Article

Will The Growth of Uber Increase Economic Welfare?

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ABSTRACT

The urban car service firm Uber is currently the most highly valued private startup company in the world, with a venture capital valuation of over $68 billion based on direct investment of over $13 billion[1] from numerous prominent Silicon Valley investors.[2] Uber's investors are not

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1. For current information on Uber's financing rounds, see https://www.crunchbase.com/organization/uber#/entity. In 2016, Uber had four times the value of the second highest valued US based startup (Airbnb) and Uber's valuation exceeded the equity value of 85% of the S&P 500. Alex Barinka et al., *Uber Backers Said to Push for Didi Truce in Costly China War*, BLOOMBERG (July 20, 2016, 1:13 PM), http://www.bloomberg.com/news/articles/2016-07-20/uber-investors-said-to-push-for-didi-truce-in-costly-china-fight.

2. These investors include Amazon founder Jeff Bezos, Google Ventures, Benchmark, TPG, Goldman Sachs, Menlo Ventures, Alfred Lin of Sequoia Capital, Kleiner Perkins Caufield Byers, Lowercase Capital and Summit Partners. Almost all private equity investments since mid-

merely seeking a share of a still-competitive urban car service industry,[3] but are openly pursuing global industry dominance and its huge valuation is based on expectations that it will be successful. The business media that ignored this industry for over a century now tracks Uber's every move. The overwhelming majority of media and tech industry coverage presume that Uber's powerful innovations make industry dominance inevitable and could produce financial returns similar to those achieved by Amazon, Facebook and other recent Silicon Valley backed startups.

None of these media and industry expectations are based on objective analysis of Uber's actual competitive economics. In fact, they are inconsistent with Uber's actual financial results. No one can explain how Uber could earn billions for its investors in an industry that historically has had razor-thin margins producing a commodity product. No one has been able to explain why the industry that has been competitively fragmented and structurally stable for a hundred years should suddenly consolidate into a global monopoly. No one can demonstrate a clear link between specific Uber product features and its meteoric growth, explain why no one else had ever recognized these opportunities, or document how they are powerful enough to allow Uber to rapidly drive all incumbent taxi and limo companies out of business. No one has attempted to explain how a company with such an allegedly powerful business model is still losing billions of dollars a year in its seventh year of operation, and why these losses are still increasing. No one has conducted an independent investigation of whether an unregulated dominant Uber would actually produce long-term improvements in the quality of urban transport.

This paper lays out the economic evidence showing that Uber has no ability—now or in the foreseeable future—to earn sustainable profits in a competitive marketplace. Uber's investors cannot earn returns on the $13 billion they have invested without achieving levels of market dominance that would allow them to exploit anti-competitive market power. The growth of Uber is entirely explained by massive predatory subsidies that have totally undermined the normal workings of both capital and labor markets. Capital has shifted from more productive to less productive uses, the price signals that allow drivers and customers to make wel-

2015 have come from overseas, including $3.5 billion from Saudi Arabia's Public Investment Fund. *Id.* Many other prominent venture capital firms have invested in Uber competitor Lyft, so the belief that the urban car service industry could produce large investment returns is held widely in the Silicon Valley.

3. "Urban car services" are predominately taxicabs but also include for-hire limousines and shuttle vans, and follow three operating models: the predominant model in North America is "dispatch" (via telephone or smartphone); "street hail" predominates in Manhattan and the similarly dense business cores of a handful of other cities; and "taxi rank" which predominates at airports and other places (major hotels, tourist attractions) where demand is unusually concentrated.

fare maximizing decisions have been deliberately distorted, and the laws and regulations that protect the public's interest in competition and efficient urban transport have been seriously undermined. Absolutely nothing in the "narrative" Uber has used to explain its growth is supported by objective, verifiable evidence of its actual competitive economics.

I. Introduction

The creation of private wealth is ideally—but not always—closely linked to the creation of broader economic benefits. This paper divides the question of whether Uber will increase overall economic welfare into three subsidiary questions, which are addressed in sections II, III and IV.

Section II asks whether Uber's growth to date has been based on the superior economics needed to significantly increase industry efficiency. This examination of Uber's competitive economics looks at actual financial results, driver compensation data, and the overall cost structure of the taxi industry. To state this question slightly differently, have the capital markets that put billions into urban car services made the industry and the overall economy more efficient by shifting resources to more productive uses? The Section also examines whether consumers and drivers receive the accurate information about price, service, and compensation alternatives needed if their market choices are to maximize industry efficiency.

If Uber's growth has enhanced welfare, Uber will meet three tests: (1) it will have shown the ability to earn sustainable profits in competitive markets or demonstrated powerful scale/network economies that would allow it to achieve sustainable profits in the near future; (2) it will have shown that it can provide service at significantly lower cost than existing competitors, or that it can produce service that consumers value much more highly at similar costs; (3) it will have established powerful competitive advantages based on major product, technology and/or process innovations that incumbent producers could not readily match.

The central finding of section II is that Uber fails all three tests. Uber has incurred substantially larger losses than any other highly-valued Silicon Valley financed startup. Uber lacks the scale/network economies needed to rapidly achieve profitability in a competitive market. Uber is a substantially less efficient producer of urban car services and has no significant sources of competitive advantage over the traditional operators it has been driving out of business. Uber's growth to date has depended on staggering levels of predatory investor subsidies. While these subsidies

may have provided some temporary benefits to consumers and drivers, they are not sustainable and are more than offset by Uber's ongoing destruction of efficient industry capacity.

Section III asks whether the quasi-monopoly industry dominance pursued by Uber will further reduce industry efficiency and overall economic welfare. This is an industry structure question—will consumers be better off with an urban car service industry dominated by a single, largely unregulated private company as opposed to a competitively fragmented industry overseen by local governments? To evaluate long-term welfare risks from Uber's industry domination, the Section looks at welfare impacts of Amazon's rise to a powerful, sustainable position of industry dominance. To evaluate the potential impact of unregulated market control Uber is seeking, Section III discusses past efforts to deregulate taxis or other transport modes and examines the actual impact of prior taxi deregulation efforts on industry efficiency and consumer welfare.

The major findings of Section III are that monopoly power and the potential for sustainable rent-extraction has always been the central objective of Uber's investors, that Uber's investors could not earn returns on their $13 billion investment without the ability to exploit anti-competitive market power, and that several features of Uber's business model that provide limited value today would become substantially more important with quasi-monopoly industry dominance. Unlike Amazon, whose growth to industry dominance had been driven by huge efficiency and product advantages over incumbent retailers, Uber is pursuing dominance without having created any meaningful industry efficiency or consumer welfare benefits. Past efforts to deregulate taxi entry and pricing never produced any improvements in taxi service or efficiency, and the market control Uber is seeking goes well beyond any past transport deregulation efforts. Market control would eliminate the ability of cities to exercise any oversight over the taxi operations that are a component of their urban transport infrastructure, and it would eliminate any protections for consumers and drivers from the market power abuses that could follow the elimination of competition.

Section IV asks how Uber can achieve unregulated industry dominance in light of uncompetitive economics and the failure of all past efforts to eliminate legal or regulatory constraints to improve economic welfare. Uber's marketplace and political successes to date required a strategy that could overcome both its inferior economics, and the unwillingness of city governments to voluntarily cede control of their taxi industries to outside private investors. This section lays out the three major components of Uber's strategy. The first component was a sophisticated communication program that was copied directly from a major taxi der-

egulation program developed in the 1990s by pro-corporate/libertarian-oriented think tanks in pursuit of the same complete elimination of all public oversight over urban taxi service that Uber's investors are seeking. This program correctly recognized that the transfer of control over taxi markets from local citizens and government to private investors was a political decision and used techniques that have proven successful in political battles. It reframed the discussion of how to best structure taxi competition away from empirical evidence about efficiency and consumer welfare into an emotive, tribal us-versus-them narrative in order to distract attention from Uber's uncompetitive economics. The second component was the unprecedented size of Uber's $13 billion investment base, which weaponized the communication program, funded the predatory competition needed to drive more efficient operators out of business, and created the widespread impression of an unstoppable juggernaut. The third component was the development of a corporate culture that had a monomaniacal focus on achieving the industry dominance needed to produce investor returns. That culture valorized the willingness to violate any laws or behavioral norms in the pursuit of dominance in order to demonstrate that local governments had no ability to enforce longstanding industry regulations, and that any resistance to its eventual dominance and industry control would be futile.

II. Was Uber's Growth Based on the Superior Economics Needed to Significantly Increase Industry Efficiency?

A. Billions in Operating Losses and Predatory Investor Subsidies

The Uber business model includes two segregated but interdependent components: "corporate Uber" and its "independent drivers." Traditional operators have used this segregated approach since the 1970s.[4] Previously, industry production had been fully integrated and drivers were either employees of taxi fleet companies or standalone owner/operators. The post-70's business model converted taxi companies into vehicle leasing businesses, and drivers became independent contractors.[5] Drivers at traditional taxi companies pay a fixed lease fee for each shift operated (covering the costs of the vehicle, dispatching and other

4. The shift to independent contracting was first allowed in Boston in 1974, Chicago in 1975, San Francisco and Philadelphia in 1978, New York and Cleveland in 1979 and Los Angeles in 1981. Gorman Gilbert & Robert Samuels, The Taxicab: An Urban Transportation Survivor 161 (1982).

5. Discussion Paper, Toronto Metro. Licensing Comm'n, Taxicab Leasing and Related Issues (July 8, 1996), http://www.taxi-library.org/leasing.htm.

centrally provided services).[6] They must also pay for gas and other direct operating costs and they retain all passenger fares and tips. Uber, on the other hand, takes a percentage of passenger fares from drivers, but its drivers must pay all vehicle costs (such as ownership, insurance and maintenance) that traditional taxi drivers were never required to cover.[7] As a separate legal entity, Uber (like taxi lessors) only reports financial results for its own (the "corporate") component of its business model. However, neither component can survive unless both components are economically viable, and competitiveness can only be analyzed in terms of the overall business model.

As a private company, Uber is not required to publish financial reports in accordance with generally accepted accounting principles (GAAP), but on five separate occasions the business press has reported selected financial results that Uber has shared with investors. The first set included data for 2012, 2013, and the first half of 2014. Here, only EBITDAR contribution (before interest, taxes, depreciation and amortization) was shown, not the true (GAAP) profit that publically traded companies report.[8] The second set included tables of GAAP profit data for full year 2014 and the first half of 2015.[9] The third, fourth and fifth sets were limited to summary EBITDAR contribution data for the first half,[10] third quarter,[11] and full year of 2016.[12] There has been no public report of results for the fourth quarter of 2015.

6. S.F. MUN. TRANSP. AGENCY, METER RATES AND GATE FEES (Aug. 2013), https://www.sfmta.com/sites/default/files/Meter%20Rates%20and%20Gate%20Fees_Final.pdf.

7. The cost structure impact of the shift to the Uber business model is illustrated on Exhibit 5 in Section II(B).

8. Eric Newcomer & Jing Cao, *Uber Bonds Term Sheet Reveals $470 Million in Operating Losses*, BLOOMBERG (June 29, 2015, 6:28 PM), http://www.bloomberg.com/news/articles/2015-06-30/uber-bonds-term-sheet-reveals-470-million-in-operating-losses; *see also* Sam Biddle, *Here Are the Internal Documents that Prove Uber Is a Money Loser*, GAWKER (Aug. 15, 2015, 12:07 PM), http://gawker.com/here-are-the-internal-documents-that-prove-uber-is-a-mo-1704234157; Erin Griffith, *For High-Risk Start-Ups Like Uber, Big Ambitions Don't Make Losses Any Less Unsettling*, LOS ANGELES TIMES (Aug. 11, 2015, 3:00 AM); http://www.latimes.com/business/la-fi-the download-20150811-story.html#page=1J.

9. Amir Efrati, *Uber's Losses Grow*, THE INFORMATION (Jan. 11, 2016, 5:13 PM), https://www.theinformation.com/ubers-losses-grow-but-so-do-its-profit-projections?unlock=D104ce&token=ece149610ae5ea63ac16b195b5a1152d7691f78e; Brian Solomon, *Leaked: Uber's Financials Show Huge Growth, Even Bigger Losses,* FORBES (Jan. 11, 2016, 1:05 PM), http://www.forbes.com/sites/briansolomon/2016/01/12/leaked-ubers-financials-show-huge-growth-even-bigger-losses/#2b0d95e25c99541a41305c99; Eric Newcomer & Ellen Huet, *Facing a Price War, Uber Bets on Volume*, BLOOMBERG (Jan. 21, 2016, 2:14 PM), http://www.bloomberg.com/news/articles/2016-01-21/facing-a-price-war-uber-bets-on-volume.

10. Eric Newcomer, *Uber Loses at Least $1.2 Billion in First Half of 2016*, BLOOMBERG (Aug. 25, 2016, 6:00 AM), http://www.bloomberg.com/news/articles/2016-08-25/uber-loses-at-least-1-2-billion-in-first-half-of-2016; Mike Issac, *How Uber Lost More Than $1 Billion in the First Half of 2016*, N.Y. TIMES (Aug. 25, 2016), http://www.nytimes.com/2016/08/26/technology/how-uber-lost-more-than-1-billion-in-the-first-half-of-2016.html. The bottom line in the first set

Figure 1 summarizes available data from 2013 through the first half of 2016. Data after 2013 shows total passenger payments (fares plus tips) and the portion of those payments retained by drivers that must cover the cost of vehicle ownership, insurance, maintenance, fuel, credit card and license fees, as well as health insurance and take home pay; the balance is Uber's total revenue. Figure 2 shows the GAAP results for the full year ending September 2015 based on the published numbers and an estimated quarterly split of published 2nd half 2014 results.

Figure 1: Uber P&L 1/2012-6/2016	1H12	2H12	1H13	2H13	1H14	2H14	1H15	1H16
Total passenger payments					*613.0*	*2,344.3*	*3,660.8*	*8,800*
Driver gross revenue					*510.3*	*1,951.7*	*2,997.6*	*6,740*
% passenger fares retained by drivers					*83%*	*83%*	*82%*	*77%*
Uber Revenue	3.6	12.6	32.3	72.1	102.6	392.4	662.6	2,060
Cost of Sales	4.8	9.9	19.3	32.6	54.5	345.0	637.5	
Operating Expense	6.6	13.8	28.4	80.8	209.1	451.6	743.8	
EBIDTAR contribution	(7.8)	(11.1)	(15.4)	(41.3)	(161.1)	(423.8)	(718.1)	(1,270)
EBIDTAR margin	(217%)	(88%)	(48%)	(57%)	(157%)	(108%)	(108%)	(62%)
GAAP profit							(987.2)	
GAAP profit margin							(149%)	

of reports was labeled as either "Net Loss" or EBIT (earnings with only interest and taxes excluded) but is presumed to be EBITDAR, consistent with later reports.

11. Amir Efrati, *Uber's Loss Decelerates, Reflecting China Exit,* The Information (Dec. 19, 2016, 12:55 PM), https://www.theinformation.com/ubers-loss-decelerates-reflecting-china-exit; Eric Newcomer, *Uber's Loss Exceeds $800 Million in Third Quarter on $1.7 Billion in Net Revenue*, Bloomberg (Dec. 19, 2016, 5:07 PM), https://www.bloomberg.com/news/articles/2016-12-20/uber-s-loss-exceeds-800-million-in-third-quarter-on-1-7-billion-in-net-revenue.

12. Eric Newcomer, *Uber, Lifting Financial Veil, Says Sales Growth Outpaces Losses,* Bloomberg (Apr. 14, 2017), https://www.bloomberg.com/news/articles/2017-04-14/embattled-uber-reports-strong-sales-growth-as-losses-continue. This report refuted claims (including Efrati, *supra* note 11) that these P&L results included roughly $1 billion in Chinese market losses, and would dramatically improve following the August 2016 sale of Uber China to Didi Chuxing.

Figure 2: Uber P&L 10/14-9/15	*4Q14(a)*	*1Q2015*	*2Q2015*	*3Q2015*	*YE9/15*
Uber Revenue	235.4	287.3	375.3	498.0	1,396.0
EBITDAR contribution	(254.3)	(159.0)	(559.1)	(640.0)	(1612.4)
EBITDAR margin	(108%)	(55%)	(149%)	(129%)	(115%)
Uber Total Expense	553.3	672.4	977.4	1,195.0	3,398.1
GAAP profit	(317.9)	(385.1)	(602.1)	(697.0)	(2,002.1)
GAAP profit margin	(135%)	(134%)	(160%)	(140%)	(143%)
% expense covered	43%	43%	38%	42%	41%

(a) based on estimated quarterly split of reported 2H2014 results, and 2015 relationship between EBITDAR and GAAP profit

As shown in Figure 2, in the year ending September 2015, Uber had GAAP losses of $2 billion on revenue of $1.4 billion, a negative 143% profit margin. The published reports of full year 2016 results indicated EBITDAR contribution of negative $2.8 billion on a $5.5 billion revenue base, meaning 2016 GAAP losses would easily exceed $3 billion.[13] Thus, Uber's current operations in 2015 and 2016 depended on over $5 billion in subsidies, funded out of the $13 billion in cash its investors have provided. In the year ending in September 2015, Uber was only recovering 41% of its costs.[14] Uber's growth was driven by its ability to capture market share from competitors who had to cover 100% of their costs from passenger fares. Many other Silicon Valley funded startups lost money at first, but losses of this magnitude are unprecedented. Previously, the worst twelve-month profit performance by a Silicon Valley-funded startup was recorded by Amazon in 2000, when it lost $1.4 billion on $2.8 billion in revenue, but this negative 50% margin was a far cry from Uber's negative 143%, and Amazon responded by firing more than 15 percent of its workforce and reached P&L breakeven in the 4th quarter of 2001.[15] 2015 was Uber's fifth year of operations; at that point in its history, Facebook was achieving 25% profit margins.[16]

Since Uber's valuation is based on its claim that its business model can produce profitable growth on a global scale, these aggregate corporate results are the most appropriate starting point for the evaluation of that business model. There have been numerous

13. *See* Newcomer, *supra* note 11.

14. In this time period, passenger fares appeared to cover only 78% of total (Uber plus driver) costs, however this would only be true if driver gross revenue fully compensated drivers for the higher cost and driver risks under the Uber business model. See *infra* Section II(B). Moreover, there is no public evidence showing this is true. *Id.*

15. Saul Hansell, *Amazon, Facing Slowdown, Cuts 1,300 Jobs*, N.Y. TIMES (Jan. 31, 2001), http://www.nytimes.com/2001/01/31/business/the-markets-market-place-amazon-facing-slowdown-cuts-1300-jobs.html; *Amazon Posts a Profit*, CNN MONEY (Jan. 22, 2002, 3:39 PM), http://money.cnn.com/2002/01/22/technology/amazon.

16. Erin Griffith, *The problem with 'Uber for X,'* FORTUNE (Aug. 11, 2015), http://fortune.com/2015/08/11/uber-profitable-business-model/.

unsubstantiated (and unverifiable) assertions that Uber is profitable in selected local markets. One of these is Uber CEO Travis Kalanick's claim from 2015 that Uber's North American operations would be profitable by early 2016.[17] Kalanick never explained whether this meant actual (GAAP) profitability, or an artificial interim contribution measure, such as EBITDAR or positive cash flow, but the 3rd quarter 2016 results show that Uber is still far from achieving Kalanick's promise.

Figure 3: Uber P&L 1H 2015 compared to 1H 2016	***1H2015***	***1H2016***	***1H16@82%***
Total passenger payments	3,660.8	8,800.0	8,800.0
Driver gross revenue	2,998.2	6,740.0	7,216.0
Driver % of pax payments	82%	77%	82%
Uber Revenue	662.6	2,060.0	1,584.0
EBIDTAR contribution	(718.1)	(1,270.0)	(1,746.0)
EBIDTAR margin	(108%)	(62%)	(110%)
GAAP profit	(987.2)		
GAAP profit margin	(149%)		

The 2012-2016 data in these tables provide no evidence that Uber's rapid growth is driving the magnitude of steady margin improvements that would be needed to achieve break-even and yield sustainable financial returns. Uber's corporate revenue for the year ending June 2015 was over 500% higher than the year ending June 2014, but the EBITDAR margin barely changed, moving from negative 115% to negative 108%. Uber's EBITDAR contribution margin improved from negative 108% in the first half of 2015 to negative 62% in the first half of 2016, but this margin improvement is entirely explained by cuts in driver compensation. As shown in Figure 3, Uber only allowed drivers to retain 77% of each passenger dollar in 2016, down from 82% in 2014-15.[18] If drivers had retained 82% of 2016 passenger payments, Uber's EBITDAR contribution would have been negative $1.7 billion, and its EBITDAR margin would have been negative 110%. Uber's EBITDAR margin did not improve in 2016 because of increased efficiency or scale economies; the company had simply made the unilateral decision to transfer $1 billion in cash from labor to capital.[19] Assuming that the unusual spike in

17. Newcomer & Cao, *supra* note 8.

18. Uber began implementing driver compensation cutbacks in the second half of 2015. Ellen Huet, *Uber Tests Taking Even More from its Drivers with 30% Commission*, FORBES (May 18, 2015, 6:32 PM), http://www.forbes.com/sites/ellenhuet/2015/05/18/uber-new-uberx-tiered-commission-30-percent/.

19. Drivers lost nearly $500 million from compensation cuts in the first half of 2016; given the ongoing growth in total passenger payments, full year driver compensation losses would have easily exceeded $1 billion. *See supra* Figure 3.

EBITDAR margin in the first half of 2014 (157%) was due to 2013 expenses not recognized for accounting purposes until 2014, Uber had EBITDAR margins worse than negative 100% from 2013 through 2015 and has only been able to improve margins by cutting driver pay.

The industry dominance that Uber's investors are pursuing cannot be welfare enhancing unless Uber can demonstrate that it can provide service on a basis that is sustainably profitable, provides a strong return on the capital its investors have provided, and can produce service substantially more efficiently than the incumbent providers it is trying to displace. The financial data in these tables show that Uber operations are staggeringly unprofitable, profitability is not rapidly improving, and its growth to date must be seen as the result of predatory competition[20] against incumbents who have lower costs but need to charge fares that cover the entire cost of trips and lack the financial strength to withstand years of below-cost pricing subsidized by Silicon Valley billionaires. As one financial analyst observed, ". . .[people] wonder why Uber keeps raising so much money. . . The answer is that Uber is using cash as a competitive weapon. When a competitor enters an Uber market, one investor in an Uber-competitor says, Uber immediately and radically cuts its prices. Uber then happily loses money on each ride, knowing that the new competitor, with inferior scale, will lose even more money on each ride. Uber bleeds the competitor until the competitor realizes that Uber will do whatever it takes to crush it. The competitor then often gives up and withdraws — and Uber raises its prices again."[21] Aggressive below-cost pricing by a new market entrant only improves consumer welfare if the new entrant has efficiency and/or scale advantages that would allow it to quickly achieve sustainable profits large enough to recoup the short-term losses. The following sections consider whether Uber could ever

20. Predatory pricing occurs where a firm (1) sets prices "below an appropriate measure of its rival's costs," and (2) the firm's predatory pricing creates "a dangerous probability" of eliminating competition and ultimately allowing the firm to recoup losses through supra-competitive pricing. Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 222–24 (1993). "Predatory pricing" refers to a situation in which a producer of a standardized product sets unprofitably low price levels in the short-term in the expectation that its stronger financial base allows it to force financially weaker competitors out of the market. This paper uses the broader concept of "predatory competition" in order to accommodate the analogous practice where the stronger firm operates unprofitably higher capacity (or offers unprofitably higher product quality) in the short term to achieve the same ends. In all cases, discussions of Uber predation in this paper presume that Uber meets the Brown & Williamson standard, that its behavior was motivated by the "dangerous probability" of eliminating competition and that Uber had a reasonable expectation it could recoup the costs of the predatory behavior once a dominant position was established.

21. Henry Blodget, *Meanwhile, Here's the Chatter about That Huge Financing Uber is Doing*, BUS. INSIDER (Nov. 20, 2014, 2:19 PM), http://www.businessinsider.com/uber-raising-money-2014-11.

achieve the powerful and sustainable competitive efficiency advantages needed to reverse these huge losses.

B. Uber is a Less Efficient, Higher Cost Producer of Urban Car Services

To achieve dominance in a competitive market, a new entrant would need to find ways to provide service at substantially lower costs than existing operators based on efficiency advantages that incumbents could not readily match. The costs that Uber needs to undercut are summarized in Figure 4, which presents the cost structure breakdown of traditional urban car service operators in major cities, with each cost component expressed as a percentage of total passenger revenue. The first three columns are based on actual cost data from recent Seattle, San Francisco, and Denver studies;[22] the fourth column provides an illustrative, representative 2013 industry-cost breakdown, based on the data from the three cities, adjusted to reflect hybrid usage (i.e. higher vehicle and lower fuel costs). In the traditional taxi industry, 58 cents out of each passenger dollar goes to driver take-home pay, 18 cents to vehicle expense, 15 cents to dispatching, corporate overhead and leasing/corporate profits, 6 cents to fuel, and 3 cents to credit card, cell phone and airport access fees.

