

Can Uber Ever Deliver? Part One – Understanding Uber’s Bleak Operating Economics

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Yves here. By virtue of steamrolling local taxi operations in cities all over the world, combined with cultivating cheerleaders in the business press and among Silicon Valley libertarians, Uber has managed to create an image of inevitability and invincibility. How much is hype and how much is real?

As transportation industry expert Hubert Horan will demonstrate in his four-part series, Uber has greatly oversold its case. There are no grounds for believing that Uber will ever be profitable, let alone justify its lofty valuation, absent perhaps the widespread implementation of driverless cars. Lambert has started digging into that issue, and his posts on that topic have consistently found that the technology would be vastly more difficult to develop and implement that its boosters acknowledge, would require substantial upgrading in roads, may never be viable in adverse weather conditions (snow and rain) and is least likely to be implemented in cities, which present far more daunting design demands than long-distance transport on highways.

Tellingly, earlier this month, Bloomberg reported that [JP Morgan and Deutsche Bank turned down the “opportunity” to sell Uber shares to high-net-worth individuals](#). The reason? The taxi ride company provided 290 pages of verbiage, but would not provide its net income or even annual revenues.

By Hubert Horan, who has 40 years of experience in the management and regulation of transportation companies (primarily airlines). Horan has no financial links with any urban car service industry competitors, investors or regulators, or any firms that work on behalf of industry participants.

Uber is currently the most highly valued private company in the world. Its primarily Silicon Valley-based investors have achieved a venture capital valuation of \$69 billion based on direct investment of over \$13 billion. Uber hopes to earn billions in returns for those investors out of an urban car service industry that historically had razor-thin margins producing a commodity product. Although the industry has been competitively fragmented and structurally stable for over a century, Uber has been aggressively pursuing global industry dominance, in the belief that the industry has been radically transformed into a “winner-take-all” market.

This is the first of a series of articles addressing the question of whether Uber’s pursuit of global industry dominance would actually improve the efficiency of the urban car service industry and improve overall economic welfare.

For Uber (or any other radical industry restructuring) to be welfare enhancing, it would have to clearly demonstrate:

The ability to earn sustainable profits in competitive markets large enough to provide attractive returns on its invested capital

The ability to provide service at significantly lower cost, or the ability to produce much higher quality service at similar costs

That it has created new sources of sustainable competitive advantages through major product redesigns and technology/process innovations that incumbent producers could not readily match, and

Evidence that the newly-dominant company will have strong incentive to pass on a significant share of those efficiency gains to consumers.

Unlike most startups, Uber did not enter the industry in pursuit of a significant market share, but was explicitly working to drive incumbents out of business and achieve global industry dominance. Uber's huge valuation was always predicated on the dramatic growth towards global dominance. Thus if Uber's valuation and industry dominance were to be welfare enhancing, Uber's efficiency and competitive advantages would need to be overwhelming, and there would need to be clear evidence of Uber's ability to generate large profits and consumer welfare benefits out of these advantages.

While most media coverage focused on isolated Uber product attributes, or its corporate style and image, this series will focus on the overall economics of Uber, using the approaches that outsiders examining industry competitive dynamics or investment opportunities typically would. This first article will present evidence on Uber's profitability, while subsequent pieces will present evidence about cost efficiency, competitive advantage and the other issues critical to the larger economic welfare question.

Uber Has Operating Losses of \$2 Billion a Year, More Than Any Startup in History

Published financial data shows that Uber is losing more money than any startup in history and that its ability to capture customers and drivers from incumbent operators is entirely due to \$2 billion in annual investor subsidies. The vast majority of media coverage presumes Uber is following the path of prominent digitally-based startups whose large initial losses transformed into strong profits within a few years.

This presumption is contradicted by Uber's actual financial results, which show no meaningful margin improvement through 2015 while the limited margin improvements achieved in 2016 can be entirely explained by Uber-imposed cutbacks to driver compensation. It is also contradicted by the fact that Uber lacks the major scale and network economies that allowed digitally-based startups to achieve rapid margin improvement.

As a private company, Uber is not required to publish financial statements, and financial statements disseminated privately are not required to be audited in accordance with generally accepted accounting principles (GAAP) or satisfy the SEC's reporting standards for public companies.

The financial tables below are based on private financial statements that Uber shared with investors that were published in the financial press on three separate occasions. The first set included data for 2012, 2013 and the first half of 2014, although only EBITAR (before interest, taxes, depreciation and amortization) contribution was shown, not the true (GAAP) profit that publically traded companies report.^[1] The second set included tables of GAAP profit data for full year 2014 and the first half of 2015;^[2] the third set included summary EBITAR contribution data for the first half of 2016.^[3] There has been no public report of results for the fourth quarter of 2015.

Exhibit 1 summarizes data from 2013 through the first half of 2015. Drivers retained 83% of passenger payments (fares plus tips) which must cover the cost of vehicle ownership, insurance and maintenance, fuel, credit card and license fees as well as health insurance and take home pay; the balance is Uber's total revenue. Exhibit 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. Exhibit 3 compares first half 2016 results to 2014-15 results. There is no simple relationship between EBITAR contribution and GAAP profitability and even publically traded companies have wide leeway as to what expenses can be excluded from interim contribution measures such as EBITAR.

Exh 1: Uber P&L 1/12-6/15	1H12	2H12	1H13	2H13	1H14	2H14	1H15
Total passenger payments					613.0	2,344.3	3,660.8
Driver gross revenue					510.3	1,951.7	2,997.6
% pax fares retained by drivers					83%	83%	82%
Uber Revenue	3.6	12.6	32.3	72.1	102.6	392.4	662.6
Cost of Sales	4.8	9.9	19.3	32.6	54.5	345.0	637.5
Oper Expense	6.6	13.8	28.4	80.8	209.1	451.6	743.8
EBITAR contribution	(7.8)	(11.1)	(15.4)	(41.3)	(161.1)	(423.8)	(718.1)
EBITAR margin	(217%)	(88%)	(48%)	(57%)	(157%)	(108%)	(108%)
GAAP profit							(987.2)
GAAP profit margin							(149%)

Exh 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
EBITAR contribution	(254.3)	(159.0)	(559.1)	n/a	
EBITAR margin	(108%)	(55%)	(149%)		
GAAP profit	(317.9)	(385.1)	(602.1)	(697.0)	(2,002.1)
GAAP profit margin	(135%)	(134%)	(160%)	(140%)	(143%)

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

Exh 3: Uber P&L 1/14-6/16	1H2014	2H2014	1H2015	2H2015	1H2016	1H16@83%
Total passenger payments	613.0	2,344.3	3,660.8	n/a	8,800.0	8,800.0
Driver gross revenue	83%	83%	82%		77%	83%
Uber Revenue	102.6	392.4	662.6		2,060.0	1,496.0
EBITAR contribution	(161.1)	(423.8)	(718.1)		(1,270.0)	(1,834.0)
EBITAR margin	(157%)	(108%)	(108%)		(62%)	(123%)
GAAP profit			(987.2)			
GAAP profit margin			(149%)			

As shown in Exhibit 2, for the year ending September 2015, Uber had GAAP losses of \$2 billion on revenue of \$1.4 billion, a negative 143% profit margin. Thus Uber's current operations depend on \$2 billion in subsidies, funded out of the \$13 billion in cash its investors have provided.

Uber passengers were paying only 41% of the actual cost of their trips; Uber was using these massive subsidies to undercut the fares and provide more capacity than the competitors who had to cover 100% of their costs out of passenger fares.

Many other tech startups lost money as they pursued growth and market share, but losses of this magnitude are unprecedented; in its worst-ever four quarters, in 2000, Amazon had a negative 50% margin, losing \$1.4 billion on \$2.8 billion in revenue, and the company responded by firing more than 15 percent of its workforce.^[4] 2015 was Uber's fifth year of operations; at that point in its history Facebook was achieving 25% profit margins.^[5]

No Evidence of the Rapid Margin Improvement That Drove Other Tech Startups to Profitability

There is no evidence that Uber's rapid growth is driving the rapid margin improvements achieved by other prominent tech startups as they "grew into profitability."

Assuming that the unusual spike in EBITAR margin in the first half of 2014 (157%) was due to one-time events or accounting anomalies, Uber has been steadily producing EBITAR margins worse than negative 100% since 2012, and the absolute magnitude of losses has been increasing.

Uber corporate revenue for the year ending June 2015 was over 500% higher than the year ending June 2014, but the EBITAR margin barely changed, moving from negative 115% to negative 108%. Uber had a negative \$1.2 billion EBITAR contribution in the first half of 2016, suggesting full year GAAP losses approaching \$3 billion. Uber's EBITAR 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 Uber imposed cuts in driver compensation. As shown in Exhibit 3, Uber only allowed drivers to retain 77% of each passenger dollar in 2016, down from 83% in 2014-15[6]. If drivers had retained 83% of 2016 passenger payments, Uber's EBITAR contribution would have been negative \$1.8 billion, and its EBITAR margin would have fallen to negative 122%. Uber's EBITAR margin did not improve because its productive efficiency or market performance was improving; capital was simply claiming a higher share of each revenue dollar and giving less to labor.

If rapid growth could not drive major margin improvements between 2012 and 2016, there is no reason to believe that Uber will suddenly find billions in scale economies going forward. Fundamentally digital companies like Amazon, eBay, Google and Facebook had massive operating scale economies because the marginal cost of expanded operations was close to zero. Aggressive pricing fueled the growth that drove major margin improvements and also created major consumer welfare benefits.

By contrast, in the hundred years since the first motorized taxi, there has been no evidence of significant scale economies in the urban car service industry. That explains why successful operators never expanded to other cities and why there was no natural tendency towards concentration in individual markets. Drivers, vehicles and fuel account for 85% of urban car service costs. None of these costs decline significantly as companies grow. As the P&L data above demonstrates, Uber has not discovered a magical new way to drive down unit costs.

Uber Losses Not explained by Uber China and No One Can Explain How Profitability Can Be Achieved

Several of the new stories reporting Uber's financial results quoted anonymous sources attributing a significant portion of the losses to Uber's failed efforts in China. Uber China may have lost a lot of money but those losses are not included in (or are not material to) the losses discussed here. Uber China did not begin operating until 2014 and operated under a separate ownership structure prior to its sale to Didi Chuxing[7]. Uber Global only had a minority shareholding. Thus Uber Global could not have included Uber China results in any of its EBITAR contribution or GAAP operating profitability numbers, and could only have included the percentage of China losses assigned to its minority shareholding as a non-operating expense. The news reports of Uber's first half 2016 losses said that Uber had not yet incorporated any Chinese losses onto its Global balance sheet, some of which will be offset by Uber's new 17.5% shareholding in Didi, and Didi's \$1 billion investment in Uber.

The press has reported numerous unsubstantiated assertions that Uber was on the verge of profitability, or that operations in individual markets were profitable. In September 2015, Travis Kalanick said that Uber's North American operations would be profitable by early 2016[8], but did not explain whether this meant actual (GAAP) profitability, or an artificial interim contribution measure such as EBITAR or positive cash-flow. Uber has not presented any evidence that Kalanick's promise has been achieved.

Since Uber's corporate expenses are almost entirely joint/overhead costs that cannot be directly linked to current operations in specific markets, it would be easy to claim positive contribution numbers despite massive actual GAAP losses. The article reporting Uber's 2015 losses said "the company expects older markets in developed countries to generate billions of dollars in profit in the coming years." [9] But the \$4 billion profit improvement needed to convert

today's \$2 billion losses into a \$2 billion profit would require some combination of the most staggering efficiency gains in the history of private enterprise (total Global Uber expense in Exhibit 2 was \$3.4 billion) and humongous fare increases (fares would need to have quadrupled to have produced a \$2 billion profit in 2015).

Uber's refusal to consider an IPO may best be explained by the recognition that publishing detailed, audited financial data confirming these massive losses and the complete lack of progress towards profitability could undermine public confidence about its inevitable march to industry dominance.

There have been hundreds of articles claiming that Uber has produced wonderful benefits, but none of these benefits increase consumer welfare because they depended on billions in subsidies. Uber is currently a staggeringly unprofitable company. Aside from the imposition of unilateral cuts in driver compensation, there is no evidence of any progress towards breakeven, and no one can provide a credible explanation of how Uber could achieve the billions in P&L improvements needed to achieve sustainable profits and investor returns.

Uber's growth to date is entirely explained by its willingness to engage in predatory competition funded by Silicon Valley billionaires pursuing industry dominance. But this financial evidence, while highly suggestive, cannot completely answer the question of how an Uber-dominated industry would impact overall economic welfare.

The next articles in this series will examine the critical questions of cost competitiveness and industry dynamics. Could Uber ever produce urban car services as efficiently as the incumbent operators it has been driving out of business? Is Uber's business model based on the types of major product/technological/process breakthroughs that could provide sustainable competitive advantages large enough to justify the losses its investors have been subsidizing to date? Has Uber transformed urban car services into a "winner-take-all" market? Do the billions that the capital markets have invested in Uber and similar companies reflect a reallocation of resources from less productive to more productive uses? Is Uber's pursuit of returns on the \$13 billion its investors have provided consistent with the normal workings of competitive markets?

