdf/newly_passed_rule_fatigued_driving.pdf.

176. See, e.g., NAT'L EMP'T LAW PROJECT, RIGHTS ON DEMAND: ENSURING WORKPLACE STANDARDS AND WORKER SECURITY IN THE ON-DEMAND ECONOMY (Sept. 2015), <http://www.nelp.org/content/uploads/Rights-On-Demand-Report.pdf>.

177. Alison Griswold, *Hillary Clinton Is Skeptical About the "Sharing" Economy*, SLATE (July 13, 2015), http://www.slate.com/blogs/moneybox/2015/07/13/hillary_clinton_economy_speech_i_ll_crack_down_on_sharing_economy_exploitation.html;

economically vulnerable workers without adequate social benefits. On the other hand, Uber argues that drivers prefer to be classified as independent contractors because they value the freedom to choose their hours and to work for others.¹⁷⁸ It can point to evidence (from an Uber-funded study) that over half of Uber drivers have other jobs and drive for Uber for under 15 hours a week, which suggests that many drivers are relying on Uber as a supplementary source of income and may not need the benefits that would flow from being classified as employees.¹⁷⁹ Irrespective of these arguments, classifying Uber and

see also Steven Greenhouse, *Uber: On the Road to Nowhere*, AM. PROSPECT (Dec. 7, 2015), <http://prospect.org/article/road-nowhere-3> (stating that, “[b]y some estimates,” Uber’s classification of its drivers as independent contractors “cuts Uber’s compensation costs by more than 20 percent per driver”); Steven D. Solomon, *Uber Case Highlights Outdated Worker Protection Laws*, N.Y. TIMES (Sept. 15, 2015), <http://www.nytimes.com/2015/09/16/business/dealbook/uber-case-highlights-outdated-worker-protection-laws.html>. There are varying estimates of the size and significance of the contingent workforce. *See, e.g.*, Jonathan V. Hall & Alan B. Krueger, *An Analysis of the Labor Market for Uber’s Driver-Partners in the United States* 3–7 (Princeton Univ., Indus. Relations Section, Working Paper No. 587, Jan. 22, 2015); Orly Lobel, *The Gig Economy & the Future of Employment and Labor Law* 4–5 (Univ. of San Diego Sch. of Law, Legal Studies Research Paper Series, Research Paper No. 16-223, Mar. 2016).

178. *Growing and Growing Up*, UBER (Apr. 21, 2016), <https://newsroom.uber.com/growing-and-growing-up> (“Drivers value their independence.”).

The fact that Uber drivers choose their hours does not necessarily mean that they are independent contractors as a matter of law. In denying Uber’s motion for summary judgment in a California case challenging its classification of its drivers as independent contractors, the district court “cited cases holding that workers may set their own hours and still be legal employees, so long as the putative employer exerts substantial control while they are on the clock.” BRISHEN ROGERS, AM. CONSTITUTION SOC’Y FOR LAW & POLICY, *REDEFINING EMPLOYMENT FOR THE MODERN ECONOMY* 4 (2016), https://www.acslaw.org/sites/default/files/Redefining_Employment_for_the_Modern_Economy.pdf (citing *O’Connor v. Uber Techs., Inc.*, 82 F. Supp. 3d 1133, 1140 (N.D. Cal. 2015)).

179. Hall & Krueger, *supra* note 177, at 10 (“Uber’s driver-partners fall into three roughly equal-sized groups: driver-partners who are partnering with Uber and have no other job (38 percent), driver-partners who work full-time on another job and partner with Uber (31 percent), and driver-partners who have a part-time job apart from Uber and partner with Uber (30 percent).”); *id.* at 18 (“In the combined set of 20 areas surveyed by BSG [Benenson Strategy Group], more than half of uberX driver-partners chose to drive for less than 15 hours a week, and fully 85 percent chose to drive less than 35 hours a week.”).

On the other hand, the Hall & Krueger study shows that a fair number of Uber drivers rely on Uber as a source of income, and that many lack health insurance, which suggests that Uber drivers potentially might benefit from being classified as employees. *See id.* at 11 (“Driving on the Uber platform provides an important source of income for driver-partners. For nearly one-quarter of driver-partners (24 percent), Uber is their only source of personal income, and for another 16 percent Uber is their largest but not only source of income. More than one-third of driver-partners view income earned on the Uber platform as a supplement to their income but not a significant source (38 percent).”); *id.* at 12 (“About half (49 percent) of Uber’s driver-part-

Lyft drivers as independent contractors may not be legally sound and the classification is now being litigated in multiple jurisdictions,¹⁸⁰ just as the incumbent taxi industry's classification of its drivers as independent contractors has been litigated over the years.¹⁸¹ The fact that the incumbent taxi industry often classifies its drivers as independent contractors tends to be overlooked in the debate about whether Uber drivers are legally independent contractors, and whether they should be classified in this way.

The debate about the classification of Uber drivers is related to the broad public policy debate about income inequality and economic insecurity.¹⁸² There are many proposals to address these concerns, some of which would decouple social benefits from employment and have governments, rather than employers, provide many of these benefits.¹⁸³ Other less radical proposals involve extending some of the

ners currently receive employer-provided health insurance from their employer at another job or from a spouse or other family member's job"). By not providing benefits such as health insurance to its drivers, Uber might be regarded as free-riding off the expenditures of firms that are financing health insurance for the drivers that have health insurance.

Uber has recently taken a number of steps to address the concerns that its drivers are being exploited. Uber and the International Association of Machinists and Aerospace Workers union recently announced that they will establish an association of Uber drivers in New York City. In addition, Uber indicated that it plans to draw on the advice of the Freelancers Union in the City on increasing the availability of benefits to its drivers in the City, many of whom are full-time. See Josh Eidelson, *Uber Found an Unlikely Friend in Organized Labor*, BLOOMBERG BUSINESSWEEK, (Oct. 27, 2016), <https://www.bloomberg.com/news/articles/2016-10-27/uber-found-an-unlikely-friend-in-organized-labor>; Noam Scheiber & Mike Isaac, *Uber Recognizes New York Drivers' Group, Short of a Union*, N.Y. TIMES (May 10, 2016), <http://www.nytimes.com/2016/05/11/technology/uber-agrees-to-union-deal-in-new-york.html>.

180. See *supra* note 29.

A small number of the state statutes legalizing "Transportation Network Companies" state, explicitly or implicitly, that the drivers for these companies are not employees of the companies. See Jon Weinberg, *Gig News: Uber Successfully Pursuing State Legislation on Independent Contractor Status*, ONLABOR (Dec. 11, 2015), <http://onlabor.org/2015/12/11/gig-news-uber-successfully-pursuing-state-legislation-on-independent-contractor-status/>; Summary Memoranda, *supra* note 45.

181. See *supra* note 19 (including case law challenging the classification of taxi drivers as independent contractors).

182. Brishen Rogers, *Whether and How to Regulate Uber and Lyft*, COLUM. L. SCH. BLUE SKY BLOG (Aug. 25, 2015), <http://clsbluesky.law.columbia.edu/2015/08/25/whether-and-how-to-regulate-uber-and-lyft/> (noting that the "existing debate around Uber [is] caught up in debates about inequality more generally").

183. See, e.g., SUNDARARAJAN, *supra* note 10, at 177–202 (discussing a number of options for providing benefits to the sharing economy workforce); Lobel, *supra* note 177, at 6–15 (outlining four paths for reforming employment and labor law to address the rise of the contingent workforce, including "rethinking some of the historical links between work and welfare"). One idea that has been much discussed recently is increasing the minimum wage, a measure that might benefit low-income workers, al-

protections traditionally provided to employees to some workers now treated as independent contractors. These include a recent proposal to create an intermediate category of “independent worker” that would enjoy some of the protections currently accorded only to employees—such as “the freedom to organize and collectively bargain, civil rights protections, tax withholding, and employer contributions for payroll taxes”—but not others, such as “hours-based benefits, including overtime or minimum wage requirements,” or “unemployment insurance.”¹⁸⁴ The proponents of the independent worker category describe Uber drivers and many taxi drivers as examples of the kinds of workers that they believe should come within the category.¹⁸⁵

In the midst of the broad public policy debate about whether to increase worker protections to address income inequality and economic insecurity, actors regulating taxis must decide what kinds of protections should be available to incumbent industry drivers and drivers for the new transportation network companies. In contemplating protections for drivers, taxi regulators must be mindful of legal limits on their jurisdiction, which in some places constrain regulators to introducing worker protection measures that can be tied to improving taxi safety or managing taxis in some way.¹⁸⁶ Moreover, taxi regula-

though not taxi drivers if they are independent contractors. *See, e.g.*, Alan B. Krueger, *The Minimum Wage: How Much Is Too Much?*, N.Y. TIMES (Oct. 9, 2015), <http://www.nytimes.com/2015/10/11/opinion/sunday/the-minimum-wage-how-much-is-too-much.html>.

184. Harris & Krueger, *supra* note 19, at 2. The proposal could be implemented by Congress and state legislatures. *Id.* at 5.

With respect to workers’ compensation, the one benefit provided to some taxi drivers otherwise categorized as independent contractors, including New York medalion taxi drivers, Harris and Krueger propose that “intermediaries [such as Uber] be permitted to opt to provide expansive workers’ compensation insurance policies to the independent workers with which they work without transforming these relationships into employment.” *Id.* at 20.

There are many criticisms of the proposal for a new “independent worker” category. *See, e.g.*, ROGERS, *supra* note 178, at 5–6; Ben Sachs, *Do We Need an “Independent Worker” Category?*, ONLABOR (Dec. 8, 2015), <http://onlabor.org/2015/12/08/do-we-need-an-independent-worker-category/#more-6978>; Noam Scheiber, *A Middle Ground Between Contract Worker and Employee*, N.Y. TIMES (Dec. 10, 2015), <http://www.nytimes.com/2015/12/11/business/a-middle-ground-between-contract-worker-and-employee.html>. Lobel nicely situates the Harris and Krueger proposal for an independent worker category within existing literature for addressing the economic vulnerability of workers not classified as employees, including other proposals for intermediate categories. Lobel, *supra* note 177, at 11.

185. Harris & Krueger, *supra* note 19, at 5, 14, 22–23, 27.

186. Several years ago, before the rise of Uber, the New York Taxi and Limousine Commission attempted to establish a charge on taxi fares to create a fund enabling taxi drivers to obtain health and disability insurance. A court invalidated the Commission’s efforts, partly on the basis that they “exceeded [the Commission’s] authority.”

tors may face other legal obstacles to extending worker protections to taxi drivers, such as federal antitrust law, which may be an obstacle to ordinances such as that passed in Seattle to extend the right to collectively bargain to traditional taxi and app-drivers.¹⁸⁷ However sympathetic we might be to the desire to address the income inequality and insecurity affecting many workers, including many taxi and Uber drivers, the ability of taxi regulation specifically to deal with the issue may be limited.¹⁸⁸

At a minimum, taxi regulators should maintain protections for traditional taxi drivers that also may protect the public at large from unsafe driving, and extend these protections to app drivers. These worker protection requirements include the requirements in some ju-

Ahmed v. City of New York, 129 A.D.3d 435, 440 (N.Y. App. Div. 2015) (“TLC [Taxi and Limousine Commission] has certain delineated powers to ensure that drivers are capable of driving safely However, nothing in the Charter or the enabling Code provisions contemplates the establishment and outsourcing of a miniature health insurance navigation and disability insurance department.”). In October 2016, several New York City Council members introduced legislation directing the Taxi and Limousine Commission to provide taxi and for-hire vehicle drivers with medical and other benefits, funded from a surcharge on taxi fares. N.Y.C., N.Y., Int. 1301-2016 (introduced Oct. 13, 2016). The legislation “would effectively negate” the just-described court decision. Dana Rubinstein, *Council Bill Would Provide Health Benefits for Taxi, Uber Drivers*, POLITICO (Sept. 6, 2016), <http://www.politico.com/states/new-york/city-hall/story/2016/09/city-council-aims-to-revive-health-care-fund-for-taxi-uber-drivers-105199>.

187. See *Chamber of Commerce v. City of Seattle*, No. C16-0322RSL, 2016 WL 4595981 (W.D. Wash. Aug. 9, 2016) (dismissing, based on lack of standing, action to enjoin Seattle ordinance as violating federal antitrust law and preempted by the National Labor Relations Act); Harris & Krueger, *supra* note 19, at 15–17 (describing barriers that antitrust law creates for independent workers organizing to bargain collectively); Mike Isaac et al., *Seattle Considers Measure to Let Uber and Lyft Drivers Unionize*, N.Y. TIMES (Dec. 13, 2015), <http://www.nytimes.com/2015/12/14/technology/seattle-considers-measure-to-let-uber-and-lyft-drivers-unionize.html> (reporting on potential that Seattle ordinance violates antitrust law); Caroline O’Donovan, *Drivers Win the Right to Bring Uber and Lyft to the Negotiating Table*, BUZZFEED (Dec. 14, 2015), <http://www.buzzfeed.com/carolineodonovan/drivers-win-the-right-to-bring-uber-and-lyft-to-the-negotiat/>.

Seattle is attempting to invoke the “state action immunity defense.” See *Seattle, Wash.*, Ordinance 124968, Version 4 § 1.1.2 (Dec. 23, 2015) (“As the City is acting under specific state statutory authority, it is immune from liability under antitrust laws.”); Greenhouse, *supra* note 177. Litigation over the legality of the Seattle ordinance has been delayed by the slow pace of implementing the ordinance. See Mike Richards, *Seattle Push for Uber Union Vote Slowed; Automation Is Coming, in Time*, LENS (Aug. 29, 2016), <http://thelens.news/2016/08/29/seattle-push-for-uber-union-vote-slowed-automation-is-coming-in-time/>.

188. See Harris & Krueger, *supra* note 19, at 15 (arguing for a “comprehensive solution” implemented by Congress and state legislatures to address “the emergence of independent workers,” rather than “courts or administrative agencies us[ing] their existing authority to address a few of the problems created by the emergence of independent workers” because courts and agencies lack sufficient authority).

risdictions that medallion owners or app companies ensure that drivers are covered by workers' compensation insurance.¹⁸⁹

What about the lease caps that some jurisdictions introduced to protect drivers leasing medallions from exploitation by medallion owners? At this juncture, it is not clear how much benefit traditional taxi drivers who lease medallions are deriving from the lease caps.¹⁹⁰ Taxi drivers in cities like New York with Uber and other apps likely enjoy more market power than they have in decades.¹⁹¹ Unemployment is low in many places, and so the pool of potential drivers likely is relatively stable. Drivers no longer need to lease medallions; they now have the choice of driving either traditional taxis with medallions or vehicles for Uber, Lyft, and the other apps without medallions. Many taxi drivers have been abandoning the traditional medallion industry and choosing to drive for Uber, which seems to have been forcing medallion lessors to lower the leasing fees for medallions.¹⁹²

189. In New York City, Uber drivers generally are covered by the Black Car Fund, which provides the equivalent of workers' compensation for black car drivers, because many Uber drivers are licensed black car drivers. See Workers' Comp. Law §§ 2(3), 2(4), 18-c; 35 RCNY § 59B-12(b)(1); Rebecca Harshbarger, *Uber's Claim of \$90K Average Pay for Drivers Is Overestimated*, N.Y. POST (Nov. 2, 2014), <http://nypost.com/2014/11/02/ubers-claim-of-90k-average-pay-for-drivers-is-overestimated/>; Workers' Compensation Coverage: *Taxi Cabs—Most Taxi Cab Operators Are Considered Employees*, N.Y. ST. WORKERS' COMPENSATION BD., <http://www.wcb.ny.gov/content/main/onthejob/CoverageSituations/taxiCabs.jsp> (last visited Nov. 12, 2016).

