

# Unfinished Business:

## A Blueprint for Uber, Lyft and Taxi Regulation

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This report was prepared independently as an opportunity to offer recommendations on current issues facing state and local decision-makers on the regulation of Transportation Network Companies and taxi and sedan services. The author has no financial interests with any ride service company.

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## *Definitions*

A variety of terms are used in discussions of TNC and taxi services. For purposes of clarity and conciseness, the following nomenclature is adopted in this report:

**Ride services** - for-hire, point-to-point transportation services provided in exchange for a fare. Includes TNCs, taxis and sedans. May be either exclusive-ride or shared-ride. With a few exceptions, vehicles seat fewer than nine passengers.

**Transportation Network Company (TNC)** - category of ride service that utilizes smartphone apps to take requests for rides and dispatch vehicles. Vehicles are generally the personal vehicles of drivers providing the service. Also referred to as app-enabled mobility services and ride sharing and ride-hailing services.

**Taxicabs** - vehicles authorized to pick up street hail and at taxi stands and typically serve dispatched trips as well.

**Sedans** - ride services not authorized for street hail and taxi stand service, other than TNCs. Includes limousines, black cars (premium service) and car services. Sometimes called liveries, for-hire vehicles or private-hire vehicles.

**Dispatch service** - ride services requested through a dispatch base by telephone order, smartphone app or website. Includes taxi dispatch and TNC rides.

**Flag service** - ride services obtained by street hail or at taxi stands.

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## Summary

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After winning adoption of favorable legislation in over 30 states from 2012 to 2015, the fast-growing app-based ride service companies Uber and Lyft encountered resistance in five of the six large states -- New York, Texas, Florida, New Jersey and Pennsylvania -- where they pushed for similar legislation this spring.

A review of legislative debates in these states finds that action was stymied by a range of issues related to driver background checks, service to disabled persons, fair treatment of drivers, competitive impacts on the taxi industry, and whether app-enabled ride services should be regulated by state or local governments.

This report addresses each of these issues, thus providing a blueprint for regulation of "Transportation Network Companies" (TNCs) such as Uber and Lyft. The report summarizes the debate on each of five key issues, assesses the arguments put forth by the various stakeholders, and makes recommendations designed to achieve core public policy goals of service, safety, competition and equity, while fairly balancing competing interests of companies, drivers, customers and cities themselves. The blueprint is intended to aid in legislative deliberations as elected officials take up TNC bills later this year or early in 2017.

Resolving the current legislative impasse is of growing importance as TNCs become an increasingly important transportation option, enhancing the attractiveness of cities as places to live, work and recreate. Legislative decisions being made now will affect public safety, the economic fortunes of TNC and taxi companies and drivers, availability of service to disabled persons, and the competitive balance between Uber, Lyft, taxis, new TNCs entering the market and potential entrants such as Google. Furthermore, decisions being made now have implications for the introduction of self-driving vehicles, which augur a revolution in urban transportation.

The history of taxi regulation shows the importance and potential peril of regulatory policy making. Shaped by decisions over many decades, the taxi regulatory system served to limit competition and innovation, compromise the attractiveness of taxi service and ultimately served to limit cabs to a niche role in city transportation networks. Achieving an effective and equitable blend of regulation and market competition is clearly critical to realizing the potential of both TNC and taxi services as they evolve and expand.

This blueprint for TNC and taxi regulation includes recommendations on five key issues that stymied approval of TNC bills in big-state legislatures this year:

- **Level playing field:** To stem the loss of customers to TNCs, taxi owners across the country have called for repeal of regulatory constraints and the opportunity to compete with TNCs on a "level playing field." This report recommends repealing key regulations on dispatched taxi service, creating the basis for fair competition between taxi and TNC companies based on consumer choice for customers requesting service by telephone or smartphone app. However, decades of experience with taxi regulation have shown the need to retain more extensive regulations, including numerical controls and fare regulation, for "flag" service (e.g., taxi stands and street hail) to prevent oversupply, fare gouging and chaotic street conditions. More flexible ways to do so, and to institute a two-tiered structure with fewer regulations for dispatch trips and a more extensive set of regulations for flag trips are discussed in the report, with relevant examples.
- **Fingerprinting drivers:** Whether TNC drivers should undergo fingerprint-based criminal record checks is a major subject of debate and led Uber and Lyft to withdraw from several cities that required these checks. This report recommends that driver-related risks should be addressed using a combination of state-of-the-practice safety management systems that monitor, train and provide feedback to drivers, and more traditional fingerprint-based criminal record checks that are the established best practice for identifying drivers with criminal records.

