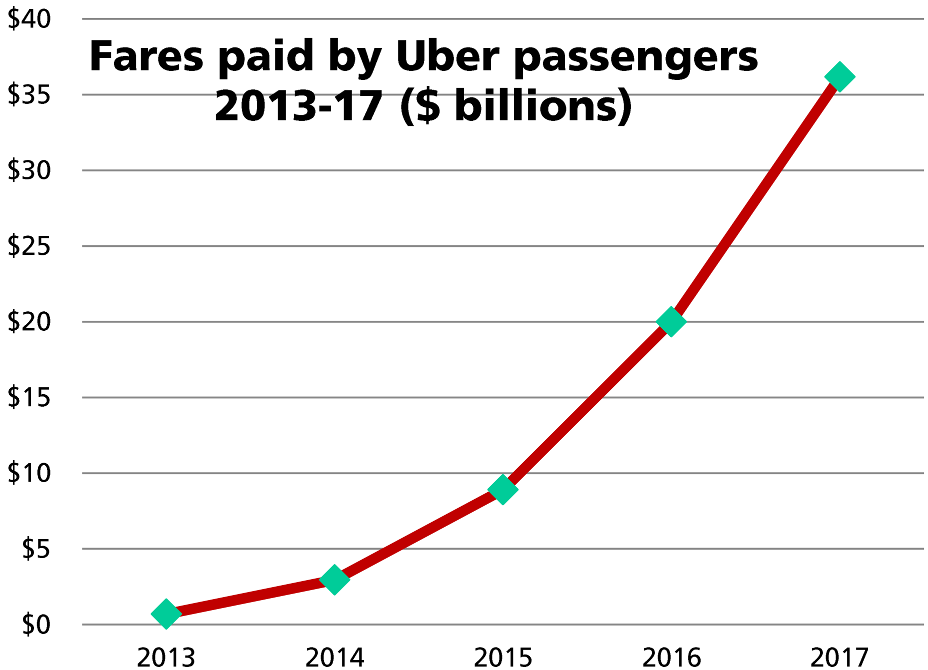
An airline/railroad economist looks at Uber

Hubert Horan
The Lexington Group
Chicago, 31 October 2018

Uber: one of the biggest transportation stories of all time



- **Enormous growth ($36bn)**
  - Gross Revenue YE 6/18 $44 bn
- **Staggering funding ($20 bn)**
  - biggest Silicon Valley funded startup ever
- **Massive valuation ($70bn)**
  - only UP, UPS worth more
- **Seeking 2019 IPO @~$120 bn**
  - 4x Facebook; 5x Alibaba
- **Complete "disruption" of a taxi industry that had been largely stable for 100 years**

But no one can explain the economics behind Uber's growth

- **Huge media coverage but ignores the biggest questions**
  - What was the source of all this economic value?
  - Why had no one ever discovered this value before?
  - When/How can Uber finally achieve sustainable profits?
  - Will consumers/cities be better off if Uber achieves the industry dominance and market power it has been seeking?

Media—ignore financial data, no input from objective outsiders with urban/transport economics expertise

- **Economic questions are readily answerable**
  - Taxi economics a lot simpler than airlines, ecommerce
  - This isn't Facebook in year 2—taxis aren't a new industry-- Uber now in its 9th year of operations
  - Well known methods for examining cost efficiency/competitive issues

My background—transport economics, strategy, industry structure

Relevant experience

- Rail—USRA, ICC, Amtrak, Conrail, urban rail
- Deregulation of rail, trucking aviation
- Airline—USA post-deregulation, EU liberalization, mergers 1980 onward, developed first international alliance (NW/KL), first cross-border mergers, multiple bankruptcy reorganizations
- Testified before Congress against radical post-2004 aviation consolidation

Independent

- No financial links to any taxi industry competitors or regulators
- Everything here documented in great detail in 2017 Transportation Law Journal article *"Will the Growth of Uber Increase Economic Welfare?"*

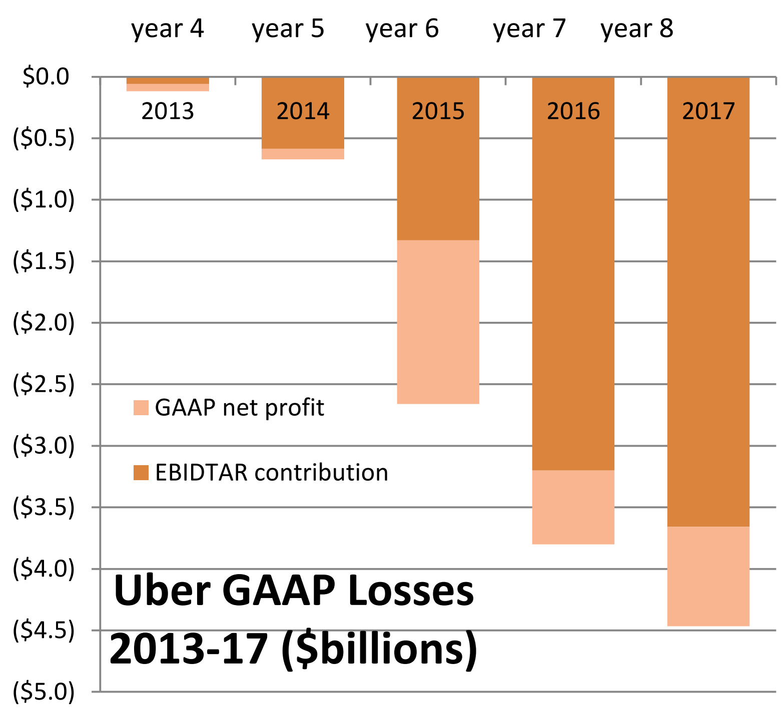
Major lessons about transportation economics and industry structure