190. In a recent New York lawsuit, the traditional taxi industry argues that the lease caps that apply to it, but not for-hire vehicles including Uber vehicles, put the traditional industry at a disadvantage. Amended Complaint at 33, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Mar. 7, 2016) (“FHV[s] [for-hire vehicles] are not subject to lease caps, which allows FHVs to be leased to drivers at rates determined by supply and demand. This disparate treatment forces Plaintiffs to operate at a disadvantage as compared to similarly situated FHVs by restricting Plaintiffs from charging higher rates during times of high demand (e.g. on Friday), while charging lower rates during times of low demand (e.g. on Monday).”). This statement suggests that the lease caps may still be binding, and therefore may still benefit taxi drivers, at times.

191. The last time taxi drivers enjoyed as much market power in New York may have been in the heyday of the taxi drivers' union, in the 1960s and early 1970s.

192. See, e.g., COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 89 (“Many taxi drivers have shifted to ride service companies.”); OFFICE OF THE MAYOR, CITY OF NEW YORK, *supra* note 52, at 3 (“In the past two years, the number of active yellow taxi drivers [in New York City] has declined by five percent. Over the same two-year period, new for-hire vehicle registrations by former yellow taxi drivers have increased many times over.”); Rebecca Harshbarger, *Yellow Taxis Launch \$1 Million Campaign to Lure Back Drivers, Passengers from Uber, Lyft*, AMNEWYORK (Dec. 14, 2015), <http://www.amny.com/transit/yellow-taxis-launch-1-million-campaign-to-lure-back-drivers-passengers-from-uber-lyft-1.11228657>

(describing “\$1 million campaign” that fleet owners have launched “to bring back drivers who left yellow cabs for new options like Uber”). For a discussion of why taxi drivers are switching from traditional taxis to Uber and other for-hire vehicle compa-

Driving for Uber may be more profitable for drivers, because they avoid paying medallion leasing fees since an Uber vehicle does not require a medallion, though drivers pay Uber a service fee on fares.¹⁹³

Moreover, it is difficult to argue at this juncture that measures analogous to lease caps should be introduced to protect Uber drivers from exploitation by Uber.¹⁹⁴ In cities such as New York where Uber, Lyft, and other apps are seeking to establish themselves, the apps are recruiting drivers and they appear to be offering drivers relatively good terms (compared with the traditional taxi industry, if not in absolute terms). The evidence for this is that, as mentioned above, traditional taxi drivers in cities like New York have been leaving the traditional taxi industry to drive for Uber.¹⁹⁵

However, the favorable conditions for drivers may not last, and they already appear to be disappearing in some places. Thus worker protections may be warranted if not now, then in the future, to avoid a diminution in working conditions that might jeopardize public safety.¹⁹⁶ Uber's expansion strategies include reducing fares to attract passengers, increasing the portion of the fare that it takes from drivers,¹⁹⁷ and increasing the number of its drivers, all of which reduce drivers' take-home earnings if Uber's expansion is not accompanied by an offsetting increase in consumer demand for service.¹⁹⁸ Moreo-

nies, based on a survey of drivers, see OFFICE OF THE MAYOR, CITY OF NEW YORK, *supra* note 52, at 9.

193. Complaint at 21, *CGS Taxi LLC v. City of New York*, No. 653264/2015 (N.Y. Sup. Ct. Sept. 30, 2015); Complaint at 20, *Daler Singh v. City of New York*, No. 701402/2017 (N.Y. Sup. Ct. Jan. 30, 2017).

194. Isaac et al., *supra* note 187.

195. Uber has been subsidizing drivers to grow the number of drivers in its network. Eric Newcomer, *Uber Loses at Least \$1.2 Billion in First Half of 2016*, BLOOMBERG TECHNOLOGY (Aug. 25, 2016), <https://www.bloomberg.com/news/articles/2016-08-25/uber-loses-at-least-1-2-billion-in-first-half-of-2016> ("Uber's losses in the first half of 2016 totaled at least \$1.27 billion. . . . Subsidies for Uber's drivers are responsible for the majority of the company's losses globally."). *But see* Greenhouse, *supra* note 177 (referring to Uber ads in New York City in fall 2015 "saying anyone who signed up to drive would earn a minimum of \$7,000," but emphasizing that Uber's other policies, such as fare reductions, are harming Uber drivers and describing an Uber driver as "cut[ting] back his Uber hours to part-time so he could also drive for a friend's black-car service").

196. *See generally* Greenhouse, *supra* note 177.

197. *See* Isaac et al., *supra* note 187 (reporting that in Seattle, "Uber and Lyft have cut the rates they charge passengers for rides and ended the incentives used to recruit drivers"); Greenhouse, *supra* note 177 (referring to an Uber fare decrease in Los Angeles).

198. *See* James Covert, *Uber's NYC Fare Cuts Haven't Helped Drivers*, N.Y. POST (Apr. 25, 2016), <http://nypost.com/2016/04/25/uber-is-really-feeling-the-wrath-of-citys-rate-cuts/> (stating that January 2016 fare cuts have not increased driver pay); Greenhouse, *supra* note 177 (referring to the effects of increasing the number of

ver, down the line, there is the possibility that Uber or another app may emerge as the dominant provider of taxi services, by eclipsing the other apps and the traditional taxi industry. If that occurs, drivers where it happens could be economically vulnerable to the dominant app, which might attempt to significantly increase the fees that it charges drivers for matching them with customers, in order to increase the app company's share of fares.¹⁹⁹

Paralleling the lease caps imposed to protect traditional taxi drivers, the service fee that Uber charges drivers on fares could be similarly capped. However, effective implementation of a cap on the service fees might require regulating the underlying fares that app companies charge passengers, as app companies might circumvent any caps on service fees charged to drivers by altering the fare structure. “[M]inimum mile charges for riders” might be used to protect Uber drivers from exploitation by Uber,²⁰⁰ though these also likely would entail regulating fare levels.

Universal Service Requirements

The last traditional pillar of taxi regulation is the requirement that taxis agree to serve all riders.²⁰¹ This universal service requirement is justified based on a non-discrimination principle, and reflects a commitment to avoiding inequitable outcomes, as opposed to inefficient

UberX drivers and Uber's reducing fares by “30 percent” on incomes of drivers in New York); Marc Santora & John Surico, *Uber Drivers in New York City Protest Fare Cuts*, N.Y. TIMES (Feb. 1, 2016), <http://www.nytimes.com/2016/02/02/nyregion/uber-drivers-in-new-york-city-protest-fare-cuts.html> (reporting on a protest by Uber drivers of a fare cut by Uber, which the company defends on the basis that a past fare cut increased driver earnings by inducing more passengers to take Uber).

199. See COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 77; Darbéra, *supra* note 10, at 13.

200. Isaac et al., *supra* note 187.

201. See, e.g., *FAQs – Passenger: Refusal Law*, NYC TAXI & LIMOUSINE COMM'N, http://www.nyc.gov/html/tlc/html/faq/faq_pass.shtml (last visited Nov. 12, 2016) (“It is against the law to refuse a person based on race, disability, or a destination in New York City. A taxicab driver is required to drive a passenger to any destination in the five boroughs.”). The prohibition is in the New York City Administrative Code and Rules of the City of New York. N.Y.C. Admin. Code § 19-507(a)(2) (West 2016); 35 R.C.N.Y. § 54-20; see also *Ill. Transp. Trade Ass'n v. City of Chicago*, 134 F. Supp. 3d 1108, 1111 (N.D. Ill. Sept. 22, 2015), *aff'd in part & rev'd in part*, 839 F.3d 594 (7th Cir. 2016) (noting that Chicago “[t]axis are prohibited by . . . Ordinance to refuse service to a passenger based on destination” and that “taxis are required to abide by all federal, state, and City non-discrimination laws”). Edelman and Geradin also use the term “universal service” to refer to the obligation to “serve all customers.” Edelman & Geradin, *supra* note 10, at 320.

ones, as efficiency is conventionally understood.²⁰² For decades, the concern animating the enforcement of the requirement has been that drivers discriminate against riders based on their race or their destination (which, due to residential segregation based on race in major cities, is often correlated with race).²⁰³

Anti-discrimination norms justify requiring app-dispatched taxis to accept rides irrespective of the destination or the characteristics of the rider, just as traditional taxis are required to do. There has been relatively little controversy about the idea that taxi apps should be prohibited from discriminating against riders based on their race or destination.²⁰⁴ Some argue that app-based taxis are less likely to discriminate based on riders' destination or race than street-hailed taxis. The apps' ability to match drivers with riders may reduce drivers' incentives to turn down rides based on destination because the apps' ability to match drivers and passengers may make it easier for drivers to get return trips from less densely populated areas.²⁰⁵ Apps like Uber also monitor the percentage of trips that drivers accept. Uber encourages its drivers to accept at least 80% of trips, "but 'the closer to 100% the better,'" and this may discourage drivers from turning down trips based on race or destination.²⁰⁶ Also, "Uber drivers don't see where

202. I add the caveat "as efficiency is conventionally understood" advisedly. See the discussion in terms of efficiency of "prohibition[s] against service refusal" in FRANKENA & PAUTLER, *supra* note 34, at 61–63. They suggest that such prohibitions "may be second best efficient" in certain circumstances. *Id.* at 65.

203. See, e.g., *Booth Now Will Prosecute Cab Discrimination Cases*, N.Y. TIMES (Dec. 10, 1966), <http://timesmachine.nytimes.com/timesmachine/1966/12/10/82974302.html?pageNumber=28>; *Equal Taxi Opportunity*, N.Y. TIMES (Mar. 14, 1978), <https://timesmachine.nytimes.com/timesmachine/1978/03/14/110803095.html?pageNumber=34>; *Negroes Accept Wallander Word: Commissioner Won't Tolerate Race Bias, Will Investigate Charges of Brutality*, N.Y. TIMES (Aug. 10, 1946), <http://timesmachine.nytimes.com/timesmachine/1946/08/10/91621786.html?pageNumber=28> (noting that a police commissioner "promised that his department would look into the practice of certain taxicab drivers in refusing to drive fares to Harlem," and that offending taxicab drivers would be "dealt with by prompt action"); *State Warns Taxis to Accept Negroes*, N.Y. TIMES (Mar. 23, 1961), <http://timesmachine.nytimes.com/timesmachine/1961/03/23/118029313.html?pageNumber=25>.

For a useful discussion of the requirement that taxis "serve all geographic areas of the regulating jurisdiction" that recognizes that it implements a form of cross-subsidization, see COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 44–46 (citing P.S. Dempsey, *Taxi Industry Regulation, Deregulation, & Re-regulation: The Paradox of Market Failure*, 24 TRANSP. L.J. 73 (1996)).

204. Arun Sundararajan advocates delegating to platforms responsibility for ensuring "that there is no discrimination in transactions conducted on their platforms." FTC Workshop, *supra* note 10, at 159 (remarks of Arun Sundararajan).

205. Rogers, *supra* note 10, at 95.

206. Cook, *supra* note 164 (quoting an Uber email newsletter to drivers).

passengers want to go until after they've accepted a request."²⁰⁷ This makes it harder to discriminate based on destination, although not impossible because drivers still can cancel trips after accepting them. On the other hand, a recent academic study found evidence that UberX drivers are discriminating against passengers based on race, presumably using the passenger information that drivers get after accepting a trip to identify passenger race, and the driver's ability to cancel a trip after initially accepting it. In particular, the study "found that UberX drivers are nearly three times as likely to cancel a ride on a male passenger upon seeing that he has a 'black-sounding' name."²⁰⁸ Drivers also might discriminate against passengers based on race through the ratings that drivers give passengers at the completion of trips, but the study did not find that driver ratings varied depending on the race of

207. Johana Bhuiyan, *Uber and Lyft Position Themselves as Relief from Discrimination*, BUZZFEED (Oct. 7, 2014), <http://www.buzzfeed.com/johanabhuiyan/app-based-car-services-may-reduce-discrimination-issues-tk>.

208. Yanbo Ge et al., *Racial and Gender Discrimination in Transportation Network Companies* 19 (Nat'l Bureau of Econ. Research, Working Paper No. 22776, Oct. 2016). The study indicates that the finding "seems to be driven primarily by behavior in areas with low population densities." *Id.* The study also found discrimination based on gender, with female passengers "driven farther." *Id.* at 18. The finding of driver discrimination echoes a similar finding that Airbnb hosts discriminate against guests based on race. See Mike McPhate, *Discrimination by Airbnb Hosts Is Widespread, Report Says*, N.Y. TIMES, (Dec. 11, 2015), <http://www.nytimes.com/2015/12/12/business/discrimination-by-airbnb-hosts-is-widespread-report-says.html> ("Fictional guests set up by the researchers with names like Lakisha or Rasheed were roughly 16 percent less likely to be accepted than identical guests with names like Brent or Kristen."). In a co-authored article, one of the authors of the study about discrimination on Airbnb presciently predicted that "if a transportation platform made a passenger's race salient (through name and face), it might facilitate the same discrimination passengers previously faced offline." Edelman & Geradin, *supra* note 10, at 322.

There is some evidence that Uber is better serving areas of New York City that have traditionally been under-served by medallion taxis. See Jared Meyer, *Bringing Uber to All New Yorkers*, THE FEDERALIST (Dec. 22, 2015), <http://thefederalist.com/2015/12/22/bring-uber-to-all-new-yorkers/> ("In December 2014, 27 percent of UberX pickups were outside Manhattan or city airports. For comparison, less than 6 percent of yellow taxi rides begin in the outer boroughs (excluding airports) and the northern tip of Manhattan."). Also, there is evidence that Uber is serving low-income and African-American neighborhoods, as well as higher-income neighborhoods in New York City. *Id.*

For a discussion of the potential for transportation network companies to reduce or exacerbate racial discrimination, and service low-income areas, see generally COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 132–34, 141. The report notes that there is "a lack of data . . . to assess [the] . . . arguments" about the impact of these companies on racial discrimination, and only "preliminary" evidence about whether the companies are improving service in low-income areas. *Id.* at 134, 141; see also *id.* at 145.

the passenger.²⁰⁹ Customers also may be discriminating against Uber drivers based on race in rating drivers, something that the apps currently are not required to police because they have not been deemed employers bound by “Title VII of the [federal] Civil Rights Act of 1964.”²¹⁰ Even if racial discrimination remains an issue with the Uber platform, the data that Uber collects about passengers and drivers potentially could be used to identify patterns of discrimination and address them in novel ways that were not possible in the pre-app era.²¹¹

Recently, people with mobility disabilities have argued that all taxis should be accessible to people with such disabilities, and sought to broaden the ambit of the universal service requirement.²¹² Some cities have introduced policies that require that a certain percentage of their traditional taxi fleets be accessible to persons with mobility issues by a target date.²¹³ In 2014, the New York City Taxi and Limou-

209. Ge et al., *supra* note 208, at 18 n.9. For the idea that driver ratings of passengers might discriminate based on race, see COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 133.