Figure 4: Distribution of Taxi Revenue (including tips) by cost category	***Seattle 2010***	***San Fran. 2013***	***Denver 2013***	***Industry 2013(a)***
Driver take-home/health insurance/licenses	52%	57%	58%	58%
Fuel (paid by drivers)	13%	6%	6%	6%
Credit card/cell phone/airport fees (drivers)	2%	3%	#N/A	3%
Vehicle ownership and maintenance	13%	13%	22%	18%
Corporate: dispatch/overhead and profit	20%	20%	15%	15%

(a) assumes use of low-mileage hybrid vehicles

Recent in-depth studies show that the 58 cents retained by drivers provide hourly take-home rates in the $12-17 range (in 2015 dollars). However, drivers can only realize those hourly averages if they work 60-

22. Seattle Consumer Affairs Unit, Seattle Taxicab Industry Revenue And Operating Statistics (Aug. 31, 2010), http://www.seattle.gov/purchasing/docs/bids/taximeter.pdf; S.F. Mun. Transp. Agency, *supra* note 6; author's analysis of Denver taxi operators annual financial reports to the Colorado Public Utility Commission (on file with the author). Seattle data assumed the use of Ford Crown Victoria and higher 2010 fuel prices; San Francisco and Denver data assumed the use of hybrid vehicles. Credit card and airport fees are paid by vehicle owners in Denver; the representative traditional column assumes they are paid by drivers.

75 hours a week.[23] Pre-tax earnings are even lower since workman's compensation, health insurance, and some miscellaneous expenses must be covered out of take-home pay.[24] Recognizing that big city taxi drivers are forced to work much longer hours than typical drivers, this data is consistent with Census Bureau analysis which estimated the average wages in the broad category of taxi and limousine driver as $32,444 per year and $13.25 per hour (in 2015 dollars).[25]

Figure 5: Impact of Shift from Traditional to Uber business model	*Traditional Cost split*	*Uber model Cost split*
Total driver costs:	67%	85%
Vehicle ownership and maintenance	18%	▲
	▼	18%
Total corporate costs:	33%	15%

Under the traditional industry cost function, 33% of total costs are paid by the taxi owner (the 18% vehicle costs and the 15% corporate costs). As illustrated in Figure 5, if traditional operators adopted the Uber business model, the 18% vehicle costs are shifted to drivers, so they would be incurring 85% of total costs.

The Uber business model not only places higher burdens on drivers, but also makes Uber less efficient. While there is no public data on the breakdown of Uber costs by category, if one observes its operating practices, one can readily conclude that Uber is much less efficient, has higher costs than traditional car service operators in every category, except for fuel and fees, where no operator can achieve a cost advantage. The breakdown of Uber's structural cost/efficiency disadvantage is summarized in Figure 6.

23. CHI. BUS. AFFAIRS & CONSUMER PROT., TAXI FARE RATE STUDY (Aug. 2014), https://www.cityofchicago.org/content/dam/city/depts/mayor/Press%20Room/Press%20Releases/2014/August/Chicago_Taxi_Fares_Study_Final_Aug2014.pdf; Nelson Nygaard, Bos. Taxicab Consultants Report (Oct. 11, 2013), http://www.cityofboston.gov/mayor/pdfs/bostaxiconsultant.pdf; SEATTLE CONSUMER AFFAIRS UNIT, *supra* note 22; N.Y.C. TAXI & LIMOUSINE COMM'N, NEW YORK CITY TAXICAB FACT BOOK (Mar. 2006), http://www.schallerconsult.com/taxi/taxifb.pdf.

Seattle drivers earned $12.14/hour working 10.2 hours per day; Chicago drivers earned $12.94/hr @ 12.8 hrs/day; Boston drivers earned $14.61/hr @ 15 hours/day and New York drivers earned $17.51/hr @ 9 hours/day. All pay data adjusted to 2015 dollars.

24. S. F. TAXI DRIVERS HEALTH CARE WORKING GROUP, TAXI DRIVER HEALTH CARE POLICY RECOMMENDATIONS (Mar. 2007), https://archives.sfmta.com/cms/rtaxi/documents/HealthCarePolicyRecommendations1.pdf.

25. Census Bureau American Community Survey data excluding drivers working 40 hours or less. TRANSP. RESEARCH BD., BETWEEN PUBLIC AND PRIVATE MOBILITY, EXAMINING THE RISE OF TECHNOLOGY-ENABLED TRANSPORTATION SERVICES 52-53 (2015).

Figure 6: Distribution of Taxi Revenue (including tips) by cost category	*Traditional Model Cost Split*	*Can Uber Achieve Significantly Lower Costs Than Traditional Cab Companies?*	
driver compensation (take-home pay plus self-funded benefit costs)	58%	**NO**	Uber's growth impossible without much higher driver costs
fuel and fees (paid by driver)	9%	**NO**	All have same fuel costs
vehicle ownership and maintenance (in traditional model corporate pays; in Uber model driver pays)	18%	**NO**	Independent drivers pay more for insurance/vehicles/ financing and maintenance than existing operators
corporate: dispatch/overhead/profit	15%	**NO**	Uber charges 20-30% of revenue but has much higher costs (IT, global branding, shareholder returns)

Higher vehicle costs. It is inconceivable that hundreds of thousands of independent, poorly-financed Uber drivers could ever achieve lower vehicle ownership, financing, licensing and maintenance costs than professional fleet managers at traditional taxi/limo companies, or that these drivers could do a better job balancing long-term asset costs against local market revenue potential.[26] Not only does shifting operating costs and capital risk from Uber's investors onto its drivers fail to eliminate them from the overall business model, but the shifting makes the costs and risks higher.

Structurally higher driver take-home pay. The portion of passenger fares retained by Uber drivers must be split between a "base wage" that is comparable to the take home pay of traditional drivers (58% of the traditional cost structure) and "vehicle cost" compensation (18% of the traditional cost structure), covering the added costs drivers bear under the Uber model, as shown in Figure 5. Uber needed extraordinary traffic and revenue growth in order to fuel the growth of its unprecedented $68 billion financial valuation.[27] This growth (documented in Figures 1-3) would have been impossible without offering 2010-2015 base wage

26. "Outsourcing to individual contractors means that on an aggregate basis efficiency is lost. For example, rather than having the bulk purchase bargaining power of a major corporate, Uber drivers must negotiate everything from car lease contracts, insurance, fuel prices and cleaning services individually. . . That makes the overall costs of servicing the customer base higher, which will eventually feed through to prices." Izabella Kaminska, *Scaling, and Why Unicorns Can't Survive Without It*, FIN. TIMES (Jan. 15, 2016), http://ftalphaville.ft.com/2016/01/15/2150403/scaling-and-why-unicorns-cant-survive-without-it/.

27. "Core to Uber's valuation is global domination. Uber has had it for several years. Since about. . . $50 billion in valuation or so." *See* Sarah Lacy, *First China, Then European Bans, Then Indian Driver Strikes, Now a Brazilian Judge Rules Uber Drivers are Employees. Can We All Agree World Domination has Utterly Failed?* PANDO (Feb.15, 2017), https://pando.com/2017/02/15/first-china-then-european-bans-then-indian-driver-strikes-now-brazilian-judge-rules-uber-drivers-are-employees-can-we-all-agree-world-domination-has-utterly-failed/.

premiums large enough to get hundreds of thousands of drivers to sign up with Uber, but these wage premiums increased losses and the size of its structural cost disadvantage. As will be discussed below in the context of the industry's demand peaking problem, neither Uber nor any other operator using independent contractors can offset a structural driver and vehicle cost disadvantage by significantly improving driver/vehicle efficiency (the ratio of revenue miles to total miles driven on a given shift).

If labor markets worked efficiently, Uber driver receipts would have to have been roughly 30-40% higher than traditional driver pay in order to cover the added vehicle costs and capital risk they bear, and to incentivize them to switch to Uber. A 35% increase over the $12-17/hour traditional driver pay would have produced $16-23/hour receipts for Uber drivers. An Uber financed and published study found December 2014 gross driver receipts of $16.65 for UberX drivers (comparable to traditional taxi drivers) and $20.16 for UberBlack drivers (comparable to traditional limousine drivers).[28] From this limited data it is difficult to conclude whether the take home portion of driver compensation increased slightly or actually decreased when traditional drivers initially switched to Uber.

Uber's aggressive exploitation of information asymmetries[29] was key to blocking the much higher driver compensation that would have been seen if these labor markets worked efficiently. Drivers for traditional operators had never needed to understand the true vehicle costs and financial risks they needed to deduct from gross revenue in order to estimate their actual take home pay. Ongoing Uber claims about higher driver pay deliberately misrepresented gross receipts as net take-home pay. They also failed to disclose the substantial financial risk its drivers faced since Uber could cut their pay or terminate them at will, even if they were locked into long-term vehicle financing obligations.[30] Uber claimed "[our] driver partners are small business entrepreneurs demonstrating across the country that being a driver is sustainable and profitable" and that ". . .the median income on UberX is more than $90,000/year/driver in New York and more than $74,000/year/driver in

28. Jonathan V. Hall & Alan B. Krueger, *An Analysis of the Labor Market for Uber's Driver-Partners in the United States* 18-19 (Princeton Univ. Indus. Relations Section, Working Paper No. 587, 2015), http://www.nber.org/papers/w22843. The data was based on a survey of drivers in six cities (New York, Boston, Chicago, Washington, Los Angeles, and San Francisco), where wages are typically higher than national averages.

29. Alex Rosenblat & Luke Stark, *Uber's Drivers: Information Asymmetries and Control in Dynamic Work*, 10 INT'L. J. COMM. 27 (2016), https://www.nap.edu/download/21875.

30. Dan Kedmey, *Do UberX Drivers Really Take Home $90K a Year on Average? Not Exactly*, TIME (May 27, 2014), http://time.com/119587/do-uberx-drivers-really-take-home-90k-a-year-on-average-not-exactly/.

San Francisco,"[31] even though Uber had no drivers with earnings anything close to these levels.[32] After these claims were readily debunked,[33] Uber aggressively publicized the higher Uber driver pay reported by supposedly "academic" research (which Uber co-authored and paid for) without explaining that the study made no attempt to deduct vehicle costs and risks from gross Uber pay that would be required-to calculate actual net earnings and to provide a legitimate comparison of take home pay rates. Further, the papers concealed the fact that Uber salaries were massively subsidized in contrast to traditional taxi salaries, which were constrained by actual passenger revenues.[34] In January 2017, the Federal Trade Commission fined Uber $20 million for deceptive advertisements about potential driver earnings and vehicle leasing terms.[35]

In mid-2015, after hundreds of thousands of drivers were locked in to vehicle financial obligations, Uber eliminated driver incentive programs and reduced the driver share of each passenger dollar by one-third.[36] This transfer from Uber drivers to Uber investors produced the 2016 margin improvement shown in Figure 3, but also eliminated much (if not all) of the economic incentive that got drivers to switch to Uber in the first place. An external study of actual Uber driver revenue and expenses

31. Uber was claiming that its drivers made more than double the actual earnings of traditional New York taxi drivers, and more than the average wages of workers in the tech industry. *See* BusinessWire, *An Uber Impact: 20,000 Jobs Created on the Uber Platform Every Month* (May 27, 2014, 7:54 AM), https://newsroom.uber.com/an-uber-impact-20000-jobs-created-on-the-uber-platform-every-month-2/; Matt McFarland, *Uber's Remarkable Growth Could End the Era of Poorly Paid Cab Drivers,* WASH. POST (May 27, 2014), https://www.washingtonpost.com/news/innovations/wp/2014/05/27/ubers-remarkable-growth-could-end-the-era-of-poorly-paid-cab-drivers/.

32. "I have yet to come across a single driver earning the equivalent of $90,766 a year. . .. despite broadcasting the $90,766 figure far and wide, Uber has so far proved unable to produce one driver earning that amount." Alison Griswold, *In Search of Uber's Unicorn: The Ride-Sharing Service Says its Median Driver Makes Close to Six Figures. But the Math Just Doesn't Add up,* SLATE (Oct. 27, 2014, 4:29 PM), http://www.slate.com/articles/business/moneybox/2014/10/uber_driver_salary_the_ride_sharing_company_says_its_drivers_make_great.html.

33. Kedmey, *supra* note 30; Ted Rail, *Fact Checking Uber's Claims about Driver Income. Shockingly, They're Not True,* PANDO DAILY (May 29, 2014), https://pando.com/2014/05/29/fact-checking-ubers-claims-about-driver-income-shockingly-theyre-not-true/; Felix Salmon, *How Well Uberx Pays. Part 2: Maybe Not Quite as Well as Uber Would Have You Think,* MEDIUM (June 8, 2014), https://medium.com/@felixsalmon/how-well-uberx-pays-part-2-cbc948eaeeaf#.m93d2ssf6; Justin Singer, *Beautiful Illusions: The Economics of UberX,* VALLEYWAG (June 11, 2014, 3:40 PM), http://valleywag.gawker.com/beautiful-illusions-the-economics-of-uberx-1589509520.

34. Hall & Krueger, *supra* note 28. Jonathan V. Hall is Uber's Public Policy Director and Head of Economic Research. Alan B. Krueger is a Princeton academic and a former White House colleague of Uber executive David Plouffe, whose role is discussed in Section IV(D).

35. Leslie Hook, *Uber Pays $20m Fine over Misleading Driver Earnings' Claims,* FIN. TIMES (Jan. 19, 2017), https://www.ft.com/content/71dded36-de93-11e6-86ac-f253db7791c6.

36. *See supra* note 18.

in Denver, Houston, and Detroit in late 2015, estimated actual net earnings of $10-13/hour, at or below the earnings from the studies of traditional taxi driver take home pay in Seattle, Chicago, Boston and New York. The study found that Uber was still recruiting drivers with earnings claims that reflected gross revenue and did not mention expenses.[37] Multiple news reports indicate drivers are having enormous difficulty making ends meet given Uber's current commission levels.[38] This suggests there has been a medium-term driver market failure since the signals drivers would use to decide which employer offered the best compensation and conditions had been distorted to the point where drivers switched from higher take-home pay at traditional operators to lower take-home pay at Uber. In addition, when drivers realize that true Uber compensation is lower, they cannot readily switch to other employers based on that better information.

Higher dispatch and corporate costs. Traditional taxi owners take 15 cents of each passenger dollar to cover dispatching, corporate overhead and profit. Uber currently charges drivers 30 cents of every revenue dollar although the P&L data cited above shows that these driver fees fall several billion dollars short of covering Uber's actual operating and financial costs. There is no public evidence showing that Uber's software makes its dispatching more efficient than traditional operators; while the software reduces labor costs, these savings appear to be more than offset by much higher development and other overhead costs.[39] Unlike traditional cab companies, Uber fees need to cover the cost of global marketing, branding and lobbying programs, and needs to produce profits large enough to provide returns on the $13 billion its owners have invested.[40]

37. Caroline O'Donovan & Jeremy Singer-Vine, *Uber Data and Leaked Docs Provide a Look at How Much Uber Drivers Make,* BUZZFEED (June 22, 2016, 4:37 PM), https://www.buzzfeed.com/carolineodonovan/internal-uber-driver-pay-numbers?utm_term=.xleJmrjoPE#.kikPELpZwm.

38. One report cited the need for drivers to work marathon shifts focused on surge pricing periods. Masha Goncharova, *Ride-Hailing Drivers are Slaves to the Surge*, N.Y. TIMES (Jan. 12, 2017), https://www.nytimes.com/2017/01/12/nyregion/uber-lyft-juno-ride-hailing.html?. Another news report noted the increasing need for Uber drivers to actually sleep in their cars. Eric Newcomer & Olivia Zaleski, *When Their Shifts End, Uber Drivers Set up Camp in Parking Lots across the U.S.*, BLOOMBERG NEWS (Jan. 23, 2017, 3:00 AM), https://www.bloomberg.com/news/articles/2017-01-23/when-their-shifts-end-uber-drivers-set-up-camp-in-parking-lots-across-the-u-s. A third report confirmed the marathon shifts and sleeping in cars, and compared Uber drivers to "migrant workers." *See* Carolyn Said, *Long-Distance Uber, Lyft Drivers' Crazy Commutes, Marathon Days, Big Paychecks*, S.F. CHRONICLE (Feb. 18, 2017), http://www.sfchronicle.com/business/article/Long-distance-Uber-Lyft-drivers-crazy-10942919.php.

39. *See supra* Figure 6.

40. "[W]hat Uber has really managed to do is persuade the world a smart and efficient urban transport system geared towards mass transit — within which taxis cater to the marginal client that's prepared to pay a premium for an occasional chauffeur-driven ride — can be

C. Growth Will Not Eliminate Uber's Cost Disadvantage

Many successful startup companies dramatically improved cost competitiveness as they grew, but Uber needed to find nearly $3 billion in annual P&L improvements (on its 2016 $5.5 billion revenue base) just to reach operational breakeven, and much, much larger improvements to provide a return to its investors. Unfortunately, urban car service operators have never demonstrated significant scale economies,[41] and Uber has not found any source of major margin improvements other than driver compensation cuts. No one in the history of urban car services has ever observed economies that drove high levels of concentration in individual markets or allowed individual companies to rapidly expand into other cities, much less the economies needed to expand globally. Figure 7 summarizes scale/network economy issues for each major cost category.

Figure 7: Distribution of Taxi Revenue (including tips) by cost category	*Traditional Model Cost Split*	*Can Uber Achieve Significantly Lower Costs Than Traditional Cab Companies?*	
driver compensation (take-home pay plus self-funded benefit costs)	58%	**NO**	100% variable
fuel and fees (paid by driver)	9%	**NO**	100% variable
vehicle ownership and maintenance (in traditional model corporate pays; in Uber model driver pays)	18%	**NO**	Uber drivers have less ability to exploit fleet economies than traditional taxi operators
corporate: dispatch/overhead/profit	**15%**	**NO**	Possibly limited dispatch economies but offset by higher branding, market development costs, ROI

There are no scale economies related to direct driving costs (driver compensation, fuel, fees); each shift involves one vehicle and one driver regardless of the size of the company. The revenue productivity of drivers could increase if more off-peak and backhaul passengers could be found, but revenue productivity is not a function of company size. Uber's business model precludes the efficiencies integrated operators could

transformed into a much less economical one, without any commensurate costs being passed on to anyone, whilst somehow also accommodating investor returns." Izabella Kaminska, *Mythbusting Uber's Valuation*, Fin. Times (Sept. 13, 2016), http://ftalphaville.ft.com/2016/09/13/2173631/mythbusting-ubers-valuation/.

41. Academic studies found limited scale economies (i.e. to cover the fixed costs of dispatching equipment) that would limit the ability of very small firms to compete with mid-sized firms in the same city, but none large enough to drive high levels of concentration within a given city. Anthony M. Pagano & Claire E. McKnight, *Economies of Scale in the Taxicab Industry: Some Empirical Evidence from the United States*, 17 J. Transp. Econ. & Pol'y 299, 299-313 (1983); Paul Dempsey, *Taxi Industry Regulation, Deregulation, and Reregulation: The Paradox of Market Failure*, 24 Transp. L. J. 73, 115-16 (1996).

achieve such as volume purchasing of vehicles and insurance and precludes the use of sophisticated systems to optimize asset acquisition costs and utilization against volatile demand patterns.

Uber's economics are fundamentally different from other well-known startups that successfully used scale economies to grow into profitability. These were companies in fields such as social media or online retailing, whose digital products could be expanded globally (and into new markets) at extraordinarily low marginal cost. Unlike an urban car service provider, direct labor was a tiny component of these companies' overall cost structure, and most of them had no competition, such as entirely new products like eBay or Facebook. Others, such as Amazon, faced competition with enormously higher direct operating costs (online retailers vs. brick-and-mortar incumbents). Unlike digital companies, Uber actually faces negative expansion economies since each new market raises entirely unique competitive, recruitment, and political lobbying battles. The first markets Uber entered were presumably the ones it thought would be the easiest to penetrate; as demographic, competitive, and political challenges have increased, Uber's unit expansion costs appear to have increased dramatically as Uber has expanded to Europe and Asia.[42]

Uber also has no potential to exploit the network economies that some purely digital companies have used to drive major profit improvements. In these cases, such as eBay's exchange market, Google's search function, or Facebook's social media product, the development of a strong user base makes the product significantly more efficient and more attractive to other users.[43] This locks in existing users, fuels growth, and makes it nearly impossible for later entrants with smaller user bases to compete. Neither Uber's ordering app, nor the ordering apps of other operating companies create these network economies or lock in users the way Ebay and Facebook and Google can.[44] In a competitive market, many individuals will use the app of companies like Uber or American Airlines if these companies can profitably provide good prices and

42. Leslie Hook & Charles Clover, *Uber and Didi in $1bn China Incentives*, FIN. TIMES (Sept. 9, 2015), http://www.ft.com/intl/cms/s/0/e85cc5fa-5473-11e5-8642-453585f2cfcd.html#axzz3lG2M0tQe.

43. For a general discussion of the economics of network effects, see Anu Hariharan et al., *All about Network Effects*, ANDREESSEN HOROWITZ (Mar. 7, 2016), http://a16z.com/2016/03/07/all-about-network-effects/.

44. Arun Sundararajan, a professor at New York University's Stern School of Business, challenged Uber's claims about powerful scale and network economies, "There are network effects that are local to a particular market, but these are not like Facebook's network effects. They don't give you a multiyear advantage." Justin Fox, *Uber isn't Going to Conquer the World*, BLOOMBERG (June 29, 2016, 9:04 AM), http://www.bloomberg.com/view/articles/2016-06-29/uber-isn-t-going-to-conquer-the-world?.

service. At the same time, however, it is unlikely that very many people will abandon Yellow Cab or JetBlue just because a lot of other people have the bigger company's app on their phones.

D. Uber "Innovations" Did Not Create Significant Competitive Advantages

Uber claims to be a highly "innovative" company but has never provided evidence that any of these "innovations" constitute powerful competitive advantages that traditional operators could never match, or that these innovations have significantly reduced any of the costs identified in Figure 4. This section will briefly address some of the major claims Uber supporters have made while attempting to justify the growth of market share and valuation in terms of competitive efficiency.

Independent contracting is not an Uber innovation and actually reduces service and efficiency. As noted, the use of independent contractor drivers is not an Uber innovation, although Uber takes the longstanding practice a step further by requiring drivers to provide and maintain vehicles. Independent contracting transfers wealth from labor to capital but does not improve efficiency or service. When introduced in New York in the late 1970's and early 1980's, fleet owner income increased on a per shift basis by 72%, while hourly driver take-home pay fell 23%.[45] Independent contracting split integrated car services into separate corporate (vehicle leasing) and contracting (driving) businesses.[46] Segregating the two interdependent business functions made it much more difficult for customers to reward or punish taxi firms based on trip quality.[47] It also reduced taxi owner incentives to improve service and efficiency.[48] In most cities, owners lease cars on a twelve-hour (or longer) basis and get the same lease (or "gate") fee regardless of how many fares the driver collects.[49] The combination of low pay ($12-17/hour) and the exhausting workweek (typically between 60 and 75 hours) needed to cover lease fees destroys driver incentives to work harder or better.[50] Uber's higher pre-

45. Bruce Schaller & Gorman Gilbert, *Villain or Bogeyman? New York's Taxi Medallion System*, 50 Transp. Q. 5, 91 (1996).

46. *Id.*

47. Bruce Schaller & Gorman Gilbert, *Fixing New York City Taxi Service*, 50 Transp. Q. 85, 85-96 (1996); Roger F. Teal & Mary Berglund, *The Impacts of Taxicab Deregulation in the USA,* 21 J. Transp. Econ. & Pol'y 7, 48 (1987); S. F. Police Comm'n, Taxicab Medallion Public Convenience and Necessity Report 11 (1998).

48. Henry Schneider, *Moral Hazard in Leasing Contracts: Evidence from the New York City Taxi Industry*, 53 J. Law & Econ. 629, 783 (2010).

49. *See* S.F. Mun. Transp. Agency, *supra* note 6.