TNC concerns with processing delays and incomplete FBI records can be addressed with electronic fingerprinting technology, follow-up where disposition information is missing, and use of temporary driver licenses where the fingerprint-based checks are unacceptably slow.

- **Wheelchair-accessible service:** There are a variety of issues related to service for disabled persons, but clearly the most challenging issue concerns wheelchair-accessible service, which has for many years been lacking for taxicabs as well as TNCs. The report assesses previous attempts to provide prompt and reliable accessible taxi service. The main finding is that the most common approach, which mandates individual components of accessible service (vehicle mandates, financial incentives, separate dispatch services) has proven largely ineffective in meeting the needs of wheelchair users. The report recommends that these "kit of parts" mandates be replaced with an approach that focuses on identifying and enlisting dispatch companies who together with their drivers have the commitment and resources to do the job well, and thus both the means and desire to put together driver, vehicle and dispatching effectively. The program should be funded through a fee on all ride service trips and provide user-side subsidies to encourage good service in an open and competitive market.
- **Independent contractor or employee:** This hotly debated issue is often framed in either/or terms that divert attention from the legitimate and often shared interests of companies and drivers. Framing of this issue should recognize that the relationship between TNCs and drivers is complex and includes elements of independence as well as control that are important for both sides. Drivers' desire for both independence and fair treatment should be addressed by providing civil rights protections, and ensuring that worker benefits are either provided by law or left to meaningful channels of negotiation between drivers and companies. Legislation should also provide companies (TNC and taxi) with the right to exercise an appropriate level of control over their operations that is critical to prompt, reliable and consistent service. Legislation that addresses both sides' interests will benefit drivers, companies and the public's need for prompt, reliable and consistent service.
- **State or local regulation:** Creating an effective and right-sized regulatory system is intertwined with the issue of who should regulate: state or local agencies. The key considerations are ensuring the right level of regulation and erasing disparities in TNC and taxi regulations. The report finds that experience with taxi regulation shows that taxi flag markets have universally required -- and should continue to have -- a regulator with a local or regional focus to administer the more extensive regulatory apparatus needed to assure quality and appropriate supply of flag service. This will most likely be a city, county or possibly regional agency. Concerns about avoiding a "patchwork" of local regulations can be addressed in several ways discussed in the report. In cities where dispatch trips predominate, regulatory authority can be more readily assigned to either a local or state agency. Examples of different regulatory structures -- state and local and combinations -- are discussed to help legislators tailor the legislation to their own circumstances.

Creating a fair, effective and adaptable regulatory structure that covers TNCs, taxis and sedan services as they compete and evolve is a difficult and challenging task -- and one that is important to get right. Regulatory structures and provisions need to be carefully designed and administered to achieve the goals of service, safety, competition, equity and regulatory effectiveness. This blueprint is designed to help in that process. The blueprint is also intended to provide a foundation for continued expansion of TNC services to include shared trip-making, "filling empty seats" of commuters on their way to work, expanding to "microtransit" services that resemble traditional public transit, and the incorporation of self-driving vehicles.

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## Introduction

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From 2012 to 2015, fast-growing ride service companies Uber and Lyft scored a series of impressive legislative victories as states and cities across the country set licensing requirements that were substantially less extensive and more flexible than for competing taxi and sedan services. Thirty states adopted legislation that allowed Uber and Lyft to operate legally, provided a large degree of autonomy in their day to day operations, and allowed them to avoid having to deal with a "patchwork" of often more extensive local regulations.<sup>1</sup>

This spring, however, Uber and Lyft encountered resistance to their legislative proposals. Legislation for statewide regulation of "Transportation Network Companies" (TNCs) stalled in Texas, Florida, New York, New Jersey and Pennsylvania, which represent five of the six largest states as ranked by the size of their ride service industries, that took up TNC bills this year.<sup>2</sup> The sixth state in this list, Massachusetts, enacted regulatory legislation that also mandated that key issues be brought back after studies are completed by a new task force and designated state agencies.