210. Ben Sachs, *Uber: A Platform for Discrimination?*, ON LABOR (Oct. 22, 2015), <http://onlabor.org/2015/10/22/uber-a-platform-for-discrimination/>; see also COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 133 (referring to potential for passenger ratings to discriminate against drivers based on race); Dan Adams, *Boston-Based Attorney Argues Uber’s Star Ratings Are Racially Biased*, BOS. GLOBE (Oct. 7, 2016), <https://www.bostonglobe.com/business/2016/10/06/attorney-for-uber-drivers-says-star-ratings-are-racially-biased/R28mqWL6ShjMFB5xAr3uGL/story.html> (noting that a Boston attorney has filed a complaint with the EEOC arguing that Uber’s system for passenger ratings of drivers is “racially discriminatory”). Uber and other transportation network companies already may face liability if their drivers suffer discrimination based on race, even if the drivers are considered independent contractors. ROGERS, *supra* note 178, at 9.

211. Ge et al., *supra* note 208, at 20; Lobel, *supra* note 177, at 10.

212. See, e.g., Jan Garrett, *On the Move: Increasing the Wheelchair Accessible Taxis Around the Country*, 34 HUM. RTS. 14 (2007) (briefly describing history of efforts to increase the accessibility of taxicabs to people with mobility disabilities in New York); COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 46–47 (describing efforts to increase the accessibility of taxis and the modest resulting increases in accessibility).

213. See, e.g., DISABILITY ADVISORY COMM., D.C. TAXICAB COMM’N, COMPREHENSIVE REPORT AND RECOMMENDATIONS ON ACCESSIBLE TAXICAB SERVICE 4 (Feb. 20, 2014), http://dfhv.dc.gov/sites/default/files/dc/sites/dc%20taxi/page_content/attachments/DC%20Taxicab%20Comission%20Disability%20Advisory%20Committee%20Comprehensive%20Report%202014%20FINAL%20w%20Addendum.pdf (“Under the DC Taxi Act, each taxi company with [twenty] or more taxicabs in its fleet as of July 1, 2012 will be required to dedicate a portion of its fleet to wheelchair accessible taxis: [six] percent by December 31, 2014; [twelve] percent by December 31, 2016; and [twenty] percent by December 31, 2018.”); *id.* at 14 (“Chicago recently passed legislation with the following requirement: ‘Any single licensee that owns or controls [twenty] or more licenses must place into service wheelchair accessible vehicles as taxicabs on five percent of its taxicab vehicle fleet.’”) (excerpting CHI. MUN. CODE § 9-112-070); see also Matthew W. Daus, THE EXPANDING TRANSPORTATION NET-

sine Commission required that “[b]y 2020, half of all yellow taxis—7,500 total—will be wheelchair accessible,” consistent with the terms of the settlement of a lawsuit brought by disability rights advocates under the Americans with Disabilities Act.²¹⁴ “The transformation will be funded through a 30-cent per-ride Taxi Improvement Surcharge integrated into the yellow medallion taxicab fare as of January 1, 2015.”²¹⁵ The requirement that a certain percentage of the fleet be accessible does not apply to black car companies such as Uber in New York City, but black car company bases are required to “provide ‘equivalent service’ to persons with disabilities,” an obligation that the bases can meet by “[d]ispatching an [a]ccessible [v]ehicle from” their base or “[c]ontracting with another base.”²¹⁶ In 2014, the Taxi and Limousine Commission found a general lack of compliance with this

WORK COMPANY “EQUITY GAP” 26–27, <http://www.whosdrivingyou.org/wp-content/uploads/2016/08/Equity-Report-FINAL-11232642.pdf> (summarizing local policies to increase the accessibility of taxicab service in various municipalities in the U.S. and Canada).

214. Press Release, N.Y.C. TAXI & LIMOUSINE COMM’N, City Poised for Major Expansion of Accessible Taxis Under New TLC Rules (Mar. 26, 2014), http://www.nyc.gov/html/tlc/downloads/pdf/press_release_03_26_14.pdf; see also 35 RCNY § 58-50 (2015) (listing taxicab accessibility requirements); 35 RCNY ch. 53 (regarding accessible taxicabs); *Singh v. Joshi*, 152 F. Supp. 3d 112, 119–120 (E.D.N.Y. 2016) (describing implementation of taxicab accessibility requirements). On the litigation that led to the policy commitment, see DISABILITY ADVISORY COMM., *supra* note 213, at 3. For an unsuccessful attempt to enjoin the implementation of regulations to make New York City’s taxi fleet more accessible, see *Singh*, 152 F. Supp. 3d 112; see also *Singh v. Joshi*, No. 15-CV-5496-FB-VMS, 2016 WL 4272349 (E.D.N.Y. Aug. 15, 2016) (denying plaintiffs’ motion for reconsideration and granting defendants’ motion for summary judgment). On the New York Taxi and Limousine Commission’s accessible dispatch system, see *Find an Accessible Ride*, N.Y. TAXI & LIMOUSINE COMM’N, <http://www.nyc.gov/html/tlc/html/passenger/accessible.shtml> (last visited Nov. 12, 2016).

215. Press Release, N.Y.C. TAXI & LIMOUSINE COMM’N, *supra* note 214; see also *Singh*, 152 F. Supp. 3d at 122 (describing New York City’s argument that the Taxicab Improvement Fund will offset the cost to medallion owners of changing to accessible vehicles, but also noting that as of the date of the decision the City had not implemented a timetable for distributing the Fund); Meera Joshi, Commissioner & Chairperson, N.Y.C. Taxi & Limousine Comm’n, Speech to *Crain’s* Breakfast 7–8 (Jan. 14, 2016) (Exhibit B to Letter from Karen B. Selvin, Assistant Corporation Counsel, New York City Law Department, to Honorable Analisa Torres, United States District Court Southern District of New York (Aug. 18, 2016)) (describing the Taxi and Limousine Commission’s “financial incentive programs for drivers and owners of wheelchair accessible taxis”).

216. 35 RCNY § 59B-17(c). The term “Equivalent Service” is defined in 35 RCNY § 59B-17(c)(2); see also *Singh*, 152 F. Supp. 3d at 118 (noting that the New York Taxi and Limousine Commission “require[s] black car] licensees to provide a wheelchair-accessible vehicle on request”); *Singh*, 2016 WL 4272349 (denying plaintiffs’ motion for reconsideration and granting defendants’ motion for summary judgment).

regulatory requirement.²¹⁷ Advocates for people with disabilities in New York City also have criticized Uber for attempting to serve people with disabilities by dispatching yellow and green taxis, which otherwise compete for business with Uber vehicles.²¹⁸ App companies such as Uber also are being sued for poorly serving people with mobility disabilities.²¹⁹

The requirements that a certain percentage of taxi fleets must be accessible need to be rethought with the advent of taxi apps.²²⁰ When the traditional taxi industry was insulated from competition, it was logical to think that service to people with mobility disabilities could be improved by requiring the industry to purchase and operate accessible taxi vehicles, with assistance from subsidies to offset the cost of purchasing and operating accessible vehicles. Requiring that a certain percentage of taxi fleets be accessible might not by itself ensure that

217. Joshi, *supra* note 215, at 8 (“The pre-arranged car service world . . . is subject to a more general requirement to provide wheelchair users with service that is equivalent to what’s provided to other passengers, a requirement that has not always created the desired reality. In the fall of 2014 the TLC did an industry wide enforcement action, and 90% of the care [sic] service industry was unable to provide a wheelchair passenger with equivalent service.”).

218. See Johana Bhuiyan, *Disability Rights Advocate Files Discrimination Complaint Against Uber*, BUZZFEED (Jan. 19, 2016), <https://www.buzzfeed.com/johanabhuiyan/disability-rights-advocate-files-discrimination-complaint-ag>; Rosa Goldensohn, *Wheelchair Users’ Advocacy Group Demands Crackdown on Uber*, CRAIN’S N.Y. BUS. (Jan. 13, 2016); Issie Lapowsky, *Uber’s Business Isn’t Built to Help Disabled People*, WIRED (Aug. 14, 2015), <http://www.wired.com/2015/08/uber-disability/>; Sarina Trangle, *Taxi Medallion Owners, Disability Advocates Call for Wheelchair Accessible Mandate for Uber*, CITY & STATE N.Y. (June 22, 2016), <http://cityandstateny.com/articles/politics/new-york-city/taxi-medallion-owners,-disability-advocates-call-for-wheelchair-accessible-mandate-for-uber.html>.

Uber’s use of accessible yellow and green taxis to provide accessible service could be regarded as free-riding off the traditional taxi industry’s investments (albeit, subsidized investments) in providing accessible service. In any event, relying on the traditional taxi industry to provide accessible service may not be sustainable to the extent that it is displaced by Uber and other new entrants.

219. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 136 (discussing litigation involving transportation network companies by advocates for people with disabilities); Daus, *supra* note 213, at 29-30 (same). However, there are disability rights advocates who support Uber, arguing that it has improved the transit options of people with disabilities. See, e.g., Chris Bragg, *Disability Rights Groups Support Legalizing Uber in New York*, TIMES UNION (Dec. 21, 2015), <http://www.timesunion.com/tuplus-local/article/N-Y-taxi-operator-subsidizes-work-of-disability-7972052.php>. It may be that Uber has increased the transit options for people with some types of disabilities, but not others. See COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 136, 145; FTC Workshop, *supra* note 10, at 141 (remarks of Ashwini Chhabra).

220. Jim Dwyer, *Accessibility as Challenge in Age of Uber*, N.Y. TIMES (Dec. 22, 2015), <http://www.nytimes.com/2015/12/23/nyregion/accessibility-as-challenge-in-age-of-uber.html>.

accessible taxis are available when and where needed by people with disabilities, because the taxis might be servicing other passengers or off-duty. But the odds generally were that fleet requirements for accessibility would improve service to people with disabilities, especially if a large share of the fleet was required to be accessible. Moreover, while it remained largely insulated from competition, the traditional taxi industry likely could afford to cross-subsidize the provision of services to people with mobility disabilities from the industry share of taxi fares, to the extent that any additional costs in providing these services were not covered by taxi riders through special surcharges like New York City's or taxpayer-funded subsidies.²²¹

The picture has changed now that the traditional industry is competing against Uber and other apps, which are not similarly required to ensure that a certain percentage of the vehicles on their platforms are accessible to persons with mobility disabilities. In New York City at least, the accessible vehicle fleet requirements may no longer be functioning to increase the number of accessible taxis on city streets. According to a recent complaint filed in federal court by medallion owners and credit unions that finance medallion purchases, drivers are refusing to lease accessible vehicles, because they are less profitable for drivers to operate (even with the subsidies) than conventional taxi vehicles, and drivers now have the choice to lease taxis that are not accessible or to drive with Uber and other apps in vehicles that are not accessible.²²² With drivers refusing to lease accessible taxicabs, there

221. See, e.g., Amended Complaint at 40, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y., Mar. 7, 2016) (“[T]he only conceivable justification for requiring medallion taxicabs to comply with the Accessible Conversion Rules while not imposing comparable rules on FHV’s [for-hire vehicles] was the medallion owners’ exclusive right to hails.”). For a description of the New York City Taxi and Limousine Commission’s “financial incentive[s]” for medallion taxi drivers and vehicles owners to deploy wheelchair accessible vehicles, see Joshi, *supra* note 215.

222. See Amended Complaint at 25–26, *Melrose Credit Union*, No. 1:15-cv-09042 (“According to drivers, accessible vehicles rattle, are too big, guzzle gas, and are equally disliked by passengers. According to drivers, accessible vehicles are simply not worth leasing given the additional regulatory burdens imposed on them and the alternative leasing options available, including abundant unrestricted medallion vehicles and an endless supply of unrestricted Uber vehicles.”); *id.* at 39 (“[T]he driver of a wheelchair-accessible cab may pick up non-disabled fares, but must always respond to calls for a disabled pickup if they’re the closest wheelchair-accessible cab to the call and are dispatched. As a result, drivers sometimes travel multiple unpaid blocks to pick up a disabled fare.”) (excerpting Daniel Fitzsimmons, *Fare Access*, N.Y. PRESS (Aug. 26, 2015)); *id.* at 13–14, 36–40; see also *Singh v. Joshi*, No. 15-CV-5496-FB-VMS, 2016 WL 304761, at *9–10 (E.D.N.Y. 2016); Memorandum of Law in Support of the Verified Petition and Petitioners’ Motion for a TRO and Preliminary Injunction at 10, *Clair v. City of New York*, No. 102277/2015 (N.Y. Sup. Ct. Feb. 18, 2016); COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at

likely are fewer of them on city streets to service the needs of people with mobility disabilities. Also, facing competition for drivers, and lower profits, incumbent medallion owners now are even less willing than before to help finance the cost of serving people with mobility disabilities, even when there are programs in place to offset industry costs in this regard, as in New York City.²²³

We should be looking for ways to use the new app technology to improve transportation services, including taxi services, for people with mobility disabilities.²²⁴ How to adapt the new technology to better serve people with mobility disabilities is a large topic that is beyond the scope of this article. As the number of people with mobility disabilities increases with the aging of the population, the issues that need to be considered include how to better integrate taxis and paratransit services, as there is the potential to provide enhanced and more cost effective transportation services to many people with disabilities through new and incumbent taxi services rather than conventional paratransit services.²²⁵ Another issue is how to fund the provision of

134, 136–37 (listing “obstacles” to the expansion of “accessible vehicle fleets” and describing drop in availability of accessible taxis and “wheelchair trips” in San Francisco); Lapowsky, *supra* note 218.

223. *Singh v. Joshi*, No. 15-CV-5496-FB-VMS, 2016 WL 4272349 (E.D.N.Y. Aug. 15, 2016) (rejecting plaintiffs’ motion for reconsideration and granting New York City defendants’ motion for summary judgment in challenge by medallion owners to wheelchair accessibility requirements).

224. In New York City, Uber is suggesting “that the city levy a small per-trip fee on ‘for-hire vehicles’” that would create a fund that the for-hire industry, including Uber, could use to “offer sweeteners to bases and drivers to get them to deploy accessible vehicles.” Dana Rubinstein, *Uber and de Blasio Aides Quietly Push Dueling Accessible-Taxi Proposals*, POLITICO (Apr. 21, 2016), <http://www.politico.com/states/new-york/city-hall/story/2016/04/uber-and-de-blasio-aides-quietly-push-dueling-accessible-taxi-proposals-100914>. For two other ideas on how platforms such as Uber might be required to serve people with mobility disabilities, see Edelman & Geradin, *supra* note 10, at 321.