50. New York cab drivers with eight years of experience actually earn 10% less revenue per day than the average driver since more experienced drivers could no longer put in the continual 60-75 hour work weeks that younger drivers could. Bruce Schaller & Gorman Gilbert, *Factors*

2016 driver base wages (and/or driver perceptions of higher take-home pay) mitigated these service problems but also made its costs uncompetitive; if Uber were to force its drivers to accept the same low wages and long hours, these service problems would inevitably return. More importantly, independent contracting eliminates the ability to optimize total capital investment, to maximize vehicle and labor utilization, and to train drivers to operate as efficiently as possible. A detailed study of taxi operations in Chicago demonstrated that the system driven by the intuition of hundreds of isolated individuals led to huge variations in revenue productivity, and that taxi companies could not maximize capacity at peak periods and had no way to train or weed out underperforming drivers.[51] Airlines, railroads, trucking firms, and urban transit systems depend on highly integrated systems that are designed to optimize the efficiency and profitability of the entire network. Independent contracting destroys normal transport economics by making integrated network management impossible. Giving taxi drivers a fixed percentage of fares incentivizes them to avoid trips and shifts (i.e. off-peak service, trips with empty backhauls) that have less gross revenue but would otherwise increase the total profitability of an integrated operator.[52]

Uber is not an innovative new product ("ridesharing") and is not exploiting "sharing economy" efficiencies. Uber supporters often falsely claim that Uber was one of the pioneers of the "sharing economy", and that it has major efficiency advantages over traditional taxicabs as it is primarily using "dead capital" (already paid-for vehicles) and extremely

of Production in a Regulated Industry: Improving the Proficiency of New York City Taxicab Drivers, 49 TRANSP. Q. 5, 81(1995); ST. OF VICT. TAXI INDUSTRY INQUIRY, TAXI REGULATION IN NORTH AMERICA 13 (2012). Because of the long hours required to cover lease fees, studies showed that drivers were highly risk averse and prone to exhaustion; instead of continuing to drive whenever demand was strong, they drove only the hours needed to reach daily revenue targets. Colin Camerer et al., *Labor Supply of New York City Cabdrivers: One Day at a Time*, 112 Q. J. ECON. 341, 407-441 (1997); Vincent P. Crawford & Juanjuan Meng, *New York City Cab Drivers' Labor Supply Revisited: Reference-Dependent Preferences with Rational Expectations Targets for Hours and Income*, 101 AM. ECON. REV. 1649, 1912-32 (2011).

51. A study based on 10.6 million trips over an eight-month period in 2013 found much wider variances in driver productivity than a system proactively managing driver scheduling could achieve. 15-20% of all drivers made five or fewer trips over a seven-hour to eleven-hour shift versus 12-18 trips for most drivers; while the median driver made net income of $115 a day, 20% of drivers made net income of $30 a day or less, and 20% of drivers made $187 a day or more. CHI. BUS. AFFAIRS & CONSUMER PROT., *supra* note 23, at 3-2 to 3-6. A New York study also found very high variance among driver earnings. *See* Schaller & Gilbert, *Fixing New York City Taxi Service, supra* note 47.

52. Since airline, railroad and transit operating employees receive the same pay regardless of the revenue earned on their trips, they can be scheduled in ways that maximize system-wide revenue and equipment utilization. For examples of how Uber's system does not maximize driver revenue potential, see Alex Rosenblat, *The Truth about How Uber's App Manages Drivers*, HARV. BUS. REV. (Apr. 6, 2016), https://hbr.org/2016/04/the-truth-about-how-ubers-app-manages-drivers.

low marginal cost (drivers out to earn a few extra dollars when they have free time).[53] In fact, Uber is no more a "ridesharing" business than United Airlines is a "plane-sharing" business; nothing is being shared; it is selling car service to consumers and paying its drivers, just as traditional taxis do. The author whose 2010 book initially popularized the "sharing economy" term insisted Uber did not qualify, as its business model was not fundamentally based on collaborative sharing of underutilized resources with the primary purpose of creating gains for the owners of those resources.[54] No large-scale transportation operation could survive if any significant portion of its capacity depended on totally casual workers who only showed up when they happened to feel like it. Many other companies followed Uber's lead in misrepresenting the use of low-wage independent contractors as a powerful "sharing economy" efficiency breakthrough[55] and claimed to be the "Uber of" a wide range of other service industries (e.g. food delivery).[56] None of these companies ever developed a large-scale sustainable business because the Uber efficiencies they were trying to replicate were trivial and unscalable.

Uber's App is not a major innovative breakthrough. Many consumers seem to like Uber's ordering and dispatching smartphone app; however, the app is not a powerful, sustainable technological advance and could not possibly help explain how Uber has total transformed industry competition. Many observers have incorrectly claimed that Uber's app creates a major efficiency gain by either achieving major transaction cost savings or by matching drivers and passengers vastly better than traditional taxi dispatchers can.[57] None of these observers back their claim with any data, and there is no evidence that the revenue productivity of

53. JARED MEYER, UBER-POSITIVE: WHY AMERICANS LOVE THE SHARING ECONOMY 23 (2016); Dan Rothschild, *How Uber and Airbnb Resurrect 'Dead Capital'*, THE UMLAUT (Apr. 9, 2014), https://theumlaut.com/how-uber-and-airbnb-resurrect-dead-capital-4475a2fa91f1.

54. Rachel Botsman, *Defining The Sharing Economy: What Is Collaborative Consumption—And What Isn't?*, FAST COMPANY (May 27, 2015, 6:15AM), https://www.fastcoexist.com/3046119/defining-the-sharing-economy-what-is-collaborative-consumption-and-what-isnt.

55. Giana M. Eckhard & Fleura Bardhi, *The Sharing Economy Isn't About Sharing at All,* HARV. BUS. REV. (Jan. 28, 2015), https://hbr.org/2015/01/the-sharing-economy-isnt-about-sharing-at-all; Oliver Blanchard, *Stop Calling It The "Sharing Economy." That Isn't What It Is*, OLIVERBLANCHARD.NET (June 29, 2015), http://olivierblanchard.net/stop-calling-it-the-sharing-economy-that-isnt-what-it-is/; Vanessa Katz, *Regulating the Sharing Economy*, 30 BERKELEY TECH. L.J. 385, 1068 (2015).

56. See Griffith, *supra* note 16; Sara Lacy, *The Only Uber of Anything is Uber*, PANDO DAILY (July 28, 2015), https://pando.com/2015/07/28/homejoy-only-uber-is-uber/; Alison Griswold, *There is No Uber Economy, There is Only Uber*, QUARTZ (Mar. 28, 2016), http://qz.com/648420/there-is-no-uber-economy-there-is-only-uber/; TOM SLEE, WHAT'S YOURS IS MINE (2017).

57. *See, e.g.*, MEYER, *supra* note 53; Farhad Manjoo, *With Uber, Less Reason to Own a Car*, N.Y. TIMES (June 11, 2014), http://www.nytimes.com/2014/06/12/technology/personaltech/with-ubers-cars-maybe-we-dont-need-our-own.html?_r=0. Traditional taxi dispatchers have perfect

Uber's drivers is any better than traditional drivers. The huge competitive gains falsely attributed to application software are actually due to the hugely subsidized level of car capacity the app often shows. If the app only showed the much smaller number of more expensive cars that could cover their full operating costs out of the fares charged, few people would care about the quality of the app's user interface. Transaction cost savings are immaterial to overall car service cost competiveness;[58] this software can be (and has been) readily replicated by competitors. In a competitive market the app does not create any network economies,[59] and the costs of switching away from Uber's app are very low. Hundreds of other consumer industries have migrated from telephone ordering to Internet and smartphone ordering (pizza delivery, airline booking), but there is not a single case where this had any material impact on industry competition, much less created tens of billions of dollars in corporate value.

Uber's "surge pricing" approach does not improve efficiency. Uber's surge pricing[60] cannot achieve the major efficiency gains that variable pricing systems have achieved in airlines, hotels and other travel industries because urban car service market dynamics are totally different. Unlike taxi customers, people buy airplane tickets and hotel rooms well in advance, and can easily get complete information about all of the price and scheduling options available in the market. This allows airlines and hotels to increase profitability, by increasing sales to price sensitive customers (who can fill otherwise empty seats and rooms), and by eliminating the high cost of capacity that would only get used at peak periods. But research has long demonstrated that taxi demand is inelastic in the very short-term, and the timing of demand is especially inelastic (people want a cab at a very specific time),[61] so very short-term fare changes will

information about passengers and empty cabs; no one can explain how any marginal gains Uber's app might achieve would cover its huge development cost.

58. Transaction costs are a very small portion of total overhead and distribution costs. *See supra* section II(B).

59. *See supra* section II(C).

60. For basic descriptions of surge pricing by an Uber Board member and by an independent outsider, see Bill Gurley, *A Deeper Look at Uber's Dynamic Pricing Model*, ABOVE THE CROWD (Mar. 11, 2014), http://abovethecrowd.com/2014/03/11/a-deeper-look-at-ubers-dynamic-pricing-model/; Le Chen et al., *Peeking Beneath the Hood of Uber*, PROCEEDINGS OF THE 2015 ACM INTERNET MEASUREMENT CONFERENCE 496 (Oct. 2015).

61. Frederic D. Fravel & Gorman Gilbert, U.S. Dep't of Transp., Fare Elasticities for Exclusive-Ride Taxi Services (1978); Chanoch Shreiber, *The Economic Reasons for Price and Entry Regulation of Taxicabs*, 9 J. OF TRANSP. ECON. & POL'Y 268 (1975); Mark W. Frankena & Paul A. Pautler, Fed. Trade Comm'n, An Economic Analysis of Taxicab Regulation 162-64 (1984); similar findings on elasticity subsequent to the initial deregulation debate include Teal & Berglund, *supra* note 47; Bruce Schaller, *Elasticities for Taxicab Fares and Service Availability*, 26 TRANSP. 231, 283-97 (1999).

not change demand patterns, drive improved utilization or increase total revenue. All forms of urban transport have similarly inelastic demand; the Long Island Rail Road has had peak and off-peak pricing for over a hundred years, but rush hour is still rush hour. No level of taxi discount will get anyone to shift their Saturday night plans to midday Tuesday. Airline revenue management systems improve market efficiency because they incorporate market-wide supply/demand data and because they operate in a timeframe long enough to improve the matching of customers with capacity. Uber simply responds to fluctuations in passenger requests within very narrow geographic and time periods.[62] Uber's response comes without prior warning and can increase taxi fares up to eight times their normal levels. An internal Uber study of its four largest US markets found that 21% of all passengers paid surge prices.[63] Uber's surge pricing is not based on data about total market demand, and Uber cannot provide customers with any of the information about pricing or service options critical to improving capacity utilization. It cannot even tell people heading out on Saturday night what it will charge to take them home. Uber Surge pricing can be readily manipulated, depending on whether Uber wants to increase (or minimize) driver earnings, limit wait times, or maximize its own revenue.[64] Uber claims that it does not use surge pricing to maximize revenue, but solely to increase the supply of drivers at peak periods. External studies, however, show that it redistributes existing driver supply but does little to increase it.[65] Additionally, the sociological distribution of urban taxi demand is bipolar; 43% of the demand is from people earning less than $20,000 (and 55% of it is from people earning less than $40,000, most of whom do not have cars), while 35% is from

62. "[T]he surge algorithm was made of crude heuristics." *See* Amir Efrati, *Surge-Price Builder Leaves Uber*, THE INFORMATION (Oct. 17, 2016, 6:58 AM), https://www.theinformation.com/surge-price-builder-leaves-uber.

63. Peter Cohen et al., *Using Big Data to Estimate Consumer Surplus: The Case of Uber* (Nat'l Bureau of Econ. Research, Working Paper No. 22627, 2016), www.nber.org/papers/w22627.

64. Ben Popper, *Uber Kept New Drivers off the Road to Encourage Surge Pricing and Increase Fares*, THE VERGE (Feb. 26, 2014, 10:00 AM), http://www.theverge.com/2014/2/26/5445210/in-san-diego-uber-kept-drivers-off-the-road-to-encourage-surge; Matt Stoller, *How Uber Creates an Algorithmic Monopoly to Extract Rents*, NAKED CAPITALISM (Apr. 11, 2014), http://www.nakedcapitalism.com/2014/04/matt-stoller-how-uber-creates-an-algorithmic-monopoly.html; Tim Hwang & Madeleine Clare Elish, *Uber's Algorithms and The Mirage of the Marketplace*, SLATE (July 27, 2015, 6:00 AM), http://www.slate.com/articles/technology/future_tense/2015/07/uber_s_algorithm_and_the_mirage_of_the_marketplace.single.html; Alex Rosenblat, *Uber's Phantom Cabs*, VICE: MOTHERBOARD (July 27, 2015, 8:15 AM), http://motherboard.vice.com/read/ubers-phantom-cabs?update.

65. Nicholas Diakopoulos, *How Uber Surge Pricing Really Works*, WASH. POST: WONKBLOG (Apr. 17, 2015), https://www.washingtonpost.com/news/wonk/wp/2015/04/17/how-uber-surge-pricing-really-works/.

people with incomes greater than $100,000.[66] Studies show that most of the lower-income demand is driven by jobs and services that cannot easily be reached by public transit, or trips at hours when public transit does not operate.[67] Unlike airline pricing systems, surge pricing does not offer price-sensitive customers attractive alternatives; it simply prices them out of the market. A pro-Uber paper by a major libertarian think tank dismissed this huge portion of taxi demand as "people who do not really need a ride."[68]

Uber's competitive service advantages are completely explained by massive investor subsidies, and nothing in Uber's business model solves the industry's major service problems. Uber's early growth was driven by widespread perception that its service quality—driver courtesy and professionalism, car cleanliness, greater car availability at peak times—was superior to traditional car service providers. This market perception is entirely explained by unsustainable subsidies that boost driver compensation and car capacity above the levels that could be justified by passenger fares.

The traditional industry's deficiencies in these areas are due to inherent taxi market structural problems, not to any obvious inefficiencies that new software could fix or excess profits that new competitive market entry could solve. As noted, driver professionalism and car cleanliness problems are caused by low pay and the use of independent contractors,[69] and Uber's business model does not solve these problems. The problems of car availability when demand is highest (you can't get a cab after dinner on Saturday night, after your late evening arrival at LaGuardia, or when it is raining), and poor service to lower-density neighborhoods (including but not limited to low income neighborhoods) exist because the true cost of providing peak period and low-density neighborhood service is substantially higher than the fares taxi riders expect (or are willing) to pay, and nothing in Uber's business model reduces the cost of these services.[70]

66. BRUCE SCHALLER, TRANSP. RESEARCH BD., COMM. FOR STUDY OF INNOVATIVE URBAN MOBILITY SERV., TAXI, SEDAN AND LIMOUSINE INDUSTRIES AND REGULATIONS 3-5, 8-11 (Jan. 20, 2015); John Pucher & John L. Renne, *Socioeconomics of Urban Travel: Evidence from the 2001 NHTS*, 57 TRANSP. Q. 11, 49 (2003).

67. *Id.*

68. MEYER, *supra* note 53. Jared Meyer works for the Manhattan Institute, which has been a prominent Uber supporter.

69. Schaller & Gilbert, *Villain or Bogeyman*, *supra* note 45.

70. As with driver salaries, Uber has paid for and publicized "independent" analysis that claims that it provides better service in low-income neighborhoods than traditional taxis, but failed to explain how Uber could economically provide better service and concealed the existence of the subsidies that did explain it. Davey Alba, *Uber Cheaper, Faster Than Taxis in Low-Income Neighborhoods,* WIRED (July 20, 2015, 5:53 PM), http://www.wired.com/2015/07/uber-cheaper-faster-taxis-low-income-neighborhoods/.

Every form of urban transport faces the problem of extreme demand peaks that are very expensive to serve; the taxi demand peak occurs in the evening, with especially extreme peaks on Friday and Saturday night. This is largely driven by (largely lower income) people working evening and night shifts when transit service is unavailable, as well as by (largely higher income) people travelling to dining and entertainment venues.[71] The profitability of individual taxi trips varies widely depending on the associated empty backhaul costs. However, taxi operators (including Uber) have no way to know the exact backhaul cost associated with each trip in advance and no way to adjust fares in order to align them with true trip costs. The true cost of an early morning airport trip (which will have an empty backhaul, because no flights have arrived) is nearly double the cost of a later afternoon trip, when return fares are ready and waiting, but both trips are priced identically. The economic cost of trips to neighborhoods with low demand density (where backhauls are rare) will be much higher than trips within a city's high demand core (these include downtown areas, shopping and entertainment districts, wealthier residential areas, etc.).[72] Uber's app has not improved driver/vehicle revenue productivity because it has done nothing to eliminate these empty backhauls. Taxi drivers struggling to make a living often refuse trips with empty backhauls because it sharply limits what they can earn during a shift.[73] If taxi companies set fares in line with true service costs, prices to low density neighborhoods would likely increase 50-100% and peak pe-

71. A San Francisco Taxi Commission study found that on Monday through Thursday between 6 and 10 pm, only 35% of calls to dispatch centers actually produced a taxicab, while on Friday and Saturday nights the no-show rate reached 95%. S.F. TAXI COMM'N, TAXICAB MEDALLION PUBLIC CONVENIENCE AND NECESSITY REPORT 15-25 (Feb. 2007). In Manhattan, 15% of all taxi ridership occurs within two seven-hour blocks on Friday and Saturday nights, and an additional 13% occurs within four-hour evening blocks Monday through Thursday. *See* CAMILLE KAMGA ET AL., TRANSP. RESEARCH BD., 92ND ANNUAL MEETING, HAILING IN THE RAIN: TEMPORAL AND WEATHER-RELATED VARIATIONS IN TAXI RIDERSHIP AND TAXI DEMAND-SUPPLY EQUILIBRIUM 7-10 (2013). These studies based on actual ridership can badly understate the actual underlying demand peak, as they do not include people who give up hope of finding a cab, or know from experience not to bother in the first place.

72. For maps that illustrate the demand gap between core downtown, entertainment districts, and low-density neighborhoods, see Bos. Taxicab Consultants Report, *supra* note 23, at 4-9; RACHEL ABRAMS ET AL., N.Y.C. TAXI & LIMOUSINE COMM'N, TAXI 07: ROADS FORWARD 119-127 (2007); MIAMI DADE CTY., TAXI RIDERSHIP STUDY PHASE TWO REPORT 44-54 (Mar 2006).

73. Poor service to low-density neighborhoods is primarily due to the high cost of empty backhauls but can be exacerbated by racial prejudice. The New York Taxi and Limousine Commission investigated complaints of passenger complaints that drivers had refused to take them to their desired destination, as legally required, and found that almost all destinations were in very low crime areas, but were outer borough neighborhoods with a high likelihood of an empty backhaul. But the TLC noted that it could not investigate cases (i.e. African-Americans), where the cab driver never stopped to see where the passenger wanted to go. Schaller & Gilbert, *supra* note 47.

riod prices would be three to five times their normal levels.[74] This would price taxis out of the reach of many current users, reducing both total taxi demand and overall economic welfare.

Without strong car service profits, Uber cannot grow the market or expand into other industries. Some Uber supporters have defended its rich valuation by asserting that Uber could dramatically grow market demand beyond historical levels. These same supporters also ignore the subsidies that have driven all growth to date and didn't seem to understand that the lower prices needed to expand demand require both superior (and continually improving) efficiency and powerful scale economies.[75] Bill Gurley, one of Uber's original investors, took the "magical market growth" claim even further, claiming that people trying to value Uber had to consider that Uber would drive prices so low that car ownership rates would plummet.[76] He further claimed that Uber's growth potential should not be defined by the existing demand for taxis and limousines, but by the size ($22 billion in San Francisco) of the entire ground transportation market.[77] Gurley did not disclose the magnitude of current losses and did not explain how Uber could ever profitably provide car service at prices competitive with public transit or private car ownership.

Claims that Uber's huge valuation is justified by growth opportunities beyond the urban car service such as delivery services,[78] carpooling,[79] and the "driverless car" industry[80] ignore the fundamentally different ec-

74. If taxi companies provided drivers and fleet of vehicles that only operated during these 20-30 peak hours, peak fares would need to be high enough so that the vehicles could earn the same revenue as other vehicles operating 75-100 hours per week.

75. "[T]he introduction of Uber and Uber-style apps greatly increases the size of the world taxi market." Matthew Yglesias, *Why Uber Just Might Be Worth It at $18 Billion*, VOX (June 7, 2014, 10:29 AM), http://www.vox.com/2014/6/7/5788558/why-uber-just-might-be-worth-it-at-18-billion; [since Uber and Lyft are in a] "vicious match for dominance across the globe, ride-sharing prices over all are sure to plummet." *See also* Manjoo, *supra* note 57. "Uber and Lyft have already pushed down fares and expanded availability, and Uber may achieve further improvements on both fronts in the coming years. In the process, they may significantly expand the overall market." Timothy B. Lee, *Why Uber Could Be Worth $70 Billion*, VOX (Oct. 25, 2015, 8:30 AM), http://www.vox.com/2014/12/4/7336433/uber-worth-.

76. Bill Gurley, *How to Miss By a Mile: An Alternative Look at Uber's Potential Market Size*, ABOVE THE CROWD (July 11, 2014), http://abovethecrowd.com/2014/07/11/how-to-miss-by-a-mile-an-alternative-look-at-ubers-potential-market-size/.

77. *Id.*

78. "The idea: Uber doesn't just set passengers up with drivers. It's a company starting to dream of becoming a logistical nervous system for cities." Christine Lagorio-Chafkin, *Resistance Is Futile*, INC. MAGAZINE (July/August 2013), http://www.inc.com/magazine/201307/christine-lagorio/uber-the-car-service-explosive-growth.html.

79. Travis Kalanick, *Uber CEO Travis Kalanick's Gridlock Solution? Carpools For All*, WALL ST. J. (June 6, 2016, 10:13 AM), http://www.wsj.com/articles/uber-ceo-travis-kalanicks-gridlock-solution-carpools-for-all-1465222383.

80. Alex Hern, *Are Driverless Cars The Future Of Uber?*, THE GUARDIAN (Feb. 3, 2015,

onomics of these businesses. They also ignore the fact that Uber cannot expand into other, more competitive, lower-margin businesses unless it first finds the billions in P&L improvements needed to achieve profitability in its core car service business. Uber executive Emil Michaels claimed that its car services were just the starting point for expansion into a broad array of delivery and logistical services. "We always say that we deliver people in five minutes or less. Well, there are a lot of other things you can deliver in five minutes or less. This is the beginning of an on-demand lifestyle we're bringing to people."[81] Michaels' comment highlights the disconnect between Uber's claim that its "push a button, get a car" on-demand service was a major innovative breakthrough, and its inability to explain how it could profitably provide enough car capacity to insure immediate availability whenever that button was pushed. And just as Michaels did not explain how Uber could ever achieve sustainable profits in its core car service business, he also did not explain how Uber would suddenly establish powerful competitive advantages over entrenched, sophisticated logistical delivery companies such as UPS and FedEx. To date, none of Uber's many attempts to expand into other "on-demand" services, such as UberEats, UberRush, UberFresh or UberEssentials, nor any of the similar attempts by other companies, have demonstrated any ability to expand outside of very narrow niches.[82] Uber did not make "driverless cars" a top strategic priority until 2016, so its current investors could not have expected them to be the source of financial returns. It is also unclear why investors speculating on "driverless cars" would have clear expectations of who might emerge as the champion of an industry that is still years away from producing a commercially viable product or strongly expect that Uber is more likely to dominate this business than competitors such as Google, Tesla, Toyota, Mercedes-Benz, Ford and General Motors.[83] All of these competitors can realize returns from in-

7:34 AM), https://www.theguardian.com/technology/2015/feb/03/are-driverless-cars-the-future-of-uber.

81. "Kalanick and his inner circle of true believers predict a future in which all commercial vehicles are "Uberized": a time when it's not just your car service that appears on demand using Uber's smartphone app and software—it's your Chinese delivery and your UPS packages, too." Ellen Cushing, *The Smartest Bro in the Room,* S. F. MAG. (Nov. 21, 2014), http://www.modernluxury.com/san-francisco/story/the-smartest-bro-the-room; Kara Swisher, *Man and Uber Man,* VANITY FAIR (Nov. 5, 2014, 12:00 AM), http://www.vanityfair.com/news/2014/12/uber-travis-kalanick-controversy.

82. Alison Griswold, *It's Time For Uber To Show It's More Than Just A Glorified Taxi Company,* QUARTZ (Aug. 4, 2016), http://qz.com/747905/its-time-for-uber-to-show-its-more-than-just-a-glorified-taxi-company/; *see also* Griffith, *supra* note 16; Lacy, *supra* note 56.

83. Sarah Lacy, *Ridesharing 2.0: Autonomous v. "Autonomous;" Google v. Uber; Technology v. Marketing,* PANDO (Sept. 16, 2016), https://pando.com/2016/09/16/ridesharing-20-autonomous-v-autonomous-google-v-uber-technology-v-marketing/. An independent study ranked Uber 18th out of 20 companies pursuing the driverless car market. *See* Cromwell Schubarth,

vestment in new software and manufacturing processes at each stage of development, while Uber gets no benefit until the (highly uncertain) point when a maximum level of automation is achieved,[84] and the cost of drivers can be eliminated.

Uber's market entry will not allow consumers to recapture rents extracted via taxi medallions. Uber often argued publicly how tradable taxi medallion values reflected major industry inefficiencies that Uber's market entry would eliminate.[85] These medallions are competitively problematic and will not be defended here, but Uber falsely claimed that their trading value represented an ongoing stream of wealth that had been extracted from consumers and drivers. They also incorrectly implied that the destruction of medallion values resulting from Uber's market entry would allow consumers or workers to recapture this value[86]. Only three cities (New York, Boston and Chicago) ever saw medallions with any significant value.[87] These cities had the same approximate fare levels, driver wages and service quality as other large US cities, and there is no evidence of any adverse consumer impacts concurrent with the recent run-

Ford, GM Ranked Ahead of Tesla, Waymo, Uber on Self-Driving Tech, SILICON VALLEY BUS. J. (Apr. 3, 2017, 11:59 AM), http://www.bizjournals.com/sanjose/news/2017/04/03/ford-gm-ranked-tesla-waymo-uber-driverless-cars.html?page=all.