[1] Newcomer, Eric, *Uber Bonds Term Sheet Reveals \$470 Million in Operating Losses*, Bloomberg, 29 Jun 2015; see also Biddle, Sam, *Here Are the Internal Documents that Prove Uber Is a Money Loser*, Gawker, 15 Aug 2015; Griffith, Erin, *For high-risk start-ups like Uber, big ambitions don't make losses any less unsettling*, Los Angeles Times, 11 Aug 2015;

[2] Efrati, Amir, *Uber's Losses Grow*, The Information, 11 Jan 2016; Salomon, Brian, *Leaked: Uber's Financials Show Huge Growth, Even Bigger Losses*, Forbes, 11 Jan 2016. ;Newcomer, Eric & Huet, Ellen, *Facing a Price War, Uber Bets on Volume*, Bloomberg, 21 Jan 2016

[3] Newcomer, Eric, *Uber Loses at Least \$1.2 Billion in First Half of 2016*, Bloomberg, 25 Aug 2016; Issac, Mike, *How Uber Lost More Than \$1 Billion in the First Half of 2016*, New York Times, 25 Aug 2016 The bottom line in the first set of reports was labeled as either "Net Loss" or EBIT (earnings with only interest and taxes excluded) but is presumed to be EBITAR the second set of reports shows that 40% of total GAAP expenses were excluded from EBIT numbers, and the third set was explicitly labeled as EBITAR.

[4] Hansell, Saul, *Amazon, Facing Slowdown, Cuts 1,300 Jobs*, The New York Times, 31 Jan 2001

[5] Griffith, Erin, *The problem with 'Uber for X'*, Fortune, Aug 2015

[6] Uber began implementing driver compensation cutbacks in the second half of 2015. Huet, Ellen, *Uber Tests Taking Even More From Its Drivers With 30% Commission*, Forbes, 18 May 2015.

[7] Uber China was valued at \$8.2 billion based on an investment base of \$1.2 billion. Bensinger, Greg & Winkler, Rolfe, *Uber-Didi Tie-Up Threatens Lyft in U.S.*, Wall Street Journal, 2 Aug 2016. Hook, Leslie, *Uber's battle for*

China, Financial Times Magazine, Jun 2016.

[8] Newcomer supra note 1

[9] Efrati supra note 2

Can Uber Ever Deliver? Part Two: Understanding Uber's Uncompetitive Costs

 nakedcapitalism.com/2016/12/can-uber-ever-deliver-part-two-understanding-ubers-uncompetitive-costs.html

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Yves here. Hubert Horan has graciously offered to add one more post to what was originally a four-part series. He will discuss reader comments and issues not addressed in the series proper in an additional article. Part four and his extra piece will run Monday and Tuesday of next week.

By Hubert Horan, who has 40 years of experience in the management and regulation of transportation companies (primarily airlines). Horan has no financial links with any urban car service industry competitors, investors or regulators, or any firms that work on behalf of industry participants.

This is the second of a series of articles that will use data on industry competitive economics to address the question of whether Uber's aggressive efforts to completely dominate the urban car service industry has (or will) increase overall economic welfare.

A positive answer to this question requires clear evidence that Uber can (or is on the verge of being able to) operate on a sustainably profitable basis in a competitive market, clear evidence that Uber can produce urban car service significantly more efficiently than the traditional operators it has been driving out of business, compelling evidence that Uber's business model is based on major product/technological/process breakthroughs that create huge competitive advantages incumbents could not match, and that Uber can earn returns on the \$13 billion its investors have provided within the normal workings of open, competitive markets, while ensuring that the gains from its efficiency and service breakthroughs are shared with consumers.

To state the question another way, does Uber's meteoric growth and unprecedented \$69 billion valuation reflect an efficient reallocation of resources from less productive to more productive uses?

The first article [presented evidence that Uber is a fundamentally unprofitable enterprise](#), with negative 140% profit margins and incurring larger operating losses than any previous startup. Uber's ability to capture customers and drivers from incumbent operators is entirely due to \$2 billion in annual subsidies, funded out of the \$13 billion its investors have provided. That P&L evidence shows that Uber did not achieve any meaningful margin improvement between 2013 and 2015 while the limited margin improvements achieved in 2016 can be entirely explained by Uber imposed cutbacks to driver compensation.

Thus there is no basis for assuming Uber is on the same rapid, scale economy driven path to profitability that some digitally-based startups achieved. In fact, Uber would require one of the greatest profit improvements in history just to achieve breakeven.

Unlike other well-known tech "unicorns," Uber has not created a totally new product or dramatically redefined a traditional market; it is not "disrupting" incumbent operators with a totally new way of doing business but is driving passengers from point A to point B in cars, just like traditional urban car service operators always have. To achieve the overwhelming industry dominance that Uber is seeking it would need to find ways to provide service at

substantially lower costs.

This article presents evidence about the cost structure of traditional operators, and evaluates, based on Uber's actual practices and historical industry evidence, whether Uber has a meaningful cost advantage in any of these cost categories, or the potential to achieve substantially lower unit costs as it grows. Can Uber's massive losses and investor subsidies be justified as an "investment" that will yield returns in the near future once its potential efficiency advantages (and scale economies) kick in?

Uber Extended the Industry's Longstanding Segregated (Corporate/Driver) Business Model

When considering financial and cost data, keep in mind that taxi service is provided under a two-part business model, with drivers classified as independent contractors. Since the 1970s most traditional taxi companies have actually been leasing companies; drivers pay a fixed lease fee covering the costs of vehicle ownership and maintenance and corporate overhead services such as dispatching, branding/marketing and credit card processing. Traditional drivers retain all of the money paid by passengers, but pay for gas and bear the risk that fare revenue on a given shift might not be enough to provide meaningful take home income after covering the leasing fees and the workman's comp and health insurance costs taxi companies do not pay for.

The Uber model takes the contracting model further by additionally shifting all vehicle costs and capital risk to drivers. Uber takes 30% of passenger revenue but only provides corporate overhead services. To evaluate questions of efficiency and competitiveness one needs to consider the entire (corporate+driver) business model since neither business model can work in the marketplace unless both the corporate entities and their driver contractors can achieve reasonable earnings.

85% of Taxi Costs Are the Direct Costs of Vehicles, Fuel and Drivers

There are four major components of urban car service costs: driver compensation (take home pay plus the benefit costs they must cover), fuel and fees directly related to passenger service (credit card fees, airport access fees, tolls, cell phone charges), vehicle ownership and maintenance, and corporate overhead and profit (including dispatching and branding/marketing). Detailed cost data from studies of traditional operators in Chicago, San Francisco and Denver showed that 58 cents of every gross passenger dollar (fares plus tips) went to driver take home pay and benefits, 9 cents went to fuel and direct fees, 18 cents went to vehicle costs and the remaining 15 cents covered corporate overhead and profit. [1] These percentages can vary slightly depending on fuel price swings and local practices, but reasonably reflect the relative size of the four cost categories at traditional operators under current conditions.

Uber is the Industry's High Cost Producer

Can Uber produce urban car services more efficiently — at sustainably lower cost — than traditional operators? Can Uber's success in driving incumbents out of business and achieving the largest venture capital valuation in history be explained by a powerful competitive efficiency advantage?

If one examines the four components of industry cost it becomes apparent that the opposite is true. Uber not only lacks the major cost advantage that a company seeking to drive incumbents out of business would be expected to have, but actually has higher costs than traditional car service operators in every category, except for fuel and fees where no operator can achieve a cost advantage.

These structurally higher costs are fully consistent with the ongoing, multi-billion dollar losses documented in part one of this series, and the finding that Uber's rapid growth is driven by massive investor subsidies, and not by superior service or efficiency.

The first two rows on Exhibit 1 quantifies the difference between the two business models. Traditional taxi leasing companies pay 33% of these costs (vehicle and corporate costs) plus the vehicle capital risk; since the Uber model

shifts vehicle costs and risks to drivers, they are only covering 15% of the total cost structure and bear none of the capital risk. .

Exhibit 1: Distribution of Taxi Revenue (including tips) by cost category	Traditional Actual costs	Tradit adj to Uber model	Can Uber Achieve Significantly Lower Costs Than Traditional Cab Companies?	
total costs paid by drivers:	67%	85%		
total costs paid by corporate:	33%	15%		
driver compensation (take-home pay plus self-funded benefit costs)	58%	58%	NO	Uber's growth impossible without much higher driver costs
fuel and direct fees	9%	9%	NO	Everyone faces same fuel costs
vehicle ownership and maintenance (in traditional model corporate pays; in Uber model driver pays)	18%	18%	NO	Independent drivers pay more for insurance/vehicles/financing and maintenance than existing operators
dispatch/overhead and corporate profit	15%	15%	NO	Uber charges 20-30% of revenue but has much higher costs (global branding, software, ROI on \$13B)

Higher driver compensation. Recent in-depth studies from Chicago, Boston, New York and Seattle show that the 58 cents retained by traditional taxi drivers provides hourly take-home rates in the \$12-17 range (in 2015 dollars) and that full-time drivers can only realize those hourly averages if they work 60-75 hours a week.[2] True pre-tax earnings are even lower since workman's compensation, health insurance and some miscellaneous expenses must be covered out of take-home pay. 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).[3]

Uber needed extraordinary traffic and revenue growth in order to fuel the growth of its (now \$69 billion) financial valuation. In addition to the massive subsidies for uneconomical fare and service levels needed to shift passengers away from traditional operators, Uber needed to subsidize uneconomical driver compensation premiums large enough to get hundreds of thousands of drivers to abandon other operators and sign up with Uber.

Uber's above-market driver compensation meant its drivers were often more professional and drove better maintained cars than their lower paid counterparts. In a competitive market drivers would have no incentive to drive for Uber if it paid the same as traditional operators (why take on all the vehicle expense and risk for the same \$12-17/hour Yellow Cab pays?) And it would be impossible for Uber to ever achieve a driver cost advantage over incumbents without paying significantly less than traditional operators, which would require pushing average take-home wages down to (or perhaps below) minimum wage levels

Higher vehicle costs. It is inconceivable that hundreds of thousands of independent, poorly financed Uber drivers Uber could ever achieve lower vehicle ownership, financing and maintenance costs than professional fleet managers at a reasonably managed traditional operator, or do a better job balancing long-term asset costs against local market revenue potential. Shifting operating costs and capital risk from Uber's investors onto its drivers does not eliminate them from the overall business model, and actually makes them higher.

Every other transport industry depends on highly centralized management using highly sophisticated systems to ensure that capital assets are highly utilized and tightly scheduled around market demand. The Uber business model implies that all these industries are horribly wrong; decentralizing asset purchasing, maintenance and scheduling to isolated low-wage workers would not only reduce costs, but create an efficiency gain large enough to drive all incumbent operators out of business. No one has produced any economic evidence demonstrating that the Uber view might be correct.

Higher dispatch and corporate costs. Traditional taxi owners take 15 cents of each passenger dollar to cover dispatching, corporate overhead and profit while Uber currently takes 30 cents. But Uber's costs are much, much higher; even though they provide less than half the service of traditional companies. The P&L data clearly shows

these charges come nowhere close to covering Uber's actual corporate expenses. Unlike traditional cab companies, Uber fees need to cover the cost of global marketing, software development programs, branding and lobbying programs, the huge market development costs of Uber's expansion into hundreds of new cities and must also fund a return on the \$13 billion its owners have invested.

Uber Used "Strategic Misinformation" To Elide Its Catch-22 Problem With Driver Costs

Uber's above-market drive pay premiums created a competitive Catch-22; they fueled the rapid growth that was critical to its unprecedented valuation and established the perception that Uber had better drivers and vehicles. However, that also meant Uber would have a hopelessly large cost disadvantage in the biggest and most important cost category. Cutting driver compensation back to previous market levels would also halt growth and undermine Uber's perceived quality advantage.

Uber dealt with this Catch-22 with a combination of willful deception and blatant dishonesty, exploiting the natural information asymmetries between individual drivers and a large, unregulated company. Drivers for traditional operators had never needed to understand the true vehicle maintenance and depreciation costs and financial risks they needed to deduct from gross revenue in order to calculate their actual take home pay.

Ongoing claims about higher driver pay that Uber used to attract drivers deliberately misrepresented gross receipts as net take-home pay, and failed to disclose the substantial financial risk its drivers faced given Uber's freedom to cut their pay or terminate them at will. Uber claimed "[our} driver partners are small business entrepreneurs demonstrating across the country that being a driver is sustainable and profitable...the median income on UberX is more than \$90,000/year/driver in New York and more than \$74,000/year/driver in San Francisco"[4] even though it had no drivers with earnings anything close to these levels.[5]

After these claims were readily debunked[6] Uber responded with allegedly "academic" research (which Uber administered and paid for) which claimed Uber drivers earned more than traditional taxi drivers but made no effort to calculate actual net earnings, and concealed the fact that Uber salaries were massively subsidized while traditional taxi salaries were constrained by actual passenger revenues.[7]

In mid-2015, after hundreds of thousands of drivers were locked in to vehicle financial obligations, Uber eliminated driver incentive programs and reduced the standard driver share of passenger fares from 80 to 70 percent.[8] This transfer of passenger dollars from Uber drivers to Uber investors drove all of its 2016 margin improvement, 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 driver revenue and vehicle expenses 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 drivers in Seattle, Chicago, Boston and New York and found that Uber was still recruiting drivers with earnings claims that reflected gross revenue, and did not mention expenses or capital risk.[9] In the absence of artificial market power, it is not clear how Uber could sustain either higher driver compensation, or the misinformation that created the false impression that it pays significantly better than traditional operators.