225. “The Americans with Disabilities Act (ADA) requires that individuals with disabilities who are unable to use accessible mass transit for some or all of their trips must be provided with paratransit.” *Guide to Access-A-Ride Service*, METRO. TRANSP. AUTH., <http://web.mta.info/nyct/paratran/guide.htm> (last visited Nov. 12, 2016). Some transit agencies are experimenting with using Uber and Lyft to provide paratransit services. Powell, *supra* note 90. For two reports recommending that paratransit agencies work with transportation network companies to improve paratransit service, and integrate technology used by transportation network companies, see CITIZENS BUDGET COMM’N, *ACCESS-A-RIDE: WAYS TO DO THE RIGHT THING MORE EFFICIENTLY* (2016); SARAH M. KAUFMAN ET AL., *INTELLIGENT PARATRANSIT* (2016). For a report highlighting the poor service and inefficiency of Access-A-Ride, which provides paratransit in New York City, see MARJORIE LANDA, OFFICE OF THE COMPTROLLER, CITY OF NEW YORK, *AUDIT REPORT OF THE METROPOLITAN TRANSPORTATION AUTHORITY’S ACCESS-A-RIDE PROGRAM* (2016), http://comptroller.nyc.gov/wp-content/uploads/documents/FK15_098A.pdf.

taxi and other transportation services for people with mobility disabilities. As in New York City, there is a tendency to fund taxi services for people with disabilities from taxi fares and paratransit from transit fares, but there is a strong case that taxpayers should fund these services, not riders, because the benefits accrue to society at large.²²⁶

The New Anti-Monopoly Function

While the advent of taxi apps may provide occasion for scaling back taxi regulation, the apps also may suggest a new role for regulators: guarding against the creation of a monopoly taxi app. As mentioned above, there are a number of commentators who argue that Uber is a natural monopoly,²²⁷ and the company's high valuation suggests there are many market players who may share this view.²²⁸ But not everyone agrees that Uber is a natural monopoly, because it is easy for drivers and passengers to switch to other apps, and Uber is not a monopoly at this juncture.

In this transitional period, regulators should be trying to avoid the creation of a monopoly app such as Uber.²²⁹ This means that regulators must avoid pursuing policies that could have the unintended consequence of making it more likely that Uber will become a monopoly. For example, in the fall of 2014, the New York City Taxi and Limousine Commission considered—and then dropped—a proposed rule that would have limited the ability of for-hire vehicle drivers to accept rides from multiple dispatchers (technically, bases). As a letter from New York State Attorney General Eric Schneiderman pointed out, the rule likely would have led to “market consolidation around a small number of the best capitalized and most well-known services” (i.e.

226. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 134–35. The Committee report also points out that making taxi riders pay for accessible taxis through surcharges on taxi fares, which is the current practice in New York City for example, could be regressive because it could mean “low-income taxi riders would pay disproportionately high per trip and per mile fees to subsidize people in wheelchairs who might well be more affluent than they are.” *Id.* at 135; *see also* CITIZENS BUDGET COMM’N, *supra* note 225, at 1 (arguing that the cost of funding Access-A-Ride, the Metropolitan Transportation Authority’s paratransit service, should “be borne” largely by taxpayers, rather than transit fares, while transit “fares, tolls and dedicated taxes” now finance fifty-seven percent of the cost of Access-A-Ride).

227. *See supra* note 118.

228. Darbéra, *supra* note 10, at 12–13.

229. Not everyone agrees that regulators should be seeking to avoid the creation of a monopoly taxi app. Some scholars suggest that it might be preferable for regulators to facilitate the creation of a monopoly taxi app, and then regulate it as a natural monopoly due to the beneficial network effects of the platform. Weyl & White, *supra* note 10.

Uber).²³⁰ If limited to choosing a single dispatcher, drivers likely would have chosen the company with the largest network of customers.

Another Topic: Who Should Regulate Taxis?

The question of which level of government should be regulating taxis in the age of Uber is a second order issue that is attracting considerable attention. Historically, municipal governments have been mainly responsible for regulating taxis in the U.S., with relatively minor involvement from the federal and state governments.²³¹ However, state legislatures recently have been extremely active in legalizing the spread of taxi apps. Over half of the states have passed legislation creating legal authorization for Uber and other transportation network companies to operate,²³² and there have been calls for other state legislatures or regulators to do so in the face of entrenched resistance to taxi apps at the local level.²³³ Some scholarship has even called for

230. See Letter from Eric T. Schneiderman, N.Y. Attorney Gen., to the Members of the N.Y.C. Taxi & Limousine Comm'n (Nov. 7, 2014), https://ag.ny.gov/pdfs/Letter_from_AG_to_TLC.pdf; see also Johana Bhuiyan, *In a Win for Uber, Taxi and Limousine Commission Revises Proposed One-Base Rule*, BUZZFEED (Nov. 19, 2014), <http://www.buzzfeed.com/johanabhuiyan/in-a-win-for-uber-taxi-and-limousine-commission-revises-prop#.ic7d9J5q>; Dan Rivoli, *Uber, Lyft Fight Proposed City Rule That Would Alter How Drivers Are Dispatched*, AMNEWYORK (Oct. 16, 2014), <http://www.amny.com/transit/tlc-proposes-rules-changes-to-hiring-drivers-1.9512638>.

231. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 39 (“In large metropolitan areas . . . taxis [are] commonly regulated by local governments and sometimes airport authorities as well.”).

232. “Colorado was the first state to legislatively address the [Transportation Network Companies.]” Strong, *supra* note 10, at 1079; see also Dobson, *supra* note 10, at 709–10. Colorado has historically regulated taxis and for-hire vehicles; accordingly, state regulation of the app-dispatched vehicles did not entail preempting local authority. Strong, *supra* note 10. Many states that have created a state-level regulatory infrastructure for transportation network companies have preempted local regulation of these companies. See, e.g., Light, *supra* note 74, at 343 (“Uber/Lyft have successfully lobbied more than a dozen state legislatures to preempt all local and municipal governance of such firms.”); *id.* at 376–81 (describing the approaches in various state statutes dealing with transportation network companies to supplemental local regulations).

233. Dobson, *supra* note 10, at 719–20, 722 (stating that the South Carolina legislature and public utilities commission should create regulations for “Transportation Network Companies”); see also Editorial, *Help New and Old Taxi Services Share the Road*, NEWSDAY (July 4, 2015), <http://www.newsday.com/opinion/editorial/uber-and-taxis-can-coexist-we-just-need-to-let-them-1.10607020> (stating that New York State should authorize and regulate new taxi operators). Cities are concerned about state governments acting to address sharing economy issues. FTC Workshop, *supra* note 10, at 109–10 (remarks of Brooks Rainwater).

federal regulation of taxis in the era of taxi apps.²³⁴ Another second-order issue is which agency—or agencies—should regulate taxis within whatever level of government is deemed appropriate. There are various candidates: special purpose taxi regulators, antitrust agencies, and planning departments. At the moment, I set to the side these second-order issues.

IV.

TRANSITION RELIEF FOR TRADITIONAL MEDALLION TAXI OWNERS

For taxi regulators in major cities today, the most pressing issue after how they should regulate the new app entrants, is whether they should compensate²³⁵ incumbents in the traditional taxi industry who are suffering large losses as Uber and other apps eat into their historical monopoly on the taxi business. The main actors incurring losses due to the arrival of Uber are medallion owners, and the financial institutions that loaned money to these owners, using the medallions as collateral.²³⁶ As mentioned above, unlike medallion owners and finan-

234. See, e.g., Weyl & White, *supra* note 10; Krauss, *supra* note 10. But see Posner, *supra* note 10. In contrast, Light stresses the need for the states and the federal government to avoid preempting local authority to regulate Uber and Lyft given the “uncertainty about the potentially significant environmental impacts” of the rise of these companies. Light, *supra* note 74, at 382. She argues local governments should have scope to experiment in addressing the environmental consequences of transportation network companies. *Id.* at 384–90.

235. I use the terms compensation and transition relief interchangeably. In using the terms interchangeably, I am following Louis Kaplow, who uses the term “transitional relief,” to encompass “compensation[,] . . . grandfathering, . . . phase-ins and delayed implementation.” Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509, 514 (1986); see also *id.* at 582–92 (discussing “transition mechanisms” which are “analytically equivalent to direct compensation”). The term “transition relief” comes from literature on “changes in tax policy.” Bruce R. Huber, *Transition Policy in Environmental Law*, 35 HARV. ENVTL. L. REV. 91, 92 n.2 (2011).

236. See, e.g., Amended Complaint at 10–14, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Mar. 7, 2016); Deirdre Fernandes, *Banks Step Up Efforts to Collect on Taxi Medallion Loans*, BOS. GLOBE (May 24, 2016), <https://www.bostonglobe.com/business/2016/05/24/banks-stepping-efforts-collect-taxi-medallion-loans/QPc6vFHd5UDfN3X9dJqe8M/story.html>; Danielle Furfaro, *Taxi Medallion Owners Find Their Dreams Dashed by Uber, Lyft*, N.Y. POST (July 5, 2016), <http://nypost.com/2016/07/05/city-lets-uber-and-lyft-cannibalize-the-american-dream/>.

In addition to medallion owners, individuals who own vehicles that have been hacked up to comply with taxi regulations arguably have a claim to compensation. These special purpose vehicles have less value, as Uber cars do not need to comply with many of the requirements that regulators impose on taxis. For evidence of the impact of Uber on vehicle owners (who do not also own medallions) in New York City, see Verified Petition at 7, *Glyka Trans LLC v. City of New York*, No. 100578/2015 (N.Y. Sup. Ct. Mar. 31, 2015) (describing a vehicle owner’s 19.3% loss in revenue from sub-leasing “his taxi vehicle” from February 2014 to March 2015). The

ciers, taxi drivers actually may be benefitting from the arrival of Uber in some cities.²³⁷

Medallions are the mechanism that many cities historically have used to enforce limits on the number of taxis allowed to operate on city streets. Governments distributed medallions in various ways—including at little cost, and through lotteries and auctions.²³⁸ Before the advent of Uber, there were active secondary markets in many cities' medallions in which individuals privately bought and sold medallions, and medallion owners borrowed money from banks and credit unions using the medallions as collateral. Many cities' medallions were valuable because having one was necessary to operate a taxi, and cities often limited their supply to a number well below that required to serve demand for taxis. At the peak in the early 2010s, New York City

plaintiffs' claims in *Glyka Trans LLC* were dismissed in *Glyka Trans LLC v. City of New York*, No. 8962/15, 2015 WL 5320868 (N.Y. Sup. Ct. Sept. 8, 2015).

237. See *supra* notes 66–67, 191–93 and accompanying text.

238. Most New York City medallions date from the early twentieth century. “In 1937, the first [New York City] taxi medallions were sold for ten dollars each. Haas Act § 4.” Brief for Respondents at 30, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. Apr. 15, 2016). That ten dollars is the equivalent of roughly \$168 in 2016 dollars, using the Bureau of Labor Statistics CPI Inflation Calculator. Since 1996, the City periodically has auctioned new medallions, garnering millions of dollars for the City budget. Verified Petition at 20, *Melrose Credit Union v. City of New York*, No. 6443/15 (N.Y. Sup. Ct. May 26, 2015) (“New York City auctioned taxicab medallions in 1996 and 1997, realizing approximately \$85 million in revenue from the sale of 400 medallions. Between 2006 and 2013, New York City auctioned approximately 1,050 medallions, generating an additional \$486 million in revenue. . . . Most recently, in fiscal 2014, New York City reportedly sold 400 taxicab medallions, generating nearly \$338 million in revenue. New York City has also budgeted for medallion sales between 2015 and 2019, anticipating \$1.6 billion in revenue for its budget.”); *cf. id.* at 12 (“In FY 2014, the City sold 350 of the 2,000 new taxi medallions that were authorized by State law in 2011, generating \$359 million (more than \$1 million per new medallion sold).”) (excerpting New York State Comptroller’s Office’s March 2015 Review of the Financial Plan of the City of New York). Miami-Dade County has used lotteries to allocate new medallions, charging the owners of the new medallions a flat fee of \$15,000, as well as auctions. Motion to Dismiss Amended Class Action Complaint at 4, *Miadeco Corp. v. Miami-Dade County*, No. 1:16-cv-21976 (S.D. Fla. June 29, 2016). Milwaukee also used a lottery to distribute new “taxicab permits” in 2013. *Joe Sanfelippo Cabs, Inc. v. City of Milwaukee*, 839 F.3d 613, 615 (7th Cir. 2016).

New York City has benefitted from medallion values not only through auctions, but also because the City has collected a transfer tax of five percent on secondary market sales of medallions since 1980. See N.Y.C. Admin. Code §§ 11-1401, 11-1402 (West 2016); Wyman, *supra* note 21, at 163. “The TLC establishes the fair market value of medallions for purposes of the transfer tax based on the average sales price of the previous month’s transfers.” Verified Petition at 20, *Melrose Credit Union*, No. 6443/15.

medallions were selling for over \$1 million.²³⁹ Medallion values have dropped substantially since the spread of Uber and other taxi apps, because cars affiliated with these companies compete with incumbent medallion taxis, but do not require medallions.²⁴⁰

Medallion owners fall into different categories, and the proportion of medallion owners in each category varies depending on the jurisdiction. Some medallion owners are taxi drivers who own a single medallion.²⁴¹ They may have immigrated to the U.S. and bought their lone medallion after years of hard work driving taxis using leased medallions and vehicles.²⁴² To buy that medallion, they may have bor-

239. “Taxi medallions are a transferable commodity that until recently were worth over \$1 million each (about \$17 billion in the aggregate) precisely because the hail exclusivity that the City created and sold is so valuable.” Verified Petition at 33, *Glyka Trans LLC*, No. 100578/2015. The plaintiffs’ claims in this case were dismissed in *Glyka Trans LLC*, No. 8962/15, 2015 WL 5320868.

Some suggested that New York medallions were overvalued even before Uber reduced medallion values. Felix Salmon, *How the Taxi-Medallion Bubble Might Burst*, REUTERS (Jan. 20, 2012), <http://blogs.reuters.com/felix-salmon/2012/01/20/how-the-taxi-medallion-bubble-might-burst/> (arguing that New York City’s announcement that it will issue 2000 additional medallions could burst the medallion bubble).

240. See Amended Complaint at 11–12, *Melrose Credit Union*, No. 1:15-cv-09042 (“[T]he value of the medallion has plummeted by more than 40% and the once vibrant market for the purchase and sale of New York City taxicab medallions is now frozen.”); Complaint at 20–22, *CGS Taxi LLC v. City of New York*, No. 653264/2015 (N.Y. Sup. Ct. Sept. 30, 2015) (describing reductions in medallion values); Complaint at 19–21, *Daler Singh v. City of New York*, No. 701402/2017 (N.Y. Sup. Ct. Jan. 30, 2017) (same).