The political climate became less receptive to bills pushed by Uber and Lyft as legislative battles moved to big-state legislatures from cities and smaller states where TNC threats to cease operations unless they obtained favorable legislation had proved effective. Legislators in these larger states gave a hearing to advocates for disabled persons, driver representatives, taxi owners and public safety and city officials. The central issues concerned the use of fingerprint-based background checks for drivers, service to disabled persons, fair treatment of drivers, and creating a level playing field between TNCs and taxis. Also involved in some of these debates was the overarching question of whether TNCs and taxis should be regulated on a statewide basis or by local jurisdictions. (See summary of issues on next page.)

On another issue, auto liability insurance, 35 states have adopted bills that largely followed model legislation endorsed by the Property Casualty Insurers Association of America.<sup>3</sup> By contrast, on the broader set of issues that gained attention this year, legislators lacked any type of blueprint that pointed the way to a regulatory structure that would be effective and balance the interests of different stakeholders.

This report is intended to help fill that gap. The report presents a blueprint for legislative action designed to achieve core public policy goals for service, safety, competition and equity, while at the same time accommodating the core interests of each stakeholder group and fairly balancing competing interests. Recommendations are designed to achieve objectives for:

- Public safety
- Robust competition that encourages innovation and high quality service
- Level playing field between and among TNCs and taxis
- Economic opportunity and equity for drivers
- Universal service, including for disabled passengers
- Fair, effective and efficient regulatory systems
- Integration of ride services into urban transportation networks as an important and reliable transportation option.

**This report presents a blueprint for legislative action to achieve the core public policy goals of service, safety, competition and equity, while also accommodating core stakeholder interests.**

Legislative decisions being made now will have a number of direct and immediate effects -- on public safety, company and driver expenses and incomes, drivers' status in the industry and availability of service to disabled persons. Decisions will also affect the competitive balance between TNCs and taxis, between these companies and fledgling TNCs being formed in key states,<sup>4</sup> as well as potential entrants such as Google, which is starting up a ride sharing service for commuters.<sup>5</sup>

Legislative decisions will also have important longer-term implications for the role of ride services in urban areas given that taxi and TNC services have become an increasingly important transportation option across the country. Ride

## *Five Key Issues*

This report focuses on the following five key issues that have vexed legislators and stymied legislative action.

### 1. "Level playing field"

Given wide disparities in regulatory requirements for TNCs and taxis in virtually all major states, how should regulations be changed so that taxi owners and drivers have a fair opportunity to compete with TNCs? Should regulations on taxis be relaxed? Should some of the regulations that apply to cabs be extended to TNCs?

Key regulations include fingerprinting drivers for criminal record checks, regulated fares, caps on the number of licensed taxicabs and limits on entry of new companies. There is a long history of taxi regulation in each of these areas but few if any provisions for TNCs.

Aside from Phoenix and to an extent Houston (where there are similar rules for taxis and TNCs), there are wide disparities in regulation in major U.S. cities.

### 2. Fingerprinting drivers

A much-debated issue involves whether TNC drivers should be fingerprinted as part of driver criminal record reviews. Fingerprinting requirements are vigorously opposed by TNCs, which rely on rapidly bringing drivers on-board to fuel growth and fill the ranks of drivers who leave in a high-turnover business.

Issues are the time and cost involved with taking and processing fingerprint-based reviews, accuracy and completeness of criminal records in state and FBI databases, and whether TNC name-based criminal record checks are equivalent to government-conducted fingerprint-based checks.

Many but certainly not all taxi regulators require fingerprinting of taxi drivers in the licensing process. Only a few cities (New York City, Houston, Austin) have required fingerprinting of TNC drivers.

### 3. Wheelchair-accessible service

Lack of wheelchair-accessible service has long been a problem with taxi and sedan services.

The federal American with Disabilities Act (ADA) requires taxis be accessible only if the owner buys new "vans." (Whether minivans and SUVs, often used by cab owners, are covered by "vans" has been a matter of dispute.) A number of local governments have taken steps toward accessible taxi service, ranging from subsidies to mandates.