84. The National Highway Traffic Safety Administration established five stages of car automation, based on categories originally defined by the Society of Automotive Engineers. Taxis would require drivers in each stage prior to category five ("full automation"). SAE INT'L STANDARD, Automated Driving: Levels of Driving Automation are Defined in New SAE International Standard J3016 (Jan. 2014), http://www.sae.org/misc/pdfs/automated_driving.pdf.

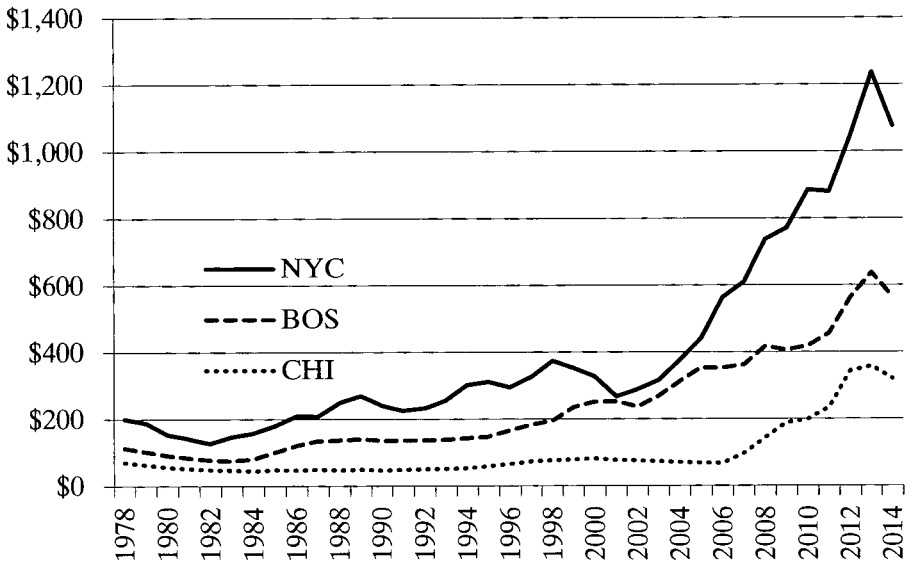
85. Uber CEO Travis Kalanick is quoted as saying Uber is fighting "the taxi medallion evil empire." Steven Greenhouse, *Uber: On the Road to Nowhere*, THE AMERICAN PROSPECT (Dec. 7, 2015), http://prospect.org/article/road-nowhere-3; *see* Emily Badger, *Taxi Medallions Have Been the Best Investment in America for Years. Now Uber May Be Changing That*, WASH. POST: WONKBLOG (Nov. 27, 2014), http://www.washingtonpost.com/blogs/wonkblog/wp/2014/11/27/as-uber-fights-new-battles-over-privacy-an-older-war-simmers-with-the-cab-industry/ (discussing the debate over what form of transportation best serves the public and medallion owners); *see also* Felix Salmon, *Why Cab Drivers Should Love Uber*, REUTERS (Dec. 12, 2013), http://blogs.reuters.com/felix-salmon/2013/12/11/why-cab-drivers-should-love-uber/ (explaining how Uber can offer lower fares to riders and substantially higher income to drivers — a win for everybody except the medallion owners).

86. "As [Kalanick] notes, in New York there are 13,000 taxis with medallions that trade for close to $1 million, implying a very profitable cash flow from fares." Andy Kesler, *Travis Kalanick: The Transportation Trustbuster*, WALL ST. J. (Jan. 25, 2013, 6:51 PM), http://online.wsj.com/news/articles/SB10001424127887324235104578244231122376480. "Doesn't the high-value of medallions (over $1mm in some markets) implicitly prove that the market is undersupplied and that prices are above true market clearing prices?" *See* Gurley, *supra* note 76.

87. In New York, only street hail (Yellow) taxis have tradable medallions; "for hire" dispatch cars and limousines do not. Miami, Philadelphia, and Atlanta sanctioned medallion trading markets in the 90's, but prices were always below $100,000; San Francisco reclaimed medallions as city property in 1978. Some other cities appear to turn a blind eye to small scale black market medallion trades, but true exchange markets never developed.

up in medallion values.[88]

Figure 8: Taxi Medallion Values 1978-2014 (in 2014 dollars $000)



Medallion values have never been directly related to the stream of future profits a medallion holder might earn; these cities established medallions in the 1930s, but values did not begin growing until the 1960s.[89] The huge recent inflation in medallion values is completely explained by changes in speculative financial markets. When returns in most classes of low-risk investment fell in the early 2000s (and fell dramatically after 2008), investor demand for medallions soared.[90] This created massive

88. A study of taxi regulatory practices in the U.S. commissioned by the San Francisco Mayor's Office found no relationship between license tradability and price or service levels, but rejected any proposal to increase license tradability unless new regulations ensured that any rents created were shared with drivers. *See* Debora Lam et al., THE SAN FRANCISCO TAXICAB INDUSTRY: AN EQUITY ANALYSIS, U.C. Goldman Sch. Pub. Policy, at 10-15 (2006).

89. Historical medallion values were compiled from multiple sources, including N.Y.C. TAXI & LIMOUSINE COMM'N, *supra* note 23; BOS. MAYOR'S OFF. OF TRANSP., *Boston Taxi Study* 4 (1978), available at https://archive.org/details/bostontaxistudyf00boat; monthly reports of medallion sale prices in CHI. DISPATCHER MAG.; Anna Barlett & Yesim Yilmaz, *Taxicab Medallions—A Review Of Experiences In Other Cities* (2011); S.F. MUN. TRANSP. AGENCY, *Managing Taxi Supply* (2013); Badger, *supra* note 85.

90. Prior to 2004 medallion prices closely tracked general financial market indices such as the S&P 500. *See* Rohin Dhar, *The Tyranny of the Taxi Medallions*, PRICEONOMICS (Apr. 10, 2013), http://blog.priceonomics.com/post/47636506327/the-tyranny-of-the-taxi-medallions. The post-2004 increase was heavily influenced by the specialist financial firms that had long provided medallion-collateralized loans to cab drivers. Naureen S. Malik, *A Bet on the Rising Value of*

windfall profits for people who happened to have acquired medallions in the past,[91] but the recent collapse of these values (following Uber's market entry) did not provide any benefits for consumers or drivers.

E. Uber Lacks the Competitive Economics Needed To Increase Overall Economic Welfare

Three tests were identified at the beginning of this paper as a basis for evaluating whether the displacement of incumbent industry competitors by a new market entrant would increase overall economic welfare. Uber fails all of them—it is nowhere close to earning sustainable profits in a competitive market and it lacks the powerful scale/network economies needed to quickly grow into profitability, it cannot produce car service more efficiently than the incumbents it has been driving out of business, and it has no powerful sources of sustainable competitive advantage.

Uber has not created a completely new product or redefined the urban car service market; it is not "disrupting" incumbent operators with a brand new way of doing business[92] but is driving passengers from point A to point B in cars, just like traditional urban car service operators. Customers of traditional operators use a telephone to order a car, with the order then relayed to a driver by a dispatcher; Uber customers use a smartphone to order a car, and the order is then relayed by a computer. Smartphone ordering does not create huge unmatchable cost or utilization advantages, nor make customers willing to pay much higher prices. Uber has not reduced the high cost of peak service or solved any of the other major service or efficiency problems that traditional operators face. The evidence presented here supports the conclusion that Uber is a less efficient producer of urban car service than a reasonably well-run traditional taxi company, and cannot significantly increase efficiency by exploiting major scale or network economies. Its growth to date has

Yellow Cabs, Barrons (June 7, 2007, 11:59 PM), http://www.barrons.com/articles/SB11811693 0894327006; Charles Mead, *Taxi Licenses as 'Cash Cows' Bolster Medallion Financial Shares*, Bloomberg Fin. News (Nov. 16, 2011), http://www.bloomberg.com/news/articles/2011-11-07/ ny-taxi-licenses-outperform-stocks-oil-and-gold.

91. A District of Columbia study that rejected taxi industry proposals to introduce tradable medallions found that "[t]hose who receive medallions in the initial round of distribution are the greatest beneficiaries. Any gains in the value of the medallion . . . accrue almost exclusively to the first owners." D.C. Chief Fin. Off., *Taxi Medallion Systems* (2010).

92. "Uber isn't an example of disruptive entry at all but, instead, it is just . . . entry". Clayton M. Christensen et al., *What Is Disruptive Innovation?,* Harvard Bus. Rev. (Dec. 2015), https://hbr.org/2015/12/what-is-disruptive-innovation; Joshua Gans, *Is Uber Disruptive?*, Digitopoly (Nov. 17, 2015), http://www.digitopoly.org/2015/11/17/is-uber-disruptive/; Joshua Gans, The Disruption Dilemma (2016) (provides an overview of the last 20 years of academic research about industry disruption and Uber does not fit any of the criteria or categories mentioned).

depended on staggering levels of predatory investor subsidies, and while these may have provided some temporary benefits to consumers and drivers, they are not sustainable and they are more than offset by Uber's ongoing destruction of more efficient industry capacity.

III. Could the Quasi-Monopoly Industry Dominance Pursued by Uber Further Reduce Industry Efficiency and Overall Economic Welfare?

A. Uber's Investors Always Focused on Artificial Market Power and Quasi-Monopoly Industry Dominance

Uber represents a radical departure from all of the previous Silicon Valley funded unicorns[93] that have grown into large, powerful companies. Companies like Google, Amazon, eBay and Facebook rose to dominant positions on the basis of powerful competitive efficiency advantages, and then to industry dominance on the basis of scale or network economies that turned their industries into "winner-take-all" games and created a powerful barrier to future competitive threats. Those competitive advantages and scale or network economies created significant consumer benefits, although these net welfare gains were reduced by the ability to exploit market power once they had achieved industry dominance.

Uber's radical departure is that its business model skips the difficult first part of this equation, which requires creating a totally new product valued by consumers or finding major efficiency breakthroughs so consumers can enjoy an existing product at much lower cost. Instead of beating existing providers in the marketplace based on those advantages, Uber's investors provided $13 billion to fund predatory competition, beating those providers with price and service levels that were totally uneconomical. The urban car service industry had none of the economic characteristics of a "winner-take-all" industry, but Uber believed its $13 billion investment base would effectively turn it into one, and that its demonstrated ability to use the investment base to overwhelm more efficient competitors would discourage future competitors from challenging its dominance. Uber's investors believed that they could "win" control of the industry before its cash ran out, and as s of early 2017, Uber still had $7 billion in cash available.[94] Uber's business model is focused entirely on the second part of the equation, the exploitation of anti-competitive market power[95] that industry dominance would create.

93. Erin Griffith & Dan Primack, *The Age of Unicorns*, Fortune (Jan. 22, 2015), http://fortune.com/2015/01/22/the-age-of-unicorns/ (discussing startups with venture capital valuations greater than $1 billion).

94. Newcomer, *supra* note 12.

95. Artificial anti-competitive market power is used in this paper to refer to the ability to

The Silicon Valley venture capital community that funded Uber has always been focused on the potential for outsized financial returns, and especially focused on companies that could achieve industry dominance on a global scale, supporting significant rent-extraction and supra-competitive profits. As PayPal founder Peter Thiel said, "Always aim for a monopoly. It's one big transgressive idea, and you're not allowed to talk about it. . . [f]rom society's perspective, it's complicated. But from the inside, I always want to have a monopoly."[96] In an article entitled "Competition is for Losers," Thiel argued "Americans mythologize competition and credit it with saving us from socialist bread lines. Actually, capitalism and competition are opposites. Capitalism is premised on the accumulation of capital, but under perfect competition, all profits get competed away."[97] Under this line of thinking, capitalism is not a system society uses to maximize overall welfare, but a system serving the interests of a narrow class of investors. The robust market competition designed to ensure the efficient long-term allocation of capital is actually the enemy of this narrow class of investors, the type of robust market competition designed to ensure the efficient long-term allocation of capital is actually the enemy of capitalism, and needs to be vanquished.

None of Uber's investors or senior managers ever thought that their pursuit of global industry dominance would be driven by superior competitive economics. Therefore, none of these investors or managers expressed any concern as Uber operated with uncompetitive costs and required multi-billion dollar subsidies to cover the growing operating losses documented in the first section of this paper. Instead of building a better mousetrap than incumbent operators, Uber's investors simply funded the predatory competition that was designed to eventually drive the people who actually provided the better mousetrap out of business. Monopoly rents on a global scale could certainly justify the financial risks inherent in a long-term $13 billion speculative investment. Venture capi-

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reduce consumer welfare by holding prices above (and/or holding output below) supra-competitive levels, without the risk that new market entry would discipline such behavior in a thorough or timely fashion, consistent with the standards established by the 1982 Merger Guidelines, U.S. DEP'T JUST. 2 (1982), https://www.justice.gov/archives/atr/1982-merger-guidelines. For a useful introduction to market power issues, see Thomas G. Krattenmaker et al., *Monopoly Power and Market Power in Antitrust Law*, 76 GEO. L.J. 241 (1987). Most analysis occurs in antitrust cases where market power is created or enhanced by mergers or collusion, while the Uber case presents a case of market power created by predatory behavior by a firm with significantly greater financial resources than any competitor.

96. Thiel was the founder of PayPal and is a major investor in Lyft. *See* James Cook, *Peter Thiel: 'Always Aim for a Monopoly. I Always Want to Have a Monopoly,'* BUS. INSIDER (May 2, 2015, 11:31 AM), http://www.businessinsider.com/peter-thiel-talk-in-london-on-business-and-politics-2015-4.

97. Peter Thiel, *Competition Is for Losers*, WALL ST. J. (Sept.12, 2014, 11:25 AM), http://www.wsj.com/articles/peter-thiel-competition-is-for-losers-1410535536.

talists would not have put $13 billion into a company fighting to achieve a reasonable market share based on marginal service and utilization advantages over established competitors in a commodity market.

Benedict Evans, a partner at the venture capital firm Andreessen Horowitz, summarized Uber's strategy as, "Fascinating city-by-city algebra to make the numbers work, plus massive burn in a play to conquer the world."[98] Sherwin Pishevar, formerly a managing director at Menlo Ventures, became an original investor in Uber because he believed the company's platform could provide the basis for sustainable rent-extraction and the company's model could scale globally. "Uber is building a digital mesh—a grid that goes over the cities," Pishevar says. "Once you have that grid running, in everyone's pockets, there is a lot of potential for what you can build as a platform. Uber is in the empire-building phase."[99]

With previous startups, platforms (eBay's trading platform, Amazon's ecommerce platform, Google's search engine, Facebook's social network software) were key to the creation of the competitive advantages that fueled both growth and consumer benefits. In 2010, Kalanick was quoted saying, "I'll stop at nothing to see Uber go to every major city in the US and the world," and by early 2011 he had "expelled from his inner circle anyone he thought might stand in the way of Uber's manifest destiny to conquer the world."[100] Uber's app platform did not create any material product or efficiency advantage and does not generate any scale or network economies[101] but if Uber achieves industry dominance, it would serve as a barrier to new entry because taxi users everywhere would be forced to have it on their phones. It would also become a monopoly controller of all information about demand, capacity and pricing, driver employment and compensation.[102]

98. Bobbie Johnson, *How to Get Away with Uber*, MEDIUM (Nov. 22, 2014), https://medium.com/matter/how-to-get-away-with-uber-75b406043733.

99. Lagorio-Chafkin, *supra* note 78.

100. BRAD STONE, THE UPSTARTS: HOW UBER, AIRBNB, AND THE KILLER COMPANIES OF THE NEW SILICONE VALLEY ARE CHANGING THE WORLD 7, 123, 153 (2017).

101. Service advantages attributed to the app are actually due to the massive subsidies that fund the artificially low prices and increased service shown on the app. *See supra* section II(D).

102. This is the logic behind Pishevar's comment. *See* Lagorio-Chafkin, *supra* note 99. In a competitive market, Uber's ordering app would simply be a technical platform (in the same sense that Windows and Android serve as a technical platforms for PCs and smartphones) but with quasi-monopolistic dominance "platform" would refer to its control of the rules that govern providers, customers and all other market participants. Control of a market is a "natural monopoly," even though the industry marketplace is not. *See* ALEXANDER WHITE & E. GLEN WEYL, TSINGHUA UNIV. SCH. OF ECON. & MGMT., INSULATED PLATFORM COMPETITION (2012). Available at SSRN 1694317; Izabella Kaminska, *The Sharing Economy Will Go Medieval on You*, FIN. TIMES (May 21, 2015, 5: 51 AM), http://ftalphaville.ft.com/2015/05/21/2130111/the-

B. Uber Has Not Merely Pursued Deregulation, But Full Market Control

Since its inception, Uber has understood that its biggest challenge was not the marketplace battle between Uber drivers and Yellow Cab drivers over local taxi passengers, but between Uber's Silicon Valley investors and local citizens over control of the laws and regulations governing the urban car service market.[103] Given the billions in profit improvement, Uber needs just to break even, its investors cannot take the risk that cities respond to Uber dominance by reimposing pricing and service requirements, or other steps designed to restore meaningful competition.

Many have incorrectly referred to Uber's objective as taxi deregulation.[104] In previous transport deregulation debates, industry and government officials debated whether alternate industry structures (levels of competition and government oversight) would maximize overall economic welfare.[105] Past reforms considered the needs of operators (taxi owners and drivers needed to make money) but also recognized that unregulated taxis would underprovide welfare enhancing benefits such as safety, insurance and access to jobs and housing that were poorly served by public transit.[106] In certain cases, reforms designed to increase competition between independent providers subject to "level playing field" rules were judged to be the best way to increase industry efficiency and overall welfare, but the importance of the government oversight needed to protect the public interest in maximizing welfare was never questioned.[107]

Uber's objective was not to eliminate aspects of government oversight that no longer improved taxi service, but to eliminate the idea that taxis were a part of transport infrastructure that governments had any right to exercise oversight over. Uber's objective was not to maximize competition subject to "level playing field" rules, but to seize control of

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sharing-economy-will-go-medieval-on-you/ (explaining how with dominance the app would provide the basis for controlling "a rent-extraction business of the highest middle-man order").

103. White & Weyl, *supra* note 102; Frank Pasquale & Siva Vaidhyanathan, *Uber and the Lawlessness of 'Sharing Economy' Corporates,* The Guardian (July 28, 2015, 2:00 PM), http://www.theguardian.com/technology/2015/jul/28/uber-lawlessness-sharing-economy-corporates-airbnb-google.

104. Tom Slee, *The Secret Libertarianism of Uber & Airbnb*, Salon (Jan. 28, 2014, 10:00 AM), http://www.salon.com/2014/01/28/the_big_business_behind_the_sharing_economy_partner/.

105. *See infra* section III(D).

106. See Gilbert & Samuels, *supra* note 4; Price Waterhouse, Analysis of Taxicab Deregulation & Re-regulation (1993); Paul Dempsey, *Taxi Industry Regulation Deregulation & Reregulation: The Paradox of Market Failure.* 24 Transp. L.J. 73, 115-16 (1996).

107. *Id.*

the entire playing field and to eliminate meaningful competition. Uber did not present evidence showing how an unregulated monopoly provider would create greater overall economic welfare benefits than a competitive industry subject to regulations, it wanted to establish the absolute preeminence of interests of capital accumulators over any public interest protecting competition, safety, consumer protection, employee rights, or any other welfare enhancing benefits. If urban car service could be transformed from urban transport infrastructure into a purely discretionary consumer good, like theaters and restaurants, then governments could not rationally object if the entire industry became the private property of Uber's Silicon Valley investors, or impose regulations designed to ensure that service was safe, affordable, and required to serve all citizens equally.

The unfettered freedom to exploit anti-competitive market power could rapidly improve Uber's profitability. Once meaningful alternatives were gone, Uber could not only eliminate the driver pay premiums they needed to fuel growth but they could actually drive driver take-home pay below the $12-17 per hour level traditional operators had paid. As previously noted,[108] unilaterally imposed driver compensation cuts in 2016 have transferred roughly $1 billion from drivers to Uber's investors, while vehicle financing obligations prevent drivers from abandoning Uber for other employers. With full industry dominance, Uber could drive take-home pay (net of vehicle costs) even lower, while imposing strict employee-type scheduling controls on its "independent" drivers, while still refusing to provide the pay and benefits employees are legally entitled to.

Other aspects of Uber's business model that do not create significant value in a competitive market offer significant rent-extraction potential with industry dominance, and by ignoring the adverse publicity they generated, Uber ensured they would be free to use them in the future. Surge pricing could be used much more aggressively without fear of competitive discipline. As noted previously, dominance would force anyone who might ever want a cab to carry Uber's app, and it would give Uber monopoly control of most industry data.[109] Uber could increase both utilization and revenue by unilaterally imposing much higher prices for peak periods and low-density neighborhood services, although this would effectively eliminate taxi service for a major segment of (mostly lower income) users. Dominance would also significantly enhance Uber's (already massive) political lobbying strength,[110] making it harder for con-

108. *See* Uber P&L 1H 2015 compared to 1H 2016, *supra* Figure 3; *also see* Huet, *supra* note 18; O'Donovan & Singer-Vine, *supra* note 37.

109. *See Cook, supra* note 96.

110. *See infra* section IV(D).

sumers to pursue legal and political remedies, and for potential new entrants to challenge any competitive abuses.

Uber's pursuit of market control directly follows Thiel's concept that laws and regulations designed to protect competition or maximize overall economic welfare are illegitimate if they limit his unfettered freedom to accumulate capital. Uber and its investors have been pursuing a strategy that is diametrically opposed to the entire efficiency/resource allocation framework used in this paper. In the Uber worldview, the type of evidence presented here showing that Uber's growth has reduced industry efficiency, allocated resources to less productive uses, and reduced overall economic welfare, is of no consequence because consumers, the owners of taxi companies displaced by predatory behavior, or public officials concerned with the cost and quality of taxis service, have no right to restrict Uber's efforts to accumulate more capital. The "winning" capital accumulators should be free to use raw power to take complete control of the market. Competition, and information as to whether markets are allocating resources efficiently, is for "losers."

C. Unlike Uber, Amazon's Industry Dominance was Driven by the Creation of Enormous Consumer Welfare Benefits

A comparison with Amazon illustrates how Uber's approach to corporate development represents a radical departure from past tech startups. Amazon, like Uber, was seeking to drive a massive set of incumbent competitors out of business in order to achieve long-term industry dominance. But Amazon targeted a book retailing industry that had high prices, high margins, and high costs, while Uber cannot explain why it sees the opportunity for billions in profit (opportunities no-one else in the 100-year history of motorized taxis had noticed) from an industry selling a commodity product with razor-thin margins that has already cut costs to the bone. Unlike Uber, there was active public discussion during Amazon's startup years about whether the efficiency and marketplace impacts of its technological and process breakthroughs would be large enough to both displace incumbent providers and produce sustainable profits. Amazon proactively provided outsiders with evidence that could be verified by objective outsiders who were expert in the relevant retailing, warehousing and ecommerce fields. These included the huge savings from eliminating "brick-and-mortar" retail locations, enormous scale economies in warehousing and distribution, sophisticated software that not only gave customers access to much greater product choice but dramatically simplified product search and identified customer-tailored buying suggestions, increased leverage with publishers and other suppliers, sophisticated programs (such as Amazon Prime) for es-

tablishing customer loyalty, and huge scale economies that allowed it to expand geographically and into new markets at negligible marginal cost once its basic selling and warehousing and distribution infrastructure was in place. The huge scale economies meant it could rapidly drive down unit costs as it grew, use rock-bottom prices to drive further growth (and huge consumer welfare benefits), and making it virtually impossible for existing (or new) entrants to ever match its efficiency levels.[111] This is not to say that everything Amazon has ever done increased industry efficiency and consumer welfare; once Amazon had achieved profitable scale and expanded into a range of new markets, it worked aggressively to exploit aspects of market power and eliminate competitive threats.[112] The two key differences here are market growth fundamentally based on powerful economic advantages that also created consumer welfare benefits, and the use of powerful scale economies to establish dominance and entry barriers.

Both Uber's market growth and anticipated dominance would be wholly based on predatory competition that created no sustainable consumer benefits. Uber needed a pre-IPO investment base that is over 1600 times larger than Amazon's because this magnitude of investment would be required to fund the years of predatory subsidies needed to achieve dominance in the absence of competitive advantages. Companies (like Amazon) that have powerful competitive efficiency advantages do not need investment bases this large because much of their growth can be funded from positive cash flow. Amazon welcomed outside scrutiny of its business model during its startup years because it had ample evidence of the economics that created consumer benefits. By contrast, Uber worked aggressively to intimidate journalists and other outsiders questioning the basis for their rapid growth.[113] Amazon moved quickly to become a public company and provide full transparency about its actual financial performance,[114] while Uber has avoided disclosing the data that would highlight its bleak financial performance,[115] and to date has not demon-

111. *See generally* BRAD STONE, THE EVERYTHING STORE: JEFF BEZOS AND THE AGE OF AMAZON (2013).

112. *See generally* Lina Khan, *Amazon's Antitrust Paradox*, 126 YALE L. REV. 710 (2017).

113. *See infra* section IV(D).