241. See, e.g., Summons at 1, 3, *D&P Baidwan v. City of New York*, No. 708107/2015 (N.Y. Sup. Ct. July 31, 2015).

242. For references to immigrant medallion owners, see, for example, Complaint at 6–7, *Newark Cab Ass’n v. City of Newark*, No. 2:16-cv-04681 (D.N.J. Jan. 17, 2017), 2017 WL 214075 (case dismissed) (referring to an immigrant owner of two medallions); Second Amended Complaint at 13, *Bos. Taxi Owners Ass’n v. City of Boston*, No. 1:15-cv-10100-NMG (D. Mass. Dec. 21, 2016), 2016 WL 7410777 (case dismissed) (referring to an immigrant owner of one medallion); Erik Engquist, *Three More Taxi-Medallion Buyers Sue the de Blasio Administration*, CRAIN’S N.Y. BUS. (Aug. 4, 2015), <http://www.crainnewyork.com/article/20150804/BLOGS04/150809956/three-more-taxi-medallion-buyers-sue-new-york-city>.

I have found statistics on the immigration status of taxi drivers, but not medallion owners. According to the most recent Taxicab Factbook issued by the New York City Taxi and Limousine Commission, only “4% of medallion taxi drivers” in the City “were born in the U.S.” N.Y.C. TAXI & LIMOUSINE COMM’N, *supra* note 22, at 9. According to the 2014 Taxicab Fact Book, the two largest source countries for medallion taxi drivers are Bangladesh (23.1 percent of drivers) and Pakistan (13.2 percent). N.Y.C. TAXI & LIMOUSINE COMM’N, 2014 TAXICAB FACT BOOK 9 (2014), http://www.nyc.gov/html/tlc/downloads/pdf/2014_tlc_factbook.pdf. Nationally, “[f]orty-four percent of taxi and limousine drivers are foreign-born according to the U.S. Census Bureau’s American Community Survey for November 2007, the most recent data available. Among full-time drivers, the percentage of foreign-born rises to 53 per-

rowed a lot of money from a specialized financial institution, such as Medallion Financial or a credit union. Other owners own large numbers of medallions and taxi vehicles, which they lease to taxi drivers who cannot afford to buy medallions or taxicabs. These fleet owners may have accumulated their medallions over decades. Indeed, some of their medallions may have been bought by family members shortly after medallions were introduced in the early twentieth century.²⁴³ Still other medallion owners may be professionals such as doctors who have never driven a taxi, but nonetheless invested in medallions that they lease to taxi drivers. For example, two of the medallion owner plaintiffs in an ongoing lawsuit in New York City are oncologists.²⁴⁴ According to the complaint in the case, one of these oncologists “is now being forced to sell his apartment and use the money in order to attempt to refinance his medallion loan, because leasing payments . . . no longer cover the monthly payments on [this] . . . loan.”²⁴⁵ Then there are the financial institutions that loaned money to medallion owners to finance medallion purchases, or for other purposes. Medallion loans were once a safe bet, with little risk of default, but they have since become a source of major trouble for lenders because of the competition that taxis now face from Uber. Conditions now are so bad that in September 2015, “the New York State Department of Financial Services announced that it had taken possession of taxicab medallion financier Montauk Credit Union,” and the financial condition of other credit unions that finance medallions also has deteriorated because medallion owners are becoming delinquent on their loans.²⁴⁶

cent.” COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 84 n.4.

243. For discussion of the history of some of the large fleets of medallion taxis in New York City, see Wyman, *supra* note 21, at 156–57 nn.152–53 (referring to newspaper stories “about large fleet owners whose families have owned medallions since the late 1930s and 1940s”). According to one source, “[f]ifty-eight percent of New York City’s cabs are owned by corporate entities Just a third are owned by the people who drive them.” Van Zuylen-Wood, *supra* note 7.

I have not come across a fleet owner suing New York City for compensation for legalizing Uber. However, Gene Friedman, who “took over his father’s modest yellow taxi business,” and “at one point owned more than 1,000 New York City taxi medallions,” called for the City to bail him out after the value of his medallions declined. Meyer, *supra* note 16; see also Josh Barro, *New York Taxi Mogul, Seeking a Bailout, Says He’s Too Big to Fail*, N.Y. TIMES (Apr. 10, 2015), <http://www.nytimes.com/2015/04/11/upshot/new-york-taxi-mogul-seeking-a-bailout-says-hes-too-big-to-fail.html>.

244. Amended Complaint at 22, *Melrose Credit Union*, No. 1:15-cv-09042.

245. *Id.*

246. *Id.* at 11; see also *id.* at 10–11, 49 (describing increase in loan delinquencies and troubled debt restructurings at Melrose Credit Union).

In New York and many other cities, medallion owners, and sometimes the financial institutions that loaned money against medallions, are bringing Takings claims, seeking compensation for the recent drop in medallion values due to the legalization of Uber and the other taxi apps.²⁴⁷ I am not aware of any cases where the plaintiffs

247. See *supra* note 9 (citing Takings Clause cases for the loss of medallion values).

These claims raise interesting legal questions about whether taxi medallions count as private property protected by the Takings Clause. This is an issue that has never been adjudicated in relation to New York City medallions, although there is recent jurisprudence from other jurisdictions indicating that other cities' taxicab licenses—or the market value of these licenses—are not a private property interest protected by the Takings Clause. See *Ill. Transp. Trade Ass'n v. City of Chicago*, 839 F.3d 594 (7th Cir. 2016); *Joe Sanfelippo Cabs, Inc. v. City of Milwaukee*, 839 F.3d 613 (7th Cir. 2016); *Melancon, Inc. v. City of New Orleans*, 703 F.3d 262 (5th Cir. 2012); *Minneapolis Taxi Owners Coal, Inc. v. City of Minneapolis*, 572 F.3d 502 (8th Cir. 2009); *Cambridge Taxi Drivers & Owners Ass'n v. City of Cambridge*, No. 16-11357-NMG, 2017 WL 373491 (D. Mass. Jan. 25, 2017); *Bos. Taxi Owners Ass'n v. Baker*, No. 16-11922-NMG, 2017 WL 354010 (D. Mass. Jan. 24, 2017); *Newark Cab Ass'n v. City of Newark*, No. 2:16-cv-04681, 2017 WL 214075 (D.N.J. Jan. 17, 2017); *Bos. Taxi Owners Ass'n v. City of Boston*, No. 15-10100-NMG, 2016 WL 1274531 (D. Mass. Mar. 31, 2016); *Bos. Taxi Owners Ass'n v. City of Boston*, 84 F. Supp. 3d 72 (D. Mass. 2015); *Melancon, Inc. v. City of New Orleans*, No. 12-1337, 2014 WL 1117881 (E.D. La. Mar. 19, 2014); *Abramyan v. State*, No. 2015CV262742 (Ga. Super. Ct. Mar. 22, 2016).

There is older case law holding that Chicago medallions are protected by the Takings Clause, but this case law seems poorly reasoned and in any event recently was distinguished by the Illinois Transportation Trade Association court in dismissing the taxi industry plaintiffs' claims. *Ill. Transp. Trade Ass'n v. City of Chicago*, 134 F. Supp. 3d 1108, 1111 (N.D. Ill. 2015). The district court's holding dismissing the Takings claim was affirmed in *Ill. Transp. Trade Ass'n*, 839 F.3d 594 (7th Cir. 2016).

In recent litigation, New York City "concede[d]" that taxi medallions are property for procedural Due Process purposes, but the test for property under procedural due process is less demanding than the test for private property under the Takings Clause. *Singh v. Joshi*, 152 F. Supp. 3d 112, 124 (E.D.N.Y. 2016). In *Singh v. Joshi*, No. 15-CV-5496-FB-VMS, 2016 WL 4272349 (E.D.N.Y. Aug. 15, 2016), the court denied the plaintiffs' motion for reconsideration and granted the defendants' motion for summary judgment.

In some jurisdictions, medallion owners' claims may be influenced by the existence of legislation or regulations describing medallions as property. See, for example, 53 Pa. C.S.A. 5713(a) ("Medallions are property and may not be revoked or canceled by the authority."), which is cited in Amended Complaint at 25, *Checker Cab v. Phila. Parking Auth.*, No. 2:16-cv-04669 (E.D. Pa. Nov. 4, 2016); and Miami-Dade County Code of Ordinances § 31-81(z) ("*Medallion* means a plate or decal issued by the County as the physical evidence of a taxicab license which is affixed to the outside or inside of such taxicab.") and § 31-81(aa) ("*Medallion system* means the system which deems a taxicab for-hire license to be intangible property."), which are cited in Amended Class Action Complaint and Demand for a Jury Trial at 5, *Miadecco Corp. v. Miami-Dade County*, No. 16-4244 (Fla. Cir. Ct. May 4, 2016). Nonetheless, these references to medallions as property may not assure medallion owners of legal victory. The courts are not legally bound by these legislative descriptions in Takings Clause cases, which rest on constitutional rights. Moreover, the courts could hold that even if a medallion is property, the property rights of medallion owners do not encom-

have prevailed on their Takings claims.²⁴⁸ Here, I consider the policy question of whether the owners of these medallions should be compensated for reductions in medallion values since the advent of Uber and other taxi apps that likely would be exacerbated if my proposal to

pass protection against new competitors and reductions in the market value of medallions. In its motion to dismiss a suit brought by the incumbent taxi industry, Miami-Dade County describes medallions as conferring “limited intangible personal property” to operate for-hire vehicles. The County insists that this right has not been taken by the legalization of transportation network companies because the property right does not include “the right to exclude others from the for-hire market” or protection for the market value of medallions. Motion to Dismiss Amended Class Action Complaint at 13, 27, 29–30, *Miadeco Corp. v. Miami-Dade County*, No. 1:16-cv-21976 (S.D. Fla. June 29, 2016); see also *Joe Sanfelippo Cabs, Inc.*, 839 F.3d at 616 (“The taxi permits issued by the Milwaukee city government are property, but have not been ‘taken,’ as they do not confer on the holders a property right in, amounting to control over, all transportation by taxis and taxi substitutes (such as Uber) in Milwaukee.”).

248. For a list of decisions going against the plaintiffs, see *supra* note 9. Consistent with the prevailing case law, Suska recently has argued that “medallion owners lack a doctrinally plausible Takings claim.” Suska, *supra* note 10, at 198. He argues that they will have difficulty establishing that medallions constitute a property interest for Takings purposes. *Id.* at 198–201. But even if medallion owners can establish that medallions are private property protected by the Takings Clause, medallion owners may not be able to establish that their property has been taken under the *Penn Central* factors. *Id.* at 201–05.

There are two very interesting European cases rejecting arguments from taxi drivers that opening entry to the taxi business deprived them of property rights by undercutting the value of their taxicab licenses. *Gorman v. Minister for the Env’t* [2001] 2 IR 414 (H. Ct.) (Ir.) held that Irish taxicab licenses are property protected by the Irish Constitution’s equivalent of the Takings Clause. However, the court also held that the deregulation of entry did not infringe the license owners’ property rights because there was a condition inhering in the licenses that the law about them might change. *R (Royden) v. Metro. Borough of Wirral* [2002] EWHC (Admin) 2484, [2002] All ER 256 rejected an argument from taxi drivers that the Borough’s removal of the numerical limit on taxis deprived them of property rights protected under Article 1 of Protocol 1 to the European Convention for the Protection of Human Rights and Fundamental Freedoms 1950. The court ruled that the drivers’ licenses were not protected by Article 1, and in the alternative that the removal did not breach Article 1 if it applied. Notwithstanding the holding in *Gorman*, the Irish government paid a limited amount of compensation under political pressure from license holders. See SEAN B. BARRETT, REGULATORY CAPTURE, PROPERTY RIGHTS AND TAXI DEREGULATION—A CASE STUDY, IN ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT, TRANSPORT RESEARCH CENTRE, (DE)REGULATION OF THE TAXI INDUSTRY ROUND TABLE 133, 145–46 (2007) (discussing government’s appointment of Taxi Hardship Panel after *Gorman*); Ken Johnstone, Letter to the Editor, *Minister of Transport and Taxi Market Deregulation*, IRISH TIMES (Jan. 6, 2004), <http://www.irishtimes.com/opinion/letters/minister-of-transport-and-taxi-market-deregulation-1.1129023>. After the economic crisis in 2008, Ireland subsequently reinstated limits on the number of taxi licenses. Graeme O’Meara, *The Taxi Market in Ireland: To Regulate or Deregulate?*, PUBLICPOLICY.IE (Oct. 23, 2014), <http://www.publicpolicy.ie/the-taxi-market-in-ireland-to-regulate-or-deregulate/>.

eliminate limits on the number of taxis were implemented.²⁴⁹ Such compensation could be implemented by legislative decisions by city councils or state governments, if the courts continue to reject claims for just compensation under the Takings Clause.²⁵⁰ In considering whether compensation is justified, it is worth remembering that governments do not normally compensate actors who suffer losses due to regulatory changes.²⁵¹

249. I focus on whether medallion owners should be compensated, and do not explicitly consider whether the financial institutions that loaned money to medallion owners should be compensated for the decline in the value of the medallions on which the institutions rely as collateral. Without having seriously considered the matter, it seems to me that the arguments against compensating the financial institutions are even stronger than the arguments against compensating medallion owners, assuming that the financial institutions were even better positioned than many medallion owners to diversify.

For a Takings claim brought by financial institutions in New York City, see Amended Complaint, *Melrose Credit Union*, No. 15-cv-09042. New York City argues that the credit union plaintiffs lack standing in the case. Defendants' Memorandum of Law in Support of Defendants' Motion to Dismiss the Amended Complaint at 5–8, *Melrose Credit Union*, No. 15-cv-09042. In a separate state court case, the credit unions are suing the City (and New York State Attorney General) for violating "taxi-cab medallion owners' exclusive, statutory right to accept hails" by allowing Uber and other black car companies to accept e-hails. Brief for Petitioners-Appellants at 2, *Melrose Credit Union v. City of New York*, No. 2016-02214 (N.Y. App. Div. May 17, 2016). The City is also arguing in this case that the credit unions lack standing and some of the points the City makes also argue against compensating the financial institutions as a policy matter. Brief for Respondents at 31–40, *Melrose Credit Union v. City of New York*, No. 2016-02214. As a legal practitioner suggested to me, an interesting question to consider is whether the fact that the financial institution plaintiffs in these two cases are credit unions—as opposed to banks—gives rise to a stronger claim for compensation as a policy matter, given that credit unions are "not-for-profit organizations that exist to serve their members." *What Is a Credit Union?*, Nat'l Credit Union Admin., <http://www.mycreditunion.gov/about-credit-unions/Pages/How-is-a-Credit-Union-Different-than-a-Bank.aspx> (last visited Jan. 19, 2017).

250. Suska, *supra* note 10, at 205 (arguing for "a legislative decision to compensate medallion owners"). A bill passed by the Massachusetts legislature did "include[] a temporary 20-cent surcharge for every Uber or Lyft ride, of which 15 cents would pay for state and local transportation improvements" and "the remaining 5 cents will generate money to help taxi firms adapt." Dante Ramos, Opinion, *The Uber War Is Over — Uber Won*, Bos. *GLOBE* (Aug. 5, 2016), <https://www.bostonglobe.com/opinion/2016/08/04/lessons-from-uber-war/Gq8oNWabciihO4GTx5lbnM/story.html> (reporting that in legislating "to legitimize Uber and Lyft" Massachusetts "lawmakers looked into measures such as a medallion buyback, but" decided against them because such measures "could cost tens of millions of dollars or more").