- <u>Centralized control of capital assets/labor</u> critical to the profitability of any transport company/service
- <u>Need very sophisticated systems</u> to balance capital investment and marketplace asset deployment against volatile demand and competitive conditions
- <u>Limited scale/network economies</u>; no natural tendency towards high concentration or monopoly
- <u>High cost of demand peaks, backhauls</u> a critical profit problem in every mode
- <u>Variable pricing can be valuable</u> but only if it improves revenue productivity and reduces capital requirements
- <u>Technological innovation</u>: huge part of transport history but adoption takes time; rarely has much impact on competition or industry structure

Uber's valuation suggests every one of these economic lessons was wrong

- <u>Centralized control of capital assets/labor:</u> Uber business model eliminates all direct control over assets, resources
- <u>Need very sophisticated systems</u>: Uber has no data on demand/competitive conditions and primitive pricing systems
- <u>Limited scale/network economies</u>: taxis have never demonstrated any scale economies but Uber investors explicitly pursuing quasi-monopoly industry dominance
- <u>High cost of demand peaks, backhauls</u> but nothing in Uber business model reduces these costs
- <u>Variable pricing valuable</u> but Uber surge pricing reduces revenue productivity, fails to reduce capacity requirements
- <u>Technological innovation:</u> somehow more powerful than jets, diesels, computers, somehow explains rapid conversion of fragmented taxi industry to global monopoly: Uber can have flying cars in revenue service by 2023

Uber losses massive, steadily increasing –($4.5 billion) in 2017



- **Not "growing into profitability" like companies with powerful scale or network economies**
- **2014-15: Uber revenue only covered ~40% of its costs; up to ~65% in 2016-17**
- **None of margin gains due to improved efficiency**

All of Uber's growth due to massive (~$14 bn) in predatory subsidies

Uber actually higher cost, less efficient than traditional taxi operators

Traditional Taxi Cost Breakdown (% of total revenue including tips)	Traditional Cost split	Can Uber Achieve Significantly Lower Costs Than Traditional Cab Companies?	
driver take-home pay, benefits	58%	**NO**	Uber's growth impossible without much higher driver costs
fuel and fees	9%	**NO**	Everyone faces same fuel costs
vehicle ownership, insurance and maintenance	18%	**NO**	Independent drivers pay more for insurance/vehicles/financing and maintenance than existing operators
corporate: dispatch/overhead/ marketing/profit	15%	**NO**	Uber charges 20-30% of revenue but has much higher costs (software, global branding, shareholder returns)

- **Uber must also generate strong returns on its $20 billion capital base**

Only Uber margin gains from pushing driver pay to/below minimum wage

- **Taxi drivers forced to become "independent contractors" in 80s**
  - In NY hourly driver earnings fell 23% while fleet owner income rose 72%
  - Destroyed ability to manage operational efficiency and service quality
- **Uber's model designed to transfer more wealth labor→capital**
  - Entire vehicle capital risk shifted to drivers; "locks-in" drivers

Uber shifts more costs to drivers	Traditional	Uber model
total driver costs:	67%	85%
vehicle ownership, insurance maintenance, capital risk	18% ▼	▲ 18%
total corporate costs:	33%	15%

- **Major labor market failure—drivers earn less driving for Uber**
  - Pre Uber drivers took home \$12-17/hr but only if they worked 60-75 hrs/wk
  - With efficient markets, Uber would need higher pay to get drivers to shift
  - Uber driver take-home pay is \$9-11/hr, below minimum wage in most markets
- **All recent Uber margin improvements driven by unilateral cuts to driver compensation--\$2.6 billion labor→capital shift since 2016**

Reasons why laissez-faire urban transport won't work long understood

- **Operators can't capture huge external benefits**
  - creating access to jobs, development, mobility
- **Normal pricing tools won't work with mass market social goods**
  - Huge expectations that urban transport should be cheap (or free)
  - Majority of users can't afford true cost of any urban transport service
  - High priced niche product won't be efficient or provide public benefits
- **Critical peak capacity costs 4-5X more than off-peak service**
  - Thus rationing via crowding/waiting; peak prices won't solve rush hour
- **Trips with no backhaul cost 2X as much**
  - Thus terrible service to lower density neighborhoods
- **Private operators will undersupply safety, insurance, maintenance**
- **An unregulated, dominant Uber doesn't solve any of these problems**