Issues include what types of programs and mandates should be adopted, whether requirements should be extended to TNCs, cost and how subsidies should be funded.

### 4. Independent contractor or employee?

TNCs classify their drivers as independent contractors and vigorously oppose reclassifying drivers as employees. TNCs argue that drivers want the independence and flexibility that go with independent contractor status.

Unlike employees, independent contractors do not have civil rights protections or employee benefits, some of which are mandated for employees (e.g., payment of the employer share of Social Security and Medicaid taxes, unemployment insurance and workers compensation) and some of which subject to employer discretion (e.g., health insurance, paid vacation and sick leave).

Most taxi owners classify drivers as independent contractors, a practice adopted in the 1970s; prior to that they were treated as employees and paid on commission. TNC drivers are currently paid on commission (drivers get 65 to 80 percent of the fares) while taxi drivers generally pay a flat lease fee and keep whatever they earn above that amount. Both taxi and TNC drivers pay for certain expenses ranging from gasoline to vehicle purchases and maintenance.

The issues are how drivers should be classified, whether state law should address driver employment status or should leave the issue for courts to decide based on current law, and if subject to legislative action, what should be done.

### 5. State or local regulation?

This governance issue has been hotly debated with implications for how extensive, intensive, consistent and effective regulation may be.

Issues are which jurisdiction is best able to regulate effectively, how to ensure a level playing field between ride service providers, whether drivers are limited in where they can pick up passengers, the need to tailor regulations to local circumstances, and ensuring good interagency and intergovernmental coordination.

In most states, taxis are regulated by local governments with the notable exceptions of Arizona, Colorado, Nevada and parts of Maryland and Pennsylvania. For the most part, local regulators are city agencies, but counties also have regulatory authority in some states (e.g., Florida and parts of Maryland).

TNC regulation varies by state. California and Colorado were early adopters of statewide TNC regulation, followed by a number of mid-size and smaller states. As discussed in this paper, most states with large ride service industries currently regulate TNCs locally although legislative proposals would transfer regulation to state agencies.

services have enabled people to get around without a private motor vehicle and made urban living more attractive. Down the road, when combined with self-driving vehicle technology, ride services also augur a revolution in urban transportation, potentially eliminating traffic congestion and greatly reducing emissions and parking needs in urban centers.<sup>6</sup>

The history of taxi regulation shows the potential peril from poorly constructed regulatory frameworks. The product of decisions made over many decades, taxi regulations served to limit competition and innovation, compromise the quality and reliability of cab service and as a result, limited the taxi industry to niche markets centered on business travelers and non-car owning households.

Uber and Lyft broke through the regulatory barriers that apply to taxicabs. Uber and Lyft offered a far more appealing service and forged an expanded role for ride services in urban areas. This has served the interests of TNCs, their customers and in many ways, the cities in which they live and work. But the process by which TNCs were quickly brought under regulation also left hanging important issues that now need to be addressed.

In formulating a blueprint to address issues of public safety, equity and competition, this report identifies best practices and lessons learned from the short history of TNC regulation and the much longer history of taxi and sedan regulation, and assesses what they mean for current policy now that TNCs are large and growing service providers.

The report pays careful attention to how issues are framed and what choices flow from that framing. In current legislative debates, a number of issues are miscast in ways that produce very limited policy choices. The report thus discusses how issues are posed, and defines a broader and more productive set of options on wheelchair accessible service, fingerprinting drivers and drivers' employment status.

The report also recasts how best to think about the "level playing field" issue. This issue is usually framed as a question of either adding to TNC regulation or relaxing taxi regulation. The report discusses why the critical distinction is between dispatch markets, where competition can operate effectively, and flag markets, which have a long history of market failures

and thus need a more extensive set of regulations to protect consumers.

This blueprint recognizes that one size does not fit all in the realm of TNC and taxi regulation. The report thus offers both a broad set of approaches to key issues, and options that can be tailored to local circumstances at city, county and state levels.

