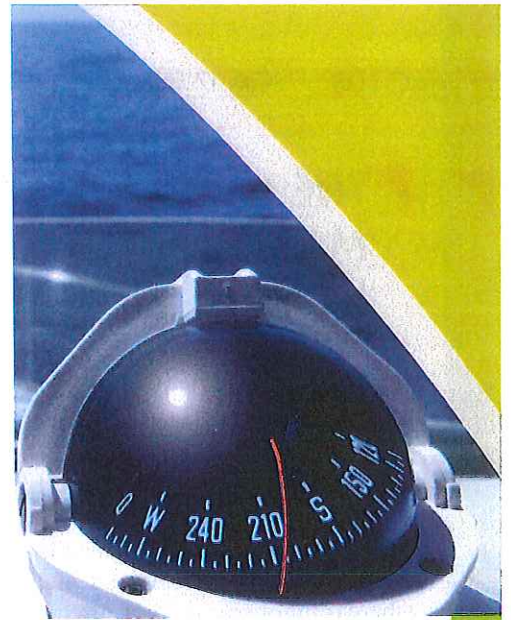


CASE

# 17

## UBER: DRIVING GLOBAL DISRUPTION



*"Uber is software eats taxis."*

Marc Andreessen<sup>1</sup>

*"I have had some terrible experiences with the taxi service; twice this past year I ordered a taxi to my house to go to the airport and they just didn't show up."*

Kevin Kane<sup>2</sup>

*"Cab driver robbed, stabbed overnight in Salt Lake City."*

KUTV News headline.<sup>3</sup>

### INTRODUCTION

In June 2014, 5-year-old company, Uber Technologies, the developer of the car-hailing smartphone app, secured \$1.2 billion in funding from a consortium of investors led by mutual-fund giant Fidelity Investments. On the basis of the funding, Uber was valued at \$18.2 billion, making it one of the world's most valuable privately held companies. This placed Uber's valuation above that of the rental car companies Hertz and Avis, as well as other well known, private technology companies such as Airbnb and Dropbox. In justifying the valuation, CEO Travis Kalanick noted that Uber was already using its app to offer ride-for-hire services in 130 cities in

36 countries, and that revenues were "at least doubling every 6 months."<sup>4</sup>

At the same time, Uber was facing challenges from incumbent taxi services around the globe that argued Uber was circumventing existing regulations and competing against them unfairly. On June 12, 2014, European taxi drivers protested the rise of Uber, stopping in the middle of streets and shutting down major portions of several major European cities including London, Lyon, Madrid, and Milan. Uber responded by offering discounts to stranded commuters in major cities. The day after the protests, Uber reported that its ridership in London had soared by 850%.<sup>5</sup> In the United States, regulators in numerous cities have issued cease-and-desist orders against Uber, which the company has generally ignored and, in several high-profile instances, overturned.

## THE "RIDE-FOR-HIRE" MARKETPLACE IN THE UNITED STATES

Historically in the United States, two different types of provider have operated in the ride-for-hire marketplace: taxicab services and limousine services, each of which operates under a different set of rules. Both taxicab and limousine services are regulated by the states and/or cities in which they operate. In most cases, taxicabs are regulated at the municipal level, whereas limousine services are regulated at the city or state level. The regulations that apply to taxicab and limousine services are roughly similar from jurisdiction to jurisdiction, although they may differ in detail.<sup>6</sup>

Regulations typically address who can operate a taxicab or limousine, how service providers are contacted, the fare structure, and the labeling and appearance of vehicles. The motive for regulation is to ensure that services are safe, reliable, and affordable, and that owners and drivers are adequately compensated.

Customers can contact ride providers in two ways: by hailing on the street, or by prearrangement. In general, only licensed taxicabs can be hailed on the street; limousine services must be prearranged. Moreover, unlike taxicabs, in many cities limousine services cannot respond immediately to pick-up requests—they typically have a minimum prearrangement time, often at least an hour. This requirement works to protect taxicabs from direct competition from limousine services.

Most large urban markets are served by a significant number of local taxicab companies operating fleets of cars. For example, there are 31 cab companies in San Francisco and 10 taxi dispatch companies that schedule rides. No one firm is dominant. There are about 1,500 licensed taxicabs within the city. Some 57% of taxi drivers in San Francisco are immigrants, a pattern repeated in many other cities. The average mean wage of a San Francisco driver was reported to be \$22,440 in 2013.<sup>7</sup>

In New York, which has the largest ride for hire fleet in the USA, licenses have been issued for 13,437 taxicabs. There are an estimated 42,000 drivers in the city, with a licensed vehicle being used by 2–3 drivers a day. In 2014, only 6% of cab drivers in New York were born in the USA, and 36% came from Bangladesh and Pakistan.

The New York taxi fleet picks up 600,000 passengers per day. There are also an estimated 25,000 livery cars that provide for hire service by pre arrangement, and carry 500,000 passengers per day. There are 10,000 "black cars" that provide services mostly for corporate clients.<sup>8</sup>

Regulators have long required that taxicabs available to be hailed on the street be licensed. The license is to ensure that the taxi service is safe and reliable, and that fares are fair. For hire vehicles must be insured to cover drivers and passengers, meet safety standards, and (if taxicabs) have a sealed meter. Regulations also require that licensed cabs be quickly and easily identifiable. This is normally achieved by a distinctive color (e.g., yellow cabs). Cabs must also display whether they are in service or not.