251. As Justice Holmes famously recognized in *Pennsylvania Coal v. Mahon*, "[g]overnment hardly could go on if to some extent values incident to property could not be diminished without paying for every such change in the general law." 260 U.S. 393, 413 (1922). *But see* Huber, *supra* note 235, at 106, 110 (suggesting that governments often provide transition relief when they change environmental laws); Kaplow, *supra* note 235, at 534 ("[T]here often is . . . compensation" for "government risks.");

This part argues that, in general, there is no compelling economic argument for compensating medallion owners. However, there may be a fairness argument for compensating some medallion owners—the owners of a lone medallion—on the grounds that they are “less sophisticated investors.”²⁵² If regulators decide to offer compensation on fairness grounds or as a matter of political expediency, I argue on economic grounds that this compensation should take the form of monetary compensation rather than continued regulatory protection from competition. The arguments I make are general, and not specific to any jurisdiction or its regulatory structure or history.²⁵³

A. *Whether Medallion Owners Should Be Compensated*

Efficiency Analysis

The anticipated effects of compensation on the investment decisions of private actors are a conventional starting point in analyses of whether it would be efficient for governments to compensate for legal

MICHAEL J. TREBILCOCK, *DEALING WITH LOSERS: THE POLITICAL ECONOMY OF POLICY TRANSITIONS* (2014).

252. I borrow the term “less sophisticated investor” from Kaplow, *supra* note 235, at 549. He is contrasting “less sophisticated (often, less wealthy) individual investors” and “institutional investors and corporations.” *Id.*

253. This leaves open the possibility that there might be jurisdictions where the specific regulatory history would justify compensating medallion owners.

Compensation would seem to be warranted if, as medallion owners and lenders currently are alleging in lawsuits in New York City, the taxi regulatory body intentionally posted misleading information about medallion values on its website, and the owners and lenders justifiably relied to their detriment on this information. Intentional misrepresentation combined with reliance might constitute fraud, and if the agency acted fraudulently, it acted illegally and should pay compensation.

The plaintiffs are suing for fraud in Amended Complaint at 17, 74–78, 83–85, *Melrose Credit Union*, No. 1:15-cv-09042; and for violation of general business law, fraudulent inducement and negligent misrepresentation in Complaint at 2, 22, 23–26, *CGS Taxi LLC v. City of New York*, No. 653264/2015 (N.Y. Sup. Ct. Sept. 30, 2015); and for violation of general business law, fraudulent inducement, breach of contractual covenant of good faith and fair dealing, and negligent misrepresentation in Complaint at 2, 22–25, *Singh v. City of New York*, No. 701402/2017 (N.Y. Sup. Ct. Jan. 30, 2017).

For the elements of civil fraud under New York law, see *Loreley Fin. (Jersey) No. 3 Ltd. v. Wells Fargo Sec., LLC*, 797 F.3d 160, 170 (2d Cir. 2015) (“Under New York law, fraud requires proof of: (1) a material misrepresentation or omission of a fact, (2) knowledge of that fact’s falsity, (3) an intent to induce reliance, (4) justifiable reliance by the plaintiff, and (5) damages.”).

In the text, I set to the side any allegations that the government acted illegally, which at any rate currently remain unproven allegations in New York City. I consider whether government should pay compensation if all it has done is legalize Uber and other taxi apps or permitted them to operate, and thereby reduced the value of a city’s medallions.

changes.²⁵⁴ A standard argument is that governments should not generally compensate for legal changes, just as they do not generally compensate for changes resulting from market forces, such as technology change.²⁵⁵ Government compensation for legal changes would enable actors to externalize some of the costs of these changes onto society, and therefore reduce the incentives for actors to take into account the risk of such changes in making investment decisions.²⁵⁶ Kaplow argues that actors should not be compensated for legal changes, just as they generally are not compensated for market changes, to ensure that actors “bear all real costs and benefits of their decisions.”²⁵⁷ Investors need to face all these costs and benefits to avoid inefficient “overinvestment.”²⁵⁸

This economic argument against compensation applies forcefully to the current situation in the taxi sector, and argues against compensating medallion owners. First, there is a strong argument for treating the legal changes that have legalized Uber like “market risks,” because the legal changes result from market forces.²⁵⁹ To operate legally, Uber and the other app-based taxi services have required government approval, because it is generally illegal to offer rides for hire without government permission.²⁶⁰ But the advent of Uber, though immediately facilitated by government authorization, ultimately is the product of market forces, specifically “[a]dvances in information and communication technologies, combined with smartphone applications and location data from global positioning systems.”²⁶¹ New York State Supreme Court Judge Allan Weiss recently recognized the technological changes that underpin the arrival of Uber in denying a claim

254. Kaplow, *supra* note 235. Kaplow’s discussion of when transition relief is appropriate clearly covers a situation such as the arrival of Uber. Kaplow underscores “the ubiquity” of transition concerns, arguing that they arise whenever unanticipated “changes in government policy . . . affect the value of investments made prior to those changes.” *Id.* at 518. He identifies deregulation as an example of a policy change raising transition issues. *Id.* at 517.

255. *Id.* at 520, 522, 533–36.

256. *Id.* at 533.

257. *Id.* at 529; *see also id.* at 531, 539–40.

258. *Id.* at 529.

259. For Kaplow’s definition of market risks, *see id.* at 533.

260. For the prohibition in New York City, *see* N.Y.C. Admin. Code §§ 19-506(b)(1), 19-506(c)(1) (West 2016), and 35 RCNY § 58-02(a), (b). For evidence that New York City authorized Uber to operate, *see*, for example, Brief for Respondents at 23, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. Apr. 15, 2016) (“In 2011, the [Taxi and Limousine] Commission licensed Uber to operate a base station in New York City.”).

261. COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 6; *see also id.* at 11–13 (describing technological changes transforming transportation).

brought by elements of the New York City taxi industry for compensation for the decline in medallion values, holding that “[i]n this day and age, even with public utilities, investors must always be wary of new forms of competition arising from technological developments.”²⁶²

Second, medallion owners should not be compensated because compensation would set an undesirable precedent of allowing investors to externalize onto society losses from foreseeable downside risks. As Kaplow argues, investors need to face all of the costs—and benefits—of their investments to promote optimal investment decisions; if actors can externalize losses when asset values fall, society risks promoting overinvestment.

The argument that actors should not be compensated for losses due to legal changes rests in part on these changes being foreseeable *ex ante* to investors.²⁶³ If the changes are not foreseeable, then there is no risk that compensation for the changes when they occur will affect investment behavior *ex ante*.²⁶⁴ As just explained, the decline in medallion values is a product of legal changes that have increased the number of taxi vehicles (the legalization of Uber), and technological changes (the introduction of new app technology for matching of passengers and taxi drivers). Though the precise mechanism by which technological and legal changes recently have combined to reduce the value of medallions may not have been foreseeable, government policy changes to increase the number of taxi vehicles and technological changes affecting the taxi industry were foreseeable *ex ante*.

There is a history of regulatory changes increasing the number of vehicles providing taxi services in major cities, and this history provided medallion owners with notice of the potential that governments might authorize additional competitors. Consider the regulatory history in New York City. While the number of medallion taxis has been capped since 1937, regulatory changes have gradually expanded the number of vehicles providing taxi services in the city. The legalization of “for-hire vehicles” in the 1980s introduced new providers of transportation services that compete to some degree with medallion taxis; to be sure, prior to the arrival of Uber, the competition was muted because these vehicles were allowed to provide transportation service

262. *Glyka Trans LLC v. City of New York*, No. 8962/15, 2015 WL 5320868, at *12–13 (N.Y. Sup. Ct. Sept. 8, 2015).

263. I say that it rests in part on the changes being foreseeable, because Kaplow argues that insurance—especially compulsory insurance—might be a better solution to “risk misassessment” than compensation. Kaplow, *supra* note 235, at 549.

264. *Id.* at 548.

only through prearrangement.²⁶⁵ Of greater relevance, since 1996, New York City periodically has increased the number of medallion taxis, by auctioning additional medallions.²⁶⁶ In addition, in 2011 and 2012, New York State passed a law that introduced new green taxis that are allowed to pick up passengers through street hails in northern Manhattan and the outer boroughs, in competition with medallion taxis.²⁶⁷ The introduction of the green taxis limited the geographic scope of the medallion taxi monopoly to picking up street hails in one part of Manhattan and at the airports. The increases in the number of vehicles providing taxi services on city streets through governmental licensing of for-hire vehicles, the increases in the number of medallion taxis since 1996, and the licensing of green taxis starting in 2014,²⁶⁸ mean that medallion owners should have been on notice that there could be policy changes to increase the number of vehicles providing taxi services.²⁶⁹

265. See Wyman, *supra* note 21, at 172 (discussing legalization of illegal cabs as for-hire vehicles); Complaint at 9, *CGS Taxi LLC v. City of New York*, No. 653264/2015 (N.Y. Sup. Ct. Sept. 30, 2015) (“The pre-arrangement requirement limited the competition.”); Complaint at 8, *Daler Singh v. City of New York*, No. 701402/2017 (N.Y. Sup. Ct. Jan. 30, 2017) (same).

266. Since 1996, New York City has increased the number of medallions by fifteen percent. See Van Zuylen-Wood, *supra* note 7 (stating that there were 11,787 medallions in 1996, and there are now 13,587, for an increase of about 15 percent).

267. HAIL Act, 2012 N.Y. Sess. Laws 9 (McKinney) (amending 2011 N.Y. Laws 602); Greater N.Y. Taxi Ass’n v. State, 993 N.E.2d 393, 397–98 (N.Y. 2013). The history of the green taxis is described in Wyman, *supra* note 21, at 134–35, 179–82, and Complaint at 6, *CGS Taxi LLC*, No. 653264/2015. In addition to being allowed to pick up street hails in northern Manhattan and the outer boroughs, green taxis are allowed to pick up by prearrangement in these areas and the airports. *Your Guide to Boro Taxis*, N.Y.C. TAXI & LIMOUSINE COMM’N, http://www.nyc.gov/html/tlc/html/passenger/shl_passenger.shtml (last visited Jan. 22, 2017).

268. Complaint at 6, *CGS Taxi LLC*, No. 653264/2015.

269. Recent judicial decisions reject claims from the traditional taxi industry in New York, Boston, Chicago, Atlanta, Newark, Cambridge and Milwaukee that governments have taken private property by legalizing taxi apps. *Supra* note 9. Some of the decisions emphasize that the taxi industry could not have reasonably expected that governments would protect them from competition from taxi apps. See *Ill. Transp. Trade Ass’n v. City of Chicago*, 839 F.3d 594, 596–98 (7th Cir. 2016); *Bos. Taxi Owners Ass’n v. City of Boston*, 84 F. Supp. 3d 72, 79–80 (D. Mass. 2015) (denying preliminary injunction); *Glyka Trans LLC v. City of New York*, No. 8962/15, 2015 WL 5320868, at *12–13 (N.Y. Sup. Ct. Sept. 8, 2015); *Abramyan v. State of Georgia*, No. 2015CV262742, at 2 (Ga. Super. Ct., Mar. 22, 2016). In *Joe Sanfelippo Cabs, Inc. v. City of Milwaukee*, in affirming the dismissal of a Takings claim, Judge Richard Posner explicitly states that the plaintiff taxi permit holders “were . . . on notice that there was no guarantee that the [“no-new-permit ordinance of 1992”] . . . would remain in force indefinitely” because when it was passed, some “aldermen warned that the ordinance could be changed to the disadvantage of the taxi companies.” 839 F.3d 613, 613 (7th Cir. 2016).

It also was foreseeable that technological change might affect the taxi business. There is a precedent for the way that developments in communications technology currently are reshaping the taxi business: the spread of two-way radio technology into the taxi industry after World War II, when it was commonplace for “households[]” to have telephones.²⁷⁰ With these technological developments, it was no longer necessary to go to the street to hail a taxi; the passenger could telephone for a taxi from the comfort of home, and the taxi company would dispatch the taxi by two-way radio.²⁷¹

The widespread adoption of mobile phone technology is merely the latest advance in communications technology to affect the taxi business. No longer do we have to call taxis from home, and dispatch centers no longer need to communicate with cabs through radios. Many people, passengers and drivers alike, now have mobile phones through which we can connect with each other while we are on the street.²⁷² Interestingly, the potential that the spread of cell phones might threaten New York’s medallion taxis was anticipated long before the creation of Uber in 2009.²⁷³ In 1998, the Sunday New York Times Magazine published a story in which then Baruch College business professor Ed Rogoff predicted that, “[i]n a few years . . . when everyone has a cell phone and the dispatching system is fully computerized, you’ll be able to press a couple of buttons on your phone and have a nonmedallion cab appear anywhere you want in a minute or two.”²⁷⁴ The story prophetically went on to add that, “[i]f that happens, the medallion owners might be distressed to find themselves with pieces of plastic that are suddenly worthless.”²⁷⁵

270. Darbéra, *supra* note 10, at 4; *see also* GILBERT & SAMUELS, *supra* note 16, at 83.

271. In Paris, the new technology meant that it was no longer necessary to physically go to the garage nearby to book a *voiture de remise*. Darbéra, *supra* note 10, at 4. “The *voiture de remise* had to wait in *remises* (i.e. garages) until being contracted by a client to go and pick him up.” *Id.* at 3.

272. “Currently, [sixty-four] percent of Americans own smartphones, a percentage that reflects rapid growth (from 35 percent in 2011) across all common demographic categories (income, gender, age, and race). Among those earning less than \$30,000, 50 percent owned a smartphone in 2015, compared with 43 percent in 2013. Smartphone access, on average, varies more by age than by income: just 27 percent of adults over age 65 have a smartphone, compared with 18 percent in 2013.” COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 143.

273. Adam Lashinsky, *Uber: An Oral History*, *FORTUNE* (June 3, 2015), <http://fortune.com/2015/06/03/uber-an-oral-history/>.

274. John Tierney, *The Big City: You’ll Wonder Where the Yellow Went*, *N.Y. TIMES MAG.* (July 12, 1998), <http://www.nytimes.com/1998/07/12/magazine/the-big-city-you-ll-wonder-where-the-yellow-went.html>.

275. *Id.*

Government compensation for the medallion owners who are now suffering due to foreseeable legal and technological changes would reduce the incentives for other investors to take full account of legal and technological risks in future investment decisions.²⁷⁶ Furthermore, it is especially undesirable to compensate those who overinvest in government-created assets such as medallions because these assets may arise from inefficient government policies.²⁷⁷ Taxi medallions are a paradigmatic example of an asset created by an inefficient government policy: there is widespread agreement among economists that limiting the number of taxis using medallions harmed society at large, for example by reducing the quality of taxi service, and that it was distributionally unfair because it constrained the ability of low-skilled workers to enter an industry that has few natural barriers to entry.²⁷⁸ Compensating the owners of problematic government-created assets such as medallions when they lose their value means that society in effect pays twice for the inefficient policies that created the medallions: first, through the social costs that medallions and similar assets create when they limit the number of taxis; and second, by compensating medallion owners when the medallions no longer serve the function of limiting the number of taxis. Compensating for the elimination of these assets also may have the pernicious effect of encouraging others to lobby the government to create inefficient monopoly rights comparable to medallions that limit entry in other fields.²⁷⁹

In a recent thought-provoking article, David Suska argues, contrary to this piece, that economic efficiency dictates that medallion owners should be compensated for the decline in medallion values.²⁸⁰ Suska offers three reasons why compensation would be efficient. Potentially the most compelling is his argument that compensation “may preserve incentives for risk-averse actors to invest in property that may be regulated, and more generally, to deal with government.”²⁸¹ This argument echoes an argument in efficiency analyses of Takings

276. Kaplow, *supra* note 235, at 548, 557–58.

277. See BARRETT, *supra* note 249, at 146 (raising questions about the compensation that Irish taxi license holders received after deregulation of entry in the early 2000s). Kaplow also seems to gesture toward the relevance of the efficiency of the underlying government policy in the decision about whether compensation is justified. Kaplow, *supra* note 235, at 572–74.