Uber Cannot Grow Into Profitability

Many successful startup companies experienced large initial losses but used scale and/or network economies to dramatically improve cost competitiveness and margins as they grew, although Uber's losses to date (\$2 billion a year) are significantly larger than any previous tech startup. But as noted in the first article in this series, the urban car service industry has never displayed evidence of significant scale economies,[10] Uber's actual financial results show none of the rapid margin improvements that would occur if strong scale economies actually existed, and Uber has none of the characteristics of the digital companies that were able to "grow into profitability."

Exhibit 2: Distribution of Taxi Revenue (including tips) by cost category	Traditional Costs (actual)	Tradit adj to Uber model	Can Uber Exploit Major Scale/Network Economies as it grows?	
total costs paid by drivers:	67%	85%		
total costs paid by corporate:	33%	15%		
driver compensation (take-home pay plus self-funded benefit costs)	58%	58%	NO	Gains only if more off-peak revenue
fuel and fees (paid by driver)	9%	9%	NO	
vehicle ownership and maintenance (in traditional model corporate pays; in Uber model driver pays)	18%	18%	NO	Independent drivers cannot exploit fleet economies that large traditional operators can
dispatch/overhead and corporate profit	15%	15%	NO	Very limited dispatch economies but more than offset by higher branding, market development, ROI expenses

Exhibit 2 summarizes scale economy issues for each major cost category. There are no scale economies related to the 85% of costs related to direct operations; each shift involves one vehicle and one car regardless of the size of the company. This is why there has never been any natural tendency towards significant concentration in individual taxi markets, and why taxi companies rarely expanded beyond their original markets.

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 decentralized business model precludes the efficiencies integrated operators can achieve such as volume purchasing of vehicles and insurance and the use sophisticated systems to optimize asset acquisition 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 purely 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 had no competition (entirely new products like EBay or Facebook) or were facing 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 challenges. Uber's unit expansion costs appear to have increased dramatically as it expanded outside the United States.

Uber also has no potential to exploit the network economies that some purely digital companies used to drive major profit improvements. In these cases (EBay's exchange market, Google's search function, Facebook's social media product) the development of a strong user base makes the product significantly more efficient and more attractive to other users. This locks-in existing users, fuels growth, and makes it nearly impossible for later entrants with smaller user bases to compete.

By contrast, neither Uber's ordering app, nor the ordering apps of other operating companies create these network economies or locks-in users the way EBay and Facebook and Google have. In a competitive market, people will use the app of companies like Uber or American Airlines if they can profitably provide good prices and service, but no one will abandon Yellow Cab or JetBlue just because a lot of other people have the bigger company's app on their phones.

Will the growth of Uber increase or decrease overall economic welfare?

The first post in this series laid out the evidence of Uber's staggering losses. Uber has grown because consumers have been choosing the company that only makes them pay 41% of the cost of their trip; there is no evidence that taxi customers in a competitive market would pay more than twice as much for the service quality advantages Uber investors have been subsidizing. Incumbent operators have been losing share and filing bankruptcy because they cannot compete with Silicon Valley billionaire owners willing to finance years of massive subsidies as they pursue industry dominance.

This post focused on the cost structure of the urban car service industry in order to demonstrate that Uber has structurally higher costs than its competitors, and lacks the scale economies other startups have used to rapidly reduce unit costs. In the absence of the massive scale economies that digital companies enjoy, there is a fundamental contradiction between incurring the cost of providing higher levels of capacity and service quality, and achieving costs low enough to drive incumbents out of the market.

If one examines the components of urban car service costs, there is no basis for claiming Uber could ever eliminate its structural cost disadvantage, much less achieve the massive cost advantage needed if its march to industry dominance is to be justified on economic welfare terms. The findings that Uber is the industry's high cost producer and lacks any meaningful scale economies are entirely consistent with the P&L data presented in the first post.

In most industries, years of evidence about massive losses, the lack of margin improvements, and structurally uncompetitive costs would be sufficient support for the conclusions that the displacement of incumbent companies by the new entrant had not increased economic welfare, and that the capital markets that had funded the new entrant were not allocating society's resources to more productive uses. Silicon Valley funded tech unicorns have regularly claimed that these traditional financial standards are inadequate because they have been introducing massive product/technological/process innovations that totally "disrupt" traditional industry economics, and the public discussion of Uber has been dominated by claims about its innovative breakthroughs.

In reality, if the alleged innovative breakthroughs have not made major impacts on service, efficiency and profitability, then they are not really innovative breakthroughs. In the case of Uber the question becomes why haven't these "disruptive innovations" yet produced competitive cost advantages or profits?

The next installment of this series will examine a range of claimed Uber "innovations"—sharing economy efficiencies, market growth, Uber's app and surge pricing—and examine whether any of these could constitute the type of large, sustainable competitive advantage that could eventually justify Uber's growth and industry dominance in economic welfare terms.

[1] Seattle Consumer Affairs Unit, *Seattle Taxicab Industry Revenue And Operating Statistics* (2010); and Taxicab Industry Revenue Flow Diagram; San Francisco Municipal Transportation Agency, *Meter Rates & Gate Fees*, prepared by Hara Associates (Aug 2013); author's analysis of Denver taxi operators annual financial reports to the Colorado Public Utility Commission. All data was restated in 2015 dollars. Seattle data assumed the use of Ford Crown Victoria and higher 2010 fuel prices and were adjusted to reflect the higher original cost of hybrid vehicles and the lower 2013 fuel prices reflected in the San Francisco and Denver data. Driver take-home pay must cover workman's compensation and any health insurance costs drivers incur.

[2] Chicago Business Affairs and Consumer Protection, *Taxi Fare Rate Study*, prepared by Nelson Nygaard Associates (2014); *Boston Taxicab Consultants Report*, prepared by Nelson Nygaard Associates and Taxi Research Partners (2013); Seattle Consumer Affairs Unit *supra* note 15; New York Taxi and Limousine Commission, *New York City Taxicab Fact Book*, prepared by Schaller Consulting (2006). 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.

[3] Census Bureau American Community Survey data excluding drivers working 40 hours or less. Transportation Research Board, *Between Public and Private Mobility, Examining the Rise of Technology-Enabled Transportation Services*, 52-3 (2015)

[4] 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., McFarland, M., *Uber's Remarkable Growth Could End The Era Of Poorly Paid Cab Drivers*, Washington Post, 27 May 2014.

[5] “In several months of reporting on Uber, 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.” Griswold, Alison, *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, 27 Oct 2014. These figures appeared to have resulted from extrapolating the hourly receipts of drivers who only drove a handful of peak-demand hours a week.

[6] Kedmey, D., *Do UberX Drivers Really Take Home \$90K A Year On Average? Not Exactly*, Time, 27 May 2014. Rail, T., *Fact checking Uber’s claims about driver income. Shockingly, they’re not true*, Pando Daily, 29 May 2014. Singer, J., *Beautiful Illusions: The Economics of UberX*, Valleywag, 11 Jun 2014.

[7] The academic was Alan Krueger of Princeton, a former White House colleague of Uber executive David Plouffe. Issac, Mike, *Hard-Charging Uber Tries Olive Branch*, New York Times, 1 Feb 2015.

[8] Huet, Ellen, *Uber Tests Taking Even More From Its Drivers With 30% Commission*, Forbes, 18 May 2015.

[9] O’Donovan, Caroline & Singer-Vine, Jeremy, *Uber Data And Leaked Docs Provide A Look At How Much Uber Drivers Make*, BuzzFeed, 22 Jun 2016.

[10] 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. Pagano, A. M., & McKnight, C. E., *Economies of Scale In The Taxicab Industry: Some Empirical Evidence From The United States*. *Journal of Transport Economics and Policy*, (1983).299-313; Dempsey, Paul, *Taxi Industry Regulation, Deregulation, and Reregulation: The Paradox of Market Failure*. *Transportation Law Journal*, 24(1),115-16 (1996)

Can Uber Ever Deliver? Part Three: Understanding False Claims About Uber's Innovation and Competitive Advantages

 nakedcapitalism.com/2016/12/can-uber-ever-deliver-part-three-understanding-false-claims-about-ubers-innovation-and-competitive

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By Hubert Horan, who has 40 years of experience in the management and regulation of transportation companies (primarily airlines). Horan has no financial links with any urban car service industry competitors, investors or regulators, or any firms that work on behalf of industry participants

Uber is Staggeringly Unprofitable, Is the Industry's High Cost Producer, and Cannot "Grow Into Profitability"

This is the third of a series of articles that will use data on industry competitive economics to address the question of whether the Uber's aggressive efforts to completely dominate the urban car service industry has (or will) increase overall economic welfare.

The capital markets, which ignored the industry for over a hundred years, have made massive investments in Uber and related companies. Are these markets benefiting society by allocating capital to more productive uses? A judgement that a Uber-dominated industry would enhance overall welfare requires evidence that:

Uber can (or will soon be able to) earn sustainable profits in a competitive market

Uber can operate urban car services significantly more efficiently than the traditional operators they have been driving out of business,

Uber has introduced major product/technological/process breakthroughs that create huge competitive advantages incumbents could not match,

Uber can earn returns on the \$13 billion its investors have provided within the normal workings of open, competitive markets, while ensuring that the gains from its efficiency and service breakthroughs are shared with consumers.

The first article presented evidence [that Uber is a fundamentally unprofitable enterprise](#), with negative 140% profit margins and incurring larger operating losses than any previous startup. Uber's ability to capture customers and drivers from incumbent operators is entirely due to \$2 billion in annual subsidies, funded out of the \$13 billion its investors have provided. That P&L evidence shows that Uber did not achieve any meaningful margin improvement between 2013 and 2015 while the limited margin improvements achieved in 2016 can be entirely explained by Uber imposed cutbacks to driver compensation.

The second article presented a breakdown of the taxi industry's cost structure, [and demonstrated that Uber was the](#)

industry's high cost producer, with a significant cost disadvantage in every cost category except fuel and fees where no operator could achieve any advantage. It also explained that Uber could not "grow into profitability" because there were no significant scale economies related to any of these cost categories. Both findings were completely consistent with the P&L evidence in the first article showing huge operating losses, and no evidence of the rapid margin improvement shown by past digital startups, whose businesses could exploit major scale economies.

Any Major Business Model "Innovations" Should Have Already Had Major P&L Impacts

This article will focus on the question of whether the Uber business model is based on breakthrough product/technological/process innovations.

It must be emphasized that "competitive advantage," as used in these articles, refers strictly to advantages powerful enough to transform the industry's competitive dynamic, allowing one company to profitably grow much faster than its competitors. Consumers might prefer certain product attributes offered by one company, but unless they significantly alter market and profit shares within the industry, they do not constitute "competitive advantages".

Unlike previous tech startups, Uber has never made any specific, detailed claims about the sources of competitive advantage that might explain its rapid growth. While it has discussed aspects of its business model, Uber has never presented evidence about their efficiency/service impacts that independent outsiders could review. There have been scores of articles in the business press speculating about possible explanations for Uber's rapid growth, but all ignore the billions in subsidies that have funded growth to date, and none were based on any hard evidence about their impact on industry competition.

Since there are no formal, documented claims about Uber's competitive advantages that can be confirmed or challenged, this article will review a set of the most common undocumented claims found in media coverage.

If Uber had actually implemented transformative change, evidence of the transformative impact should have already appeared in the financial data presented in the previous two articles.

Uber has been operating since 2010. If Uber had dramatically redefined the product and the market, one would see obvious, tangible evidence of how its service was dramatically different from traditional taxis, and one would see huge demand growth in response to the totally new product offering. If Uber had found ways to produce urban car service significantly more efficiently than incumbents, one would see obvious, tangible evidence of its lower production costs and one would see superior profitability or at least strong, steady margin improvements on a clear path towards sustainable profitability.

In fact, there is no evidence of any of those things. One can observe product and service advantages over traditional operators, but these can be entirely explained by massive subsidies. Uber users pay only 41% of the cost of their service; it has gained share because competitors need to charge users 100% of their costs there is no evidence that taxi customers in a competitive market would pay more than twice as much for the service quality advantages Uber investors have been subsidizing.

If "innovations" are not powerful enough to transform product or operating economics, then they are not relevant to a discussion of how industry competition has been transformed, or whether that transformation will actually improve economic welfare. This article will consider many of the innovations that Uber supporters have suggested as possible sources of Uber's transformative, disruptive competitive power. The question is why any of these might drive dramatic profit improvement in the future, when they have had no apparent impact in the past six years.

Unlike Uber, Amazon Proactively Publicized Its Many Legitimate Competitive Advantages

It is useful to compare the public claims and perceptions about Uber's growth with the case of Amazon, which like Uber, was seeking to drive a massive set of incumbent competitors out of business in order to achieve long-term industry dominance.