Taxicabs charge a regulated fare, set by a government agency, based on the time and distance of the trip as measured by a meter. Some trips to and from established destinations such as an airport may have a fixed price that will displayed in the cab. Taxicabs are required to carry standardized meters that must be prominently displayed, sealed, and periodically checked to ensure that the proper fare is being charged. Limousine services are generally prohibited from charging fares based on time and distance, and they do not carry a meter. Typically, fees are based on time, often with a minimum billed time. The fee normally has to be agreed upon in advance.

In many jurisdictions, the licensing system limits the supply of taxicabs. One common variant of licensing is the medallion system that is used in cities such as New York, Boston, Chicago, and San Francisco. Medallions are small, metal plates attached to the hood of a taxi certifying it for passenger pickup throughout a defined area (normally metropolitan boundaries). When the medallion system was first introduced in New York in 1937, the idea was to make sure that taxi driver was not a criminal luring passengers into his vehicle. To get a medallion, the taxi service has to adhere to the regulatory requirements in that jurisdiction and be approved by the appropriate regulatory agency. Medallions may be given to individual taxi drivers who own their own cars, but more typically taxi companies that own fleets of cars acquire them. The taxi companies then lease cars and medallions to drivers on a daily or weekly basis. In some locations the driver may own the car, but lease or purchase the medallion from an agent who has acquired it. An example would be Medallion Financial, a publically traded company

that owns hundreds of medallions in New York, sells them to aspiring young cabbies, and arranges for loans to finance their purchase.

In cities that utilize a medallion system, the supply of medallions has often been limited. The rationalizations for doing this include ensuring quality, guaranteeing a fair return to taxi companies, and helping to support demand for other forms of public transportation such as buses, trains, and the subway. It has also been argued that limiting the number of cabs helps reduce congestion and pollution.<sup>9</sup>

In practice, the supply of medallions has often not kept pace with growing populations. In New York, Chicago, and Boston, for example, the number of medallions issued has barely budged since the 1930s. In New York, there were 11,787 medallions issued after World War II, a number that remained constant until 2004. By 2014, there were 13,437 medallions issued in New York.

Medallions can be traded. Thus over time, a secondary market in medallions has developed. In this market, the price is not set by the agency issuing them but by the laws of supply and demand. The effect of limited supply has been to drive up the price of medallions. In New York, taxi medallions were famously selling for over \$1 million in 2012. In Boston, the price was \$625,000. In San Francisco, the price was \$300,000 and the city took a \$100,000 commission on the sale of medallions.<sup>10</sup> The average annual price of medallions surged during the 2000s. In New York, prices increased 260% between 2004 and 2012. The inflation-adjusted annualized return for medallions over this time period in New York was 19.5%, compared to a 3.9% annual return for the S&P 500.<sup>11</sup>

As noted above, drivers often do not own the medallions. There are three players in many taxi markets: the medallion holders (often taxi companies) who have acquired the right to operate a taxi from the regulatory agency; the taxi driver; and taxi dispatch companies. A taxi dispatch company typically matches available cabs with customers and takes a fee for its scheduling services.

In New York, about 18% of cabs were owner operated in 2014, putting most medallions in the hands of taxi companies. In New York, regulations allow medallion owners to lease them out to drivers for 12-hour shifts. The critical problem facing drivers is that they must get access to a medallion in order to make a living. Due to this, companies that own medallions can extract high fees from drivers. There are also reports

that some taxi dispatch companies use their position as schedulers to extract payment in the form of bribes from drivers in return for preferred shifts.<sup>12</sup>

Drivers, who legally are viewed as “independent contractors,” can begin a 12-hour shift owing as much as \$130 to their medallion-leasing company. They may not break even until halfway through their shift. One consulting company report found that, in 2006, a driver’s take-home pay in New York for a 12-hour shift averaged \$158. In 2011, the New York transportation authority calculated that it was \$96.<sup>13</sup> A study of taxi drivers in Los Angeles found that drivers worked on average 72 hours a week for a median take-home wage of \$8.39 an hour. The LA drivers were paying \$2,000 in leasing fees per month to taxi companies. None of the drivers in the LA study had health insurance provided by their companies, and 61% were completely without health insurance.<sup>14</sup> Given the compensation, it is perhaps not surprising that some drivers can be rude, impatient, and prone to drive fast and take poor care of their cabs.

The LA study noted that, because City officials heavily regulate the taxi business, taxi companies are active politically, paying lobbyist to advocate for their interests and contributing to the campaign funds of local politicians. The same is true in New York City, where the medallion owners’ trade association, the Metropolitan Taxi Board of Trade, lobbies hard to influence public policy. In 2011, for example, medallion owners were initially able to block plans to create a fleet of “Boro” cabs (painted green) to serve New York’s outer boroughs. They argued that doing so would drive down the price of their medallions. In June 2013, however, the New York Supreme Court overruled lower court rulings and allowed the licensing of Boro cabs to proceed. The intention now is to issue 18,000 new licenses to green cabs. These cabs, however, will not be able to pick up passengers in lower Manhattan, which remains the territory of yellow cabs.<sup>15</sup>

## THE RIDE-FOR-HIRE MARKET IN OTHER COUNTRIES

Many regulations in the U.S. ride-for-hire marketplace have analogs in other countries. In London, for example, there are 22,000 black cabs (taxis that can be hailed) and 49,000 vehicles licensed for private hire that cannot be hailed on the street. Although

there is no regulatory limit on the number of taxis in London, before London taxi drivers can join the work force they must navigate byzantine licensing procedures that include memorizing the city's street maps, which is referred to as "the knowledge." Acquiring "the knowledge" constitutes the most demanding taxi driver training program in the world. On average it takes 12 attempts at the final test and 34 months of preparation to pass the knowledge exam. The effect of "the knowledge" requirement is to limit the supply of taxis in London. Similar, though less demanding, knowledge tests are found in Austria, Brussels, Finland, Germany, and Hungary.<sup>16</sup>