1988—these economics widely documented, discussed
2018—these economics totally ignored

Uber's regulatory changes have nothing in common with rail/air deregulation

1970s transport deregulation debate entirely focused on overall industry efficiency, consumer welfare

- **Rail/airline rules established before paved roads or turboprops were no longer benefiting consumers or industry efficiency**
  - Regulatory reform strictly limited to liberalizing pricing/entry rules
  - No changes to regulations governing safety, financial reporting, consumer protection, antitrust, labor conditions
- **Economists rejected taxi deregulation because economics of providing taxi service hadn't changed**
  - No evidence of major inefficiencies (branch lines) linked to regulations
- **Taxi deregulation in 17 cities failed—no price/service benefits**

Uber seeking to nullify right of cities to restrict "freedom" of monopoly operator in any way, including safety

- **No taxi regulations chages achieved through open, democratic processes; Uber demanded unfair advantages over incumbents**

For 8 years media focused on Uber's (false) PR narrative while ignoring economics

- **Business model based on cutting edge technological innovation, and can overwhelm incumbents in any market anywhere**
- **Existing laws/regulations don't apply—totally new industry**
  - Uber carries people from point A to point B in cars like every other taxi
- **Grew because customers chose superior service in open markets**
- **Resistance to Uber led by Evil Taxi Cartel and corrupt regulators who want to block innovation and job creation**
  - Billionaires breaking laws in pursuit of monopoly are the innocent victims
- **Tech companies startup losses always become big profits**
- **Uber will eventually displace private car ownership**
- **$70 billion valuation justified since taxi industry dominance will lead to profitable expansion into many other businesses**
- **Sexual harassment, other "cultural" issues anomalous, totally fixed when Khosroshahi replaced Kalanick**
  - Lacking competitive economics, Kalanick's monomaniacal, lawbreaking culture critical to growth—startups with strong positive cashflow do not need to harass journalists, obstruct justice, sabotage competitors, or attack rape victims

Traditional economics fully explain Uber's huge losses, bad behavior

but how markets respond to economic signals vastly different

- **Profit signals—Uber versus Penn Central, Tesla versus Ford**
- **Capital allocation—equity speculation vs sustainable competitiveness**
- **Ignore ability of artificial market power to distort market signals**

public discussion of companies vis-à-vis society vastly different

- **Market signals via media—discussions vs one-sided PR narratives: focus "rockstar" billionaires versus "the real economy"**
- **Safety and fatalities—aviation vs "driverless cars"**
- **"Deregulation" economic welfare vs unfettered capital accumulation**
- **Competition—driver of innovation or barrier to capital accumulation**
- **Concentration—monopoly power/rent-seeking vs higher stock prices**
- **Economics of public goods, urban transport infrastructure**

Will planned 2019 IPO force Uber to finally deal with economic reality?

End game for both Amazon and Uber was always exploiting artificial "platform" power--but radically different approaches

- **Amazon strategy—achieve strong cash flow and market share in bookselling through major product and efficiency breakthroughs**
  - Ecommerce platform then easily leveraged for many years of growth
  - Amazon moved quickly toward full capital market scrutiny
- **Uber strategy—skip the hard parts (find powerful competitive advantages, establish profitable core business)**
  - Uber needed 2300 times more pre-IPO capital to fund predatory growth
  - Create $70 billion out of thin air, without any consumer welfare benefits
- **Uber's investors need >$100 billion public valuation—IPO must show real profits, market power, strong future growth**
  - Somehow improve P&L by over $5 billion/year by mid-2019, demonstrate that Uber platform has achieved Amazon-type power, many expansion opportunities
  - Catch 22—Investment in future markets will trash P&L; short-term cost cuts to juice P&L will undermine longer-term growth narrative
  - Obvious macro headwinds (tech bubble bursting, interest rates, recession)

Endnote--Transportation Law Journal article (Oct 2017)

- ***Hubert Horan, Will the Growth of Uber Increase Economic Welfare? 44 Transp. L.J., 33-105 (2017)***
  - *Includes Taxi cost structure and driver compensation data, analysis of Uber's competitive economics, a comparative analysis of the (largely successful) rail and airline deregulation efforts of the 1970s vs the (totally unsuccessful) attempts to deregulate taxis in the 1980s, the development and evolution of Uber's PR narrative, an assessment of Uber's strategy for producing shareholder returns, and Uber' financial results through mid-2017*
- ***Available for download at:*** ***https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2933177***
- **For updated Uber financial results and explanations of Uber's recent management turmoil, see**
  - Can Uber Ever Deliver? Part Ten: The Uber Death Watch Begins, Naked Capitalism 15 June 2017
  - Can Uber Ever Deliver? Part Thirteen: Even After 4Q Cost Cuts, Uber Lost $4.5 Billion in 2017, Naked Capitalism, 18 Feb 2018
  - Uber's Q1 18 Results – Reporters Show They Aren't Up to Reading Financials, Naked Capitalism 24 May 2018