278. Wyman, *supra* note 21, at 147 n.121.

279. See Geradin, *supra* note 8, at 10; Louis Kaplow, *Transition Policy: A Conceptual Framework*, 13 J. CONTEMP. LEGAL ISSUES 161, 199 (2003) (“[P]romises of protection ex post make special interest legislation more attractive ex ante, which will increase rent-seeking activity surrounding original enactments.”).

280. Suska, *supra* note 10, at 206–09.

281. *Id.* at 209.

Clause compensation that risk averse property owners should be compensated for “large losses” that they suffer due to regulatory changes if they are “unable to insure against such losses.”²⁸² The idea behind the argument is that if left uncompensated, such property owners might be discouraged from making socially beneficial investments due to their aversion to risks that may substantially reduce their wealth, and their inability to protect against these risks through insurance or diversification.²⁸³ Homeowners whose wealth is largely tied up in their house would be a paradigmatic instance. They might be discouraged from making socially useful upgrades to their homes, if, for example, the government could radically alter the zoning of their land to preclude residential use without paying compensation, assuming homeowners cannot buy insurance against zoning changes or diversify their holdings.²⁸⁴ Taxi medallion owners, especially if they are taxi drivers who own a single medallion, might be analogized to individual homeowners. Due to the reduction in medallion values, driver-owners

282. Lawrence Blume & Daniel L. Rubinfeld, *Compensation for Takings: An Economic Analysis*, 72 CAL. L. REV. 569, 573 (1984).

283. *Id.* at 588. A similar argument is made by Rose-Ackerman and Rossi. Susan Rose-Ackerman & Jim Rossi, *Disentangling Regulatory Takings*, 86 VA. L. REV. 1435 (2000). They argue that there should be a “presumption” that the government is not obligated to compensate due to policy changes, but they support a “presumption” for compensation when the government acquires assets. *Id.* at 1440; *see also id.* at 1477–93. Referring to Blume and Rubinfeld, however, they argue that there might be a case for government to compensate for policy changes when the “investors” “are risk averse [because] . . . the uncertainty created by the threat of harm may lead them to invest less and to hold their assets in a form that is unlikely to be affected by the public program.” *Id.* at 1486; *see also id.* 1488 n.167 (citing Blume & Rubinfeld, *supra* note 282, at 582–99).

From an *ex ante* perspective, Kaplow also recognizes that risk perception and the ability to diversify also may influence the justifiability of compensation for legal changes. He speculates that “less sophisticated (often, less wealthy) individuals” are more likely to improperly estimate risks. Kaplow, *supra* note 235, at 549. He suggests that compensation is less problematic when individuals are prone to underestimate risks, because the compensation is unlikely to affect their investment choices. *Id.* at 548–49. However, he argues that insurance—especially “compulsory insurance”—may be a more appropriate response than compensation given the likelihood that risks will be systematically underestimated. *Id.* at 549. He also recognizes that “[i]n some situations . . . certain individuals lack the information to use . . . markets to diversify risks created by the possibility of changes in government policies.” *Id.* at 550.

284. Blume and Rubinfeld’s argument is focused on regulatory takings involving real property, not intangible property like medallions. Blume & Rubinfeld, *supra* note 261, at 570 n.8. Rose-Ackerman and Rossi argue that “[t]he insurance rationale [for governments to compensate for takings] is much stronger for government takings of family homes than for actions that harm broadly-held corporations” because homeowners are less likely to be able to “insure by holding a diversified portfolio of investments.” Rose-Ackerman & Rossi, *supra* note 262, at 1488–89. In addition, corporations are more likely to be able to purchase “political risk insurance.” *Id.*

of single medallions likely have lost a significant portion of their overall wealth. Moreover, they likely had little opportunity to insure against this loss of wealth, for example by purchasing political risk insurance or diversifying their assets.²⁸⁵ Suska seems to argue for compensating all medallion owners on the basis that medallion owners generally share these characteristics.²⁸⁶ But his argument justifies compensating only the subset of risk-averse medallion owners that suffer significant losses against which they could not have insured. Medallion owners who own large numbers of medallions and professional investors are more likely to have had the opportunity to diversify their asset holdings, given that they likelier have greater resources.

Moreover, even if there is an economic argument for compensating owners of single medallions, it is not clear that the argument is strong. Recall that the argument for compensating such risk-averse owners rests on the idea that we do not want to discourage socially beneficial investments. As mentioned above, limiting the number of taxis through medallion systems was an inefficient government policy that likely reduced service quality,²⁸⁷ and investments in taxi medallions consequently were socially inefficient. Compensating medallion owners would not only pay them for socially inefficient investments, but, as mentioned, force the public to bear the cost of undoing a policy the costs of which it has shouldered for many years in the form of higher fares and lack of innovative taxi service. Also, compensation in this instance might set a precedent that could be invoked in the future by other interest groups that lose similarly inefficient government policies that benefit them.

Suska's other two efficiency arguments for compensation focus on the incentives that compensation might create for governments, not private actors.²⁸⁸ He argues that compensation is desirable to facilitate the transition to a more efficient regulatory regime that allows app-dispatched taxis. By paying compensation, governments may be able to reduce the opposition to changing the regulatory regime.²⁸⁹ This argument seems unavailing in many places in the United States, although it might be more relevant in countries where transportation network companies have met with greater resistance from regulators,

285. Suska, *supra* note 10, at 210.

286. Suska seems to generalize from the situation in Chicago where “the majority” of medallion owners “own a single medallion.” *Id.*

287. See *supra* note 278 and accompanying text.

288. See Kaplow, *supra* note 279, at 164 (separately analyzing the impacts of transition relief on “private actors” and “government behavior”).

289. Suska, *supra* note 10, at 207–09.

such as in Europe.²⁹⁰ In the U.S., transportation network companies have been legalized in many jurisdictions without compensating the incumbent taxi industry.²⁹¹ The issue now in many places is that the regulatory burden on the traditional taxi industry remains excessively stringent, and if the burden is not lowered, the existing industry likely will be further eroded. Since in my view it is in the long-term interests of the traditional industry to revisit the stringency of the regulations that currently apply to it, there is less political need to compensate that industry for overhauling the regulations that likely are inhibiting it, because that industry will benefit from the overhaul relative to preserving the status quo. In any event, there are strong arguments against granting relief generally to facilitate transitions to more efficient policies by reducing the likelihood of opposition. Granting such relief itself may encourage inefficient behavior by regulated actors, such as lobbying for the continuation of transition relief, that may perpetuate inefficient government policies.²⁹²

Suska's other argument that governments should pay compensation is that compensation is desirable to "force government to internalize the costs of its actions."²⁹³ The idea behind this "fiscal illusion" argument is that governments must be forced to bear the costs of their actions so that they recognize that policy changes have costs, as well as benefits, and act only when the benefits exceed the costs.²⁹⁴ One difficulty with the argument that governments should compensate medallion owners to avoid inefficient decisions, is that the argument focuses narrowly on ensuring that governments internalize the costs of removing restrictions on the number of taxis, while ignoring the benefits of removing the restrictions on entry. Forcing the government to bear the costs, but not enabling it to enjoy the benefits, may lead decision-makers to over-emphasize the costs compared with the benefits. A more fundamental objection to the argument is that government decision-makers are primarily motivated by political considerations, which do not necessarily align with economic costs and benefits.²⁹⁵ Thus even if we want to incentivize governments to make efficient

290. Geradin, *supra* note 8.

291. See *supra* note 38 and accompanying text.

292. See, e.g., Kaplow, *supra* note 279, at 197–200 (doubting the public choice arguments for transition relief); Revesz & Kong, *supra* note 50, at 1621–32 (rejecting the public choice arguments for transition relief).

293. Suska, *supra* note 10, at 206.

294. See, e.g., Kaplow, *supra* note 279, at 194 (discussing the fiscal illusion argument for government compensation for legal changes).

295. Daryl J. Levinson, *Making Government Pay: Markets, Politics, and the Allocation of Constitutional Costs*, 67 U. CHI. L. REV. 345, 345 (2000).

decisions, it is not clear that forcing governments to pay for the economic costs of their actions will increase the likelihood of efficient policy-making. Indeed, given political realities, it is possible that if compensation is required, the diminishing number of U.S. jurisdictions that have yet to legalize e-hailing could be further delayed in doing so. Policy-makers might be deterred from legalizing e-hailing because they fear having to raise taxi fares or taxes, or cut spending, to pay compensation to medallion owners.²⁹⁶

Fairness Arguments

If there is a case for compensating medallion owners, it likely rests on ideas about fairness rather than efficiency. Below I elaborate and reject a fairness argument that medallion owners are advancing for compensation based on their reliance on existing laws. Then I turn to a distributional argument that might justify compensating some medallion owners.

Reliance Argument

Actors seeking government compensation for legal change often argue that they are entitled to it because they invested relying on the pre-existing legal framework.²⁹⁷ Medallion owners currently are making such an argument. They assert that governments should compensate medallion owners because they invested in medallions relying on the stability of the regulatory framework, especially the long-existing legal restrictions on entering the taxi business that gave rise to medallion values.²⁹⁸ In legalizing Uber, medallion owners argue, govern-

296. As previously noted, in legislating “to legitimize Uber and Lyft,” Massachusetts “lawmakers looked into measures such as a medallion buyback, but” decided against this because “that could cost tens of millions of dollars or more.” Ramos, *supra* note 250; see also Huber, *supra* note 235, at 94 (noting that “lawmakers may be less willing to pursue needed regulatory change if law or custom comes to require relief”).

297. See, e.g., Huber, *supra* note 235, at 107–108 (discussing arguments for transition relief rooted in the idea that it is unfair for governments to change laws on which people have relied, without compensation).

298. See, e.g., Amended Complaint at 5–6, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Mar. 7, 2016) (noting that “medallion purchasers . . . reasonably relied” on “the statutory right to hail exclusivity that accompanies” medallions “in making the decision to purchase a medallion and operate their private businesses”); Complaint at 10, *Newark Cab Ass’n v. City of Newark*, No. 2:16-cv-04681 (D.N.J. Jan. 17, 2017), 2017 WL 214075 (case dismissed) (claiming that medallion owners bought medallions “[i]n reliance” on the regulatory “structure”); Reply Brief For Petitioner-Appellants at 27, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. May 13, 2016) (noting that “the City itself sold the medallions, taking in nearly \$1 billion based on medallion purchasers’ reliance on the promise that they had the exclusive right to accept street hails”).

ments are abandoning their longstanding policy of limiting entry to the taxi business to entities holding medallions, and undermining the value of investments predicated on regulatory restrictions on entry. Governments are arguably engaging in “deregulatory takings”—reducing, and potentially eliminating, the value of medallions by removing restrictions on entry, or not enforcing them against Uber and other taxi app services.²⁹⁹ From the point of view of medallion owners, such takings are unfair “and tantamount to the government suddenly changing the terms of the contract”³⁰⁰ because investors “ma[de] investment decisions . . . based on the expectation that the law will not change.”³⁰¹

Although medallion owners invested relying on municipal regulatory restrictions on entry, there is a counter-argument that fairness does not require compensating them for the disappearance of their monopoly. While they may have relied on the regulatory limits on entry, “it is [not] reasonable to expect laws never to change.”³⁰² Indeed, as mentioned above, there is a history of regulatory changes in major cities such as New York City to increase the availability of taxi services, and this history provided medallion owners with notice of the

New York Supreme Court Judge Allan Weiss rejected a reliance-based claim for compensation under the Takings Clause from elements of New York City’s traditional taxi industry. *Glyka Trans LLC v. City of New York*, No. 8962/15, 2015 WL 5320868 (N.Y. Sup. Ct. Sept. 8, 2015).

299. For discussion of deregulatory takings, see, for example, Rose-Ackerman & Rossi, *supra* note 283, at 1459 (using the term “‘deregulatory takings’ challenges” to refer to claims by regulated actors that changes in government policies have caused them a loss in revenues and “interference with investment-backed expectations”). For example, when the federal government and a number of states restructured the electricity sector to introduce greater competition in the 1990s and early 2000s, electric utilities argued that they should be compensated for their “stranded costs” through “transition surcharges” paid by “consumers or new market participants.” *Id.* at 1436; *see also id.* at 1457–61. Rose-Ackerman and Rossi argue that there should be a “presumption” that the government is not obligated to compensate due to policy changes, but they support a “presumption” for compensation when the government acquires assets. *Id.* at 1440; *see also id.* at 1477–93. As of when Rose-Ackerman and Rossi were writing, “no court ha[d] . . . accepted the sweeping deregulatory takings argument advocated by the [electricity] industry,” but regulators allowed recovery of “stranded costs” through other means. *Id.* at 1466; *see also id.* at 1467–68.

300. Revesz & Kong, *supra* note 50, at 1587 (referring to Graetz’s critiques of “the reliance argument used by old-view scholars”). Newark medallion plaintiffs specifically argued that “[b]y permitting the de facto taxi companies [such as Uber] to operate without fully complying with City Taxi Regulations, the City has breached its contract with the Medallion Owner Plaintiffs.” Complaint at 16, *Newark Cab Ass’n*, No. 2:16-cv-04681 (case dismissed).