In Paris, the number of taxi permits was capped at 14,000 in 1937. By 2014, a much bigger and vastly richer Paris was receiving 27 million tourist visits a year, yet the number of cabs had edged up just 14%, to 15,900. The result: Parisians must stand in long lines for cabs that never come. In 2007, the Government of Nicolas Sarkozy proposed to license 6,500 new cabs in Paris. The proposal triggered a strike among transportation workers that shut the city down for a day and frightened Sarkozy into surrender.<sup>17</sup>

Italy is another country with a restrictive licensing system for taxis. This has been a problem in Milan, for example. In 2002, the ratio of taxis to inhabitants was 1 for every 1,094 inhabitants, compared to 1 for every 387 in London and 1 for every 414 in Paris. At the time, there were 4,571 taxis in Milan, a number that had been frozen for 20 years. The shortage of taxis resulted in long waiting periods at peak demand times. The price of taxi licenses on the secondary market had risen to between EUR 100,000 and EUR 130,000. In 2002, the city government moved to alleviate the cab shortage, announcing that it would issue 500 new cab licenses. Milan's taxi drivers mounted a vigorous campaign against this. The city responded by reducing the number of proposed new licenses to 300. The taxi drivers still objected and protested by forming "go-slow" convoys of taxis that paralyzed city traffic for 2 days. The city effectively backed off.<sup>18</sup>

In contrast, Dublin offers a view of what can happen when regulations are relaxed. Due to the limited availability of licenses, between 1979 and 1998 the number of licenses in Dublin barely budged even though demand had soared as the population grew. Deregulation in 2000 reduced the cost of entry (car plus license) by 74%. The result was more than three times as many cabs on the road, shorter waiting times,

better cab quality, and higher passenger satisfaction—all in 2 years.<sup>19</sup>

Interestingly, Tehran, the capital of Iran, has a highly deregulated ride-for-hire market. In addition to private taxis, a shared taxi system allows any private car to pick up passengers. Since travelers can hop on and off as they please, a driver can carry passengers travelling to different destinations at the same time, which increases utilization of the vehicle. The system also means that the supply of taxis is very fluid, increasing during rush hour as commuters pick up passengers on their way home.<sup>20</sup>

## UBER'S SERVICE

Uber was founded in San Francisco, in 2009, by Garrett Camp and Travis Kalanick to develop a smartphone app that would facilitate the creation of a new ride-for-hire service. The company raised \$1.25 million in angel investments in 2010 to help fund the initial service rollout. From the outset, the goal was to overcome common frustrations that customers often experience when trying to find a taxi. Passengers can find taxicabs to be unpleasant, poorly maintained, dirty, and recklessly driven. Taxicabs can be difficult to find in certain areas—many drivers avoid areas of a city where there are few passengers, or where they are unlikely to find a return fare. There can also be a shortage of cabs at peak commute times, or at special events, such as New Year's Eve, which leads to long wait times. Sometimes taxicabs just don't turn up, leaving a traveler stranded. This author once missed a plane flight because a taxicab booked the day before didn't appear. On another occasion, a scheduled ride turned up very late because the taxi driver got lost.

## Business Model

Uber exploited the opportunity created by customer frustrations to develop a smartphone application that effectively enables customers to hail a car immediately from the comfort of a couch or a barstool, rather than standing on a cold street and waiting for a cab to drive by. The app also shows customers the location of cars. In general, a car will arrive a few minutes after being hailed. The fare, including a tip, is charged

directly to the customer's credit card. This means that no cash changes hands, which is a major plus for drivers who did not like to carry large quantities of cash (there is a long history of taxi drivers being robbed by riders). The fee is based on time and distance, as determined by the Uber application using the GPS capability of the driver's mobile device. Under the initial model, the fee was split between the driver, who kept 80%, and Uber, which got 20%. When Uber started its service in 2010, the company was charging 40 to 100% more than a similar trip using a taxicab. However, over time, the price differential between Uber cars and regular taxicabs fares has declined substantially.

Uber does not own cars. Instead it relies upon a network of established, licensed limousine drivers and companies that wish to be part of its system. In effect, the Uber app allows limousine's to be transformed into a service that can be hailed from any location, albeit by an app rather than hand signaling. Uber relies greatly on data analytics to determine the best locations for drivers to wait in order to speed up response time to customer requests for rides. The more data Uber gathers, the better its predictive models, the more optimal its placement of vehicles, and the higher its vehicle utilization.

Uber also used data analytics to pioneer the use of what it calls "surge pricing."<sup>21</sup> Instead of using fixed pricing as do conventional taxi services, Uber adjusts prices for a ride depending upon the state of demand. For example, prices have been known to surge on New Year's Eve. Similarly, if there is an unforeseen event such as a snowstorm that makes everyone want a car at the same time, prices will go up, often dramatically. There have been reports of Uber fares increasing to as much as seven times the normal level during periods of peak demand. In turn, the higher prices attract more Uber vehicles onto the road, and prices drop back down toward normal levels. Uber argues that a benefit of this system is that it encourages more supply at periods of peak demand, and visa-versa. However, there have been some reports of grumbling on the part of customers who find that they are paying unexpectedly high prices. Conversely, if Uber's network of drivers responds quickly to price signals, dramatic price surges should be a very transitory phenomenon.

An added benefit of the Uber app is a feature that allows riders to rate drivers, which translates into an

implicit guarantee of driver reliability based on prior reputation. There is a corresponding feature on the driver's app, which enables them to rate customers and red flag and avoid troublesome clients.