114. Google had raised only $25 million before going public, and its IPO raised only $2 billion. Leslie Hook, *Uber CranksUup Ride-Hailing Battle with $3.5bn Saudi Investment*, FIN. TIMES (June 2, 2016), http://www.ft.com/intl/cms/s/2/3ac7c982-2879-11e6-8b18-91555f2f4fde.html #axzz4BxKmXyup.

115. As illustrated by the data presented in Section II, Uber rarely gave investors detailed financial data; a 2016 prospectus prepared by Morgan Stanley for investors considering private purchases of at least $1 million in Uber stock provided no financial numbers whatsoever. Julie Verhage, *Here's What Morgan Stanley is Telling Its Wealthiest Clients about Uber*, BLOOMBERG (Jan. 14, 2016, 7:42 AM), http://www.bloomberg.com/news/articles/2016-01-14/here-s-what-morgan-stanley-is-telling-its-wealthiest-clients-about-uber. JPMorgan Chase and Deutsche Bank re-

strated any interest in exposing itself to the open scrutiny of capital markets.[116]

D. Taxi Deregulation Has Never Helped Consumers or Improved Industry Efficiency

As noted at the outset, this paper is addressing an industry structure question. Will consumers be better off with an urban car service industry dominated by a single, largely unregulated private company, than they were with a competitively fragmented industry where local cities exercised oversight over pricing, capacity, safety, and consumer protection issues? The question of taxi deregulation, involving milder changes to industry structure than Uber's owners are pursuing, has been considered multiple times, but when evaluated against economic welfare criteria using industry data, has always been rejected.

Economists cannot find any credible evidence that taxi deregulation would improve efficiency or consumer welfare. Academic economists in the 1970s and 80s had identified numerous ways that major reforms to railroad, airline, and trucking regulations[117] could directly improve industry efficiency and consumer welfare, but rejected the idea that taxi deregulation would produce similar benefits because industry conditions were entirely different. It must be emphasized that actual airline, railroad, and trucking deregulation (and the taxi deregulation considered at this time) was strictly limited to getting government staff out of the business of reviewing day-to-day tactical marketing decisions, including pricing, capacity, and service features, and eliminating artificial limits on the

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fused to participate in the private placement given the lack of financial data. *See* Julie Verhage & Alex Barinka, *Banks Passed Up Uber Share Sale on Lack of Data*, Bloomberg (Nov. 7, 2016, 5:00 AM), http://www.bloomberg.com/news/articles/2016-11-07/banks-said-to-have-passed-up-uber-share-sale-on-lack-of-data.

116. Avery Hartmans, *Here's Why Uber is Avoiding an IPO for As Long As Possible*, Bus. Insider (Sept. 12, 2016, 9:18 AM), http://www.businessinsider.com/bill-gurley-uber-public-2016-9. For a more detailed discussion of how capital markets cannot reflect or test alternative views about Uber's true value, see Steve LeVine, *Investors Have Placed a One-Way Bet on Uber—Which Made Us Want to Find a Way to Short It*, Quartz (Aug. 5, 2016), http://qz.com/707947/investors-have-placed-a-one-way-bet-on-uber-which-made-us-want-to-figure-out-a-way-to-short-it/.

117. As incorporated into the Air Cargo Deregulation Act of 1977, 49 U.S.C. §§ 1301-1552 (1982), the Airline Deregulation Act of 1978, Pub. L. 95-504, 92 Stat. 1705 (1978), the International Air Transportation Competition Act of 1979, Pub. L. No. 96-192, 94 Stat. 35 (1980), the Staggers Rail Act of 1980, Pub. L. No. 96-448, 94 Stat. 1895 (1980) (codified as amended at 49 U.S.C. §§ 10101-11908) (2015)), the Motor Carrier Act of 1980, Pub. L. No. 96-296, 94 Stat. 793 (codified as amended at 49 U.S.C. §§13101-14916 (2017)), the Household Goods Transportation Act of 1980, Pub. L. No. 96-454, 94 Stat. 2011 (1980), the Bus Regulatory Reform Act of 1982, Pub. L. 97-261, 96 Stat. 1102 (1982), the Civil Aeronautics Board Sunset Act of 1984, Pub. L. 98-443, 98 Stat. 1703 (1984), and the Surface Freight Forwarder Deregulation Act of 1986, Pub. L. 99-521, 100 Stat. 2993 (1986).

number of companies that could compete in a market. This approach to transport deregulation, as noted previously, recognized that government oversight was needed to ensure these industries maximized overall economic welfare, but reforms designed to increase competition within a "level playing field" framework could help achieve that objective. There was no attempt to eliminate (and many efforts to strengthen) legal and regulatory requirements related to antitrust, financial reporting, consumer protection, employee rights, bankruptcy, and safety.[118]

The market control rules established by past transport regulatory regimes had been based on contemporary industry economics. When railroads had a monopoly of intercity freight and passenger service, owners had artificial market power over workers, shippers, and local communities, and could also engage in ruinous rate wars and takeover battles that reduced the value of the industry. ICC market control rules were designed to limit destructive competition and extract some of the monopoly pricing power in order to fund protections for employees and less profitable local service. But technological and marketplace changes upended the original assumptions about industry economics, and the regulations that had stabilized the industry now imposed huge deadweight costs (firemen on diesel locomotives, passenger and low-density freight services that were huge money losers) and prevented it from reallocating resources more efficiently. Similarly, the economic assumptions behind airline and trucking regulations from the era of DC-3s and unpaved rural roads were creating major inefficiencies in the era of Boeing 747s and Interstate Highways, and it was easy to demonstrate how certain regulatory practices directly reduced consumer welfare.[119] Unlike the current taxi industry situation, none of the powerful industry incumbents were advocating deregulation in order to increase concentration or pursue dominance. All of the "deregulatory" reforms of the 70's and 80's were

118. In reviewing the actual impacts of airline deregulation, Alfred Kahn (one of the best-known academic advocates of deregulation, who dramatically liberalized airline regulations as chairman of the CAB) pointed to well-documented consumer pricing and operational efficiency gains, but bemoaned the failure to protect the robust competition needed to spur consumer benefits due to" the lamentable failure of the administration to enforce the policies of the antitrust laws" and the specific failure to prevent incumbents from using predatory pricing to attack market entrants. Alfred Kahn, *Surprises of Airline Deregulation*, 78 AM. ECON. REV. 316, 318-19 (1988) (the author of this paper was personally involved with many aspects of transport deregulation throughout his career, from the restructuring of freight railroads in the 1970s to the initial development of global airline networks in 1990s to the radical consolidation of international aviation in recent years).

119. An academic paper that was widely quoted during debates over airline deregulation noted that PSA could profitably operate jets in California, and asked why the Civil Aeronautics Board demanded that United charge fares double the fares charged by PSA. Michael Levine, *Is Regulation Necessary? California Air Transportation and National Transportation Policy*, 74 YALE L.J. 1416, 1416-47 (1965).

designed to increase the number of competitors (and the ease of future entry) within a legal framework that ensured "level playing field" conditions and protected welfare-enhancing externalities (e.g. safety, competition, collective bargaining rights).

But economists recognized that taxi deregulation could not produce comparable consumer benefits because neither taxi technology, taxi operating economics, nor the role of taxis in urban transport had changed significantly since taxi regulations had been widely introduced. Taxi pricing, entry, and public safety regulations were established in order to ensure taxi owners and drivers could make a reasonable living from the available market revenue, while also ensuring fares were widely affordable, and that no operators could evade licensing, safety and insurance standards.[120] But no technological changes akin to jets, diesels, or Interstate Highways had come along to render the original economic logic behind taxi regulation obsolete, and no one could find obvious evidence of PSA-type consumer pricing issues or diesel firemen type deadweight costs. Academics attacked the rare cases where a single company exercised quasi-monopoly dominance of a major city,[121] but the vast majority of cities had significant competition. Individual industry participants in specific cities might be unhappy with how local regulators had balanced the burdens of the industry's structural cost problems (such as peaking, empty backhauls, and fuel price volatility) between passengers, drivers, and fleet owners.[122] But no one could find clear evidence that any of the myriad local approaches to industry regulation clearly produced better overall results than the others.

The economists who examined and modeled the competitive dynamics of taxi markets in the 1970's and 1980's also identified a variety of specific reasons why unfettered entry and pricing freedom would not improve efficiency or consumer welfare. These reasons include demand inelasticity (price cuts would not stimulate sufficient new demand, reducing profits[123]), price competition was unworkable in most situations because customers could not compare the prices of different cabs they could flag down;[124] the economics of cab dispatching limited competition and could

120. GILBERT & SAMUELS, *supra* note 4, at 67-73.

121. Ross Eckert, *The Los Angeles Taxi Monopoly: An Economic Inquiry*, 43 S. CAL. L. REV. 407, 407-53 (1970); Edmund Kitch et al., *The Regulation of Taxicabs in Chicago*, 14 J.L. & ECON. 285, 285-350 (1971). The central problem described in these articles (regulatory capture by a dominant incumbent) had been significantly mitigated by 1980.

122. In the 1970s, taxi owners squeezed by high fuel costs and falling demand due to urban population shifts got regulators to approve the use of independent contractors, shifting most of the economic burden onto drivers. Schaller & Gilbert, *supra* note 45; *see also* Schaller & Gilbert, *Fixing New York City Taxi Service*, *supra* note 47.

123. Shreiber, *supra* note 61.

124. Taxis in streethail or airport markets would have an incentive to set higher prices than

facilitate oligopoly pricing behavior among incumbents;[125] taxi operators have no way to equate price and marginal cost because of the backhaul problem;[126] and evidence that taxi markets did not naturally converge on an efficient equilibrium because of negative externalities[127] and an "empty core" problem that would lead to prices much higher than marginal cost.[128] Nobody claimed that existing regulations had optimized industry performance, and everyone acknowledged industry problems (poor profitability, long waits in peak periods), but none could be directly linked to specific regulatory rules, and the research clearly rejected the hypothesis that unregulated taxi markets would set welfare maximizing price and output levels.

Taxi deregulation was tried in 17 cities and failed to produce any efficiency or consumer benefits. Taxis were partially deregulated in 17 cities in the late 1970's and early 80's,[129] but 15 of the 17 cities (all but the two smallest) quickly restored most of the previous regulations[130] when effi-

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they would under a system where consumers had perfect, costless information. George Douglas, *Price Regulation and Optimal Service Standards: The Taxicab Industry*, 4 J. TRANSP. ECON. & POL'Y 116, 116 (1972); Shreiber, *supra* note 61, at 270.

125. Frankena & Pautler, *supra* note 61, at 54; James Foerster & Gorman Gilbert, *Taxicab Deregulation: Economic Consequences and Regulatory Choices*, 8 TRANP. 371, 371-87 (1979).

126. Edward C. Gallick & David E. Sisk, *Reconsideration of Taxi Regulation*, 3 J. L. ECON. & ORG. 117, 118-20 (1987).

127. Taxi firms cannot establish both the price and quality (wait time) of their product; adding capacity will reduce city-wide average wait times, but since the firm that adds capacity cannot capture its social value, firms will tend to undersupply the market. "The crux of the regulatory problem is that, a priori, there is no normal utilization rate for taxis, and no concomitant normal level of service quality, as measured by expected waiting time." Douglas, *supra* note 124, at 122-23; Frankena & Pautler, *supra* note 61, at 57; Shreiber, *supra* note 61, at 274. The impact of firm capacity changes on market-wide wait times is sometimes referred to as a "negative externality" problem.

128. The modeling by Douglas, *supra* note 124, at 121-26, and Frankena & Pautler, *supra* note 61, at 157-60, were contemporary with the broader debate about transport deregulation. For later examples, *see* Jonas Häackner & Sten Nyberg, *Deregulating Taxi Services – A Word Of Caution* 1 (Research Inst. of Indus. Econ., Working Paper No. 353, 1992); Robert Cairns & Catherine Liston-Heyes, *Competition and Regulation In The Taxi Industry*, 59 J. PUB. ECON. 1, 2-9 (1996); Stefan Rometsch & Elmar Wolfstetter, *The Taxicab Market: An Elementary Model*, 149 J. INST. & THEORETICAL ECON. 531-46 (1993).

129. Atlanta and Indianapolis became open entry cities in 1965 and 1973. Between 1979 and 1983 they were joined by Fresno, Jacksonville, Kansas City, Madison, Milwaukee, Norfolk, Oakland, Phoenix, Portland, Sacramento, San Diego, Seattle, Spokane, Tacoma, and Tucson. Some cities, most notably Washington D.C., had always had open entry, but regulated prices; there had never been any evidence that these open-entry cities had better or more efficient service than cities that regulated both price and entry. Charlotte and Tampa maintained longstanding entry limits but allowed the industry to change fares as long as all companies agreed to changes (i.e. open price competition was still not permitted). *See generally* PRICE WATERHOUSE, *supra* note 106; U.S. DEP'T OF TRANSP., TAXICAB REGULATION IN U.S. CITIES (1983).

130. Eight of the 17 cities restored entry limits, and a ninth reestablished an exclusive airport taxi franchise. Six of the other cities restored the competitive status quo ante by requiring that all new capacity be affiliated with one of the existing dispatch companies. Unfettered competi-

ciency and consumer benefits failed to appear. These changes closely followed the model of long-haul liberalization (most administrative controls on pricing and market entry were eliminated, but all rules governing licensing, insurance, financial reporting and safety remained in place) although there had never been any independent studies showing how the changes would improve efficiency or service. While the supply of taxis increased initially in most markets, later studies by the U.S. Department of Transportation showed that these gains had been economically unsustainable,[131] demand increases were modest (and sometimes negative), vehicle utilization and revenue productivity fell,[132] and fares rose faster in these cities than in comparable markets that had not been deregulated.[133] New capacity did not help the neighborhoods with poor service; it was heavily focused on the airport and downtown markets that had always been the most profitable for drivers (because of much lower backhaul costs) and thus already had the best service.[134] The failure of taxi deregulation was further confirmed by a new set of academic papers were published in the late 80's and 90's, incorporating findings from these 17 cities and extending some of the theoretical analysis from earlier papers.[135] No one could produce evidence that eliminating or reforming any specific rules would directly lead to lower prices or improved service, and until Uber, all large US cities continued to follow either the traditional regulatory model, or a regime that combined most aspects of traditional regulation with more liberal entry rules.[136]

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tion survived in only two of the 17 cities (Spokane and Tacoma). U.S. DEP'T OF TRANSP., *supra* note 129, at 37; PRICE WATERHOUSE, *supra* note 106, at 28-30; Dempsey, *supra* note 106.

131. In Indianapolis, taxi supply actually declined 7% as 20% of the licenses available prior to deregulation had never been taken up, and most new entry was simply the redistribution of licenses held by a company that had gone bankrupt to the people who used to drive for it. Supply then declined further; many of the new license holders had limited business skills, had (like the entrants of the 1920s) been pricing below cost and exited when they could not make basic maintenance and insurance payments. U.S. DEP'T OF TRANSP., THE INDIANAPOLIS EXPERIENCE WITH OPEN ENTRY IN THE TAXI INDUSTRY 9, 14 (1980).

132. In Phoenix, cab supply increased 46%, traffic fell 12%, and utilization (trips per day per cab) fell 34%. U.S. DEP'T OF TRANSP., URBAN TRANSPORTATION DEREGULATION IN ARIZONA 9, 14 (1984).

133. Teal & Berglund, *supra* note 47, at 41-46; PRICE WATERHOUSE, *supra* note 106, at 8-15; Dempsey, *supra* note 106, at 103-09.

134. In Phoenix, 45% of all pickups by new entrants were at the airport. U.S. DEP'T OF TRANSP., *supra* note 129, at 11.

135. Teal & Berglund, *supra* note 47; PRICE WATERHOUSE, *supra* note 106; Cairns & Liston-Heyes, *supra* note 128; Gallick & Sisk, *supra* note 126; Häackner & Nyberg, *supra* note 128; Dempsey, *supra* note 106; Richard J. Arnott, *Taxi Travel Should Be Subsidized*, 40 J. URB. ECON. 257, 316-33 (1996). While academics continued to find a number of specific regulatory practices problematic, but there was no evidence that the industry's major problems were caused by regulators.

136. ST. OF VICT. TAXI INDUSTRY INQUIRY, *supra* note 50.

IV. How Can Uber Achieve Unregulated Industry Dominance In Light of Uncompetitive Economics and Failure of Past Deregulation Efforts to Improve Economic Welfare?

A. Uber Organized its Business Development as a Political Campaign

Uber's pursuit of control of the market faces both "factual economic" and "democratic process" obstacles. No one can legitimately claim that consumers would achieve Google/Amazon type service or pricing gains under Uber dominance. They cannot demonstrate that Uber dominance resulted from the impartial judgment of the "market," since Uber has not shown that it can profitably produce a better taxi service under competitive conditions. The battle between fragmented, poorly capitalized incumbents and Silicon Valley billionaires able to fund billions in predatory subsidies is not impartial market competition. They have no legitimate evidence that any of the regulatory requirements they have evaded, seriously harmed consumers. They also have no legitimate evidence that even more limited forms of taxi deregulation would materially improve industry efficiency or consumer welfare. No democratically elected city government would openly eliminate all citizen oversight of local taxi service and grant total control of that service to private investors. Urban voters still see taxis as part of their local transport infrastructure, requiring governmental oversight, and do not see it as an entirely discretionary consumer good. A government that openly relinquished control of the industry would be openly surrendering any ability to ensure that taxis are safe, and provide needed access to jobs and residents for all of the people who currently rely on them. They would also be the surrendering any ability to protect competition and prevent market power abuses by a dominant or monopolistic Uber.

From its inception, Uber correctly understood that the battle between its Silicon Valley investors and local citizens over control of the laws and regulations governing the urban car service market, was a political fight,[137] and had to be fought with techniques that had proven successful in political fights. Luckily for Uber, pro-corporate, libertarian, and objectivist-oriented think tanks had conducted a major political campaign in the 1990's advocating the same complete elimination of all forms of legal and regulatory restrictions on the freedom of capital accumula-

137. *See* Izabella Kaminska, *No, Regulatory Evasion Isn't 'Disruptive Innovation'*, Fin. Times (Jan. 31, 2014), http://ftalphaville.ft.com/2014/01/31/1759062/no-regulatory-evasion-isnt-disruptive-innovation/ (". . ..in particular attempts to reorder and recast the old system from scratch — and then prevent regulation from crushing the new monopolies and cartels that emerge").

tors that Uber is seeking, and laid out a detailed communication program that Uber copied when it began its fight for market control.

The think tanks' campaign for taxi deregulation faced the same "factual economic" and "democratic process" obstacles. The think tanks could not document any industry economic evidence linking observed service and financial problems to specific regulations, and had no evidence that taxi deregulation could produce any of the tangible consumer benefits that 1970's or 1980's long-haul deregulation had produced. The think tanks did not conduct any academic analysis refuting any of the previous findings showing that unregulated taxis would increase service and efficiency and lower prices, as had been confirmed by the failure of the real-world deregulation tests in 17 cities. Democratically elected city governments had no reason to change longstanding practices in the absence of clear evidence that they would directly lead to improved taxi service and lower fares.

The 1990's think tank taxi deregulation campaign was entirely based on the type of political propaganda commonly found in large-scale partisan campaigns, designed to obscure underlying agendas and motives. Relevant definitions of propaganda include a deliberate, systematic attempt to shape perceptions, manipulate cognition and direct behavior in ways that block interactive discussion in order to further the objective of the propagandist,[138] and communications designed to win over the public for special interests through a massive orchestration of attractive conclusions packaged to conceal both their actual purpose and lack of sound supporting reasons.[139]

Neither this campaign nor the earlier 17 city deregulation push was the result of local citizens organizing to address local transportation issues, both were entirely organized and financed by external interests who systematically repeated its key messages across a range of contexts and publications.[140] The descriptions of the think tank taxi deregulation campaign below are based on twenty-eight articles from this period, twenty of

138. GARTH JOWETT & VICTORIA O'DONNELL, PROPAGANDA AND PERSUASION 1, 6, 24 (3d ed. 1999).

139. J. MICHAEL SPROULE, CHANNELS OF PROPAGANDA 8 (1994).

140. A review of deregulation in Seattle noted that no local consumer or civic groups had advocated for deregulation. The chief proponent of deregulation was a libertarian-leaning City Council member who argued that "the best way to improve taxi service to the public was. . .for the government not to interfere with private industry" and justified the move in terms of the recent success of airline deregulation. Craig Leisy, *Taxicab Deregulation and Reregulation in Seattle: Lessons Learned*, INT'L ASS'N TRANSP. REG. CONF. (2001). The mayor of Indianapolis, who had driven the deregulation of local taxi service, was a close political ally of these think tanks that published multiple papers (including one under the Mayor's byline) that applauded these efforts while ignoring the negative impacts on efficiency and service noted earlier (*supra* note 132). *See* Goldsmith, cited *infra* note 141; Moore, *Indianapolis's Road to Regulatory Reform* and Styring cited *infra* note 141.

which were published between 1993 and 2000.[141] Seventeen of the articles were primarily focused on the need for taxi deregulation; the others discussed taxi deregulation along with other urban transit and regulatory issues. Twenty-two of the pieces were published by pro-corporate/libertarian/objectivist oriented advocacy groups that received major funding from Charles and David Koch, including 6 by Reason and 5 by the Institute for Justice and 8 by similar state-level groups;[142] the others were

141. DANA BERLINER, INST. FOR JUSTICE, HOW DETROIT DRIVES OUT MOTOR CITY ENTREPRENEURS (1996); JOHN W. BOROSKI & GERARD C.S. MILDNER, CASCADE POL'Y INST., AN ECONOMIC ANALYSIS OF TAXICAB REGULATION IN PORTLAND, OREGON (1998); SCOTT G. BULLOCK, INST. FOR JUSTICE, Baltimore: No Harbor for Entrepreneurs (1996); *Robert* Cervero, *Deregulating Urban Transportation*, 5 CATO J. 219 (1985); Terence Corcoran, *Taken For A $1 Billion Taxi Ride,* TORONTO GLOBE & MAIL (May 5, 1997) (author was employed by the Consumer Policy Institute); DWIGHT FILLEY, INDEP. INST., TAKEN FOR A RIDE: HOW THE TAXI CARTEL AND THE STATE ARE DISSERVING DENVER'S ECONOMY (1993); Stephen Goldsmith, *Regulation and the Urban Marketplace*, 17 REG. 76 (1994); PETER GORDON & HARRY W. RICHARDSON, REASON FOUND., THE COUNTERPLAN FOR TRANSPORTATION IN SOUTHERN CALIFORNIA: SPEND LESS, SERVE MORE (1994); Robert M. Hardaway, *Taxi and Limousines: The Last Bastion of Economic Regulation*, 21 HAMLINE J. PUB. L. & POL'Y 319 (2000); Lee A. Harris, *Taxicab Economics: The Freedom to Contract for a Ride,* 1 GEO. J. & PUB. POL'Y 195 (2002); Jeff Jacoby, *Break Open the Taxicab Monopoly,* BOSTON GLOBE (Dec. 5, 1995); JOHN E. KRAMER & WILLIAM H. MELLOR, INST. FOR JUSTICE, OPENING BOSTON'S TAXICAB MARKET (1996); GEORGE P. LEPHARDT & JOSEPH L. BAST, HEARTLAND INST., THE ECONOMICS OF TAXICAB DEREGULATION (1985); NAOMI LOPEZ, INST. FOR POL'Y INNOVATION, BARRIERS TO ENTREPRENEURSHIP: HOW GOVERNMENT UNDERMINES ECONOMIC OPPORTUNITY (1999); WILLIAM H. MELLOR, INST. FOR JUSTICE, IS NEW YORK CITY KILLING ENTREPRENEURSHIP? (1996); WILLIAM H. MELLOR & JOHN E. KRAMER, CASCADE POL'Y INST., OPEN THE DOOR TO PORTLAND'S TAXI ENTREPRENEURS (1997); Adrian T. Moore, *Indianapolis's Road to Regulatory Reform: A New Path in Licensing and Permits*, 21 REG. 49 (1998); Adrian T. Moore, *Competition and Entry in the Market for Taxis, Limousines, for Hire Vehicles and Related Services*, LIBERTY J. CTR. (Apr. 11, 2013), http://libertyjusticecenter.org/wp-content/uploads/2013/05/Crowe-Moore-report.pdf; Adrian T. Moore & Ted Balaker, *Do Economists Reach a Conclusion on Taxi Deregulation?*, 3 ECON. J. WATCH 1, 109-32 (2006); Adrian T. Moore & Tom Rose, *Regulatory Reform at the Local Level: Regulating for Competition, Opportunity, and Prosperity* (Reason Pub. Pol'y Inst., Policy Study No. 238, Jan.1998); Irwin Stelzer, *Abolish the Taxi Medallion System,* AM. ENTERPRISE INST. (Dec. 1996) [http://www.taxi-library.org/stelzer1.htm]; DAVID SEYMOUR, FRONTIER CTR. PUB. POL'Y, THE CASE FOR TAXI DEREGULATION (2009); SAMUEL R. STALEY, BUCKEYE INST' PUB. POL'Y SOLUTIONS, TAXICAB REGULATION IN OHIO'S LARGEST CITIES (1996); Samuel R. Staley, *How Cities Put the Brakes on Taxicabs,* FOUNDATION FOR ECON. EDUC. (Mar. 1, 1998), https://fee.org/articles/how-cities-put-the-brakes-on-taxicabs/; SAMUEL R. STALEY, REASON PUB. POL'Y INST., TOWARD A 21ST CENTURY TAXICAB REGULATORY FRAMEWORK: THE CASE OF MADISON (2000); Samuel R. Staley, *Taxi Regulation and the Failures of Progressivism*, FOUNDATION FOR ECON. EDUC. (Jan. 4, 2012), https://fee.org/articles/taxi-regulation-and-the-failures-of-progressivism/; Samuel R. Staley et al., *Giving a Leg Up to Bootstrap Entrepreneurship: Expanding Economic Opportunity in America's Urban Centers* (Reason Pub. Pol'y Inst., Policy Study No. 277, 2001); William Styring, *How Indianapolis Won the War of the Taxis*, INDIANA POL'Y REV. 31-35 (1994).