Amazon's business model was focused on "disrupting" a book retailing industry that had high prices, high margins and high costs. By contrast, Uber cannot explain how it will realize billions in profit from an industry selling a commodity product with razor-thin margins that had already cut costs to the bone. Unlike Uber, Amazon proactively provided outsiders with compelling, verifiable evidence of the sources of its (potential) efficiency and scale advantages. These included the huge savings from eliminating "brick-and-mortar" retail locations, enormous scale economies in warehousing and distribution, sophisticated software that not only processed customer orders but dramatically simplified product search and identified customer-tailored buying suggestions, increased leverage with publishers and other suppliers, and huge scale economies that allowed it to expand geographically and into new markets at negligible marginal cost once its basic selling and warehousing/distribution infrastructure was in place.

The huge scale economies meant it could rapidly drive down unit costs as it grew, building strong loyalty through rock-bottom prices, and making it virtually impossible for existing (or new) entrants to ever match its efficiency levels. Amazon's efficiency claims could be readily verified by objective outsiders who were expert in the relevant retailing, warehousing and ecommerce fields.

Amazon's digital platform meant it could expand into other lower-margin businesses but did not invest heavily in these new businesses until it had secured a sustainable position in its core business. Unlike Uber, Amazon encouraged an active public discussion of its business model in order to build credibility and support in the financial community. While many observers were uncertain about Amazon's long term profit potential, and questioned specific practices, there was universal agreement that its ability to rapidly capture share from industry incumbents was based on legitimate competitive advantages.^[1]

Uber Has Not Been Exploiting Powerful "Sharing" or "On-Demand Economy" Efficiencies

Two of the primary narratives constructed to "explain" Uber's growth were that it was pioneering the development of the "sharing economy" and the "on-demand economy." Both narratives extrapolated wildly from claims that had no real-world economic basis, and that have never been successfully exploited in any other setting.

The alleged basis of the "sharing economy" was that cars were only used 56 minutes a day on average, and that "ridesharing" companies like Uber were creating huge value by exploiting the 97% of the time when cars were idle.

This ignored the fact that the overwhelming majority of personal items had much lower utilization, and that "sharing" businesses had existed for decades but because personal ownership and control had huge value almost never expanded beyond tiny, obscure niches (tuxedos, bowling shoes), and in the rare cases with broader demand (car rentals) prices were always substantially greater than the comparable cost of direct ownership.

"Sharing economy" claims misrepresented a rare, marginal opportunity (borrowing otherwise idle garden tools from a neighbor) as something that could drive the economics of a global-scale industry. Yes, an isolated individual with a truck and a few hours of free time might be able to deliver a few packages at lower cost than the average UPS delivery van, but it is ludicrous to argue that independent truck drivers responding to delivery requests from a cellphone app in their spare time could drive UPS out of business and serve its entire national market at lower cost.

An individual with nothing else to do could decide to use his car to serve Uber passengers for a few hours on Saturday night, but Uber could never replace all existing taxi capacity nationwide with guys driving their personal cars for a few hours when it happened to fit their schedules. Serving the global car service market requires massive fleets of full time drivers and dedicated vehicles. Uber is no more a "ridesharing" company than United Airlines is a "planes sharing" company.

Uber has always claimed it designed so that people could just "push a button and get a ride" and hundreds of other startups have pursued this "on-demand" model in other fields such as food delivery or office supplies. But the operational costs and challenges of taxi service (and delivery/logistical services) have been known for decades, including huge demand peaks, unplannable volatility (demand spikes when it rains), and empty backhauls.

Mitigating these costs requires advance knowledge of customer demand, and integrated, centralized operations planning. Package delivery companies can arrange trips to minimize unproductive backhaul mileage, and can shift lower priority deliveries to off-peak times. The instant gratification that “on-demand” services are supposed to provide make all these costs and challenges worse. Resource utilization plummets because more drivers and vehicles must stand by to serve the Saturday night peak, but driver assignments can’t be optimized because people who wanted to just “push a button and get a ride” wouldn’t book their trips in advance, and Uber’s business model eliminates the possibility of centralized operations planning.

For these reasons, none of Uber’s many attempts to expand into other “on-demand” services, such as UberEats, UberRush, UberFresh or UberEssentials have demonstrated any ability to expand outside of narrow niches, and none of the many other startups focused on “on-demand” services have become profitable, growing businesses.^[2] The basic economics of “on-demand” services—designed for a narrow set of customers willing to pay a premium for immediate service whenever they feel like it—are fundamentally incompatible with Uber’s goal of providing a major portion of urban transport infrastructure.

Uber Has Not Expanded the Market for Urban Car Services

Although nothing in Uber’s business model or actual financial results suggests either near-term profitability or the existence of major scale economies, Uber and its supporters regularly argue that its valuation is justified by its nearly unlimited growth potential.^[3] Bill Gurley, one of Uber’s original investors argued that using Uber would soon become cheaper than driving your own car—its market potential should not be based on the size of historic taxi demand but the size of the entire urban ground transportation market. But Gurley failed to disclose the magnitude of current losses and did not explain how Uber could ever produce taxi service as efficiently as current operators, much less how it cut costs to the point where its prices would be fully competitive with car ownership and transit services.^[4]

Uber’s Use of “Independent” Drivers Is Not an Innovation and Does Not Increase Efficiency

As discussed in the second installment of this series, the use of independent contractor drivers is not an Uber innovation, although Uber takes the longstanding practice a step further by shifting vehicle costs and capital risks onto its drivers.

Independent contracting transfers wealth from labor to capital but does not improve efficiency or service; when introduced in New York in the late 70s/early 80s fleet owner income increased on a per shift basis by 72%, while hourly driver take-home pay fell 23%.^[5] Independent contracting makes the integrated network revenue and capital asset management that is central to every other transport mode impossible. Independent contracting would destroy all airline, freight and transit networks since no one would show up to operate trips that were critical to network efficiency but had poor trip revenue.

Uber’s App Is Not a Powerful Technological Breakthrough

Many consumers seem to like Uber’s ordering/dispatching smartphone app, but it has not had any material impact on cost efficiency, and has not done anything to help Uber’s huge corporate cost disadvantage. It offers some useful functionality, but since this software can be (and has been) easily replicated, it could not create a long-term advantage.

Hundreds of other consumer industries have migrated from telephone ordering to smartphone and internet 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. The major emphasis on the app in pro-Uber articles appears to be symbolic; the app implies the existence of magically new “on-demand” efficiencies (just push a button and your car appears).

Highlighting the app also implies that Uber is a “technology company” that has completely “disrupted” industry

economics, and is not simply a traditional company like Domino's Pizza that is utilizing smartphone ordering. Needless to say, none of these articles are written by anyone with actual expertise in ecommerce or urban transportation, and none provide any evidence supporting the claim that the app represents breakthrough technology that gives Uber a powerful competitive advantage.

Uber's Surge Pricing Does Not Increase Efficiency

Some Uber supporters have falsely claimed that its use of surge pricing [6] is a major breakthrough comparable to variable pricing systems in airlines, hotels and other travel industries. From his 30 years in aviation, the author has extensive experience with how modern pricing tools can actually improve industry efficiency and consumer welfare. Uber's Surge Pricing lacks most of the market information critical to the benefits these systems create, used extremely crude (if not arbitrary) decision rules [7], and cannot achieve comparable efficiency impacts because urban car service market dynamics are totally different.

A comprehensive discussion is not possible here, but because people buy airplane tickets and hotel rooms well in advance, and have complete information about all of the price/schedule options in the marketplace these systems allow demand from both highly price sensitive and highly service/schedule sensitive customers to be satisfied while dramatically reducing capacity and operating costs. Airlines avoid buying planes for everyone whose first inclination is to fly on Friday evenings, and can offer huge discounts to people with schedule flexibility.

But research has long demonstrated that the timing of taxi demand is highly inelastic, (people want a cab at a very specific time) [8] so variable fares will not change demand patterns, improve taxi utilization or increase total revenue. All forms of urban transport have similarly inelastic demand; the Long Island Rail Road has had peak/off-peak pricing for 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. Uber's surge pricing simply raises fares (up to eight times normal levels) without prior warning. Given the short notice this does nothing to increase total taxi supply, but merely redistributes drivers to higher fare areas. [9]

More importantly, Uber's surge pricing reduces overall economic welfare because the sociological distribution of urban taxi demand is bipolar; 43% is from people earning less than \$20,000 (and 55% from people earning less than \$40,000), most of whom do not have cars while 35% is from people with incomes greater than \$100,000. [10] Studies show 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. Surge pricing reduces wait times for wealthier people returning home from restaurants and nightclubs by eliminating all service for lower income people working late night shifts that have no transit options. A pro-Uber paper by a major libertarian think tank simply dismissed these as "people who do not really need a ride." [11]

Uber Has Not Solved the Problems of Serving Peak Demand or Low-Density Neighborhoods

The market perception that Uber's offers superior service quality is entirely explained by unsustainable subsidies that boosted driver compensation and car capacity far above the levels that could be justified by passenger fares. By offering compensation substantially above previous market levels, Uber could obviously offer more professional drivers and newer, cleaner vehicles. However, passengers were only paying 41% of the actual costs to provide this level of quality, and there is no evidence that taxi customers in a competitive market would pay more than twice as much for the service quality advantages Uber investors have been subsidizing.

No one can explain how this quality advantage can be sustained as Uber cuts wages, and more drivers figure out their true take home pay, after accounting for vehicle costs and capital risks.

The industry's biggest service problems—limited and unreliable car availability when demand is highest (you can't get a cab after dinner on Saturday night, or 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.[12]

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 and people travelling to dining and entertainment venues.

The profitability of individual taxi trips varies widely depending on the associated empty backhaul costs, but 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 line with true incremental cost of each trip.

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 (downtown, shopping/entertainment districts, wealthier residential areas).

Taxi drivers struggling to make a living often refuse trips to these low-density neighborhoods, a problem that can be exacerbated by fear of crime and racial prejudice. If taxi companies set fares in line with true service costs, prices to low density neighborhoods would likely increase 50-100% and peak period prices would be 3-5 times normal levels.[13] As noted, Uber's surge pricing does not increase efficiency; it simply prices taxis out of the reach of many current users, reducing both total taxi demand and overall economic welfare.

Uber's \$69 Billion Valuation Has Not Been Driven by the Potential to Expand Into Other Markets

Claims that Uber's huge valuation is justified by growth opportunities beyond the urban car service such as delivery services, carpooling, transit services and "driverless cars" ignore the massive subsidies current operations depend.

Without sustainable car service profitability, Uber cannot expand into other businesses with even lower margins and earn an adequate return on capital. As discussed earlier, many of these claims assume non-existent "on-demand" industry economies. Amazon could easily enter new markets because the digital and warehousing/distribution systems they had built for bookselling could be adapted to other retail markets at very low cost, but it did not move into them until the financial viability of its core business had been firmly established.

Uber has made "driverless cars" a top strategic priority in 2016, but there is no evidence that this drove its rapid valuation growth in prior years, and it is unclear why investors would wager billions on the prospect that it will eventually be able to design and build highly sophisticated vehicles more efficiently than competitors such as Google, Tesla, Toyota, Mercedes-Benz, Ford and General Motors. Additionally, all of these competitors can realize returns from investment in new software and manufacturing processes at each stage of development, while Uber gets no benefit until the (highly uncertain) point when maximum level of automation is achieved, [14] and the cost of drivers can be eliminated. Uber's sudden, huge emphasis on the financial potential of cars without cars at some unspecified future date suggests it may want to distract attention from its inability to operate cars with drivers profitably.

Uber Has No Material Sources of Competitive Advantage That Would Allow It To Earn Sustainable Profits in a Competitive Market

Will the growth of Uber increase or decrease overall economic welfare?

The first post in this series laid out the P&L evidence of Uber's staggering losses. Uber has grown because consumers have been choosing the company that only makes them pay 41% of the cost of their trip. There is no evidence that taxi customers in a competitive market would pay more than twice as much for the service quality

advantages Uber investors have been subsidizing. Incumbent operators have been losing share and filing bankruptcy because they cannot compete with Silicon Valley billionaire owners willing to finance years of massive subsidies as they pursue industry dominance.

The second post laid out evidence of the cost structure of the urban car service industry in order to demonstrate that Uber was the industry's high cost producer, with structurally uncompetitive costs, and none of the scale economies needed to grow into profitability.

This post reviewed a wide range of claims about potential sources of competitive advantage, and found that none were based on actual evidence of industry economics, and none of the claimed sources had ever had major competitive impacts in any other industry, or ever created tens of billions in corporate value. The findings from the three posts are entirely consistent with one another, and consistent with the conclusion that Uber could never generate sustainable profits in a competitive market.

The critical caveat here is "in a competitive market". Uber's investors did not put \$13 billion into the company because they thought they could produce urban car service more efficiently than incumbents, and use those efficiencies to earn outsized profits under "level playing field" competitive conditions. Since Uber's entry in 2010, the urban car service market has had the polar opposite of "level playing field" competitive conditions, with small scale incumbents with no access to capital struggling to cover their bare bone costs facing a behemoth company funded by Silicon Valley billionaires willing to subsidize years of multi-billion dollar losses.