Limousine and other private car owners have been attracted to the Uber model by a number of factors. First, the Uber app has enabled limo drivers to circumvent regulations that prohibit them from being hailed on the street. As such, it has increased demand for their services. Second, the app increases vehicle utilization, which drives more revenues to the vehicle owner. Third, owners of the vehicle benefit from the surge-pricing methodology that enables them to charge more than regulated fares at times of peak demand. Fourth, the fact that no cash changes hands and that payment is guaranteed when a ride is booked increases the safety of the driver, as does the client-rating feature on the driver's app. Fifth, the Uber system means that drivers can work flexible hours, driving when they want to rather than when a taxi company tells them they must take a shift.

There have been reports of Uber drivers earning multiples of what the driver of a regulated taxicab could earn. In early 2014, Uber suggested that while a typical taxicab driver could earn \$30,000 a year, an Uber driver working a 40-hour-week could earn nearly \$91,000 a year in New York, and \$74,000 in San Francisco.<sup>22</sup> Attracted by such financial inducements, in 2014, the company claimed that 20,000 drivers a month were signing up with Uber worldwide.

Some financial journalists have questioned Uber's claims about driver income. Uber's estimates were based on a sample of drivers who drove over 40 hours a week. The earnings figures also excluded the cost of gas, insurance, parking, maintenance, repairs, and paying for tolls. One journalist concluded that in order to earn \$75,000 a year driving for Uber in San Francisco, a driver would have to work 58 hours a week.<sup>23</sup>

## Expansion Strategy

Uber began offering its service in June 2010 in San Francisco under the name UberCab. New York was added in May 2011. By April 2012, the company was in seven U.S. cities, Paris, and Toronto. Two years later, Uber was operating in 130 cities in 36 countries around the world. Initially, Uber limited its service to drivers with high-end, limo-type cars. In San Francisco, Uber explicitly targeted members of the

tech community in its early marketing efforts, sponsoring local tech and venture capital events and providing free rides to attendees. Uber's bet was that its service would immediately resonate with this demographic, who would rapidly spread the news via word of mouth and social networks. According to CEO Travis Kalanick:

Uber spends virtually zero dollars on marketing, spreading almost exclusively via word of mouth. I'm talking old-school word of mouth, you know at the water cooler in the office, at a restaurant when you're paying the bill, at a party with friends—"Who's Ubering home?" Ninety-five percent of all our riders have heard about Uber from other Uber riders. Our virality is almost unprecedented. For every 7 rides we do, our users' big mouths generate a new rider.<sup>24</sup>

One of Uber's business development managers elaborated on this:

With Uber everything is very local-focused as transportation is a local topic. For that reason we have an operations team on the ground in all the cities where Uber exists, and that team is working with both local drivers and local clients to grow the business there.

We've also found that our growth is driven substantially by word of mouth. When someone sees the ease of use, the fact that they press a button on their phone and in under 5 minutes a car appears, they inevitably become a brand advocate. We've also done our best to reach out to folks who are influencer in our markets, who obviously have a stronger reach and bigger audience.<sup>25</sup>

To drive rapid growth, Uber picked cities that have what Kalanick refers to as "accelerants." These accelerants indicate a concentrated need for Uber's service and include (1) lots of restaurants and nightlife, (2) holidays and events, (3) weather, and (4) sports.<sup>26</sup> For example, in Chicago, a city with lots of nightlife, intense weather, and numerous sporting events, Uber's initial viral growth was double what they normally experienced. Special events and holidays also provided an opportunity to showcase Uber's model. Uber's ability to deliver rides on New Year's Eve in

San Francisco, a city notorious for its lack of taxis, drove spikes in new ridership. Kalanick has also noted that Uber is getting better at local market entry over time:

Every city, every subsequent city that we go to we're getting better at rolling the city out and growing the city faster. And so a lot of the cities where there's a constrained number of taxis, no liquid black car market, those are the cities where we launch and things explode from the start. We have other cities where there's tons of taxis, in some cases way too many and in those situations often the quality of service being delivered is really poor, so we go in there and explode as well. But there's all kinds of different cities in terms of regulatory, and in terms of what the industry looks like, an industry which we're disrupting in a substantial way.

We think that cities deserve to have another transportation alternative. It sounds crazy to have to say that but you have to do that because you have incumbent interests which are often trying to curtail innovation and curtail the sort of transportation alternatives that might compete with their existing business. And, because of that, it requires us to take a very local approach to how we go after a city. We have launchers that go into [cities] . . . and turn nothing into something. I like to say they drop in with parachutes and machetes [and] get highly involved with the suppliers, people who own cars and run car services, and really just make sure that we can launch a service that is high quality from the start. Being local and speaking with a local voice is important when you're doing transportation and means you know what's going on for the city.<sup>27</sup>

To achieve rapid expansion, Uber needs to be able to quickly build a network of drivers in each city it enters. The company certainly touts the financial and safety advantages of working for Uber, but it is also taking other actions to make sure there are plenty of drivers available. Most notably, in December 2013, Uber lined up \$2.5 billion in outside financing for low-interest-rate loans for Uber X drivers with Toyota and GM (more on Uber X later in this case).