142. For discussion of how the Koch Brothers established these think tanks as political advocacy groups, see JANE MEYER, DARK MONEY 232-33 (2016). For the development of Koch supported state level think tanks, see Frederick Clarkson, *Takin' It to The States: The Rise of Conservative State-Level Think Tanks*, POLITICAL RESEARCH ASSOCIATES, (Sept. 1, 1999), http://

opinion pieces in mainstream outlets that uncritically publicized the claims of those advocacy groups. The higher-level political objective these papers was defined as the "liberty principle,"[143] a belief that only a very narrow range of governmental activities were legitimate, which was consistent with the Thiel/Silicon Valley political view that any governmental actions limiting the freedom of capital accumulators are illegitimate.[144]

The campaign worked to shift all industry discussion from a technical economic efficiency and consumer welfare frame based on industry economic evidence, to a narrative where a single, simple change would dramatically transform the industry. Attractive conclusions were highlighted, their central claim that regulation is the cause of all of the industry's problems is endlessly repeated, but none of the papers presented any supporting evidence based on actual taxi industry economics. ". . .[M]ore could be done to improve the quality of urban transportation and perhaps abate the current fiscal shortfall through the process of deregulation than through almost any other policy strategy."[145] The papers all claim that ending economic regulation of taxis will lead to better quality service, lower fares, shorter wait times and increased employment, but since none of the papers even mentions concepts such as operating efficiency, utilization or productivity none of the papers can explain where these gains will come from, or how existing regulations might have caused these problems. The papers claim that deregulation will solve the problems of long wait times in peak periods and poor service to lower-income neighborhoods, but none of the authors demonstrated any understanding of the actual costs of those services, and made no attempt to explain how deregulation would reduce those costs. Regulation is at-

www.politicalresearch.org/1999/09/01/takin-it-to-the-states-the-rise-of-conservative-state-level-think-tanks/#sthash.8m9NSwhf.dpbs; Frederick Clarkson, *Exposed: How The Right's State-Based Think Tanks are Transforming U.S. Politics*, POLITICAL RESEARCH ASSOCIATES (Nov. 25, 2013), http://www.politicalresearch.org/2013/11/25/exposed-how-the-rights-state-based-think-tanks-are-transforming-u-s-politics/#sthash.vd6XIxfF.dpbs.

143. The "liberty principle," and the role these papers played in supporting it were defined as the belief that any governmental activity outside the realm of police and military protections (including taxi regulation) must bear the full burden of justifying their existence, while any reduction in government activity (such as taxi deregulation) does not bear any burden of proof. *See* Moore & Balaker, *supra* note 141. "Certain interventions [including taxi regulation] that are hallowed and important to statist ethos and mythos are wrongheaded and fail to meet the liberal burden of proof." Daniel B. Klein, *The Forsaken-Liberty Syndrome: Looking at Published Judgments to Say Whether Economists Reach a Conclusion*, 71 AM. J. ECON. & SOC. 1143, 1250 (2012). In addition to the Moore & Balaker's taxi deregulation survey, Klein published similar surveys on the efficacy of FDA and medical licensing, municipal recycling rules, road pricing, rent control, and other government activities that he believed fell afoul of this principle.

144. Thiel, *supra* note 97; Cook, *supra* note 96.

145. Cervero, *supra* note 141.

tacked as an obstacle to innovation, but no one can cite any specific innovations that had been blocked.

The papers reframed all industry issues around an emotive black-and-white, us-versus-them ideological/tribal battle narrative. The fictional hero was the "entrepreneur", often portrayed as a struggling immigrant anxious to embrace the free-market, who would transform taxi service but for the evils of regulation. This converted a fight for greater corporate freedom, funded by billionaires, into a fight to help an oppressed underdog. "The impact of regulation on entrepreneurs is devastating. It impairs their ability to earn a decent living for themselves and for their families. It limits their opportunity to work for themselves, instead of for others. It destroys their dream of a brighter future."[146] In reality, these thwarted entrepreneurs were close to non-existent and consumers had not been harmed, since the few that did enter were not competitive with incumbents and quickly went out of business.[147] The fictional villains were the malicious forces of the "Cab Cartel" working in cahoots with corrupt government regulators. "The current regulatory scheme in Boston benefits no-one but the existing medallion holders, their lobbyists, and their lawyers".[148] Framing the "heroic entrepreneur vs. corrupt regulator" fight as a battle for progress, innovation, and economic freedom, precluded reasoned, factual discussion about the pros and cons of alternate paths forward.

Having first reframed regulatory issues into a moral battle where data was irrelevant and compromise was unacceptable, the think tanks then expanded the scope of morally unacceptable regulations from pricing and entry restrictions that had been the focus of every previous "deregulation" debate, to any rule that might ever constrain the freedom of capital. These papers specifically rejected calls for "more or better regulations [but] that an improved taxicab market can arise by removing regulation"[149] including regulations designed to prevent monopoly or protect public safety.[150] The think tanks insisted that giving the owners of capital complete, unfettered control of the industry, would automatically eliminate any externalities and inefficiencies, implying there was no need for

146. KRAMER & MELLOR, *supra* note 141. Every article discussing "entrepreneurs" uses similar language.

147. And the entrepreneurs could not have existed, given the dominant industry model of taxi owners leasing to independent contractors. When Indianapolis allowed open entry, only one person that wasn't already working in the industry applied for a license. *See* THE INDIANAPOLIS EXPERIENCE WITH OPEN ENTRY, *supra* note 131, at 8.

148. KRAMER & MELLOR, *supra* note 141.

149. BOROSKI & MILDNER, *supra* note 141.

150. Some authors attack regulations for mechanical inspections of taxicabs and the requirement that cab drivers obtain commercial licenses. *See* BERLINER, BULLOCK, KRAMER & MELLOR cited *supra* note 141.

any governmental actions to protect competition. "If it weren't for government interference, the laws of supply and demand would govern the taxi trade with almost frictionless efficiency: cabs would be plentiful, fares would be reasonable, and service would be available nearly everywhere it was wanted."[151]

The think tanks claimed they were just like the airline deregulation reforms of the 1980's in order to obscure their much different objectives and to falsely imply taxi deregulation would produce the same large efficiency and consumer benefits. The papers included assertions such as "eliminate medallions and fares would drop, just as they did when the airlines were deregulated,"[152] or that "there is no reason, however, why the same [airline deregulation] principles cannot be successfully applied to urban transportation as well."[153] These claims were designed to create the false impression that the think tank taxi proposals were based on the same type of rigorous, evidence-based analysis as the academic research that supported airline deregulation, and to conceal that their real objectives were substantially different from the limited pricing and entry changes made during airline deregulation. Other outright falsehoods included equating medallion values with monopoly rents directly extracted from consumers,[154] and claims that the failed 17-city taxi deregulation test had actually been a great success.[155]

The 1990's think tank taxi deregulation failed to generate any support outside the ideological and political circles already predisposed against most forms of governmental activity, and thus failed to overcome the "democratic process" obstacles. Local governments and taxi industry participants may not have grasped the radical nature of the changes proposed in these papers, but knew that past deregulation efforts had failed to produce any benefits, knew that these papers had not provided any credible evidence of potential public benefits, and knew that any explicit political decision to totally abandon public oversight of taxis would be rejected by the public.

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151. Jacoby, *supra* note 141.

152. Some authors also argued that taxi regulation was justified by the success of airline deregulation. Seltzer, *supra* note 141; Hardaway, *supra* note 141.

153. Cervero, *supra* note 141.

154. These claims were refuted in section II(D). *See* KRAMER & MELLOR, *supra* note 141; Hardaway, *supra* note 141; Moore & Balaker, *supra* note 141.

155. Most papers ignored the 17-city test, but the ones that mentioned them only cited the initial expansion of capacity. These papers failed to mention that the new entry was unsustainable, and that almost every city restored previous regulations. Cervero, *supra* note 141; Moore & Rose, *Regulatory Reform at the Local Level*, *supra* note 141; SEYMOUR, *supra* note 141; Styring, *supra* note 141.

B. Uber Initiated Its Propaganda-Based Political Campaign Immediately after Launch

Uber immediately adapted the 90's think tank propaganda narrative as its communication template because it directly addressed the obstacles Uber would face in its pursuit of full market control. It needed to prevent media and public discussion from focusing on any economic welfare questions (could Uber achieve powerful efficiency advantages or sustainable profitability? Would Uber improve the long-term quality of urban taxi service?). It needed to reframe all public discussion around an emotive, ideological/tribal narrative that would limit scrutiny of its uncompetitive economics and would also enlist a base of dedicated supporters, who would see Uber's battle against longstanding laws and regulations as a moral battle where compromise was unacceptable. It needed a simple regulation-based explanation for the industry problems it would allegedly solve, but did not want anyone to reexamine the actual history of taxi deregulation, or to understand the huge difference between pricing and entry liberalization, and the total market control they were seeking. It needed to establish the image of a battle between cutting-edge technologists fighting to disrupt a backward industry so that people outside of its core of supporters would view Uber as the heroic good guy. Uber needed to create a strong association between its disruptive innovation and its meteoric growth in order to create the impression they were following the proven model of Amazon, and other successful unicorns, and thus would inevitably achieve strong profitability and industry dominance. Establishing Uber as the heroic good guy with a business model just as innovative as Amazon would eliminate the need to investigate whether they actually had similarly powerful innovations or scale economies, or to figure out why the losses investors were subsidizing were so large and persistent.

To build a base of ideological/tribal supporters, Uber CEO Travis Kalanick emphasized the company's affinity with the tech industry and its libertarian/objectivist values. He highlighted his famous Silicon Valley investors, his use of Ayn Rand as his Twitter avatar, and described himself as a "trustbuster" and a "freedom fighter." "It's like Braveheart. Like, 'freeeeeduuuuuuuuum."[156] Uber focused on the same us-versus-them battle with entrenched and corrupt political forces, but substituted the heroic technology innovator for the heroic entrepreneur the think tanks had used.[157] Kalanick described Uber as an avatar of progress "a trans-

156. Kesler, *supra* note 86; Lagorio-Chafkin, *supra* note 78.

157. "Conflating Uber with the broad advance of technology is just wrong, and it's also exactly what Uber wants us to do." Tom Slee, *Why Canada Should De-Activate Uber*, Tom Slee Blog (Nov. 22, 2014), http://tomslee.net/2014/11/why-canada-should-de-activate-uber.html.

portation technology innovator, boldly going where no man has gone before;"[158] its loyal supporters would be amply rewarded in the end because "ultimately, progress and innovation win."[159] He positioned Uber and its tech industry supporters as so focused on producing cutting-edge innovations that they had never thought much about the work required to displace industry incumbents and longstanding regulations. "Our roots are technology, not politics, writing code and rolling out transportation systems. . . I think for too long we were sort of tech geeks that didn't realize the battle was happening."[160]

Despite massive funding from Silicon Valley billionaires, Uber insisted that it faced overwhelming disadvantages in its battle against a powerful "Taxi Cartel" (alternatively the "Taxi Medallion Cartel"[161]). "Over the years, what I've come to realize is that this controversy exists because we are in the middle of a political campaign and it turns out the candidate is Uber" and the opponent is "an as***le named taxi."[162] "Our opponent — the Big Taxi cartel — has used decades of political contributions and influence to restrict competition, reduce choice for consumers, and put a stranglehold on economic opportunity for its drivers." "When we do so, we don't do so fighting anybody. The fight is brought to us by those who don't want to have to compete, don't want to innovate and who like the status quo for what it is, which is not to the benefit of consumers or drivers."[163]

Given the long-term objective of total market control, the propaganda narrative made the uphill battle with the evil Taxi Cartel into a struggle over core values where total annihilation of the enemy was a moral imperative. "Nobody likes him, he's not a nice character, but he's so woven into the political machinery and fabric that a lot of people owe him favors. . . We have to bring out the truth about how dark and dangerous and evil the taxi side is."[164] Kalanick made it clear that truth and justice were totally on Uber's side and any accommodation with incumbent operators or taxi regulators was out of the question. "If you're oper-

158. James Robinson & Sarah Lacy, *Hilariously, Travis Kalanick Says Evil Taxi Companies are Forcing Him to "Get Political" and "Throw Mud,"* PANDO (May 28, 2014), https://pando.com/2014/05/28/hilariously-travis-kalanick-says-evil-taxi-companies-are-forcing-him-to-get-political-and-throw-mud/.

159. Tim Bradshaw, *Lunch with the FT: Travis Kalanick*, FIN. TIMES (May 9, 2014), http://www.ft.com/intl/cms/s/2/9b83cbe8-d5da-11e3-83b2-00144feabdc0.html.

160. Kara Swisher, *The $17 Billion Man: Full Code Conference Video of Uber's Travis Kalanick,* RECODE (June 8, 2014, 11:17 AM), http://www.recode.net/2014/6/8/11627734/the-17-billion-man-full-code-conference-video-of-ubers-travis-kalanick.

161. Greenhouse, *supra* note 85.

162. Swisher, *supra* note 160.

163. *Id.*

164. *Id.*

ating from strong principles, you can compromise when the person on the other side is operating from principles you respect," he says. Despite Uber's transparent interest in destroying all incumbent operators in order to establish global industry dominance, he insists Uber is just trying to increase competitive options. "When it's about protecting incumbent industry, when it's about providing less choices for citizens to get around the city, then there's less to talk about."[165]

Following the think tank template, Uber emphasized attractive outcomes (e.g. hiring Uber would soon be cheaper than buying a car[166], Uber would eliminate waiting for cabs on Saturday night, and the company had "generat[ed] 20,000 new driver jobs every month"[167] that had no factual basis and were totally inconsistent with actual industry economics. Uber insisted that the emergence of an unregulated, Uber dominated industry had nothing to do with multi-billion dollar subsidies but was strictly the result of the free choices of consumers in a competitive market and therefore must reflect the efficient results that markets always produce. But as law professor Eric Posner pointed out, ". . .[this] is a response that any monopolist could make. . . But whether or not Uber does overcharge people now, sooner or later—once it displaces taxis and dominates markets—it will."[168]

Echoing the struggling immigrants in the think tank narrative, it valorized its "driver-partners" as "small business entrepreneurs"[169] who had been generously granted a unique opportunity. Uber forced drivers to bear much greater costs than traditional taxi drivers faced, could fire their "driver-partners" at will, and aggressively lied to them about their true earnings potential[170], but Kalanick defended these actions as a way to empower workers. "When you empower drivers to own and operate their own vehicles, they can take control over their own income, their hours, and they can improve their lives. "[171]

Peter Thiel insisted that the monopolies that capitalists like him were developing benefited society. "By 'monopoly,' I mean the kind of com-

165. Bradshaw, *supra* note 159.

166. Gurley, *supra* note 76. "What if I said there's going to be no traffic in any major city in the US in five years?," Kalanick quoted in The Upstarts. STONE, *supra* note 100, at 330.

167. This job creation claim was from May 2014; later estimates were higher. McFarland, *supra* note 31.

168. Eric Posner, *Why Uber Will-and Should-Be Regulated*, SLATE (Jan. 5, 2015, 2:49 PM), 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.

169. *Id.*

170. McFarland, *supra* note 31; Griswold, *supra* note 32.

171. Uber's Denver manager quoted in, Joel Warner, *Are Denver cab companies ready for an Uber-bumpy ride?*, WESTWORD (March 20, 2014, 4:00 AM), http://www.westword.com/news/are-denver-cab-companies-ready-for-an-uber-bumpy-ride-5123724.

pany that is so good at what it does that no other firm can offer a close substitute. Google is a good example. . .. Creative monopolists give customers more choices by adding entirely new categories of abundance to the world."[172] This elides the fact that venture capitalists like Thiel can also accumulate capital from exploitative monopolies that reduce overall economic welfare. Uber uses what it calls "Travis' Law" to portray itself as a beneficial, creative company just like Google and that governments questioning its march to industry dominance could only be motivated by a desire to prevent society from realizing the innovative benefits it is creating: "Our product is so superior to the status quo that if we give people the opportunity to see it or try it, in any place in the world where government has the responsibility to be at least somewhat responsive to the people, they will demand it and defend its right to exist."[173] But Uber never explains the source of these awesomely powerful benefits, and all of the consumer demand Kalanick wants to harness to overwhelm governmental resistance was artificially manufactured by massive, unsustainable subsidies. Venture capitalist Paul Graham echoed Travis' Law in 2012 when he said "Uber is so obviously a good thing that you can measure how corrupt cities are by how hard they try to suppress it" which is to say that the value of Uber is so huge and self-evident, that all remaining industry regulators were, by definition, willfully corrupt.[174]

Uber's public claims quickly coalesced into a PR/propaganda[175] narrative that was weaponized by its huge investment base and can be readily summarized. Uber's huge valuation was justified by its powerful business model that was based on cutting-edge technological innovation. Uber has created a totally new product category ("ridesharing") to which traditional taxi regulations cannot apply because of its radically different economics. Uber's meteoric demand growth was the result of consumers

172. Cook, *supra* note 96.

173. STONE, *supra* note 100, at 192, 248. Stone provides no economic evidence supporting the internal Uber view that its product is overwhelmingly superior to traditional cab service or that its emergence has created lasting benefits for society.

174. Graham was the founder of Y Combinator, a Silicon Valley firm. Sarah Lacy, *It's More Than the Fate of Just Uber: The Cult of the Founder is at Risk and a Lot of VC's are Thrilled*, PANDO (Feb. 28, 2017), https://pando.com/2017/02/28/its-more-fate-just-uber-cult-founder-risk-and-lot-vcs-are-thrilled/.

175. The focus on "propaganda" is designed to highlight the enormous differences between Uber's communication program, designed to serve broad objectives related to industry structure and control and "marketing-based" corporate communication, focused on tangible product attributes (price, features) serving much narrower objectives related to consumer purchase decisions in competitive markets, or investor decisions in capital markets. The term "propaganda" is often misused to disparage communication serving objectives one dislikes, even though it is commonly deployed on behalf of all types of political objectives, likeable or not. Edward Bernays argued that propaganda was simply the "mechanism by which ideas are disseminated on a large scale," was central to all public relations practices, and (like all of education, business and politics) was not inherently ethical or unethical. EDWARD BERNAYS, PROPAGANDA 20, 133 (1928).

freely choosing their vastly superior product in open, competitive markets. Resistance to Uber's growth was due to the coalition of the evil Taxi Cartel and corrupt regulators who were willing to block major innovations and job creation in order to protect an inefficient status quo. Uber's startup losses will soon give way to strong profits, just like past unicorns that rapidly grew into profitability. Uber's robust long-term growth is certain because its business model is so powerful that it can overwhelm competition in any city and any country and inevitably achieve global industry dominance; Uber's business model will become so efficient that it will significantly displace car ownership. Uber's propaganda emphasized simple, attractive claims like these; explanation of exactly where investor returns would come from were always unsubstantiated and constantly changed as specific claims became untenable.[176]

C. Uber's PR/Propaganda Narrative was Amplified by the Media

There is no legitimate, verifiable economic evidence supporting any part of this PR/propaganda narrative. But the effectiveness of propaganda programs does not depend on analytical rigor, it depends on their ability to get seemingly objective outsiders to amplify the message and give it greater credibility. Unlike past startups, which avoided major PR spending until a profitable market position has been secured, Uber made communication a major spending priority from day one. The media had completely ignored the 1990s think tank propaganda's explicit attacks on all aspects of taxi regulation, but when the exact same narrative was repackaged in the context of an epic power struggle where cutting edge technologists backed by the best and brightest in Silicon Valley would inevitably overwhelm an inefficient industry, it became widely repeated in the tech industry and mainstream business press as if it was established truth that had been independently verified.

176. Tom Slee tracked these changes over time. Quoted in Bradford DeLong, *There is a Serious Debate about "Uber, Floor Wax or Desert Topping?"–Excuse Me: "Uber:Grift or Technological and Organizational Breakthrough?*, Grasping Reality Blog (Dec. 20, 2016), http://www.bradford-delong.com/2016/12/must-read-there-is-a-serious-debate-about-uber-floor-wax-or-desert-topping-excuse-me-uber-grift-or-technological.html. In 2010, Uber has a nice business as a status (Black Car) product. *Id.* In 2011-2014, Uber Black may not be profitable, but UberX will displace taxis and be hugely profitable because of technology-driven efficiencies. *Id.* In 2014-2015, UberX may not be profitable, but Uber is a logistics company and will rewrite the rules of delivery, and UberPool will lead to new efficiencies in mass transit. *Id.* In 2015-2016, UberPool and logistics may not be profitable, but when Uber displaces car ownership the scale of the market will make it profitable. *Id.* In 2015-2017, Uber with drivers may not be profitable, but driverless cars will make Uber profitable. *Id.* In 2016-2017, driverless cars may not be profitable, but Uber is looking into flying vehicles. *Id.*

Uber's narrative exploited the myopia of tech industry journalists embedded in a Silicon Valley tribal culture that saw itself as the avatar of economic progress, who readily endorsed the framing of Uber's heroic battle against a backward industry. If one assumes that Silicon Valley-led "disruptive innovation" will inevitably bring enormous benefits, there is no need to interview anyone knowledgeable about the industry being disrupted, or to consider whether the Uber's claimed innovations had ever transformed any other industry.

Since Uber's narrative provided a fully self-contained explanation of its inevitable emergence as the next Amazon or Ebay caliber tech giant, it meant that even those journalists without strong tribal tech industry ties had little need to undertake any independent investigation. Journalists focused on the wealth and status of Uber's Silicon Valley investors within the venture capital world; the presumption they must know what they are doing eliminated the need to find evidence that would explain how they had found tens of billions of economic value no one else had ever seen, or whether their interests coincided with any broader economic interests. Given Uber's overwhelming financial advantage, one could assume the battle had been decided before it started, and thus there was no need to dig into industry economics to figure out how the competition might turn out. The press treated Lyft (with a mere $2 billion in funding) as an also-ran and the entire incumbent taxi industry as a complete irrelevancy. The massive industry-wide losses caused by the massive increase in less efficient capacity was never considered newsworthy, and was never blamed on Uber; since Amazon and eBay have used rapid growth to convert large initial losses into sustainable profits, there was no reason to doubt that Uber would as well.

Uber's us-versus-them narrative provided built-in responses to critics; people who raised questions about driver financing risks, whether the app was actually a technological breakthrough, or Uber's eventual profitability, could be dismissed as opponents of innovation and empowerment and progress; people complaining about Uber's ruthless behavior and disregard for legal requirements were bleeding hearts who did not understand what was required to create billions in corporate value. The combination of Uber's aggressive PR efforts, and a weak, disorganized and marginalized opposition created the impression that there was only one side to this story.

Of the thousands of Uber stories in the mainstream press, none included any interviews with independent experts on urban transport, none investigated the pros and cons of the longstanding taxi regulations Uber was disobeying, none explained how Uber had overcome the obstacles that prevented traditional taxi operators from providing ample capacity on Saturday night, and none investigated whether "innovations" like

Uber's app or surge pricing practices had ever driven major competitive changes in any other industry. Since Uber was popular (and traditional cab service was decidedly unpopular) with many of the urban elites who were a major audience for these media outlets, there was little motivation to expose the unsustainable subsidies that popularity possible, or to point out that the service they liked was reducing the already poor working conditions of drivers and also threatened affordable late night taxi service for low-wage workers.

Dozens of prestige, mainstream outlets readily adopted Uber's framing of a moral battle against evil taxi incumbents that would produce wonderful benefits for consumers. None of these stories ever provided independent evidence supporting the claimed benefits, and none investigated whether Uber actually had major competitive efficiency advantages or could ever achieve sustainable profitability. A 2012 Atlantic article claimed Uber would solve all of the problems with taxi service in Washington, D.C. (long waits when it rains, poor service to African-American neighborhoods), and claimed the problems were entirely caused by regulations such as the medallions taxi owners used to exploit consumers, even though Washington never had medallions or any other entry limits.[177] Aside from vague references to Uber's "innovative technology", there no explanation of how Uber could profitably provide both increased service and better quality cabs.[178] The only support for the claim that regulation was the cause of poor taxi service was an approving quote from a representative from the Institute for Justice.[179] A 2014 Washington Post article described the fragmented, undercapitalized industry as a powerful monopoly, and framed the industry turmoil as the effort of medallion holders to block "new technology" in order to protect ill-gotten gains, while failing to explain that tradable medallions were rare and had no impact on taxi consumers.[180] There was no explanation of whether Uber could actually produce a superior service except for anecdotes about a single low-income Chicago customer, and no effort to explain how they could produce superior service except for an approving quote from an Institute for Justice lawyer. The author told her readers that the idea that Uber should be subject to local regulations was laughable because "regulations intended for taxis don't apply to a service no one could have envisioned when the laws were written."[181]

The main technology writer for the New Yorker told his readers that

177. Megan McArdle, *Why You Can't Get a Taxi*, ATLANTIC (May 2012), http://www.theatlantic.com/magazine/archive/2012/05/why-you-cant-get-a-taxi/308942/.