Needless to say, Uber's managers and investors are very smart people and have always been aware of Uber's losses, structural cost disadvantage, and their lack of product/efficiency based competitive advantages. The next article in this series will discuss that Uber's strategy for earning returns on its \$13 billion investment was always based on eliminating both competition, and any regulatory/legal obstacles to the exploitation of anti-competitive market power.

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[2] Griswold, Alison, *It's Time For Uber To Show It's More Than Just A Glorified Taxi Company*, Quartz, 4 Aug 2016. Lacy, Sara, *The only Uber of anything is Uber*, Pando Daily, 28 Jul 2015. Griffith, Erin, *The problem with 'Uber for X'*, Fortune, Aug 2015

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[4] Gurley, Bill, *How to Miss By a Mile: An Alternative Look at Uber's Potential Market Size*, Above The Crowd, 11 Jul 2014.

[5] Schaller, Bruce, & Gilbert, Gorman, *Villain or Bogeyman? New York's Taxi Medallion System*. Transportation Quarterly, 50(1) (1996).

[6] For basic descriptions of Surge Pricing by an Uber Board member and by an independent outsider see Gurley, Bill, *A Deeper Look at Uber's Dynamic Pricing Model*. Above the Crowd, 11 Mar 2014. Chen, L., Mislove, A. & Wilson, C., *Peeking Beneath the Hood of Uber*, Proceedings of the 2015 ACM Conference on Internet Measurement Conference, 496 (Oct 2015).

[7] "the surge algorithm was made of crude heuristics" Efrati, Amir, *Surge-Price Builder Leaves Uber*, The

[8] In particular, the timing of demand is highly inelastic (people want a cab now, not later) and near-term demand is price inelastic within reasonable ranges. Fravel, F. D. & Gilbert, G., *Fare Elasticities For Exclusive-Ride Taxi Services*, report prepared for the Urban Mass Transit Administration, U.S. Department of Transportation, (1978); Shreiber, C., *The Economic Reasons for Price and Entry Regulation of Taxicabs*, Journal of Transport Economics and Policy, 268 (1975). Frankena, M.& Pautler, P., *An Economic Analysis of Taxicab Regulation*, Staff Report of the Bureau of Economics, Federal Trade Commission, 162-164 (1984); Schaller, Bruce, *Elasticities for Taxicab Fares And Service Availability*, Transportation, 26(3), 283-297 (1999).

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[10] Schaller, Bruce, *Taxi, Sedan and Limousine Industries and Regulations*, prepared for the Committee for Review of Innovative Urban Mobility Services, Transportation Research Board, 3-5 (2015) at 8-11; Pucher, J., & Renne, J. L., *Socioeconomics of Urban Travel: Evidence From the 2001 NHTS*, Transportation Quarterly, 57(3), 49 (2003).

[11] Meyer, Jared, The Manhattan Institute, *Uber-Positive: Why Americans Love the Sharing Economy*, Encounter Books. Kindle Edition, 21 (2016)

[12] As with driver salaries, Uber has 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. Alba, D., *Uber Cheaper, Faster Than Taxis In Low-Income Neighborhoods*, Wired 20 Jul 2015. <http://www.wired.com/2015/07/uber-cheaper-faster-taxis-low-income-neighborhoods/>

[13] If taxi companies provided drivers and fleets 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

[14] 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”). *Levels Of Driving Automation Are Defined In New SAE International Standard J3016*

Can Uber Ever Deliver? Part Four: Understanding That Unregulated Monopoly Was Always Uber's Central Objective

 nakedcapitalism.com/2016/12/can-uber-ever-deliver-part-four-understanding-that-unregulated-monopoly-was-always-ubers-centra

12/5/2016

Yves here. To underscore the point that Hubert Horan is making, you can't achieve a monopoly if you are a high cost producer who has no prospect of achieving economies of scale or scope in a field with few barriers to entry. As we've discussed, Uber's app is not difficult to replicate, Uber drivers now often work with multiple ride-sharing services, and Uber is particularly vulnerable to local driver consortia where the ownership is mutualized or charges to drivers are set at a level only to defray the cost of operating the enterprise.

By Hubert Horan, who has 40 years of experience in the management and regulation of transportation companies (primarily airlines). Horan has no financial links with any urban car service industry competitors, investors or regulators, or any firms that work on behalf of industry participants

Uber Is Staggeringly Unprofitable, Is the Industry's High Cost Producer, Cannot "Grow Into Profitability", and Has no Meaningful Competitive Advantages

Uber is currently the most highly valued private company in the world. Since its start in 2010, Uber has been on a steady path towards domination of an urban car service industry that had been competitively fragmented and structurally stable for over a century.

This series of articles has focused on the question of whether an Uber dominated industry would actually improve the efficiency of the urban car service industry and improve overall economic welfare. Capital markets have invested \$13 billion in Uber, producing a venture capital valuation of \$69 billion. Have those investors—primarily Silicon Valley billionaires—been making society better off by reallocating resources from less productive to more productive uses?

These articles applied standard financial/competitive analytic approaches used to evaluate the potential impact of major market restructuring caused by new entry or other exogenous forces, and/or major increases in industry concentration on industry efficiency and consumers.

The first article presented the evidence that [Uber is a fundamentally unprofitable enterprise](#), with negative 140% profit margins and incurring larger operating losses than any previous startup. Uber did not achieve any meaningful margin improvement between 2013 and 2015 while the limited margin improvements achieved in 2016 can be entirely explained by Uber imposed cutbacks to driver compensation. Uber's ability to capture customers and drivers from incumbent operators is entirely due to predatory competition funded by massive investor subsidies—Uber passengers were only paying 41% of the costs of their trips, while competitors needed to charge passengers 100% of actual costs.

The second article provided a breakdown of the taxi industry's cost structure, and demonstrated that [Uber was the industry's high cost producer, with a significant cost disadvantage in every cost category except fuel and fees where no operator could achieve any advantage](#). It also explained that Uber could not "grow into profitability" because there were no significant scale economies related to any of these cost categories.

The third article [debunked a range of claims about potential sources of Uber competitive advantage](#) that might explain its ability to drive incumbents out of business; none were based on actual evidence of industry economics, and none of the claimed sources had ever had ever produced major competitive impacts in any other industry.

The findings from the three posts are entirely consistent with one another, and consistent with the conclusion that

Uber could never generate sustainable profits in a competitive market. Uber's lack of cost competitiveness explains its massive losses, its lack of scale and network economies explains the lack of margin improvement, the financial and cost evidence is consistent with the finding that Uber lacks meaningful competitive advantages, and the lack of efficiency and competitive advantage is consistent with the finding that Uber's growth is primarily explained by the predatory use of investor subsidies.

The critical caveat here is "in a competitive market". This article documents that Uber's business model is focused on the pursuit of monopoly power. The elimination of competition is always problematic from an economic welfare standpoint, but there are certainly cases in other industries where dominance could be considered welfare enhancing or at least welfare neutral.

But these cases require overwhelming objective evidence that the dominance was created by legitimate economic factors (huge, unmatched efficiency advantages, powerful scale/network economies) that clearly offset the risks from reduced competition, and evidence that industry economics would create strong incentives for the newly dominant firm to continue to share efficiency gains with consumers. None of these conditions apply to Uber where growth was not driven by superior efficiency or scale/network economies; there are few benefits that could be shared with consumers, and no incentives to share any that might exist.

Uber's Investors Always Understood That Financial Returns Required the Ability To Exploit Quasi-Monopolistic Industry Dominance, and Provided the Level of Financing Deemed Necessary

Uber's investors and managers have always been totally focused on earning strong returns on its \$13 billion investment base. Two simple questions (that could be applied to any company): what did Uber see as the source of investor returns, and were its actions (spending, management and competitive priorities) strongly focused on pursuing those sources of financial returns?

The first three articles in this series focused on "traditional" product/efficiency based sources of financial returns that are broadly consistent with improving overall economic welfare. If investors can profit by introducing major product/technological process breakthroughs that vastly improve industry efficiency, or if their returns come from providing slightly better service at slightly lower costs in a competitive market, then both consumers and capital accumulators will be better off in most cases.

There is absolutely no evidence that Uber's investors put \$13 billion into the company because they thought they could achieve Amazon type efficiency advantages over incumbent urban car service operators. There is no evidence that Uber's managers or spending priorities were ever focused on creating welfare-enhancing efficiency improvements or consumer benefits. Unlike past startups, Uber made no effort to provide outsiders with evidence that its business model generated powerful efficiency advantages, or that it could actually produce urban car services at lower cost than incumbents.

From its earliest days, Uber's investors and managers have always recognized that investor returns would require global industry dominance, and the elimination (or effective nullification) of longstanding laws and regulations designed to protect competition, and to protect consumers from the risks of anti-competitive market power^[1]. This presumes that urban car services can be turned into a "winner-take-all-game", where the winner can earn sustainable rents once quasi-monopoly industry dominance has been achieved. Dominance would also allow Uber to leverage its platform in order to expand into other markets that it could not otherwise profitably enter.

As will be discussed below, the belief that monopoly power can be a major source of financial returns is widely held among the venture capitalists that funded Uber, and its spending priorities and marketplace behavior have been totally consistent with a company pursuing global industry dominance.

But most critically, the staggering \$13 billion in cash its investors provided is consistent with the magnitude of funding required to subsidize the many years of predatory competition required to drive out more efficient

incumbents. Uber's investors did not put \$13 billion into the company because they thought they could vanquish those incumbents under "level playing field" market conditions; those billions were designed to replace "level playing field" competition with a hopeless battle between small scale incumbents with no access to capital struggling to cover their bear bone costs and a behemoth company funded by Silicon Valley billionaires willing to subsidize years of multi-billion dollar losses. Given Uber's growth to date, investor expectations that monopoly rents justifies the current level of subsidies and financial risks appears quite plausible.

The Silicon Valley Venture Capital Community Has Long Been Focused on Exploiting Monopolies and Extracting Rents From "Winner-Take-All" Markets

The belief that exploiting monopoly power from "winner-take-all" industries is widely held in the Silicon Valley venture capital community that funded Uber and other so-called "ridesharing" companies.

Benedict Evans, a partner at 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."^[2] 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," Pushover 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."^[3] As PayPal founder Peter Thiel (who is a major investor in Uber competitor Lyft) said "Always aim for a monopoly. It's one big transgressive idea, and you're not allowed to talk about it... From society's perspective, it's complicated. But from the inside, I always want to have a monopoly."^[4] In an article entitled "Competition is for Losers" Thiel argued that "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."^[5]

Under this line of thinking, the type of robust market competition designed to maximize economic welfare and ensure the efficient long-term allocation of resources is not integral to capitalism, and is actually the enemy of capital accumulators like Thiel, and needs to be vanquished.

Many Aspects of Uber's Business model That Add Little Value in Competitive Markets Can Drive Significant Profit Growth With Industry Dominance

With industry dominance, Uber could readily exploit artificial anti-competitive market power that would not exist if it merely achieved a large share of a competitive market. Anti-competitive market power would likely solve much of Uber's driver cost disadvantage; once alternatives were gone Uber could not only eliminate the 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 discussed in the second article, Uber has already started making major driver compensation cuts, while continuing to mislead drivers about the true costs and capital risks of providing vehicles. With 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. Industry dominance would also give Uber much greater leverage over other suppliers (insurance companies, taxi manufacturers) than it enjoys today.

Aspects of Uber's business model that create limited value in a competitive market could be key to rent-extraction with industry dominance. Surge pricing could be used much more aggressively without fear of competitive discipline. Dominance would force anyone who might ever want a cab to carry Uber's app, converting the app from a benign ordering tool to a monopoly controller of all information about demand, capacity and pricing, driver employment and compensation.^[6] Uber could improve utilization by unilaterally imposing much higher prices for peak period and low density neighborhood service, although this would effectively eliminate taxi service for a major segment of (mostly

lower income) users. This would convert a piece of publically regulated urban transport infrastructure into a privately owned and controlled discretionary consumer product primarily targeted at wealthier customers. The welfare impact would be analogous to the conversion of urban expressways into privately owned toll-roads. Higher fares would improve product quality for those with more discretionary income (shorter taxi waits on Saturday night, faster rush-hour commutes) but total economic welfare would be worse given the major service quality reduction for those priced out of the market.

Much of Uber's Oft-Criticized Public Behavior Is Fully Consistent With Its Pursuit of Unregulated Monopoly

Uber has been frequently criticized for behavior outside the norms traditionally observed by companies trying to build large consumer businesses. But these critics invariably make the false assumption that Uber's long-term returns depend on the loyalty of customers and drivers in competitive markets, and fail to recognize that its behavior is fully consistent with its long-term objective of unregulated monopoly. Uber has unilaterally imposed major compensation cuts on drivers, and left customers exposed to unexpectedly high surge pricing surcharges. Neither had material impacts on Uber's magnitude of losses (although bad press has forced Uber to contain its surge pricing), and its competitors worked to build trust with drivers and passengers with clear policies limiting both practices. These seemingly high-handed practices are perfectly logical if one assumes that Uber did these things to send an unmistakable signal that it will have complete freedom to impose whatever wages and prices it likes once it achieves market dominance.