This should make it possible for up to 200,000 drivers to buy their own cars at very low interest rates, under the condition that they use those cars on the Uber network for the duration of the loan. In effect, drivers are lock in for the duration of the loan unless they want to see their interest rates balloon. Reportedly, drivers have to agree to two financing rates, one that reflects the cost savings of them partnering with Uber, and one that doesn't.<sup>28</sup>

## Regulatory Responses

Uber had not been operating in San Francisco long before there was rumbling among taxicab companies that Uber might not be legal. A taxi driver raised objections against Uber at a city Taxi Advisory Council meeting. Among the concerns were the following:<sup>29</sup>

- Uber operates much like a cab company but does not have a taxi license.
- Its cars don't have insurance equivalent to taxi insurance.
- Uber may threaten taxi dispatchers' way of making a living.
- Limos usually have to book an hour in advance, by law, while only licensed taxis can pick someone up right away, but Uber picks people up immediately, without a license to do so.

On October 20, the San Francisco Metro Transit Authority and the Public Utilities Commission of California issued a cease-and-desist order against the company. Uber, however, continued its service under threat of penalties including fines of up to \$5,000 per instance of operation, and potentially 90 days in jail for each day the company remained in operation past the order.

Undeterred, Uber stated that it would work with the agencies involved to understand their exact concerns and make sure that the service was in compliance. On the company blog, the following statement was posted:

Uber is a first to market, cutting edge transportation technology and it must be recognized that the regulations from both city and state regulatory bodies have not been written with these innovations in mind. As such, we are happy to help educate the regulatory bodies on this new generation of technology, and work closely with both agencies to ensure our compliance and keep our service available.

However, the company did quietly change the name of its service from UberCab to Uber.

The dispute between Uber and regulatory authorities in California simmered on for 3 years. During this time, Uber continued to operate, and indeed dramatically expanded its service. At one point, CEO Kalanick joked that he probably had 20,000 years of jail time in front of him.<sup>30</sup> In 2013, influenced by evidence of strong public demand for Uber's service, the California Public Utilities Commission stuck a deal with Uber, lifted the (ignored) cease-and-desist order, and eliminated fines.

As Uber expanded its service, what had happened in California occurred in cities around the United States, and then the globe. In Washington D.C., for example, where existing taxi services were rated as poor by many residents, demand for Uber cars rapidly took off after the company started service in December 2011. The local regulatory authority, The DC Taxicab Commission, deemed the service illegal. True to form, Uber continued to operate. At one point, the Commission conducted sting operations against Uber, hailing cars via the Uber app, then impounding the cars and ticketing the drivers. Responding to intense lobbying from D.C.'s 150 taxicab companies, in mid-2012 the City Council drafted legislation to fix the price for Uber's service so that it would be five times the minimum cost of cabs. Uber CEO Kalanick responded with a social media campaign, urging D.C. customers to sign a petition and email council members to protest the legislation. The council members, swamped with thousands of emails, quickly withdrew the legislation. In a major victory for Kalanick, in short order a new bill was drafted and passed that exempted Uber from regulation by the Taxicab Commission.<sup>31</sup>

In Seattle, after initially ignoring Uber, the City Council responded to its increasing popularity by passing an ordinance that limited the number of Uber drivers to 150. At the time, Uber already had 1,000 drivers in the city. The City Council said that it was concerned about the safety and insurance coverage of Uber cars. Council member Kshama Sawant, the Council's only socialist, argued in favor of the cap as a means to protect traditional taxi drivers. However, in Seattle, city ordinances can be suspended if enough citizens sign a petition requesting this. The day after the ordinance was passed, a group that received some \$400,000 in funding from Uber and similar services submitted more than 36,000 signatures to the city

clerk's office, more than double the required number to suspend an ordinance. In July 2014, the City Council voted 8-1 in favor of legislation that legalized Uber and similar services, and removed any caps on the number of drivers.<sup>32</sup>

In New York, a city with a long tradition of limo services, Uber initially operated unimpeded. However, when it tried to expand operations to include New York's traditional yellow cabs, the city's Taxi and Limousine Commission (TLC) stepped in, telling cab owners that it had "not authorized any electronic hailing of payment applications for use in New York City taxicabs," and further that "drivers and owners are reminded that violations of Commission rules can lead to fines, and in some cases, the suspension or revocation of their license."<sup>33</sup> Interestingly, the TLC took this position despite strong interest among taxi drivers. Uber responded by withdrawing its yellow taxi service, but its limo service continued to operate.

In London, taxi drivers responded to the growing popularity of Uber with a day of protests, stopping in the middle of streets and causing significant congestion. The protests backfired, as Uber reported a surge in app downloads and registration by London residents. In Paris, where similar protests by taxi drivers also took place, the Senate passed a bill that requires online car service drivers to return to their headquarters or a parking garage between each client, unless they have a prior reservation—a requirement that would substantially reduce Uber's ability to respond in a timely manner. The bill would also prevent companies from showing live locations of their cars on a map. The bill was scheduled for a full vote in the National Assembly in Fall 2014. In Brussels, Uber was banned after a court ruled it did not have the appropriate permits to operate in the city. In Berlin, the chairman of the Berlin Taxi Association won an injunction against Uber in April 2014, barring the company from operating there. However, the ruling is not being enforced in Berlin while Uber awaits the outcome of an appeal.<sup>34</sup>

Commenting on legal attempts to stop Uber, CEO Kalanick argues that they are classic example of regulators trying to stifle innovation. Kalanick also asserts that Uber's strategy of marching into new cities without asking permission is necessary. "If you put yourself in the position to ask for something that is already legal, you'll never be able to roll it out . . . the corruption of the taxi industries will make it so you

will never get to market."<sup>35</sup> At the time of writing, Uber is fighting multiple cease-and-desist orders in cities across the United States and around the world, as well as regulatory attempts to ban or hamstring the service. Despite the sustained legal assault, Uber has so far only exited one city, Vancouver, Canada.