178. *Id.*

179. *Id.*

180. *See* Badger, *supra* note 85.

181. *Id.*

everyone opposed to Uber was a "Luddite" but failed to cite the arguments of any actual Uber opponent, and his entire justification for defending Uber as a paradigm of technological progress was the assertion that "the sharing economy is the natural next step in the evolution of markets."[182] When the main technology writer for the New York Times noticed in 2016 the failure of dozens of "sharing economy" startups with on-demand apps that hoped to become the "Uber of" other markets, it did not occur to him that the repeated failure to find a way to profitably use smartphone apps to rapidly fulfill consumer desires might suggest that the grandiose claims for "on-demand" and "sharing economy" firms might not have a solid economic foundation. Instead, he attacked the failed startups for failing to meet the standard of "Uber, the hyper successful granddaddy of on-demand apps" without explaining how a company losing $2-3 billion a year qualified as "hyper successful". Having accepted Uber's narrative that it succeeded in the marketplace against "a customer-unfriendly protectionist racket that artificially inflated prices and cared little about customer service" and ignored issues such as profitability and competitiveness, he reasserted his baseless 2014 claims that Uber had become "a credible alternative to owning a car."[183]

A book on Uber and Airbnb by the senior executive editor for technology at Bloomberg provides a full overview of Uber's corporate history without ever addressing the questions of whether Uber will ever be profitable, why Uber has raised so much more money and has a valuation vastly larger than any previous startup, where Uber's investors believe returns on their $13 billion investment will come from, what Uber's long-term growth potential in the car service market might be, or how Uber's recent investments in driverless cars might succeed.[184] The author completely ignores Uber's multi-billion dollar operating losses or the major cutbacks in Uber driver compensation, even though these were stories reported by the author's colleagues at Bloomberg.

While the book provides absolutely no economic evidence about Uber's business model, it manages to endorse every component of Uber's PR/propaganda narrative. The author insists that Uber's growth was based on powerful technological innovation[185] and suggests that Uber's

182. Om Malik, *The Long History of the Fight Against Uber*, NEW YORKER (June 26, 2015), http://www.newyorker.com/tech/elements/the-long-history-of-the-fight-against-uber.

183. Farhad Manjoo, *The Uber Model, It Turns Out, Doesn't Translate*, N.Y. TIMES (Mar. 23, 2016), http://www.nytimes.com/2016/03/24/techn. Also see the discussion of "sharing economy" claims *supra* section II(D).

184. *See* STONE, *supra* note 100.

185. "[Uber and Airbnb] have scrawled in the annals of entrepreneurship . . . the post-Google, post-Facebook era of innovation that allowed the digital realm to expand into the physical one." "The meeting thrust Kalanick into the thick of the familiar battle between new technology and the old, outdated ways of doing things." STONE, *supra* note 100, at 7, 122.

ultra-powerful business model will work anywhere in the world and will eventually displace car ownership,[186] describes Uber's heroic fight against "the big taxi cartel" and corrupt regulators[187] and wants readers to believe that Uber's losses will soon give way to robust profits, just like past tech unicorns.[188] The author actually describes how he had won the cooperation of Kalanick and Uber by promising that his book would tell the story Uber wanted told, and the narrative would feature backward politicians and regulators protecting "the big taxi guys" while Uber struggles to roll out its innovative new product. "If you want people to embrace a radical future in which they give up their cars you have to allow journalists to explain and demystify your story. If you want to change the way cities work, Uber must be understood."[189] This book illustrates Uber's skill at limiting journalist access to the company to the individuals who would actively amplify their desired narrative, and the willingness of journalists to abandon serious, independent inquiry in return for inside access to the company that might become the next Amazon.

D. Ongoing Demonstrations of Ruthless, Hyper-Competitive Behavior Was a Key Component of Uber's Overall Strategy

Uber knew its battle for market control was a political battle and correctly understood that perceptions about competing levels of raw power are decisive in many political battles. The 90's think tanks were easily ignored because they could not back their demands with either legitimate evidence of powerful public benefits, or strong political power. Uber needed to also project enough raw power to overwhelm competitors who were actually more efficient, and to overwhelm cities whose citizens had no desire to eliminate longstanding governmental oversight of urban car services. Uber did this by establishing a hyper-aggressive corporate image, designed to clearly communicate that any efforts to resist Uber's inevitable dominance would be futile. Uber's propaganda program had convinced most media observers that there was no need to in-

186. "Even Uber's most fervent supporters had not grasped the true potential of the business. Uber wasn't just taking passengers out of yellow cabs, it was growing the overall market for paid transportation." Badger, *supra* note 85, at 250.

187. "Uber's expansion also measured the will of local governments to update antiquated transportation laws for a service that many of its own citizens desperately wanted. This was a litmus test for democracy, exposing whether regulators and legislators were more beholden to their own people or to powerful taxi interests and unions." Stone, *supra* note 100, at 300.

188. "Uber had discovered what startup gurus call the virtuous circle, the links between various parts of its business. Lower prices led to more customers and more frequent usage, which led to a larger supply of cars and busier drivers, which enabled Uber to further cut prices and put more pressure on competitors." *Id.* at 251.

189. *Id.* at 7.

vestigate its claims about consumer benefits and economic strengths. Uber's strategic use of ruthless behavior was designed to further convince any competitors, local governments or critical journalists that nothing could prevent Uber's inevitable industry dominance.

Uber's ruthless behavior towards competitors, local politicians, and outside critics was entirely calculated and was entirely consistent with every other aspect of its strategic pursuit of market control. By publicizing its willingness to flout traditional norms of ethical business behavior,[190] Uber underscored its propaganda framing of an "us against them" battle for supremacy where compromise was impossible, strengthened support from those with an anti-government/objectivist worldview, and signaled its total commitment to earning returns for its investors.

Once Uber began expanding to serve the entire taxi market, it began a campaign of willful, open disregard of local taxi regulations designed to demonstrate that local officials were powerless to enforce them. This civil disobedience began in 2010, four months after Uber's initial launch, when it refused to respond to a cease and desist order from the California Public Utility Commission and the San Francisco Municipal Transportation Agency, and publicized its disregard for the agencies with a Twitter and e-mail campaign. "It is Kalanick who champions the company's critically important strategy of taking UberX into new markets without first asking permission from local regulators. . . It is Kalanick who emboldens his lieutenants to reject local orders to shut them down and instead to fight back."[191] A former Uber employee explained that ". . .it's not just that Uber has adopted the business school maxim, 'Don't ask for permission; ask for forgiveness'—it has instituted a policy of asking for neither."[192] Kalanick told reporters "there's been so much corruption and so much cronyism in the taxi industry and so much regulatory capture that if you ask for permission upfront for something that's already legal, you'll never get it."[193] Uber knew that when local politicians and

190. Quoting an Uber investor, "It's hard to be a disruptor and not be an" as***e." Swisher, *Man and Uber Man*, *supra* note 81. Peter Thiel attacked Uber as the "most ethically challenged company in Silicon Valley." *See* Laurie Segall, *Peter Thiel: Uber is 'Most Ethically Challenged Company in Silicon Valley,'* CNN (Nov. 18, 2014, 8:47 PM), http://money.cnn.com/2014/11/18/technology/uber-unethical-peter-thiel/. After Uber broadcasted his live travel patterns without his knowledge, venture capitalist Peter Sims said, "I've met hundreds of founders and been to thousands of companies. Uber is the most arrogant company I've encountered, and the most unethical." *See* Cushing, *supra* note 81; Peter Sims, *Can We Trust Uber?*, HUFFINGTON POST (Sept. 30, 2014, 6:51 PM), http://www.huffingtonpost.com/peter-sims/can-we-trust-uber_b_5892668.html.

191. Patrick Hoge, *Executive of the Year 2014: Travis Kalanick Steers Uber Through Controversies into Fast Lane*, S.F. BUS. TIMES (Dec. 26, 2014, 3:00 AM), http://www.bizjournals.com/sanfrancisco/print-edition/2014/12/26/executive-of-the-year-travis-kalanick.html?page=all.

192. Cushing, *supra* note 81.

193. Kesler, *supra* note 86; Lagorio-Chafkin, *supra* note 78.

regulators finally figured out what Uber was doing, they would have become "too big to ban."[194]

Local officials had no success maintaining pricing and entry rules, but there was broader public support for enforcing longstanding driver screening, licensing and insurance requirements,[195] where Uber benefitted from evading costs that its competitors were still obligated to incur. In response, Uber shifted to a regulatory arbitrage[196] strategy where it kept "flipping the defaults"[197] in public arguments, insisting the problem is the laws don't match up well with Uber's incredibly innovative product, and insisting that the general public had the burden of proof for demonstrating why innovative technologically driven companies needed to obey "outdated" insurance, pricing, and safety rules. Uber claimed its technology was so powerful it could eliminate any public safety risks, and thus the need for any regulations protecting safety.[198] Uber further alleged it had invented an entirely new industry ("ridesharing") so that it could ar-

194. Marcus Wohlsen, *Uber's Brilliant Strategy To Make Itself Too Big To Ban*, WIRED (July 8, 2014, 6:30 AM), http://www.wired.com/2014/07/ubers-brilliant-strategy-to-make-itself-too-big-to-ban/.

195. John Kuo, *Does Your Lyft Driver Have Car Insurance?*, NERDWALLET (Oct. 17, 2013), http://www.nerdwallet.com/blog/insurance/2013/10/17/ridesharing-car-insurance/; Don Jergler, *Transportation Network Companies, Uber Gap Worries Insurers*, INS. J. (Jan. 10, 2013), http://www.insurancejournal.com/news/west/2014/01/10/316839.htm; Joshua Brustein, *Uber Tries to Convince Drivers (and Lawmakers) They're Covered*, BLOOMBERG (Mar. 14, 2014, 1:16 PM), http://www.businessweek.com/articles/2014-03-14/uber-tries-to-convince-drivers-and-lawmakers-theyre-covered; Erin Mitchell, *Uber's Loophole in the Regulatory System*, 6 HOUS. L. REV. 75, 79-83 (2015); *see generally* Jennie Davis, *Drive at Your Own Risk: Uber's Misrepresentations to UberX Drivers About Insurance Coverage Violate California's Unfair Competition Law*, 56 B.C. L. REV. 1097 (2015), http://lawdigitalcommons.bc.edu/bclr/vol56/iss3/7; Brad Stone, *Invasion of the Taxi Snatchers: Uber Leads an Industry's Disruption*, BLOOMBERG (Feb. 20, 2014, 12:26 PM), http://www.bloomberg.com/news/articles/2014-02-20/uber-leads-taxi-industry-disruption-amid-fight-for-riders-drivers.

196. "Regulatory arbitrage exploits the gap between the economic substance of a transaction and its legal or regulatory treatment, taking advantage of the legal system's intrinsically limited ability to attach formal labels that track the economics of transactions with sufficient precision." Victor Fleischer, *Regulatory Arbitrage*, 89 TX. L. REV. 227 (2010). Uber attempted to arbitrage taxi regulation by falsely asserting that its economics are radically different from traditional taxi economics because of "sharing economy" efficiencies or because the differences between ordering taxis by smartphones versus telephones radically transforms the entire business model. *See supra* section II(D).

197. Pasquale & Vaidhyanathan, *supra* note 103.

198. "Kalanick has long argued that his company doesn't need government officials to regulate it because it's a technology platform, not a transportation provider, and it self-regulates itself through customer feedback. Dana Rubinstein, *Uber, Lyft, and the End of Taxi History*, POLITICO (Oct. 30, 2014, 5:27 AM), http://www.capitalnewyork.com/article/city-hall/2014/10/8555191/uber-lyft-and-end-taxi-history. "There's a real difference of ideology here. You have a company that believes that the free market will essentially correct any negative externalities." Kim-Mai Cutler, *Uber, Airbnb And The Conflict Between Policy's Ratchet Effect And Tech's Accelerating Speed*, TECHCRUNCH (July 22, 2015), http://techcrunch.com/2015/07/22/uber-airbnb-and-the-conflict-between-policys-ratchet-effect-and-techs-accelerating-speed/. The claim that

gue that the huge difference between paying for a ride in an Uber and paying for a ride in a taxi justified having a substantially reduced legal and regulatory regime.[199]

Uber began getting sued by drivers claiming they had been improperly classified as independent contractors even though Uber exercised employee-type controls over them.[200] It developed a legal strategy that depended on the claim that it was not a transportation company at all, but just a passive intermediary selling "a lead generation app",[201] to independent, entrepreneurial drivers. "Are we American Airlines or are we Expedia? It became clear, we are Expedia,"[202] arguing in effect that labor law did not apply because local city governments could not regulate software companies[203] and since Uber had no more influence over its "drivers-partners" than Expedia had over American Airlines, those drivers were not entitled to any of the legal rights of employees such as minimum wages or collective bargaining. These claims were thoroughly rejected by the judge in a major California class action suit, but Uber agreed to a $100 million settlement that prevented the judge's findings from becoming legal precedent.[204] A 2016 Morgan Stanley investor prospectus, prepared at Uber's request, emphasized the importance of this regulatory arbitrage saying that any changes that gave its full-time drivers

software has eliminated the need for l licensing and insurance regulations is made explicitly by Meyer. *See* Meyer, *supra* note 68, at 15.

199. *See* discussion of "sharing economy" claims *supra* section II(D).

200. *See* Rosenblat & Stark, *supra* note 29; Goncharova, *supra* note 38; Newcomer & Zaleski, *supra* note 38.

201. Biz Carson, *Uber: We're Not a Taxi Service, We're a 'Lead Generation' App*, BUS. INSIDER (July 9, 2015, 5:32 PM), http://www.businessinsider.com/uber-fights-california-class-action-lawsuit-2015-7?curator=techREDEF.

202. Lagorio-Chafkin, *supra* note 78.

203. Rubinstein, *supra* note 198.

204. The judge found Uber's argument that it was only a technology company "fatally flawed in numerous respects. . . Uber does not simply sell software; it sells rides. Uber is no more a 'technology company' than Yellow Cab is a 'technology company' because it uses CB radios." O'Connor v. Uber Techs., Inc., 82 F. Supp. 3d 1133, 1135 (N.D. Cal. 2015). For a detailed discussion of the O'Connor case, see Julia Tomassetti, *Does Uber Redefine the Firm? The Postindustrial Corporation and Advanced Information Technology*, 34 HOFSTRA LAB. & EMP. L.J. 1 (2016), which describes the case within the context of attempts by Uber and other companies to win employment classification cases on the basis of "narrative" (PR) type assertions about the nature of their business that were inconsistent with actual practices. For a summary of the initial case settlement, see Douglas Macmillan et al., *Uber Drivers Settle with Ride-Hailing Company in Labor Dispute,* WALL ST. J. (Apr. 22, 2016, 10:29 PM), http://www.wsj.com/article_email/uber-drivers-settle-with-ride-hailing-company-in-labor-dispute-1461292153-lMyQjAxMTA2MzI4Mjcy MTI3Wj. Because assertions about how Uber drivers should be classified under the law were incorporated into contracts signed by the plaintiff/workers, Uber argued they should be accepted as binding. *Id.* For the subsequent rejection of the $100 million settlement as "not fair, adequate, and reasonable," see Mike Isaac, *Judge Overturns Uber's Settlement with Drivers*, N.Y. TIMES (Aug. 18, 2016), https://www.nytimes.com/2016/08/19/technology/uber-settlement-california-drivers.html.

the same legal rights of other corporate employees "could have a material adverse effect on its ability to operate its business."[205] Numerous courts outside the U.S. have also rejected Uber's attempts to claim it is not a transportation company and it does not exercise employee-type control over the work of its drivers.[206]

Uber developed a political "playbook", first introduced in Washington in 2012, that mobilized its wealthier, better-connected clients to flood local politicians with irate social media messages (helpfully prepared by Uber) demanding a halt to any regulatory efforts to put all car service providers on a level playing field. "Uber's secret weapon has been its customers: The kind of well-heeled, tech-savvy urbanites. . .[who] may never before have shown an interest in any other aspect of local governance. But when some taxi commissioner or city councilor tries to take away their newfound convenience, they'll rally to its defense with calls, e-mails, and indignant tweets. Kalanick, having wooed the city's trendsetters through swanky launch events and cheeky stunts—like running an 'Ubercade' down Pennsylvania Avenue in D.C.—plays upon their sense of moral outrage, crusading against the two-bit officials who try to stifle innovation and competition."[207] Of course the "us versus them" morality play had been artificially manufactured; local politicians did not know that the "viral uprising" of wealthy town car users had been organized along the same lines in every new Uber market, and those wealthy town car users were oblivious to the fact that service they liked was wholly dependent on massive subsidies from Silicon Valley billionaires. As Matthew Daus of the New York Taxi and Limousine Commission argued in early 2014, "I'm hoping that people will now pay attention to what this actually is, which is an attempt to deregulate the taxi industry."[208] One law professor compared Uber's political approach to deregulation to the attempted nullification of civil rights laws. "Their major innovation, how-

205. See Verhage, *supra* note 115.

206. For a discussion of recent Uber losses in UK and EU decisions, see Joseph Cotterill, *Uber in 'Minicab Company' Shocker*, Fin. Times (Oct. 28, 2016), http://ftalphaville.ft.com/2016/10/28/2178287/uber-in-minicab-company-shocker/; Mark Scott, *Uber Suffers Bloody Nose in Its Fight to Conquer Europe*, N.Y. Times (May 11, 2017), https://www.nytimes.com/2017/05/11/technology/uber-ecj-europe.html?_r=0.

207. Ryan Lawler, *Mr. Kalanick Goes To Washington: How Uber Won In DC*, TechCrunch (Dec. 4. 2012), https://techcrunch.com/2012/12/04/mr-kalanick-goes-to-washington-how-uber-won-in-dc/; Lydia DePillis, *Uber Mensch*, New Republic (Apr. 28, 2013), http://www.newrepublic.com/article/113059/ubers-travis-kalanick-fights-startups-playing-his-own-game; McArdle, *supra* note 177; Karen Weise, *This Is How Uber Takes Over a City*, Bloomberg (June 23, 2015, 4:06 PM), http://www.bloomberg.com/news/features/2015-06-23/this-is-how-uber-takes-over-a-city; Molly Cohen, *Internet Advocacy 'Uber' Alles: What Uber-Fans Accomplished in Boston & What It Means for Urban Democracy & Local Government*, Taxi-Library.org (Apr. 13, 2013), http://www.taxi-library.org/uber_alles.pdf.

208. *See* Stone, *Invasion of the Taxi Snatchers*, *supra* note 195.

ever, is strategic and manipulative, and it's meant to undermine local needs and effective governance."[209]

Uber quickly realized that the battle to vanquish evil, corrupt government officials it had promised to wage would be risky and difficult, and began investing huge sums to directly lobby those evil, corrupt government officials. A 2013 article describes early lobbying efforts in New York, Chicago, Boston, Denver, Houston, Washington, and Baltimore.[210] In Florida and California, where local regulation included fewer of the loopholes Uber had exploited elsewhere, lobbying efforts convinced the state legislatures to strip local governments of the regulatory authority over Uber and other "transportation network companies" (TNCs), while preserving the local regulations that imposed higher costs on Uber's competitors.[211] The San Francisco taxi regulator who had been politically outmaneuvered said, "Here I am, trying to steer the Titanic and someone hits me over the head with a baseball bat, is pretty much what the TNC issue is like. We were about to clear, and all of a sudden here comes billions of dollars of venture capital for people who are willing to break every law in the book."[212]

In 2014 Uber escalated its lobbying efforts, bringing in high-powered political operatives who had worked at the highest levels of government into senior management, including David Plouffe, Barack Obama's former Chief of Staff, and Rachel Whetstone, who had been a major advisor to British Prime Minister David Cameron.[213] Whetstone's appointment

209. Pasquale & Vaidhyanathan, *supra* note 103.

210. Anna Palmer & Scott Wong, *Lobbying Drives Uber's expansion,* POLITICO (Sept. 18, 2013, 11:16 PM), http://www.politico.com/story/2013/09/uber-taxi-lobbying-expansion-097028; Tess VanderDolder, *Sharing Economy Companies Like Uber and Airbnb Make Lobbying a Priority*, DCINNO (July 1, 2014, 1:35 PM), http://dcinno.streetwise.co/all-series/sharing-economy-companies-like-uber-and-airbnb-make-lobbying-a-priority/.

211. Kyle Munzenrieder, *Uber Goes Over Miami-Dade's Head and Takes Fight to Tallahassee*, MIAMI NEW TIMES (Mar. 21, 2014, 8:00 AM), http://www.miaminewtimes.com/news/uber-goes-over-miami-dades-head-and-takes-fight-to-tallahassee-6521643; Jessica Kwong, *Head of SF Taxis to Retire*, S. F. EXAMINER (May 30, 2014), http://www.sfexaminer.com/sanfrancisco/head-of-sf-taxis-to-retire/Content?oid=2810569; Noah Scheiber, *Uber and Airbnb Are Waging a Libertarian War on Regulators,* NEW REPUBLIC (May 20, 2014), http://www.newrepublic.com/article/117837/airbnb-uber-wage-war-regulators-army-customers; Rosalind S. Helderman, *Uber Pressures Rregulators by Mobilizing Riders and Hiring Vast Lobbying Network*, WASH. POST (Dec. 13, 2014), https://www.washingtonpost.com/politics/uber-pressures-regulators-by-mobilizing-riders-and-hiring-vast-lobbying-network/2014/12/13/3f4395c6-7f2a-11e4-9f38-95a187e4c1f7_story.html?utm_term=.401a1ccbb5e0; T.C. Sottek, *Uber Has an Army of at Least 161 Lobbyists and They're Crushing Regulators,* THE VERGE (Dec. 14, 2014, 2:55 PM), http://www.theverge.com/2014/12/14/7390395/uber-lobbying-steamroller.

212. Kwong, *supra* note 211.

213. The Plouffe hire recognized the importance of wealthy, big-city elites in the US to Uber, who had been mobilized in the "viral" campaigns to undermine local taxi regulations, but were often Democratic. Whetstone was the granddaughter of one of the key drivers of the UK libertarian movement, funded the think tanks that laid the groundwork for Margaret Thatcher's elec-

reflected Uber's commitment to its investors' libertarian/objectivist values, and the need to address Uber's weaker political power in Europe, where, as the Economist observed, "Uber's aggressive style has failed to bulldoze opposition in Europe as effectively as it has in the US."[214] Uber invested heavily to assemble major lobbying teams in cities where opposition limited Uber's growth ambitions; in Las Vegas, Uber spent more on lobbyists than the entire casino industry, and in California, had a larger lobbying team than any bank.[215] The key was getting state legislatures to take regulatory authority away from the cities that had the most direct interest in local taxi service. By the end of 2014, three states had passed legislation that largely exempted Uber from the regulations traditional taxis still faced; by the end of 2015, 28 states had pro-Uber regulations in place.[216]

The political battle between Uber's Silicon Valley investors and individual local governments was as hopelessly one-sided as the market battle against fragmented traditional taxi operators, especially since Uber's PR/propaganda efforts had eliminated most local media as a source of independent analysis. Local governments failed to understand the existential threat Uber posed to the concept of industry oversight, just as taxi owners failed to recognize that Uber was dedicated to driving them all into bankruptcy. Local officials often assumed that (like most startups) Uber was just trying to secure market access, and that its newfound willingness to negotiate via lobbyists meant a willingness to compromise. In fact, Uber remained totally focused on its longer term objectives of dominance and

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tion and that were frequent partners with the Koch funded think tanks in America; Whetstone personally managed a major "rebranding" of the Conservative party, and then spent ten years leading Google's battles with the EU. Kara Swisher, *Uber Hires Top Obama Adviser David Plouffe as New "Campaign Manager,"* RECODE (Aug. 19, 2014, 11:46 AM), http://recode.net/2014/08/19/uber-hires-top-obama-adviser-david-plouffe-as-new-campaign-manager/; Kara Swisher, *Google Comms and Policy Head Rachel Whetstone Takes Over That Job at Uber*, RECODE (May 13, 2015, 12:08 PM), http://recode.net/2015/05/13/google-comms-and-policy-head-whetstone-takes-over-that-job-at-uber/; Paul Bradley Carr, *Bright Young Flacks: "Cameron's Cronies" Now Drive Silicon Valley's Most Sinister Propaganda Machine*, PANDO (May 17, 2015), http://pando.com/2015/05/17/ubers-bright-young-flacks/.