As far back as 2010, Uber willfully, openly disregarded local taxi regulations, not only pricing and entry rules, but driver screening, licensing and insurance requirements. 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."^[7] Uber was not trying to "deregulate" taxi service—"deregulation" or regulatory reform assumes that democratically elected local officials have the authority to determine how local taxi service should be structured, and implies that all competitors should be subject to the same "level playing field" set of rules.

Uber wanted the freedom to evade insurance and other costs that its competitors were still obligated to incur, and wanted to establish that it did not respect the right of democratically elected governments to control local taxi service and could disregard any rules it found inconvenient. Problems with passenger safety and accident risks led to major waves of bad publicity, and the savings from this regulatory arbitrage were not huge. But Uber was determined to establish that local regulators and politicians would (or could) do nothing to seriously rein in a company backed up by Silicon Valley billionaires that was heralded in most local newspapers as a cutting-edge technological innovator. By establishing that it could blow off questions about whether it was exposing passengers to increased risk of theft or assault, or whether it carried legal required levels of liability insurance in its early startup years, it made it clear that a vastly larger and more powerful Uber would feel free to exercise artificial market power with impunity.

Uber worked to sabotage both the fundraising and operations of Lyft and other competitors^[8] and initiated specific programs to intimidate journalists, including a program designed to spread details of the personal life of a female journalist who has criticized the company."^[9] Despite attempts by company supporters to dismiss these actions as aberrant "Silicon Valley bro" behavior they were fully consistent with its desire to project an image that it was on an unstoppable march towards global industry domination, and prevent independent scrutiny of its actual competitive economics, or whether consumers would benefit if it achieved global dominance. None of the executives involved were ever disciplined and none of Uber's investors ever criticized it.

Previous startups focused their external communication programs on explaining product advantages to target customers and explaining future profit potential to the investment community and avoided PR and lobbying spending until a strong market position had been secured. Uber made PR and lobbying one of its top spending priorities from the outset, and emphasized virulent attacks on incumbent operators and regulators. In 2014 Travis Kalanick described Uber as a band of heroic tech innovators who would provide massive benefits for consumers and drivers but for the overwhelming political power of taxi owners and regulators. "... [W]e are in the middle of a political campaign and it turns out the candidate is Uber" and the opponent is "an asshole named taxi....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”.

Uber’s PR provided no information about how their alleged innovations actually benefited customers or drivers, did not mention the multi-billion subsidies that were the actual source of those benefits, did not explain how a highly fragmented and competitive industry constituted a “cartel”, and did not explain why the public should see Silicon Valley billionaires pursuing industry dominance as the disadvantaged underdog in a battle with those fragmented and disorganized incumbents. Uber brought in high-powered political operatives who had worked at the highest levels of government;^[10] in Las Vegas Uber spent more on lobbyists than the entire casino industry, and in California had a larger lobbying team than any bank.^[11] These major expenditures would have made no sense for a startup that was actually technology based or a transportation company focused on near-term profitability in competitive markets, but were fully consistent with Uber’s strategic objective of eliminating (or nullifying) legal and regulatory obstacles to its eventual exercise of quasi-monopoly market power.

All of Uber’s actions represented a radical departure from past consumer product startups. Whatever Amazon’s strengths and weaknesses as a company, it did not demonize incumbent booksellers, make false claims about industry cartels and how its independent contractors earned \$90,000 a year, its initial growth was not based on 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, and it was not using these techniques to drive more efficient booksellers out of business.

Uber’s Business Model is Entirely Based on the Destruction of Overall Economic Welfare, and the Transfer of Wealth from Consumers and Suppliers to Silicon Valley Billionaires.

This series of articles has focused on the economics of Uber, and presented evidence that its current operations are staggeringly unprofitable, that it is far less efficient than the incumbent operators it has been driving out of business, that it has not introduced any product/technological/process breakthroughs that could explain its rising market share, and that all of its growth to date is explained by predatory investor subsidies.

There is no evidence it could ever earn sustainable profits in a competitive market and its returns to investors are seeking depend entirely on achieving quasi-monopoly industry dominance and eliminating or nullifying regulations that might limit its ability to exploit anti-competitive market power. The unprecedented size of its investment base and all of the strategies it has been pursuing over the years fully support its objective of unregulated monopoly.

If it reaches its objectives, the long-term impact of Uber on consumer welfare and efficiency of the urban car service industry would combine the impact of replacing today’s urban car service industry with a higher cost, less efficient Uber operation, and the impact of replacing today’s regulated industry competition with a completely unregulated monopoly. Since Uber would require \$3-4 billion a year more than it is currently earning to provide investor returns, and has extremely limited scale economies, it will need to extract a significant fraction of that amount from consumers, drivers and suppliers via the exercise of anti-competitive market power. The growth of Uber reflects a massive failure of capital markets who have been reducing overall economic efficiency by reallocating resources from more productive to less productive uses.

Even though none of Uber’s services or operations are particularly innovative, and even though Uber has done little to “disrupt” the traditional economics of providing urban car services, Uber could easily establish itself as one of the most innovative, disruptive companies in history. It is disrupting the idea that private wealth creation requires the development of companies with superior products and superior efficiency than existing competitors.

A key innovation is the use of massive private funding to block the signals that markets require to efficiently allocate resources, to overwhelm more efficient competitors and to nullify the laws and regulations that democratic governments had enacted to ensure that taxi services benefited a wide range of citizens, and to protect those citizens from the risks of anti-competitive market power. It is of course unclear at this point whether Uber’s business

model, if proven successful, could be readily replicated in other industries, but many investors will undoubtedly pursue the possibility

No startup in history had ever created massive corporate value—much less the \$69 billion Uber has created to date—with products and operations that were less efficient than the companies they were driving out of business. Uber’s willingness to use its \$13 billion cash to fund predatory competition was its most important “innovation” but money alone cannot explain its seemingly unstoppable progress towards industry domination.

The next article in this series will consider other Uber “innovations” focusing on how Uber got broad portions of the mainstream media to enthusiastically support its efforts to eliminate competition so that it could transfer wealth from consumers to (already extremely wealthy) investors. Why would the overwhelming majority of the financial and business media applaud the growth of this specific private company, and make absolutely no effort to investigate whether its growth was based on actual efficiency or competitive breakthroughs, or whether its industry dominance would actually benefit consumers? Why would major newspapers and magazines celebrate a company that was openly disobeying democratically established laws in order to transfer a portion of urban transport infrastructure to the exclusive, unregulated control of private capital accumulators?

[1] Artificial anti-competitive market power is used in this paper to refer to the ability to 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. For a useful introduction to market power issues see Krattenmaker, T. G., Lande, R. H., & Salop, S. C. *Monopoly Power and Market Power In Antitrust Law*, Geo. Lj, 76, 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 single, extremely well financed firm.

[2] Johnson, Bobbie, *How to Get Away with Uber*, Medium, 22 Nov 2014

[3] “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.” Lagorio-Chafkin, Christine, *Resistance Is Futile*, Inc. Magazine, Jul 2013..

[4] Cook, J., *Peter Thiel: ‘Always aim for a monopoly. I always want to have a monopoly’*, Business Insider, 2 May 2015.

[5] Thiel, Peter, *Competition Is for Losers*, Wall Street Journal, 12 Sep 2014.

[6] In a competitive market Uber’s ordering app would be considered its “platform”, 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. White, A., & Weyl, E. G. *Insulated platform competition* (2012). Available at SSRN 1694317. With dominance the app would provide the basis for controlling “a rent-extraction business of the highest middle-man order.” Kaminska, Izabella, *The Sharing Economy Will Go Medieval On You*, Financial Times, 21 May 2015.

[7] Cushing *supra* note 64

[8] Fiegerman, Seth, *Uber CEO admits he tried to undermine Lyft’s fundraising efforts*, Mashable, 5 Nov 2014. D’Orazio, Dante, *Uber employees spammed competing car service with fake orders*, Verge, 24 Jan 2014. Erica Fink, *Uber’s dirty tricks quantified*, CNN Money, 12 Aug 2014.

[9] Smith, Ben, *Uber Executive Suggests Digging Up Dirt On Journalists*, BuzzFeed, 17 Nov 2014., Lacy, Sarah, *The moment I learned just how far Uber will go to silence journalists and attack women*, Pando Daily, 17 Nov 2014.

[10] 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 Swisher, Kara, *Uber Hires Top Obama Adviser David Plouffe as New "Campaign Manager*, Recode 19 Aug 2014; Swisher, Kara, *Google Comms and Policy Head Rachel Whetstone Takes Over That Job at Uber*, Recode, 13 May 2015; Carr, Paul, *Bright Young Flacks: "Cameron's Cronies" now drive Silicon Valley's most sinister propaganda machine*, Pando Daily, 17 May 2015.

[11] Figler, David, *Viva Disruption! How Uber outspent the casinos to buy Vegas*, Pando Daily, 22 Jun 2015, "Uber now spends more on lobbyists in California than Wal-Mart, Bank of America or Wells Fargo." Kirkham, C. & Lien T., *Facing regulatory roadblocks, Uber ramps up its lobbying in California*, Los Angeles Times, 26 Jul 2015.

Can Uber Ever Deliver? Part Five: Addressing Reader Comments and Questions

 nakedcapitalism.com/2016/12/can-uber-ever-deliver-part-five-addressing-reader-comments-and-questions.html

12/7/2016

Yves here. We were glad to see Hubert Horan's series on Uber get so much reader commentary, including from some Uber drivers. Hubert provides his response to questions and observations below.

By Hubert Horan, who has 40 years of experience in the management and regulation of transportation companies (primarily airlines). Horan has no financial links with any urban car service industry competitors, investors or regulators, or any firms that work on behalf of industry participants

Today's post is my opportunity to thank the Naked Capitalism readers who not only took the time to wade through four detailed posts about the economics of Uber, but took the extra effort to offer thoughtful questions and comments.

Best comment of them all:

—*Thank You, I sent money*

Yves and Lambert have created a space where these types of financial/political issues can be explored and debated. It doesn't exist without their tireless effort, but it also doesn't exist without money. I've been a financial supporter for years, and one of the reasons for contributing these articles was that it was a way to thank them for everything they've done over the years. I hope everyone who appreciates what Yves and Lambert have created will respond as Charles did.

Nonsensical but frequently repeated claims about the “sharing economy”

Most cars are parked something like 98% of the time, representing a huge lost opportunity cost.

suggesting demand for car use is also not there for 98% of the time

It would take a book to document all of reasons why “sharing economy” claims were always ludicrous. The most important is whatever limited opportunity might exist for utilizing idle consumer goods, it is not something that could ever be scaled into a global business serving mass market demand. In order to efficiently serve mass market demand, real world transportation companies require vehicles that can be intensively utilized 7 days a week. The car in your driveway cannot do that. It might be able to handle a couple taxi rides on Saturday night, but Uber (or any other taxi operator) needs a huge fleet of dedicated vehicles and drivers to serve the other 98% of demand.

Airbnb always had slightly greater opportunity to use truly spare private capacity, because there always was a portion of housing stock in big cities that sat empty for significant periods. But if Airbnb limited itself to this spare capacity, its growth would have ended years ago. To justify big corporate valuations, it had to expand into selling apartments and houses that were totally dedicated to hotel-like occupancy, while trying to maintain the fiction that its entire multi-billion dollar business was based on isolated individuals subletting their apartment when they were out of time. Total nonsense but the gap between Uber's “it's just folks making a few bucks driving their otherwise idle car a few hours a week when they happen to feel like it” and reality is even greater.

The amazing thing isn't that average people don't immediately see through the “Uber is powerfully efficient because their cars have zero marginal cost, just like when neighbors share gardening tools” BS, but that major mainstream media continually push these false claims in the face of overwhelming contrary evidence.

To cite just one example, Om Malik, the main technology writer for the New York Times is either totally economically illiterate, or simply sees his job as lending credibility to false Uber claims. In 2014, he was aggressively pushing the “Uber will soon be cheaper than private car ownership” despite total ignorance of Uber’s actual costs, or its costs relative to private car ownership” and predicted there would soon be many other companies exploiting the power of the “sharing economy” to create wonderful new consumer benefits in food delivery and other businesses.

By 2016, there was zero evidence that Uber had, or would at any point in the future become a credible alternative to car ownership, and absolutely none of the startups that had hoped to become the “Uber of” other industries had actually created a viable business. Did he suddenly realize that maybe Uber’s actual costs were much higher than he’d realized? Did he acknowledge that maybe the “sharing economy” was just a PR concoction? No, he doubled down, attacking the failed startups for failing to meet the standard of “Uber, the hypersuccessful granddaddy of on-demand apps” without explaining how a company losing \$2 billion a year qualified as “hypersuccessful”.

How many Uber drivers just drive a few hours a week?

I especially appreciate the input from folks with actual taxi driving experience including Ono, Lynn, Synoia, Tim, Watt4Bob any anyone else whose names I missed here.

Throughout my career I have been on the corporate/consulting strategic planning side of things, but I learned long ago that strategic analysis that was inconsistent with the realities faced by front line staff was pretty worthless.

On special event weekends in my town, when Uber is in surge pricing, it's worth some of my spare time to drive. During non-surge time frames, not so much...

This suggests, I think accurately, that any taxi capacity owned by private individuals can't operate profitably at traditional taxi fares; they either need higher (surged) fares, or the reduced costs that centralized fleet ownership and driver control could achieve. The question is how much of Uber's capacity in a typical big city is actually provided by people who just drive a few hours a week.