## Competition

No good idea goes long without imitation, and Uber soon found itself facing several rivals, including most notably Lyft. Lyft is a privately held company based in San Francisco backed by venture capital. By mid-2014, it had raised over \$300 million in financing. Logan Green and John Zimmer launched Lyft in Summer 2012. It was originally conceived as a local service of Zimride, a ridesharing service the two founded in 2007 that was focused on long-distance ride sharing, typically between cities. Lyft uses a smartphone app that facilitates peer-to-peer ride sharing and electronic hailing by enabling passengers who need a ride to request one from the available community of drivers nearby.

Lyft differs from Uber in that its drivers are regular citizens using their own cars. Lyft drivers are distinguished by a pink, fuzzy mustache placed on the front of their vehicles. Drivers and passengers can rate each other on a five-star scale after each ride. The ratings establish the reputations of both drivers and passengers within the Lyft network. Ratings are displayed on the Lyft smartphone app, enabling drivers to avoid bad customers, and customers to avoid drivers with poor ratings. Lyft initially did not charge fixed prices, but instead relied upon voluntary donations to the driver. This changed in November 2013, when the company said that it would institute a fixed price schedule, with a 25% surcharge for peak periods. As with Uber, payment is automatic, made through the Lyft app, and Lyft takes 20% of the fare.<sup>36</sup>

By mid-2014, Lyft had established itself in 60 cities in the United States. Like Uber, Lyft has run into significant regulatory headwinds. Indeed, if anything, Lyft has faced more regulatory opposition because its drivers use their own cars. To counter claims regarding safety, Lyft insures each driver with a \$1-million "excess" liability policy. Any driver with an average user rating of less than 4.5 out of 5 stars is also dropped from the service.

Lyft faced the same headwinds as Uber in California, and struck a similar deal with regulators in mid-2013. In New York City, the TLC, which had declared Lyft an unauthorized service that had not demonstrated compliance with safety and licensing requirements, initially blocked it from operating. The restriction was lifted in July 2014 after Lyft agreed to use licensed, commercial drivers within the city. To grow its network in New York, Lyft was reportedly offering a guaranteed \$10,000 a month to drivers with a license from the TLC who would agree to work 60 hours a week, and \$5,000 to those willing to work 40 hours a week.<sup>37</sup>

A smaller competitor, Sidecar, began in San Francisco in 2012. Sidecar, a peer-to-peer ridesharing service, is similar to Lyft in many respects. It, too, uses a smartphone app to facilitate matching drivers to customers. One major difference is that Sidecar lets drivers set their own prices, while riders can select the car they want based on price and vehicle model. In mid-2014, Sidecar was operating in eight U.S. cities.

## PRODUCT EXTENSIONS AND PRICE CUTS: UBER X

Uber started out using traditional, black limousines. In July 2012, it created a new service category, Uber X, which allowed Uber drivers to use vehicles such as Toyota Prius Hybrids and SUVs like the Cadillac Escalade. By 2014, Uber X drivers were also using basic sedans like the Toyota Camry or Honda Accord. Initially, the pricing for Uber X cars was a \$5 base fee, with a \$3.25 per mile charge thereafter, making Uber X 35% cheaper than Uber's "black car" rates. The introduction of Uber X was seen as a competitive response to the emergence of Lyft as a low-cost competitor.<sup>38</sup>

In June 2013, Uber reduced the price of its Uber X service in San Francisco by 25%. In October 2013, it announced similar fare reductions in Los Angeles, San Diego, and Washington, D.C. At the time, Uber stated that its fares were 18 to 37% cheaper than hailing a traditional taxicab, depending upon location. Although Uber compares its prices to traditional taxicabs, its price reductions have often come in cities where Lyft has recently launched its service.

For example, Uber launched its Uber X service in Indianapolis and St. Paul just a week after Lyft introduced its service to riders in those cities. Uber also offered a free month of service to riders in those cities.

Uber dropped its prices again in January 2014. To push back against resistance from drivers, it argued that the price cuts meant more rides, and thus greater revenue. Uber announced a further round of 25% price cuts in Summer 2014 for its Uber X service in select cities, including San Francisco. These cuts are meant to be for a limited time only. However, Uber also stated that drivers would still pocket 80% of the original fare *before* the cut. This implies that, in some cases, Uber was now paying drivers more than they earned. For example, a 25% cut implies that a rider will now pay \$11.25 for a ride that previously cost \$15. But the driver will still keep 80% of the original \$15 fee, which means that Uber has to pay the driver \$0.75 to make up the \$12 salary for the driver. Under the new pricing scheme, Uber X is now cheaper than taxicab service in many locations. For example, a fare from Union Square to the Mission District in San Francisco costs \$11 via taxicab, and \$6 by Uber X.<sup>39</sup> On July 7, 2014, Uber dropped its New York City fare by 20%, making Uber X cheaper than a taxi in that market.

## CONCLUSION

Uber is a private company. Its financials remain a closely guarded secret and the source of some speculation. In August 2013, well-known tech writer Kara Swisher reported that Uber was on track to make \$125 million in revenue in 2013. In December 2013, a news source gained access to what appeared to be a leaked screenshot of Uber's financials dated November 20, 2013. This suggested that the company was on track to generate revenues around \$210 million in 2013. The same screenshot indicated that Uber had received 12 million ride requests and processed 89,976 new signups in the last 7 days.<sup>40</sup> In June 2014, Kalanick stated that revenues were at least doubling every 6 months. If true, Uber may be on track to having an annual revenue run rate of \$800 million by the end of 2014.