The blueprint is designed to establish a regulatory system that provides a foundation for continued expansion of ride services beyond exclusive-ride, point-to-point trips. TNCs are already beginning to offer shared trip services such as UberPool and LyftLine. They are experimenting with services that fill empty seats of commuters, such as UberCommute. Following "microtransit" firms such as Bridj, Via and Chariot, TNCs are also envisioning services that combine demand-response trips (the traditional province of ride services) and fixed route and/or fixed schedule service (the traditional province of public transit).<sup>7</sup>

There is currently much anticipation of self-driving vehicles joining ride services' fleets, spurred this month by Uber's testing of self-driving vehicles in Pittsburgh (albeit with "safety managers" ready to take over), Ford and Lyft's announced plans to put self-driving cars on the road by 2021, and the federal government's release of guidelines for how self-driving cars should be tested. Yet the day when drivers are no longer needed for TNC service is much further away than the news coverage may suggest. The head of Uber's self-driving car team says that as Uber's service expands, the need for drivers will actually increase for years to come.<sup>8</sup> Tesla's Elon Musk wrote in his Master Plan update that even after "refinement and validation of the software" there will be "a significant time gap, varying widely by jurisdiction, before true self-driving is approved by regulators."<sup>9</sup> In addition to safety issues, the industry and government officials will need to address the potential for increased traffic, emissions and congestion as self-driving vehicles disrupt public transit service as well as the use of personal vehicles.<sup>10</sup>

While the timing of self-driving vehicles remains a matter of speculation, what is clear is that the short-term growth of ride services, and their long-term place in the transportation network, will be shaped by the important public policy and regulatory decisions now being debated and decided. This report is designed to help guide that process.

# 1. Level Playing Field

Few industries are as heavily regulated as taxicabs in major American cities. To stem the loss of customers to TNCs, taxi owners across the country have called for repeal of regulatory constraints and the opportunity to compete with TNCs on a "level playing field." Many public officials are open to the argument that if TNCs and sedan services provide attractive and responsible ride services with a slimmed-down regulatory framework, why not taxis as well? At the same time, officials worry that relaxing taxi regulations would weaken customer service in a "race to the bottom," with negative effects for both local residents and the tourism industry.<sup>11</sup>

The discussion of "deregulation" focuses most acutely on limits on entry and fare-setting. Should existing taxi companies be allowed to expand their fleets and set their own fares including surcharges during peak times? Should new companies be able to freely set up business? Should taxis be able to pick up passengers outside the city or county where they are licensed?

These are important issues, essential to fair competition between taxis and TNCs as they seek to compete on the basis of quality, price and services offered. Unfortunately, the regulatory options are usually framed in TNC versus taxi terms: should taxi regulation look more like TNC regulation? Or should some aspects of taxi regulation be expanded to TNCs, such as caps on the number of vehicles to mitigate traffic impacts from a proliferation of TNC vehicles?

For purposes of effective policy, however, this is the wrong framing and leads to the wrong set of policy choices. Instead of drawing a line between taxis and TNCs, a much more useful and productive approach is to distinguish between *dispatch service* in which customers request a trip via telephone reservation or smartphone app, and *"flag" service* in which customers hail a cab or walk up to a taxi stand. This distinction is critical because it governs whether consumers can choose among service providers, and thus whether competition operates effectively, or whether regulation needs to step in to compensate for market failures.

Both sedan services (which include black cars and car services) and TNCs dispatch trips through a central dispatch center. Because they request service from a company, consumers are able to choose among competing companies based on their own experience and company reputation. As with most goods

and services, the dynamics of competition and consumer choice act powerfully as a force for attractive service, competitive prices, innovation and new services targeted to different market segments.<sup>12</sup> There has been very little need to limit entry, cap the size of the sedan business or regulate fares. The same is generally true for TNCs (aside from concerns over surge pricing) and also for taxis that operate solely or primarily via dispatch calls.

Regulatory needs are quite different, however, for taxi flag trips that are obtained through street hail and at taxi stands. Consumer choice and feedback mechanisms are weak or non-existent for flag trips. Customers usually take the first cab with little opportunity to comparison shop. They have essentially no opportunity to patronize a company or driver that provided good service the last time around.<sup>13</sup>

Economists call this a "market failure" because competition fails to produce optimal social and economic outcomes on pricing, quality and selection.<sup>14</sup> Flag markets have historically been beset with an oversupply of drivers, particularly at cab

While often discussed as a choice between regulating taxis more like TNCs or vice versa, the right regulatory structure comes from distinguishing between dispatch and flag (street hail and taxi stand) service.

stands, and problems ranging from lack of insurance to price gouging and even extortion and curbside fistfights among drivers competing for fares.