Uber can do something taxi/car companies can't do which is give drivers the ability to work part-time at driver chosen hours. I drove a cab for a while and enjoyed it but you had no option to lease your cab for less than an 8-12 hour shift. Given this and that the number of cabs was fixed, the “market” had no ability to adjust supply or pricing to meet peak demand periods – usually rush hours or during conventions etc. The incremental/variable cost for a driver to use their own car is less than a fleet owner's cost.

No. As TFA stated several times, the cost to an individual is higher than for a traditional taxi company which has the advantage of a standardized vehicle fleet.

This is key to understanding the “sharing economy” issues. If you drive your personal car for Uber just a couple hours a week, Tim is correct and the true cost per hour is less than the cost of a fleet owner's vehicle for those same couple hours. But if you look at the total vehicle hours Uber needs to operate to serve total market demand, only a tiny fraction could be operated by truly spare private vehicles; the overwhelming majority require intensively utilized vehicles and drivers. If you operate your private car in Uber service a large number of hours a week, then Reslez is correct, your cost per hour is much higher than what a minimally competent fleet owner could achieve. Isolated individuals can't possibly achieve vehicle ownership, financing and maintenance costs as low as Yellow Cab.

Do Uber drivers understand the economics of working for Uber?

Anecdotally, it definitely does sound like for many Uber drivers: gross revenue minus Uber's commissions = net income.i've long given up shaking my head and trying to show the math.

One of the things Uber relies on is drivers not understanding their own economics.

Thanks to Oho and Watt4Bob for taking the trouble to lay out some of the cost details drivers face. Oho's explanation was based on a Honda Accord which is a good starting point for the economics a Uber driver is facing. My table of the traditional taxi cost structure in part two of the series was based on a Toyota Prius, which is typical of what a large fleet operator would ideally acquire.

I remember what it was like in 2011 or 2012, when everyone was still saying "we don't even know what it is yet. Is it a taxi? It's in a grey area. Are they 1099 or W2? I think a lot of entrepreneurship revolves around exploiting early days, unknown zones, and this is part of what they mean by "freedom". The freedom to tell stories that aren't bothered by facts, because the facts take time.

'What is the driver buying?'—the equivalent of a payday loan—as if one is an Uber-Lyft driver w/the wrong cost structure, she'll quickly go 'upside-down' on her car loan, especially given the post-2010 trend of 60 to 84-month car loans

As the NakedCap uber driver emeritus, my hunch is that Uber's cash hemorrhaging is driven by the ginormous driver subsidies that Uber spends to attract/retrain drivers. —as the base rate that passengers pay is 100% unsustainable given the cost structure of the majority of drivers, so Uber throws out supplemental cash as a bribe, er incentive. Strategy being that Uber hangs in long enough to drive out its main competitors in US/globally.

As everyone understands the Uber business model extends the "independent contractor" model that traditional cabs have used for decades so that Uber drivers have to purchase, finance and maintain the vehicles they carry Uber passengers in.

Anyone with classic economics/MBA training would assume that while there might be some confusion and uncertainty at first, Uber drivers would quickly figure out that it would make no sense to work for Uber unless their gross take home pay (fares minus direct daily costs like gas minus Uber's 30% cut) would need to be much higher than take home pay with a traditional taxi company in order to cover all the vehicle ownership, financing and maintenance costs. It would actually need to be higher than that, in order to cover the risk that Uber could terminate them at will, leaving them stuck with all the vehicle costs. Again, people trained to think that markets work perfectly might understand that drivers might underestimate these costs at first, but word would quickly get out that you need a significant premium at Uber just to reach a breakeven versus driving elsewhere.

My articles argue that the assumption of an efficient driver labor market based on good quality information about pay is wrong because there was a fundamental "information asymmetry" between a multi-billion dollar company and hundreds of thousands of isolated drivers, and Uber worked aggressively to exploit this imbalance by providing blatantly false information (drivers making \$90,000) and deliberately misleading information (implying higher gross earnings directly translated into higher real take home pay).

What hasn't been clear to me is whether good information would finally cut through the initial barrage of deliberate misinformation, and the inherent difficulty of dealing with issues like depreciation costs, and how depreciation and maintenance costs increase if you drive your personal car 65 hours a week instead of 10. Oho's comments strongly suggest the problem is even worse than I'd imagined.

To simplify just a bit, the Uber strategy was to (1) jumpstart rapid growth with driver pay premiums that would get lots of drivers to switch from traditional operators; these premiums were real but not as large as they seemed because drivers hadn't figured out how to properly deduct vehicle costs to determine true take home pay, and by willful falsehoods (our drivers make \$90,000) (2) gradually cut back driver pay once Uber was clearly a large established player by eliminating incentive programs and increasing the percentage of fares Uber retained; but drivers can't do anything about pay cuts because they've locked themselves into car payments (3) At some point—and according to the study quoted in the second article in the series, it may have already happened—true Uber take home pay (after vehicle costs) is no better or slightly worse than what Yellow Cab paid before (4) Uber achieves industry dominance, drivers have no alternatives, and take home pay falls to (or even below) minimum wage level.

Do taxi drivers focus on peak demand in order to maximize earnings?

I was taking a cab last week on a rainy and windy weeknight and the cabbie remarked that he was going to end his shift early because the fares were far and in between. So it appears that cab drivers are not universally forced to drive for a full shift regardless of demand.

Speaking about the questions of whether academics understand real world taxi driving, there is a curious subliteration in the economic journals as to whether taxi drivers actually fit the neoclassic model whereby market participants rigorously focus on revenue/profit maximization. If they did, there would be clear evidence of drivers busting their butt on busy/rainy days and avoiding slow periods. Studies clearly demonstrated that this wasn't true, and it was very common to see "daily income targeting" where drivers had a good idea of the gross earnings they'd need to cover the lease costs of the cab, gas, and justify the work they'd put in. On peak demand days, many drivers wouldn't work the maximum 12 hours, but would quit early because they'd hit their daily target.

These articles got very angry rebuttals from doctrinaire free-market types who didn't want their beloved "markets work perfectly in every and all situations" assumptions challenged but the rebuttals I've read were pretty weak. In simple terms, all the neoclassical models of the labor market assumed every hour of "labor" was exactly the same as every other hour of labor, thus higher peak demand should induce more labor. In reality, an hour of low paying, exhausting labor is different, and workers make the rational choice to blow off a few more dollars when it involves a lot more exhaustion, but the neoclassical models couldn't deal with variables like exhaustion or nasty working conditions.

Here are some references in case anyone is interested. Camerer is the key author, Richard Thaler later became known as a leader in trying to incorporate behavioral issues into mainstream economics (and had a cameo in the movie version of The Big Short)

Camerer, C. (1997). Taxi Drivers And Beauty Contests. *Engineering and science*, 60(1), 10-19, Camerer, C., Babcock, L., Loewenstein, G., & Thaler, R. (1997). Labor supply of New York City cabdrivers: One day at a time. *The Quarterly Journal of Economics*, 407-441, Crawford, V. P., & Meng, J. (2011). New York City Cab Drivers' Labor Supply Revisited: Reference-Dependent Preferences With Rational Expectations Targets For Hours And Income. *The American Economic Review*, 101(5), 1912-1932

Does surge pricing increase taxi supply?

*"Given the short notice this does nothing to increase total taxi supply" This seems contradictory. You repeatedly argue that the times that demand increases and that Uber is likely to engage in surge pricing are extremely well-known and cannot be changed by people needing transit. Fair enough, but if it's that predictable, then surely drivers can change their behavior over the long run and thus increase supply. Do you really think that it's impossible that drivers could say, "Hey, this time is a time that is likely to have surge pricing, so I'm going to be ready to drive?" The inelastic nature of the demand that you postulate helps nullify the short notice problem. And surely one effect of the "using your own car" aspect of Uber (and Uber taking a percentage for trips instead of a fixed daily cost common in regular taxi services) is that drivers are at least *somewhat* able to alter their behavior on shorter notice than in the taxi industry. In the non-owner operator taxi model (which is common in many cities) it is impossible for drivers to work anything less than a full day, due to the fixed costs paid to the cab company to use the vehicle for the day. This may be not enough, but you seem to be overselling your point claiming that it doesn't increase supply at all.*

As the question suggests, drivers know there will be more revenue out there on Saturday night than there will be on Monday afternoon, but they didn't need surge pricing software to tell them that. The studies I've seen suggest Uber actually isn't all that predictable about surge pricing as the duration of the surge and the small geographic zones that get surged aren't plannable by drivers. Surge pricing responds to sudden demand spikes in the last few minutes. If demand suddenly spikes west of Central Park, but not east of Central Park, drivers on the east side can react to the surge and head west. But it isn't going to get drivers who live on Long Island or New Jersey who weren't already on

the road to suddenly head into the city. So surges can shift existing capacity around a bit, but total capacity doesn't increase.

In the third article I tried to make a major distinction between Uber surge pricing and airline revenue management. The latter plans both capacity and fares months in advance based on lots of historical data about demand on a given day at a given hour, and it is based on data for the entire market, not just the airline doing the planning. Customers then use the schedule and pricing information that all the airlines publish well in advance and sort themselves out. Both capacity and demand gets allocated efficiently but only because everyone made plans well in advance and had perfect information about all the options. Uber drivers have no idea what prices they can charge on Wednesday or Thursday, aside from their gut feel as to whether prices might surge or not. Uber passengers who head to dinner at 6pm have no idea what Uber will charge them to get home.

You've explained that Uber is fundamentally unprofitable. Maybe they've driven a lot of traditional operators out of business. But won't surviving competitors and new entrants eventually kill them?

There's little cost of switching for users and potentially drivers. The moat Uber is trying to create is that it drives prices down so much that it kills all competition – but that is not a viable long term strategy – because it present it with two choices only – keep losing money (not viable long term – yes, I know Amazon is technically losing money, but it has IIRC positive cashflow, and the loss is mostly due to investments – it could turn itself profitable anytime it wanted w/o impact on end customers), or raise prices (which would invite competition back).

network effect. If I launch Humanity Rides LLC tomorrow, any rider using my puny network of drivers is going to likely wait 10-20 minutes for a ride. ...Versus the 1 to 8 minutes for Uber. People are a lot more impatient than you think.

I am wondering if Uber's anti-labor knife will ultimately cut both ways. Both customers and drivers can and will easily switch to and among alternatives as they arise.

Uber will have issues retaining drivers, hence the interest in going to driverless passenger pods.

– this business whether Lyft or Uber et al – is merely a dispatcher gone digital –the attempt to take rentier profits by Uber will fail. This model will revert to essentially a Cooperative (“COOP”) of Medallion Owners with the economy of scale associated with: insurance / maintenance / acquisition of vehicles / use of vehicles 24 / 7 by multiple drivers and the Dispatcher APP used for \$1.50 per ride.

What I've been trying to figure out is, what is the endgame? If Uber does somehow manage to gain market dominance, then presumably they'll raise fares in order to achieve profitability. Wouldn't that just encourage smaller operators to jump into the market? I suppose that Uber could then push for regulatory barriers to entry for these smaller operators, but that would certainly fly in the face of how they've been running their business up to this point.

I speculate that after the traditional fleet operators are driven out, it may be hard to resurrect successors when fares “normalize” since the up-front investment to re-constitute the local taxi fleets may be prohibitive
Taxi markets fall into three main segments that have totally different competitive dynamics.

“Streethail” dominates in Manhattan, similarly dense European/Asian cities, and in the central business/entertainment core of a few other large US cities.

“Taxiranks” are what you see at airports, train stations, convention centers, and other places where you have very large, very concentrated pockets of demand.

In the US, the overwhelmingly dominant model is “Dispatch” where demand and trip patterns are of very low density, so cabs are ordered by phone (or now, by smartphone app) and cabs assigned by a

dispatcher (or dispatching software). Individual owner/operators can easily serve airports or the taxiranks at big hotels, but will have little ability to get any business from widely dispersed houses and businesses that occasionally need cabs.

Thus in the vast majority of cities, the taxi industry was organized around a bunch of dispatch companies. The predatory competition funded by Uber's investors has devastated these dispatch companies.

The commenters above were implicitly asking that if Uber abused its dominant market position, couldn't new taxi companies sprout back up overnight and reclaim a big chunk of the market.

There's no problem with new entry at airports and other dense locations, and it is unlikely that Uber would ever completely eliminate competition in these segments. But it is next to impossible for drivers who are limited to these markets to actually make a living—without a broader base of revenue you can't cover the cost of a full day's driving and fares will be held down by drivers just trying to earn a few extra bucks. The question is whether new dispatch competition could ever emerge. In a competitive market where Uber isn't a dominant player, the Uber app has little or no impact on Uber's ability to operate profitably. But as many people understand, the value of the app seriously kicks in after Uber becomes dominant. Once everyone who uses (or drives) cabs regularly has to have the Uber app on their phone it becomes much much harder for newer, smaller companies to get to the scale where they can provide a strong competitive challenge. As Izabella Kaminska of the Financial Times put it, with dominance the app would provide the basis for controlling "a rent-extraction business of the highest middle-man order." And of course, Uber's billionaire owners could just cut prices until the new competitors failed.