The company declined to comment on these numbers, but with private investors valuing the company

at around \$18 billion in mid-2014, this kind of rapid growth does not seem unreasonable. Indeed, in mid-2014 Uber's global rollout seemed to be accelerating. Early August brought launches in Dusseldorf in Germany, Ft. Lauderdale, West Palm Beach, and Richmond in the United States, San Paulo in Brazil, and Saigon in Vietnam. With the San Paulo launch, Uber was now available in the 10 largest cities of the 10 largest economies in the world. By early 2015, Uber was claiming that it served more than 200 cities in 54 countries.

In December 2014, Uber announced that it had raised an additional \$1.2 billion in financing from a consortium of hedge funds and wealthy private investors. The new round of funding valued the company at a staggering \$40 billion—higher than the market capitalization of three-quarters of the S&P 500. This was followed by an announcement on January 21, 2015, that Uber had raised an additional \$1.6 billion in convertible debt from wealth management clients of Goldman Sachs. Uber indicated that the funds were to be used for “strategic investments.”

As Uber expanded, it continued to run into regulatory headwinds. Following allegations that an Uber driver had raped a passenger in India, the Indian Government issued an order asking local authorities to stop all app-based taxi services until they are registered with local transportation departments. Authorities in Thailand and Vietnam also declared that Uber was an illegal service, although it continued to operate in both countries. In December, a judge temporarily banned Uber from operating in Spain following complaints from local taxi drivers that the service was damaging their industry.

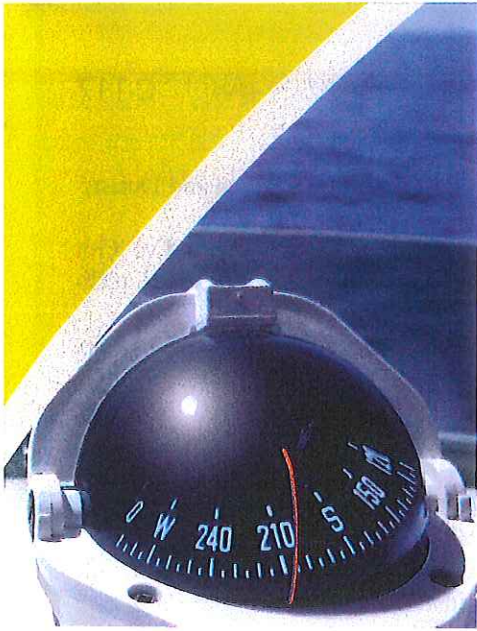
As 2015 began, numerous questions swirled around Uber. Was the private valuation reasonable? How big could the company ultimately get, and how profitable would it be? Would regulators be able to keep Uber at bay, or would the victories it had won in California, Seattle, and Washington D.C., become commonplace? How would incumbent taxicab companies respond? Would Lyft and other competitors emerge as a strong threat to Uber? And perhaps most tantalizingly, could Uber grow the way Amazon had, starting in one category (books), before branching out into other sectors? As several commentators have noted, Uber is potentially far more than a ride-for-hire service. It's really a logistics company with the

ability to digitally connect customers with commercial transportation to move not just people, but a range of physical goods.<sup>41</sup> Once Uber has you summoning cars from your phone, the logic goes, it can use that same technology to arrange for all sorts of other deliveries such as food, clothes, and Christmas trees (which it experimented with in 2013). What then, is the true upside here, and what are the risks?

## NOTES

1. P. Sloan “Marc Andreessen: Predictions for 2012 and Beyond,” CNET, December 19, 2011.
2. J. Kartch, “Uber Battle of New Orleans Pits Old Guard vs New,” *Forbes*, July 7, 2014.
3. [http://kutv.com/news/features/archive-10/stories/vid\\_650.shtml](http://kutv.com/news/features/archive-10/stories/vid_650.shtml).
4. E. Rusli, “Uber CEO Travis Kalanick: We’re Doubling Revenue Every Six Months,” *The Wall Street Journal*, June 6, 2014.
5. G. Sullivan, “Uber Said Ridership Up 850% after Taxis Hold London to ‘Ransom,’” Morning Mix blog, *Washington Post*, June 12, 2014.
6. D. Hoyt and S. Callander, “Uber: 21<sup>st</sup> Century Technology Confronts 20<sup>th</sup> Century Regulation,” Stanford Business School Case, September 25, 2012.
7. D. Bond-Graham, “Uber and Lyft Get a Lot of Hype But Ridesharing in a Parasitic Business Model,” *AlterNet*, October 22, 2013.
8. New York City Taxi and Limousine Commission, *2014 Taxicab Factbook*.
9. M. W. Frankena and P. Pautler, “An Economic Analysis of Taxicab Regulation,” Federal Trade Commission, Bureau of Economics Staff Report, May 1984.
10. R. Dhar, “The Tyranny of the Taxi Medallions,” Priceonomics blog, April 10, 2013. <http://blog.priconomics.com>.
11. New York City Taxi and Limousine Commission, *2014 Taxicab Factbook*.
12. Globe Staff Reporters, “For Boston Cabbies, a Losing Battle Against the Numbers,” *Boston Globe*, March 31, 2013.
13. J. Horwitz and C. Cumming, “Taken for a Ride,” *Slate*, June 6, 2012.
14. J. Leavitt and G. Blasi, “The Los Angeles Taxi Workers Alliance,” University of California