Oversupply is most apparent at airports, where there may be several hundred drivers waiting in the taxi hold and getting only a handful of trips a day. Other areas of high demand, such as downtown hotels, transportation hubs and shopping and convention centers, also tend to be oversupplied, taking up valuable street space and sometimes requiring sanitary and police services. Long waits for drivers at cab stands can also affect service quality, as only the more minimally-qualified drivers elect to endure the waits and meager incomes that result, and economize on expenses by using older vehicles in dilapidated condition.<sup>15</sup>

### Recommendations

Taxis should come under a two-tiered regulatory structure that distinguishes between dispatch and flag trips.

*Dispatch:* Regulations on entry, number of cabs and fares should be removed for dispatched taxi service and taxis should compete on a level playing field with TNCs for dispatch trips.

*Flag:* Regulations on entry, number of cabs and fares need to be kept for the taxi flag market to prevent oversupply and provide consumer protections.

The design of a two-tiered structure should be tailored to industry and market characteristics, as discussed in the text.

Oversupply, congestion, price gouging and poor service led cities across North America to impose entry and price controls on taxicabs in the 1920s and 1930s. Selected cities experimented with deregulation in the 1970s and 1980s, but experienced similar problems and most re-instated entry and price controls.<sup>16</sup>

This is not simply a historical problem. Oversupply is evident today in Las Vegas, which lifted limits on fleet sizes in late 2015. In the first six months of 2016, trips per cab were down 42 percent from a year earlier as overall ridership fell while the number of cabs nearly doubled.<sup>17</sup>

The regulatory structure established by virtually all major U.S. cities in the 1920s and 1930s was successful in the sense that problems of oversupply, price gouging, lack of insurance and chaotic street conditions abated. It was then extended to radio-dispatched trips after World War II with the advent of two-way radio technology.

These regulations, put in place to solve problems in the flag market, were often quite harmful to dispatch service. Caps on the number of cabs led drivers to concentrate in downtown areas and airports where trip demand was heavy, leaving too few cabs to serve neighborhood telephone orders. In cities ranging from Boston to Chicago, Austin and San Francisco, customers waited far longer for cabs to arrive than they found acceptable, frustrating customers and depressing demand. (See box on page 9.)

The lesson from this history is that numerical controls and fare regulation are necessary for cabs serving the flag market. But they are unnecessary and in fact counterproductive when applied to dispatch service.<sup>18</sup> They are now a significant obstacle to a taxi industry that needs to better focus on customer needs and compete with TNCs. A key recommendation is thus that regulations on entry, fares and fleet size should be relaxed or removed for dispatched taxi service and put on par with TNC regulatory requirements.<sup>19</sup>

Removing these regulations for cabs serving dispatch trips would be a relatively simple step if taxicabs only worked the dispatch market. But in many cities, including virtually all large U.S. cities, cabs serve a combination of dispatch and flag trips. Public policy must be devised to relax regulations as they apply to dispatch trips, but keep appropriate limits for the flag market. This can be less than simple or straightforward. Fortunately, there are a number of approaches that can be utilized. Each approach is illustrated in different places around the United States and suitable in different situations.

One approach is to have a separate set of vehicles for each market. The more extensive regulations needed for flag trips can be applied to cabs serving those trips. Less extensive regulations, mainly for public safety, can be applied to cabs dedicated to dispatch trips. New York City is the best known example of this approach. Yellow medallion cabs are dedicated to flag trips while TNCs, other black car bases and car services are limited by law to dispatch service.<sup>20</sup>

Separate licensing schemes are also found where nearly all flag trips originate at the airport. A separate fleet is authorized for airport pick-ups and less-regulated companies serve the rest of the area, primarily via telephone orders.<sup>21</sup>

Separate licensing schemes can work well where flag trips are geographically concentrated. But this approach is unworkable where flag trips are geographically dispersed and drivers need to pick up both dispatch and flag trips to avoid excessive deadheading to their next passenger. This situation can be addressed by designating a subset of cabs to pick up flag trips. These cabs are subject to stricter controls on service quantity (e.g., number of vehicles), service quality and fares. Other cabs are not subject to those controls but are limited to picking up dispatch trips. New York City's "green cabs," which can pick up flag trips outside the Manhattan core as well as answer dispatch calls, are one example. London's black cabs and mini-cabs operate similarly.