Is Uber really a software company? Is it actually any good at software?

I think that Uber has a better chance at becoming profitable if it focused on developing and licensing its software for real taxi companies.

As a software engineer by trade, Uber's software is not that difficult to replicate.

What's to stop clever coders from creating their own Ubers,

Uber is about as "digital" as Domino's Pizza, after all they have an app too, right?

Seems that Uber has a few things going for it. An app that many people have installed, a name they can remember and they can use it everywhere they go. Seems like all they have is a dispatch service. Seems like the profitably way to run the business would be to charge taxi companies a very small fee (somewhat lower than dispatch and cc fees) and operate as a dispatch company instead recreating existing infrastructure.

A few years ago "we are a software company not a transportation company" was a major Uber PR theme, supporting the larger theme that regulations that applied to every other company that took money in exchange for rides in cars. How could local regulators who dealt with Yellow Cab ever figure out how to regulate a software company. Kalanick insisted they were just a passive intermediary "Are we American Airlines or are we Expedia? It became clear, we are Expedia." This was palpable nonsense when uttered back in 2013; with hindsight it is clear Uber hasn't developed any software other than what was necessary to run its transportation operations.

The software behind Uber's app appears fine, and people like the app, but as correctly noted, Domino's Pizza has a nice app too, and it didn't allow Dominos to drive all its competitors out of business and create \$69 billion in corporate value. Yes, Uber could have just decided to be an "app" company, and could have sold software to taxi operators all over the world. But that wouldn't have created a \$1 billion business, much less a \$69 billion one. In my airline career I've run pricing departments and helped design revenue management systems. The systems behind Uber's ordering app are incredibly simple compared to what airlines and hotels have been using for decades.

They take people from point A to B in cars, but not “like traditional car operators always have”. Name me a service operating before 2010 that had smartphone integration, reliable, tip-free service, actual responsiveness to complaints, and which was willing to drive you to far-out places, and which had mutual rating to weed out bad drivers/passengers.

I disagree with the premise that Uber has no meaningful competitive advantage. What Uber has is a ubiquitous app that works in whatever city the service operates in. Until I can say, “Okay, Google. Call me a cab. This location to destination SFO” Uber has an advantage.

As mentioned the app is nice and people seem to like it. But does it make Uber profitable? Does it create a huge efficiency or pricing advantage that competitors couldn't readily match? The smartphone integration is certainly useful, but did this create a 2% improvement over traditional telephone dispatching, or 25% better efficiency? I'm not sure but I'm guessing that it is closer to 2%.

How much has Uber spent on software, and more importantly how much did it cost to scale all the behind the scenes scheduling and pricing software so they could function in every city in the world? The jury is still out, but I'm guessing the costs to date have been much higher than the cost savings and competitive benefits they've generated.

And remember the service improvements many attribute to the app were really due to other hugely subsidized service advantages. The Uber app produced cars sooner, and at lower cost than Yellow Cab could offer because of those subsidies. If smartphone requests for Uber cars led to the same long, unreliable wait times as Yellow Cab, no one would be talking about how wonderful the app was. Nobody would be talking how wonderful it was that you could use the app in different cities.

What about carpooling as a future growth opportunity?

<Alex> What do you think about uber pool service (when you share a car with fellow passengers going approximately in the same direction)? It seems to be beneficial, as less energy is super and pollution generated per passenger. Do you think it could be replicated by traditional companies and could it be a source of competitive advantage for Uber?

Urban transport people have been touting multi-rider options (carpools, jitneys, paratransit, dial-a-ride) for approximately forever. The occasional places you see actual operations require much larger subsidies than regular transit services. No one has the slightest clue how to create a commercial service here, outside of very isolated cases like SuperShuttle.

Problems include (1) people don't like sharing vehicles (2) people really don't like it when their trip takes twice as long because of the other people; because of (1) and (2) nobody with access to a car ever uses the service (3) the normal time wasted in single-trip taxi service (taxi takes 20 minutes to arrive instead of the promised 10, passenger isn't ready when they said they would be) gets hugely magnified here (4) software can't solve very much of the trip inefficiency problems because it doesn't have accurate info in advance, and the demand density isn't big enough to create a lot of opportunities for more efficient trips. (5) in a big dense city, where there'd be enough people going in the same general direction at any given time the efficient solution has already been found. It is called “public transportation”

When traditional taxi regulations were established in big cities in the 1920s and 30s, multi-destination options were banned because the (then privately owned) transit operators didn't want competitors weakening low density routes. When libertarian/anti-public transit advocacy groups fought for taxi deregulation in the 90s, they prominently pointed to these vestigial protections and claimed that regulation had stifled industry “innovation” for example these jitney/paratransit services. These rules were eliminated everywhere; absolutely no innovative services emerged.

Is Uber like Theranos?

Do we have another Theranos on our hand?

The similarity is that the much of business media completely swallowed a company narrative about heroic, cutting-edge innovation that would bring huge benefits to consumers, and didn't bother to look at basic economics to figure out where the huge benefits were coming from. But aside from that, hugely different. Theranos was promising its customers specific product features that it couldn't deliver; they could blow smoke for a while, but eventually people would figure out the product didn't work.

Uber hasn't promised customers anything but a ride from point A to point B, and it has delivered on that, and given the subsidies that have increased cab availability and held down fares, customers are happy. People may discover that the low prices and cleaner cabs and shorter waits aren't sustainable, and people may discover that a dominant Uber makes their cable TV and phone providers seem like efficient lovable companies, but that's a totally different set of issues than Theranos raised.

Did Uber make an ill-fated wrong turn a few years ago?

instead of pursuing a business model that actually would make money, they made an unfortunate decision to put everyone in the taxi profession out of business. In the beginning, Uber was a superior product (in many locations) to a traditional taxi service. Instead of capitalizing on that superior product offering and charging what is actually needed to provide that product and make a profit,

If Uber stayed with their original model and hadn't gone after global domination, the picture would be different. If they stayed with major metropolitan markets and focused on solving a real problem where there was unmet market demand for better transportation options, we might be having a different conversation.

. . . They take people from point A to B in cars, but not "like traditional car operators always have".

Traditionally, they were called taxis, and the taxi operators were called "cabbies" and in the old days, when a cabbie gave a customer a rough ride, a call to the dispatcher by the customer would land the cabbie at the bottom of the call order list, waiting a loooong time for the next fare, and gasping for money to pay the daily rate. Cab companies even had their own communications infrastructure in the form of 100 foot tall aerials and radios in every car, so not even cell phones, never mind smart phones, but so what? That got the job done, which was pick up your fare and take them to where they want to go, the further the better.

Go ahead and believe the whole Uber turd is worth 15 Nimitz class aircraft carriers, after they only invested in three and then sunk a few to gain "market share". The Fed works in mysterious ways, and before you know it, the finance flim flam artists will have sold it to you.

Have Uber's investors been fully aligned with what management has been doing?

*So the thesis of this series is that Uber's business model is to: * Raise lots of money through "the bezzle".* Use this funding to drive out the competition through predatory pricing. * Extract monopoly rents once this is done. I am inclined to agree to agree.*

I've argued with Lambert about this, and it is really a semantic question. "Bezzle" implies either a Theranos-type situation where the product itself is fundamentally fraudulent, or a situation where the early round investors have been totally snookered by an investment proposal that fundamentally misrepresented where investor returns would come from. This is certainly debatable, but I believe that Uber's investors and senior managers have had very strongly aligned views of what the long term business objectives were, and where ROI would come from. The long term objective was to create a quasi-monopoly company and to undermine all traditional legal/regulatory obstacles to exploiting anti-competitive market power. Undoubtedly lots of different perceptions among investors about which elements of the business model would be most powerful, and clearly frustration among investors about Kalanick's slow path towards an IPO, but from any strategic perspective Uber's managers and investors have been very much

on the same page.¹ But aside from this semantic quibble about the “bezzle”, I think Matthew summary was spot on.

Exactly! It's devil take the hindmost like most unicorn companies today. The early/smart guys have gotten out or will before the rest of the world figures it out.

is actually just a ruse to con wealthy investors out of their money and only a select group of insiders is expected to make a profit?

I'm guessing Uber has already delivered, in spades, to a relatively small number of pirates at the top.

I agree that for deep pocketed investors, an IPO is a must. Multiply the value of their private shares on the public market thanks to multiple hype machines (Wall Street banks, fawning media, etc) and then dump the shares for fantastic gains.

Given past unicorns, the concerns here are certainly understandable. One of the themes of this series is that Uber has been completely different from previous tech startups. The important differences involve strategy, politics and the sources of investor returns. But the difference in the timing of investor returns are also important to understand, and I think Kalanick deserves credit here, even if the differences aren't creating any broad economic benefits.

As these comments suggest, many previous startups have been structured to create a fairly quick opportunity for monetizing the corporate value created. Put in money, start a business with a bit of buzz, quickly go public before the difficult bits of building a business hit home, then the company shrinks/collapses/sells out at a discount. Uber has been playing a much longer game. Uber hasn't gone public, isn't going to anytime soon, and makes it very difficult for investors to sell stock privately. The monetization target isn't peak media coverage (2014 for Uber) but when full industry dominance has been secured. None of Uber's early investors have cashed out with big profits, which has been very frustrating for several of them. But waiting for dominance could produce much bigger returns than any previous unicorn saw.

You have to go a step further and realize that there are investors that are not investing in the success of Uber, but they are investing in Uber as a vehicle to get rid of certain laws and regulations. The wool was never pulled over their eyes about “profitability”. It's an investment based on ideology and they would deny that every step of the way.

This series has focused on the economics of Uber in the marketplace. If you wanted to better understand Uber's origins and many of the tactics it has used, and why it has always been focused on monopoly, and the extreme nature of the “deregulation” it has been pursuing, the political/ideological worldview of its founders and investors becomes very relevant. Also relevant to my point earlier that investors and management have always been strongly aligned about Uber's basic strategies and objectives. But I've seen no evidence that any investors put money into Uber just to pursue political ends. I think “possibility of big financial returns” was the primary motive in every case. But I'm sure the worldview compatibility made it easier to conclude that this management team might actually produce those big financial returns.

If Uber has all these problems couldn't we short it and make a lot of money?

This reminds me of the story during the runup to the financial crisis where potential investors met with the execs of some company issuing CDOs and asked how they were going to make money. The execs couldn't offer an explanation in plain English at which point the investors realized the execs had no idea what they were doing and went short instead.

*Yeah. Trouble is that Uber (& other pointy headed startups) are trying to act like quasi-public companies – selling shares in private placements – while rigidly avoiding publishing any real financial info. To short it you'd have to find one of the private investors willing to lend you their shares *and* find and even more idiotic investor to buy the borrowed shares from you. Not gonna happen so one of the ways Mr. Market can start shouting that Emperor Kalanick is naked is not available ... which is, of course, another reason Uber's IPO will happen sometime after the*

Excellent question, and there's a very good article that answers it in detail.

LeVine, Steve, *Investors have placed a one-way bet on Uber—which made us want to find a way to short it*, Quartz, 5 Aug 2016.

LeVine is dubious about Uber—he doesn't argue as I do that the entire business model is based on hopelessly uncompetitive economics, but he sees that the kind of positive evidence that past successful unicorns could easily produce is missing, and he recognizes that even if Uber has come up with important insights, that doesn't mean that they will be the ones to successfully exploit them commercially.

I've argued that Kalanick's refusal to pursue an IPO—over the objections of powerful investors who would like to take some of their paper profits—is fully rational because Kalanick understands that the data that would accompany an IPO would burst Uber's carefully developed PR narratives. Some of the threat would come from the media, who would be looking for headline grabbing news out of the spreadsheets. But as these comments suggest, the bigger threat would be from shorts, who could destroy the illusion that Uber had created \$68 bn in corporate value a lot more effectively than any journalist. For a company that portrays itself as a paradigm of objectivist competitive virtues, Uber is terrified of the possibility of actual scrutiny from the capital markets.

Again, the game plan here is to hold out until Uber has a strong enough market dominance, so that many of the risks shorts would be focusing on go away, and the IPO price is inflated by all the monopoly power it can readily exploit.

¹ I hate to differ with Hubert, but a venture capitalist specializing in auto-related technology took issue with the idea that any unity of vision among Uber's investors was necessarily all that well informed. Via e-mail:

We have experienced this in our own research where we have the sense that something is amiss but because of lack of complete information we are a bit off with the facts. First, it is well known that many Silicon Valleyers are libertarians, therefore they a service like Uber would be appealing philosophically, and of course they would advocate for less regulation. Second, VCs are like lemmings, they follow the lead of other VCs whom they perceive to be sophisticated, and often nobody performs any due diligence, I have seen this first hand. They all kinda assume that someone has looked at the deal carefully. Third, smart entrepreneurs always create a sense of urgency when raising money, so with oversubscribed deals VCs have very little time to perform due diligence, some times they only have days to decide, so again diligence is spotty. Fourth, VCs know that hot deals are good PR when raising money. Limited partners, particularly the institutional kind, think that a VC must be good if they can get into hot deals, never mind the economics. Finally, VC community is very small and tight, so no one will ever say another bad about anybody, even when they are total crooks.