- Transportation Center, UCTC Research paper No. 893, Fall 2009.
15. D. Wiessner, "Court OKs Plan That Will Double the Number of Cabs in New York," *Reuters*, June 6, 2013.
  16. J. T. Bekken, "Experiences with Regulatory Changes of the Taxi Industry," 9<sup>th</sup> Conference on Competition and Ownership in Land Transportation. [www.thredbo-conference-series.org/downloads/thredbo9\\_papers/thredbo9-workshopD-Bekken.pdf](http://www.thredbo-conference-series.org/downloads/thredbo9_papers/thredbo9-workshopD-Bekken.pdf).
  17. D. Frum, "Paris Taxi Shortage: It's About Jobs," *CNN Opinion*, July 10, 2012.
  18. D. Coletto and R. Pedersini, "Milan Taxi Drivers Protest Against Increased Licenses," EIR Online, March 7, 2003. [www.eurofound.europa.eu/eiro/2003/02/feature/it0302206f.htm](http://www.eurofound.europa.eu/eiro/2003/02/feature/it0302206f.htm).
  19. "A Fare Fight," *The Economist*, February 11, 2011.
  20. Ibid.
  21. "Pricing the Surge," *The Economist*, May 29, 2014.
  22. M. McFarland, "Ubers Remarkable Growth Could End the Era of Poorly Paid Cab Drivers," *Washington Post*, May 27, 2014.
  23. M. R. Dickey, "Here's How Much Money You Can Really Earn as an Uber Driver," *Business Insider*, June 28, 2014.
  24. T. Kalanick, "Chicago: Uber's Biggest Launch Date?" Uber blog, September 22, 2011.
  25. S. Ellis, E. Taylor, and D. La Com, "Uber: What's Fueling Uber's Growth Engine?" GrowthHackers. <http://growthhackers.com/companies/uber/>.
  26. Ibid.
  27. N. Carter and T. Rice, "How Uber Rolls Out, City by City," *Inc.*, April 25, 2012.
  28. K. Rose, "Uber Might Be More Valuable than Facebook Someday. Here's Why," *New York Magazine*, December 6, 2013.
  29. L. Kolodny, "Uber Ordered to Cease and Desist," *techcrunch.com*, October 24, 2010.
  30. M. G. Siegler, "Uber CEO: I Think I've Got 20,000 Years of Jail Time in Front of Me," *techcrunch.com*, May 25, 2011.
  31. B. X. Chen, "Uber, Maker of Summon a Car App, Wins in Washington," *Bits*, July 10, 2012.
  32. Z. Miners, "Seattle City Council Legalizes Uber, Lyft, Sidecar without Caps," *PC World*, July 14, 2014.
  33. C. Albanesius, "Uber Drops Taxi-hailing App in New York," *PC Magazine*, October 16, 2012.
  34. M. Scott, "European Taxi Drivers Snarl Traffic in Protest Against Car-paging Service," *New York Times*, June 12, 2014, p. B3.
  35. B. X. Chen, "A Feisty Startup Is Met with Regulatory Snarl," *New York Times*, December 2, 2012.
  36. D. Bond-Graham, "Uber and Lyft Get a Lot of Hype—But Ridesharing Is a Parasitic Business Model," *AlterNet*, October 22, 2013.
  37. Staff reporter, "Lyft Offers \$10K a Month to Lure Drivers in NYC," *Crain's New York Business*, August 1, 2014.
  38. R. Lawler, "See Uber—This Is What Happens When You Cannibalize Yourself," *TechCrunch*, March 15, 2013.
  39. E. Huet, "Uber's Newest Tactic: Pay Drivers More Than They Earn," *Forbes*, July 2, 2014.
  40. N. Tiku, "Leaked: Uber's Internal Revenue and Ride Request Numbers," *Valleywag*, December 4, 2013.
  41. K. Rose, "Uber Might Be More Valuable than Facebook Someday. Here's Why."



CASE

# 18

## THE HOME VIDEOGAME INDUSTRY: THE FIRST FOUR DECADES

### AN INDUSTRY IS BORN

In 1968, Nolan Bushnell, the 24-year-old son of a Utah cement contractor, graduated from the University of Utah with a degree in engineering.<sup>1</sup> Bushnell then moved to California, where he worked briefly in the computer graphics division of Ampex. At home, Bushnell turned his daughter's bedroom into a laboratory. There, he created a simpler version of Space War, a computer game that had been invented in 1962 by an MIT graduate student, Steve Russell. Bushnell's version of Russell's game, which he called Computer Space, was made of integrated circuits connected to a 19-inch, black-and-white television screen. Unlike a computer, Bushnell's invention could do nothing but run the game, which meant that, unlike a computer, it could be produced cheaply.

Bushnell envisioned videogames like his standing next to pinball machines in arcades. With hopes of having his invention put into production, Bushnell left Ampex to work for a small pinball company that manufactured 1,500 copies of his videogame. The game never sold, primarily because the player had

to read a full page of directions before playing—way too complex for arcade gaming. Bushnell left the pinball company and with a friend, Ted Dabney, put up \$500 to start a company that would develop a simpler videogame. They wanted to call the company Syzygy, but the name was already taken, so they settled on Atari, a Japanese word that is the equivalent of “check in the go.”

In his home laboratory, Bushnell built the simplest game he could think of. People knew the rules immediately, and it could be played with one hand. The game was modeled on table tennis, and players batted a ball back and forth with paddles that could be moved up and down sides of a court by twisting knobs. He named the game Pong after the sonarlike sound that was emitted every time the ball connected with a paddle.

In Fall 1972, Bushnell installed his prototype for Pong in Andy Capp's tavern in Sunnyvale, California. The only instructions were “avoid missing the ball for a high score.” In the first week, 1,200 quarters were deposited in the casserole dish that served for a coin box in Bushnell's prototype. Bushnell was ecstatic; his simple game had brought in \$300 in a