301. Revesz & Kong, *supra* note 50, at 1585 (summarizing “the old view” in favor of transition relief).

302. Kaplow, *supra* note 235, at 522; *see also* Revesz & Kong, *supra* note 50, at 1587–88.

potential for additional regulatory changes.³⁰³ To use New York City as an example, medallion owners might respond that while the City had permitted increases in the number of vehicles providing taxi services since 1937, it had never abandoned the policy of limiting the number of taxis allowed to pick up people by street hails until the advent of Uber.³⁰⁴ The difficulty with this argument is that New York City, like other cities, always might have abandoned limits on the number of taxis that can accept street hails, not merely expanded the number of vehicles providing taxi services. Indeed, a number of cities in the U.S. and abroad experimented with removing limits on the number of entrants to the taxi industry long before Uber.³⁰⁵

Thus, on the facts, the argument of medallion owners that they reasonably relied on longtime restrictions on entry to the taxi business when investing in medallions seems weak. But even if the facts pointed in the opposite direction, that would not resolve the normative question of whether medallion owners should be compensated. As Kaplow argues, reliance-based arguments for compensation for legal changes beg the “normative question” of why the expectations of investors of no change should be honored with compensation in the first

303. See *supra* notes 265–268 and accompanying text.

304. See Complaint at 4, *Singh v. City of New York*, No. 701402/2017 (N.Y. Sup. Ct. Jan. 30, 2017); Complaint at 4, *CGS Taxi LLC v. City of New York*, No. 653264/2015 (N.Y. Sup. Ct. Sept. 30, 2015); Brief for Petitioner-Appellants at 46, *Glyka Trans LLC v. City of New York*, No. 2015-11661 (N.Y. App. Div. May 13, 2016) (“The basic *quid pro quo* in the industry is that yellow taxis are subject to medallion, fare limit, and other onerous restrictions in exchange for the exclusive right to pick up passengers immediately, whereas black cars are free from these restrictions but are only permitted to arrange to pick up passengers in the future. Appellants could have anticipated that conventional hailing would be replaced by e-hailing, but they could not have anticipated that Respondents would upend this longstanding industry *quid pro quo* and render yellow taxi hail exclusivity all but valueless by allowing everyone, with or without a medallion, to pick up e-hails.”); Amended Complaint at 3, 7, *Melrose Credit Union v. City of New York*, No. 1:15-cv-09042 (S.D.N.Y. Mar. 7, 2016) (“From its inception, the regulatory structure of the for-hire transportation industry in New York City has been based on ‘hail’ exclusivity. In exchange for the price paid to New York City for a taxicab medallion . . . medallion bearing taxicabs were granted the exclusive right to accept hails, while all other for-hire vehicles (‘FHV’s’) . . . operating in New York City, subject to certain limited statutory exceptions, were restricted to accepting passengers solely by pre-arrangement. . . . [T]he now ubiquitous acceptance of on-demand E-Hails by every category of FHV operating in New York City, . . . has eviscerated hail exclusivity and destroyed the carefully designed marketplace dichotomy.”).

305. See, e.g., Wyman, *supra* note 21, at 147–48 n.121 (discussing efforts to deregulate the taxi industry in the U.S. and other countries); COMM. FOR REVIEW OF INNOVATIVE URBAN MOBILITY SERVS., *supra* note 7, at 49–51 (providing a generally negative account of experiments with taxi deregulation in the U.S.).

place.³⁰⁶ There are powerful arguments against honoring investor expectations that laws will never change by compensating owners, because compensating for changes likely will incentivize owners not to anticipate legal changes.³⁰⁷

Distributional Argument

A potentially more compelling fairness argument for compensating medallion owners draws on the distributional implications of the decline in medallion values. Medallion owners might argue that they should be compensated because they (or at least some of them) are “less sophisticated investors.”³⁰⁸ Remember that some medallion owners are taxi drivers who drove taxis for years to save money to buy a single medallion, and took out a large loan to buy the medallion, maybe when the government auctioned off a new batch, as it did in New York in 2014. Even if it may be inefficient to compensate these medallion owners because of the incentives that it may create, is it really fair to make buyers like these bear the costs of the precipitous decline in medallion values?³⁰⁹ They were operating in a world where governments required taxi drivers to own or lease a medallion, and it seemed more profitable to be an owner than a lessee.³¹⁰ Owners like these likely have little wealth or ability to diversify, and they invested large amounts of their own and borrowed money into assets whose riskiness they mistakenly underestimated. It might seem fairer to shift the risk of the decline in medallion values to the local or state governments, which can redistribute this loss to taxpayers generally, each of whom would pay only a small portion of the loss. The intuition that governments should absorb the losses of driver-owners may be

306. Kaplow, *supra* note 235, at 524. Kaplow similarly faults arguments that no compensation is owed because laws often change, as begging “the normative question” of whether compensation is due. *Id.* at 525.

307. Kaplow, *supra* note 235, at 513.

308. As noted above, I borrow the term from Kaplow, *supra* note 235, at 549.

309. On the other hand, New York City insists that “those who bid for medallions sold at auction must acknowledge in writing that medallion values and Commission regulations may change.” Brief for Respondents at 71, *Glyka Trans LLC*, No. 2015-11661.

310. Medallion owners are arguing that the fact that governments required medallions to operate taxis supports the case for compensation. *See, e.g.*, Complaint at 8, *Newark Cab Ass’n v. City of Newark*, No. 2:16-cv-04681 (D.N.J. Jan. 17, 2017), 2017 WL 214075 (case dismissed) (“Principles of fundamental fairness also include the constitutional right to just compensation when the government takes private property. That right is particularly important where, as here, the government itself created the property, sold it to private parties and developed a system under which hundreds of private parties were induced and *required by government* to invest and risk hundreds of millions of dollars as a precondition to engaging lawfully in business.”).

stronger if the owners bought their medallions from the local government in an auction that the government held just before Uber expanded, to fund the city budget.³¹¹

One difficulty with this fairness argument for compensating medallion owners is that not all medallion owners are best regarded as “less sophisticated investors.” While the taxi driver-owners of a lone medallion might fit this description, fleet owners and professional investors are not easily categorized as “less sophisticated investors.” All of them likely had the resources to diversify their assets. At most, the argument justifies compensating medallion owners who fit the profile of “less sophisticated investor.” It would be over-inclusive to compensate all medallion owners because some were “less sophisticated investors.”³¹² In New York City, there might be approximately 4,500 medallion owners in that category, if we assume that the number of medallion owners who themselves drive taxis is a good proxy.³¹³

Compensating some medallion owners on the grounds that they are “less sophisticated investors” would require delineating what that term means in this context, and sorting medallion owners using that definition. This likely would be an administratively and politically complex exercise. It also might raise legal claims, as owners judged ineligible for compensation might challenge the determination, for ex-

311. Medallion owners are arguing that the fact that New York City benefitted financially from the sale of medallions supports a case for compensation. *See, e.g.*, Brief for Petitioner-Appellants at 42, *Glyka Trans LLC*, No. 2015-11661 (“The character of the City’s conduct . . . strongly supports the conclusion that it acted unconstitutionally. The City purposefully enriched itself, raising nearly \$1 billion for its coffers by creating a marketplace and selling medallion owners the exclusive right to pick up hails.”); *see also id.* at 47 (“The fact that Respondents pocketed Appellants’ money in exchange for the hail exclusivity they promised, and then turned around an[d] allowed tens of thousands of non-medallion black cars to pick up passengers immediately through e-hail apps, strongly supports Appellants’ position under the ‘character of the government action’ prong of the *Penn Central* test.”).

As noted earlier, the Irish government paid limited compensation to taxi license holders after entry into the taxi industry was opened in the 2000s. *See supra* note 248.

312. For literature discussing the over- and under-inclusion problems involved in addressing concerns about the distribution of income outside the tax and transfer system, *see, for example*, LOUIS KAPLOW & STEVEN SHAVELL, *FAIRNESS VERSUS WELFARE* 34 (2002); Ronen Avraham & Kyle D. Logue, *Redistributing Optimally: Of Tax Rules, Legal Rules, and Insurance*, 56 *TAX L. REV.* 157, 182–88 (2003); Lee A. Fennell & Richard McAdams, *The Distributive Deficit in Law and Economics* 10–11 (Univ. of Chi. Law Sch. Coase-Sandor Inst. for Law & Econ., Working Paper No. 713 2d Series; Pub. Law & Legal Theory Working Paper No. 498, 2015).

See also Kaplow, *supra* note 235, at 580 (“[E]quality thus provides a dubious foundation for a fairness justification of transitional relief.”).

313. Van Zuylen-Wood, *supra* note 7 (“There are 13,587 yellow cabs in New York. . . . Fifty-eight percent of New York City’s cabs are owned by corporate entities Just a third are owned by the people who drive them.”).

ample on equal protection grounds. Moreover, one might argue against compensating some medallion owners because they are “less sophisticated investors” because it would do little to promote distributive justice across society overall. We might be especially concerned that compensating medallion owners would be regressive if the funds used to compensate would be raised from taxing lower-income individuals, or diverted from government programs that otherwise assist lower-income individuals. In addition, if we compensate some medallion owners out of a sense of fairness, we are likely to face calls from other groups harmed by government policy changes to compensate them. It is not clear which principle governments might use to limit future compensation obligations if the basis for compensating medallion owners is that governments are better positioned to bear the losses, as this will be true in many cases in which investors suffer financial losses.³¹⁴

B. *The Form of Any Transition Relief*

Assume that a municipal or state government that legalizes Uber and other taxi apps decides to provide transition relief for fairness or political reasons to some or all medallion owners. What form should transition relief take?

There are two main options: monetary compensation, or continued regulatory protection.³¹⁵ Monetary compensation could be keyed to the harm that medallion owners have incurred from Uber’s entry (the tort measure), the benefits they expected to receive by owning medallions (the contract measure), or the benefits that municipal governments gained by violating the expectations of medallion owners and legalizing Uber (the restitution measure).³¹⁶ Continued regulatory protection would involve protecting the monopoly of medallion owners to some degree. It could involve tightly restricting the operations of taxi apps to preserve more of the market for taxi services for the traditional industry, or limited restrictions on app operations. For example, transportation network company vehicles might be allowed to

314. See also Suska, *supra* note 10, at 211 (identifying, and rejecting, the potential objection to his argument for compensating medallion owners on the basis that his argument does not “include[] any coherent limiting principle”).

315. For typologies of transition relief, see Kaplow, *supra* note 235, at 584–92; Huber, *supra* note 235, at 95–107; Jonathan R. Nash, *The Cathedral of Transition Relief in Environmental Law 5–6* (May 17, 2011) (unpublished manuscript) (on file with author) (distinguishing liability rule protection, which is monetary compensation, and property rule protection, which is grandfathering).

316. Nash refers to the first two possible measures of compensation. Nash, *supra* note 315, at 3.

pick up passengers using the apps, but picking up passengers through street hails and at taxi stands could be reserved to medallion taxis to preserve some of the value of medallions. Indeed, many jurisdictions that have legalized transportation network vehicles currently prohibit them from picking up street hails,³¹⁷ perhaps in an effort to preserve some market share for traditional taxis.

From a social welfare perspective, any transition relief for medallion owners should take the form of monetary compensation, not continued regulatory protection.³¹⁸ Continued regulatory protections will inefficiently distort the provision of taxi services going forward, resulting in higher prices or poorer services for consumers, or both. Monetary compensation presumably will involve a one-time payout to medallion owners.

CONCLUSION

Until the arrival of Uber, the taxi business had remained fundamentally unchanged for decades. Many cities limited entry, and imposed similar suites of regulatory requirements concerning fares, health and safety, and universal service. Medallion owners and the financiers, brokers, and agents that supported them were the principal beneficiaries of this system. Consumers and taxi drivers suffered, as limited entry restricted competition and created a barrier to entering the industry. Uber and other taxi apps have revolutionized the taxi business by introducing new technology and new business models. The principal challenge facing taxi regulators is to rethink the regulatory framework governing the industry to catch up with developments in the marketplace.

The taxi industry and taxi regulators largely avoided the deregulation that occurred in major transportation and telecommunications industries, such as the airline industry, starting in the late 1970s. The technological and business model changes introduced by Uber and its competitors now provide the opportunity to remove significant components of the antiquated regulatory framework governing the taxi industry. Though some degree of regulation is still justified, there is significant room to reduce the scope of regulation of the traditional industry, and regulators should not seek to impose unnecessarily burdensome requirements on the new entrants.

317. *See supra* note 58.

318. *See* Kaplow, *supra* note 235, at 582 (“[T]ransition mechanisms tend to be even less efficient when they differ from compensation.”).

The deregulation of the telecommunications industry in the 1980s and 1990s was followed by a major technological revolution—the development of mobile telephone technology—that was not anticipated by the deregulators. Deregulation of the taxi industry is now feasible on a broad scale due in part to the development of technological advances, including wireless technology introduced in the deregulated telecom sector. In turn, deregulation of the taxi industry could help to promote another wave of technological change in the transportation sector: the widespread adoption of fleets of driverless cars that consumers can rent out as required, instead of buying their own cars. There is much speculation that driverless cars are the future of ground transportation.³¹⁹ Removing regulatory barriers to entering the taxi business such as medallion requirements may help to facilitate the implementation of this new mode of transportation. Certainly Uber and Lyft regard their business models as but a step along the path toward introducing fleets of driverless cars.³²⁰

319. See, e.g., Jeffery B. Greenblatt & Samveg Saxena, *Autonomous Taxis Could Greatly Reduce Greenhouse-Gas Emissions of US Light-Duty Vehicles*, 5 NATURE CLIMATE CHANGE 860 (2015); Rachel Abrams, *Self-Driving Cars May Get Here Before We're Ready*, N.Y. TIMES (Jan. 21, 2016), <http://www.nytimes.com/2016/01/22/business/dealbook/davos-self-driving-cars-may-get-here-before-were-ready.html>; Mike Ramsey & Gautham Nagesh, *GM, Lyft to Test Self-Driving Electric Taxis*, WALL ST. J. (May 5, 2016), <http://www.wsj.com/articles/gm-lyft-to-test-self-driving-electric-taxis-1462460094>. Some argue that driverless trucks will be deployed commercially sooner than driverless cars. See, e.g., John Markoff, *Want to Buy a Self-Driving Car? Trucks May Come First*, N.Y. TIMES (May 17, 2016), <http://www.nytimes.com/2016/05/17/technology/want-to-buy-a-self-driving-car-trucks-may-come-first.html>. Others are skeptical of the likelihood that driverless cars will be adopted in the near future. See, e.g., Donald N. Dewees, *Are Automated Vehicles Coming at the Right Speed?* (Univ. of Toronto Dep't of Econ., Working Paper No. 564, 2016), <https://www.economics.utoronto.ca/public/workingPapers/tecipa-564.pdf> 320. See FTC Workshop, *supra* note 10, at 99–101 (remarks of Catherine Sandoval) (discussing the potential that transportation network companies “will seek to use autonomous vehicles”); Alex Hern, *Are Driverless Cars the Future of Uber?*, THE GUARDIAN (Feb. 3, 2015), <http://www.theguardian.com/technology/2015/feb/03/are-driverless-cars-the-future-of-uber>; Mike Isaac, *General Motors, Gazing at Future, Invests \$500 Million in Lyft*, N.Y. TIMES (Jan. 4, 2016), <http://www.nytimes.com/2016/01/05/technology/gm-invests-in-lyft.html>; Cecilia Kang, *No Driver? Bring It On. How Pittsburgh Became Uber's Testing Ground*, N.Y. TIMES (Sept. 10, 2016), <http://www.nytimes.com/2016/09/11/technology/no-driver-bring-it-on-how-pittsburgh-became-ubers-testing-ground.html>; *Uberworld: The World's Most Valuable Startup is Leading the Race to Transform the Future of Transport*, THE ECONOMIST (Sept. 3, 2016), <http://www.economist.com/news/leaders/21706258-worlds-most-valuable-start-up-leading-race-transform-future>; Amy X. Wang, *Self-Driving Cars Could Spell the End of the Taxi Industry. Is That A Good Thing?*, SLATE (July 7, 2015), http://www.slate.com/blogs/future_tense/2015/07/07/self_driving_cars_a_new_department_of_energy_sponsored_report_finds_self.html.