214. Murad Ahmed, Jeevan Vasagar & Tim Bradshaw, *Uber: Backseat Driver*, FIN. TIMES (Sep. 16, 2015), http://www.ft.com/intl/cms/s/0/c5fb29b8-5796-11e5-9846-de406ccb37f2.html#axzz3luktQgYH.

215. David Figler, *Viva Disruption! How Uber Outspent the Casinos to Buy Vegas*, PANDO (June 22, 2015), https://pando.com/2015/06/22/uber-las-vegas-gigantic-lobbying-campaign-allowed-travis-kalanick-buy-his-own-taxi-law ("Uber now spends more on lobbyists in California than Wal-Mart, Bank of America or Wells Fargo."); Chris Kirkham & Tracey Lien, *Facing Regulatory Roadblocks, Uber Ramps up its Lobbying in California*, L.A. TIMES (July 26, 2015, 4:00 AM), http://www.latimes.com/business/la-fi-uber-california-20150726-story.html#page=1.

216. Alison Griswold, *Uber Pulled off a Spectacular Political Coup and Hardly Anyone Noticed*, QUARTZ (Jan. 21, 2016), http://qz.com/589041/uber-pulled-off-a-spectacular-political-coup-and-hardly-anyone-noticed/.

industry control, and reneged on or litigated many of the compromises establishing much more limited regulation than traditional taxis face.[217] Uber pulled out all the stops whenever city officials such as New York Mayor Bill de Blasio openly demanded that Uber be subject to meaningful oversight[218] and demonstrated its ability to easily quash determined opposition.[219] When cities such as Portland, Boston, and Philadelphia attempted to enforce existing licensing and insurance laws, Uber developed software to block law enforcement efforts.[220] When Austin required all car service providers to conduct fingerprint-based background checks on drivers, Uber and Lyft spend $8 million on an initiative to overturn the rule, and when Austin voters rejected their demand to eliminate background checks, they shut down operations, throwing all their "driver-partners" out of work.[221]

Uber's strategic deployment of ruthlessness went well beyond regulators. It worked to sabotage both the fundraising and operations of Lyft

217. Uber had agreed to provide New York City with the same trip data that other "for hire vehicles" supply ("for hire vehicles", commonly known as black cars, are much more lightly regulated than Yellow Cabs in New York), and was sued on similar grounds by the California state regulators established to strip regulatory authority from cities like San Francisco and Los Angeles. Ellen Huet, *Uber Hands Over Sought-After Trip Data – On Its Own Terms*, FORBES (Jan. 13, 2015, 2:19 PM), https://www.forbes.com/sites/ellenhuet/2015/01/13/uber-boston-city-data/#43da89576222; Annie Karni, *Uber Loses Appeal from Taxi & Limousine Commission Order to Turn over All Trip Data*, N.Y. DAILY NEWS (Jan. 22, 2015, 12:38 AM), http://www.nydailynews.com/news/politics/uber-loses-tlc-deal-turn-trip-data-article-1.2087718; Laura J. Nelson et al., *Uber Should be Suspended in California and Fined $7.3 Million, Judge Says*, L.A. TIMES (July 15, 2015, 5:59 PM), http://www.latimes.com/business/la-fi-uber-suspended-20150715-story.html.

218. "When New York Mayor Bill de Blasio sought to place a cap on Uber's growth, the company steamrolled him and the City Council with a blitz of robocalls, TV advertisements, and a clever addition to its app that enabled riders to swamp the council with emailed protests. De Blasio withdrew his proposal." Greenhouse, *supra* note 85.

219. Matt Glegenheimer & Emma Fitzsimmons, *City Hall and Uber Clash in Struggle Over New York Streets*, N. Y. TIMES (July 16, 2017), https://www.nytimes.com/2015/07/17/nyregion/city-hall-and-uber-clash-in-struggle-over-new-york-streets.html?hp&action=click&pgtype=Homepage&module=second-column-region&region=top-news&WT.nav=top-news; Ben Smith, *Can Bill De Blasio Turn Uber Into The NRA?*, BUZZFEED (July 19, 2015, 7:43 PM), http://www.buzzfeed.com/bensmith/cold-dead-uber; Margaret Hartmann, *Was David Plouffe the Key to Uber's Deal With New York City?*, N. Y. MAG. (July 23, 2015, 5:28 AM), http://nymag.com/daily/intelligencer/2015/07/david-plouffe-uber-nyc.html.

220. Mike Isaac, *How Uber Deceives Authorities Worldwide*, N.Y. TIMES (Mar. 3, 2017), https://www.nytimes.com/2017/03/03/technology/uber-greyball-program-evade-authorities.html?hp&action=click&pgtype=Homepage&clickSource=story-heading&module=first-column-region&region=top-news&WT.nav-top-news.

221. Mike McPhate, *Uber and Lyft End Rides in Austin to Protest Fingerprint Background Checks*, N.Y. TIMES (May 10, 2016), http://www.nytimes.com/2016/05/10/technology/uber-and-lyft-stop-rides-in-austin-to-protest-fingerprint-background-checks.html; Ramon Ramierez, *The Inside Story of Uber and Lyft's Failure in Austin*, DAILY DOT (May 9, 2016, 10:19 PM), http://www.dailydot.com/technology/uber-lyft-austin-future/.

and other competitors[222] and initiated specific programs to intimidate outsiders who might challenge the growing perception of inevitable world domination. Uber executive Emil Michaels "suggested that the company should consider hiring a team of opposition researchers to dig up dirt on its critics in the media — and specifically to spread details of the personal life of a female journalist who has criticized the company."[223] Uber later hired ex-CIA personnel to investigate the people who had filed an anti-trust suit against its surge pricing practices, and then lied about its actions to the judge hearing the case.[224]

Uber's ruthless, "we are above the law" behavior was always central to its business model even though none of these actions materially improved short-term profitability and most generated significant adverse publicity. While company supporters kept insisting these actions were aberrant incidents that would not be repeated all of it was completely integral to its pursuit of investor returns. A corporate culture based on the belief that "laws and norms do not apply to us" allowed Uber to crush much of the political opposition and media criticism that might have slowed its early growth. Kalanick demanded that his management team demonstrate this monomaniacal focus[225] on dominance and market control, expunged managers who were not totally dedicated to this vision, while members of his "A-Team" who had proven their loyalty, were immune from any internal discipline or oversight.[226] Just as Uber developed a brilliant strategy to drive more efficient taxi operators out of

222. Seth Fiegerman, *Uber CEO Admits He Tried to Undermine Lyft's Fundraising Efforts,* MASHABLE (Nov. 5, 2014), http://mashable.com/2014/11/05/uber-lyft-investors/#2XrpF14dbqq0; Dante D'Orazio, *Uber Employees Spammed Competing Car Service with Fake Orders*, THE VERGE (Jan. 24, 2014, 4:51 PM), http://www.theverge.com/2014/1/24/5342582/uber-employees-spammed-competing-car-service-with-fake-orders; Erica Fink, *Uber's Dirty Tricks Quantified: Rival Counts 5,560 Canceled Rides*, CNN (Aug. 12, 2014, 3:11 PM), http://money.cnn.com/2014/08/11/technology/uber-fake-ride-requests-lyft/.

223. Ben Smith, *Uber Executive Suggests Digging Up Dirt On Journalists*, BUZZFEED (Nov. 17, 2014, 5:57 PM), http://www.buzzfeed.com/bensmith/uber-executive-suggests-digging-up-dirt-on-journalists; Sarah Lacy, *The Moment I Learned Just How Far Uber will Go to Silence Journalists and Attack Women,* PANDO (Nov. 17, 2014), http://pando.com/2014/11/17/the-moment-i-learned-just-how-far-uber-will-go-to-silence-journalists-and-attack-women/.

224. Russell Brandom & Andrew Hawkins, *How Uber Secretly Investigated its Legal Foes – and Got Caught*, THE VERGE (July 10, 2016, 5:00 PM), http://www.theverge.com/2016/7/10/12127638/uber-ergo-investigation-lawsuit-fraud-travis-kalanick; Benjamin Weiser, *Thinking About Suing Uber? Let This Be a Warning*, N.Y. TIMES (July 25, 2016), http://www.nytimes.com/2016/07/26/nyregion/investigation-of-conservationist-conducted-on-ubers-behalf-crossed-the-line-judge-rules.html?.

225. STONE, *supra* note 100.

226. Mike Isaac, *Inside Uber's Aggressive, Unrestrained Workplace Culture,* N.Y. Times (Feb. 22, 2017), https://mobile.nytimes.com/2017/02/22/technology/uber-workplace-culture.html?smid=TW-nytimesbusiness&smtyp=cur&_r=0&referer; Leslie Hook, *Uber: The Crisis Inside the 'Cult of Travis'*, FIN. TIMES (Mar. 9, 2017), https://www.ft.com/content/9b65a59a-03e1-11e7-ace0-1ce02ef0def9; Stone, *supra* note 226.

business, it established a strategy to nullify any potential barriers to its freedom of action. To maximize long-run rent-extraction potential, it needed to establish today that it can disobey any regulations it doesn't like, it can use surge pricing to gouge customers without limits, it can impose any conditions on drivers it wants, and it can obstruct any local efforts to investigate whether its actions are lawful.

E. The PR/Propaganda Narrative Blocked Discussion of Whether Uber Would Actually Improve Consumer Welfare, Industry Efficiency or the Quality of Urban Transport Service

Uber's PR/propaganda narrative remained powerful despite growing evidence of serious problems. China expansion was imperative for Uber because its narrative had insisted that global dominance was inevitable, that its innovative business model could overwhelm competition anywhere, and that management's ruthless determination could even overcome resistance in a country openly hostile to foreign-owned companies. Uber was willing to spend over a billion dollars of its investors' cash on a market battle where they had no evident efficiency or marketing strengths[227] but regularly told the press that they were rapidly growing into profitability.[228] The China venture demonstrated Uber's commitment to its strategy of using massive quantities of investor cash to fund predatory competition. Uber failed in China because Didi Kuaidi, its major competitor, was even more massively funded, and was willing to pursue even more extreme predatory competition.[229] But the failure of Uber China has not led any of the industry observers who predicted Uber's global dominance to revise their thinking, or to even question why a $68 billion valuation based in part on eventual dominance might still be justified.

As described in the previous section, problematic behavior has occurred throughout Uber's history, but press coverage was limited and usually followed the company narrative that this ruthless hyper-competi-

227. *See* Hook, *supra* note 35; Adam Jourdan & John Ruwitch, *Uber Losing $1 Billion a Year to Compete in China*, Reuters (Feb. 18, 2016, 8:01 AM), http://www.reuters.com/article/uber-china-idUSKCN0VR1M9; Newcomer, *supra* note 11.

228. Amar Toor, *Uber Wants to Expand to 100 Chinese Cities Over the Next Year*, THE VERGE (Sep. 8, 2015, 5:44 AM), https://www.theverge.com/2015/9/8/9275015/uber-china-expansion-didi-kuaidi-app-travis-kalanick; Sarah Lacy, *As the Boasts Continue, Uber's Stated Expansion Goals in China are Starting to Slip*, PANDO DAILY (Jan. 20, 2016), https://pando.com/2016/01/20/boasts-continue-ubers-stated-expansion-goals-china-are-starting-slip/.

229. Sarah Lacy, *WeChat Blocks Uber. And This is Only the Beginning*, Pando Daily (Aug. 24, 2015), https://pando.com/2015/08/24/wechat-blocks-uber-its-step-one-didi-kuaidi-using-ubers-playbook/; Leslie Hook, *Uber's Battle for China*, Fin. Times Weekend Mag. (June 2016), https://ig.ft.com/sites/uber-in-china/.

tiveness was necessary to overcome a corrupt status quo and create tens of billions in economic value. Even when bad behavior suddenly became a central part of the Uber story in early 2017, there was no attempt determine whether it suggested any more serious flaws in Uber's business model. This negative publicity began with Susan Fowler's documentation of Uber's proactive cover-up of her sexual harassment[230] was quickly followed by revelations of the software it used to proactively block law enforcement,[231] a major Google lawsuit alleging proactive Uber efforts to steal competitively critical driverless car technology,[232] video showing a profane Kalanick tirade against an Uber driver who had challenged recent compensation cuts,[233] and the revelation that Uber senior executives obtained the confidential police files of a woman raped by an Uber driver, and considered ways to use them to undermine her testimony and blame the incident on a competing cab company.[234]

The press coverage of this behavior (with aggressive support from Uber[235]) focused narrowly on a misogyny based "cultural" problem,[236]

230. Susan J. Fowler, *Reflecting on One Very, Very Strange Year at Uber*, SUSANJFOWLER.COM (Feb. 19, 2017), https://www.susanjfowler.com/blog/2017/2/19/reflecting-on-one-very-strange-year-at-uber.

231. *See* Isaac, *supra* note 220.

232. Mike Issac & Daisuke Wakabayashi, *A Lawsuit Against Uber Highlights the Rush to Conquer Driverless Cars*, N.Y. TIMES (Feb. 24, 2017), https://www.nytimes.com/2017/02/24/technology/anthony-levandowski-waymo-uber-google-lawsuit.html?hp&action=click&pgtype=Homepage&clickSourcestory-heading&module=second-column-region&region=top-news&WT.nav=top-news&_r=0.

233. Eric Newcomer, *In Video, Uber CEO Argues with Driver Over Falling Fares*, BLOOMBERG (Feb. 28, 2017, 1:39 PM), https://www.bloomberg.com/news/articles/2017-02-28/in-video-uber-ceo-argues-with-driver-over-falling-fares.

234. The rape occurred in Delhi in December 2014. Kara Swisher & Johana Bhuiyan, *A Top Uber Executive, Who Obtained the Medical Records of a Customer Who Was a Rape Victim, Has Been Fired*, RECODE (June 7, 2017, 12:45 PM), https://www.recode.net/2017/6/7/15754316/uber-executive-india-assault-rape-medical-records.

235. Uber's response to these incidents was a review led by Board member Arianna Huffington and former Attorney General Eric Holder (of the law firm of Covington & Burling) was narrowly limited to Fowler's allegations; the review narrowed recommended actions to generic management process improvements, such as rethinking Uber's value statement, enhancing the Board's oversight, reducing alcohol use at company events, and increasing sensitivity and diversity training. Covington & Burling's summary of its recommendations to the Uber Board is available at https://drive.google.com/file/d/0B1s08BdVqCgrUVM4UHBpTGROLXM/view. Prior to the review, Huffington had dismissed the idea that the cultural problems were very serious, saying, "Yes, there were some bad apples, unquestionably. But this is not a systemic problem." Sara O'Brien, *Arianna Huffington: Sexual Harassment Isn't a 'Systemic Problem' at Uber*, CNNMONEY (Mar. 23, 2017), http://money.cnn.com/2017/03/20/technology/arianna-huffington-uber-quest-means-business/.

236. *See* STONE, *supra* note 100; Isaac, *supra* note 226; Hook, *supra* note 226; *Uber is Facing the Biggest Crisis in Its Short History*, ECONOMIST (Mar. 25, 2017), http://www.economist.com/news/business/21719509-can-ride-hailing-giant-stay-fast-lane-uber-facing-biggest-crisis-its-short; Ben Thompson, *Crisis At Uber, Uber's Culture, Who Is Responsible?*, STRATECHERY (Feb. 23, 2017), https://stratechery.com/2017/crisis-at-uber-ubers-culture-who-is-responsible/; *see also* a se-

suggesting these problems reflected issues found widely in the Silicon Valley (as opposed to issues unique to Uber) and might go away if managers underwent sensitivity or diversity training. Press coverage ignored the fact that most of the bad behavior over time (competitor sabotage, journalist intimidation, obstruction of justice, intellectual property theft) had nothing to do with misogyny and almost never mentioned Uber's ongoing multi-billion dollar losses or considered why tech startups that have strong enough competitive economics to generate strong cash flow and profits never display the ongoing pattern of bad behavior that Uber has.

In each of these cases, public discussion has remained strictly within the structure of Uber's PR propaganda narrative, which has blocked cognition of basic economic issues such as profitability and competitiveness. Reports of isolated economic problems, even ones as large as the failure of Uber China, never lead to reevaluations of Uber's overall financial outlook. Press stories about driver commission cuts do not lead to further stories showing that these were Uber's only source of margin improvement in seven years, or to any examination of whether Uber's initial customer prices and service levels might also have been unsustainable. The lack of productivity-driven margin improvement has not caused anyone to challenge the assumption that Uber could use powerful scale/network economies to "grow into profitability" as previous tech unicorns had. While the terrible financial results shown in Section II(A) have long been on the public record, no one has attempted to connect this evidence to any other aspect of the Uber story, and it has also not led any of the journalists who had embraced Uber's "avatar of innovation and progress" narrative over the years to publicly admit to any doubts.

If one ignores profitability and competitiveness, one cannot even ask the question as to whether Uber has, or at some point in the future might increase economic welfare. If Uber cannot earn sustainable profits based on superior competitive economics, one cannot claim that Uber's market entry has increased consumer welfare or industry efficiency, or improved the quality of urban transport. It is important to understand how a small group of investors and managers created $68 billion in corporate value in an industry despite the complete inability to earn profits in a competitive market. But it is also important to understand why the robust public discussion of Uber over seven years completely ignored whether it would could ever actually achieve sustainable improvements in consumer welfare, industry efficiency, or the quality of urban transport.

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ries of articles on Uber under *Uber's Culture Crisis,* RECODE (Feb. 19, 2017, 7:57 PM), https://www.recode.net/2017/2/23/14717030/uber-culture-crisis-travis-kalanick-sexism-diversity-allegations.

V. Conclusion

Uber has not introduced any breakthrough technical or process innovations and has done nothing to economically "disrupt" the economics of producing urban car services. But Uber has the potential to become one of the most innovative, disruptive companies in American history.

Uber is disrupting the longstanding concept that business and corporate development is a marketplace and economic process, where success requires significant service/efficiency advantages over competitors, and where success will be determined by consumers in competitive markets, based on reliable information about relative price and quality. Uber is also disrupting the longstanding concept that taxis are an important part of urban transport infrastructure, and that urban citizens have the right to establish political oversight of urban car services to protect their interests in those transport services as well as interests in safety, competition, nondiscriminatory access to prices, and service and other issues affecting economic welfare.

The objective of Uber's investors was to create a globally dominant urban transport company. Its $68 billion valuation reflects the hope that–once dominant–the ubiquity of the Uber platform and market power over passengers and suppliers would give it the kind of power Facebook and Amazon now enjoy. But those companies achieved quasi-monopoly power by inventing entirely new products that people hugely valued or by figuring out how to provide services massively more efficiently than any existing competitor could. Uber's disruptive strategy was to skip the hard "create real economic value" parts of this process, and focus strictly on the pursuit of private wealth accumulation based on the pursuit of artificial market power that global dominance would provide.

Uber's major innovation was the development of a three part strategy that allowed it to rapidly grow despite the total absence of competitive economics. This strongly coherent strategy combined the predatory deployment of unprecedented amounts of investor cash, a PR/propaganda narrative explaining its inevitable success, and a ruthless willingness to destroy anything standing in the way of industry dominance.

Uber's strategy was a major departure from the approach taken by prior venture capital funded unicorns. As noted, Uber's $13 billion investment base was used to fund the predatory competition needed to drive more efficient competitors out of business. This was 1600 times the investment funding Amazon needed prior to its IPO because Amazon could fund its growth out of positive cash flow. Its carefully crafted "narrative" allowed it to pursue predatory competition for seven years without serious scrutiny of its financial results or whether its anticipated dominance would improve industry efficiency or consumer welfare. Since

Amazon could make money by creating real economic value it did not have to demonize incumbent booksellers, threaten to publicize the personal lives of critical journalists, design software to obstruct local law enforcement or make false claims about medallions, cartels, or the $90,000 annual earnings of its independent contractors. Since Amazon was much more efficient than the competitors it was driving out of business it did not need massive PR expenditures designed to prevent outsiders from understanding their actual competitiveness, or on massive lobbying programs led by close advisors to Presidents and Prime Ministers.

For seven years Uber has demonstrated that it can undermine the normal workings of both labor and capital markets. Drivers have shifted to lower paying, riskier jobs and capital has been reallocated to less productive uses. All of the price signals that drive resource allocation in competitive markets had been deliberately distorted in order to transfer wealth from consumers and workers to Uber's investors. These investors are now poised to seize control of this portion of urban transport infrastructure without any formal, public decision subject to democratic processes authorizing this transfer of control. Uber has demonstrated how investors can create tens of billions of private corporate value out of thin air, without providing any material, sustainable benefits for the rest of society. It is unclear at this point whether Uber will actually achieve industry dominance, or whether its model could be readily replicated in other industries, but many investors will undoubtedly pursue that possibility.

The major findings of this paper include:

The growth of Uber to date has significantly reduced economic welfare. Financial data shows that Uber is nowhere close to being able to earn sustainable profits in competitive markets, with $2 billion in operating losses in 2015, and $3 billion in 2016. Analysis of taxi industry cost structures shows that Uber is a much less efficient producer of urban car services than the traditional operators it has been driving out of business. Nothing in Uber's business model fixes any of the industry's main service problems, such as the extremely high cost of providing peak capacity, none of Uber's claimed innovations have any material impact on overall cost competitiveness, and none have ever led to the competitive transformation of any other industry.

Since Uber cannot use growth to achieve cost efficiency or profitability, it will continue to reduce economic welfare in the future.

Nothing in the urban car service industry cost structure, or in Uber's business model produces the type of powerful scale or network economies that allowed other prominent companies to quickly reverse early startup losses. Uber's financial results since 2012 show none of the rapid

operating margin improvement one would see if it had any of these scale/ network economies.

Uber's growth is due to predatory competition financed by huge investor subsidies.

The statements and actions of Uber's investors and managers show they have always been focused on achieving industry dominance. In this pursuit, Uber has used its $13 billion investment base to fund uneconomically higher levels of service at uneconomically low prices. These subsidies provide a temporary consumer benefit, but they are not sustainable, and the benefit is more than offset by the welfare loss from destroying operators who are more efficient but cannot withstand years of predatory subsidies from Silicon Valley billionaires.

Uber investor returns always depended on total market control and the exploitation of anti-competitive market power that would reduce economic welfare further.

Monopoly power and sustainable rent-extraction have always been seen as a major potential source of the outsized returns Uber's investors need to justify their large, risky investment. Uber developed a strongly coherent strategy based on political propaganda and ruthless, hyper-competitive behavior to achieve these objectives. Uber has fought to establish its ability to use a number of techniques (such as extreme surge pricing) that add limited value in competitive markets and often generate adverse publicity, but could be major drivers of rent-extraction in the absence of competition. Uber's recent unilateral cuts to driver compensation in the US, which transferred roughly $1 billion from drivers to Uber's shareholders, demonstrates Uber's understanding of how the elimination of competition is critical to increased profitability and investor returns. Total market control would eliminate the ability of consumers to fight back against market power abuses due to the loss of competition, and eliminate the ability of cities to address the reduced utility of a taxi industry that was now solely focused on maximizing returns to capital.

Nothing in Uber's PR/propaganda narrative is supported by objective, verifiable economic evidence.

Uber's competitive strength and valuation cannot be justified by powerful, cutting edge technological innovation. It has not invented a totally new "ridesharing" product or pioneered an entirely new "on-demand" industry as no other company has established a viable business in either space. Its growth does not reflect the efficiency of competitive markets based on consumers freely choosing which company offers the superior product. The incumbent industry had many shortcomings but it was not a monopoly or a cartel protected by corrupt regulators, and nothing in Uber's business model solved the industry's biggest problem, the

high cost of peak and low-density service. The economics of Uber and the urban car service industry are very different from the economics of other recent successful startups like Amazon and Facebook, and there is no reason to assume that the factors that drove their ability to rapidly grow into profitability and dominate their markets apply to Uber. As the complete failure of Uber China and Uber weaknesses in other overseas markets illustrates, Uber's business model is not so amazingly powerful that it will work everywhere, and thus worldwide Uber dominance is not inevitable. Uber cannot produce car service as cheaply as a reasonably run Yellow Cab operation, and there is no possibility that its efficiencies will drive years of robust growth, and will eventually drive the cost of taxi service so low that it displaces private car ownership.

Uber's ruthless, hyper-competitive behavior is an integral part of its business model, and it could not have achieved its enormous growth and valuation without it.

Unlike past startups, Uber needed to drive more efficient competitors out of business, and need to seize control of industry oversight from local citizens who would never have ceded control through open, democratic processes. Uber managers needed a monomaniacal focus on achieving its investors' objectives, and needed to ruthlessly overcome any laws, competitors or other outsiders that might stand in their way. Behavior such as competitor sabotage, journalist intimidation, systemic sexual harassment and the obstruction of law enforcement is an inevitable result of this monomaniacal focus on Uber's strategic objectives. None of Uber's bad behavior was aberrant—it was a completely integral part of its business strategy. Uber cannot earn returns for its investors unless they demonstrate they can disregard any laws and regulation they find inconvenient, and can impose any conditions on drivers and customers they might choose. Uber's huge valuation could not have been achieved without this problematic behavior, and expunging this behavior would preclude future growth.

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