Another notable example is in Anaheim, California, where the number of cabs licensed to work the hotels and Disney theme park is set by city regulation. But the number of cabs in

### Ridership growth pre-dates the advent of TNCs

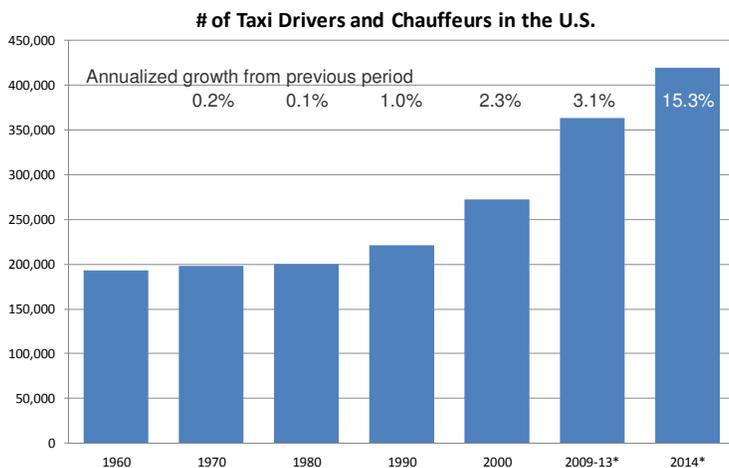
It can appear that TNCs transformed a previously moribund corner of the transportation world into a dynamic and growing market. Yet with little public notice, the taxi industry was growing rapidly before Sidecar, Lyft and then Uber began offering on-demand ride services:

- Revenues for the taxi and limousine industry (adjusted for inflation) grew by 23 percent from 1997 to 2002; 25 percent from 2002 to 2007 and 14 percent from 2007 to 2012.
- Since 2002, the number of taxicabs in the United States increased by at least 20 percent.\*

TNCs have clearly accelerated industry growth. As measured by U.S. Census data, the number of "taxi drivers and chauffeurs" surged by 15 percent in 2014 after increasing at an annual rate of 3.1 percent in the previous decade (see chart below; 2014 is the latest year available).

These trends make evident that TNCs' exponential growth reflects a combination of the attractiveness of their services as well as external factors such as the growing popularity of urban lifestyles, increases in tourism, entertainment and leisure activity and a growing desire for alternatives to the private auto.

\*Source: Transportation Research Board, *Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services*, TRB Special Report 319, December 2015.



Sources: 1960-2000 data from U.S. Decennial Census. 2009-13 data are 5-year average from American Community Survey (ACS) (The number of drivers is essentially flat during these 5 years.) 2014 figure is the 1-year ACS figure. Census data downloaded from IPUMS-USA, University of Minnesota, www.ipums.org.

Orange County outside Anaheim, serving a predominantly dispatch market, is not controlled.<sup>22</sup>

Appropriately for an industry being upended by technological change, there is also a technology-based way to control the volume of flag service while relaxing or removing controls on dispatch service. At least two cities (New York and Boston) mandate in-vehicle location tracking technology that records details of each cab trip, as well as provide credit card payment capability. Using this technology, regulators could replace traditional caps on the number of licensed taxicab vehicles with regulation of how much time cabs spend serving flag trips. Regulators would adjust the "street hail service hour" cap as passenger demand changes, ensuring sufficient supply without flooding the streets with empty cabs.

With this change, taxi drivers would still be free to serve as many trips dispatched by app or telephone order as their fleet can attract through creative marketing and high quality service. Taxi owners whose cabs attract more customers could readily add to their fleet, creating a market-driven virtuous circle toward good customer service.

### How deficiencies in taxi service opened the door to the rise of TNCs ...

It is no accident that TNCs started up in San Francisco and grew rapidly in that city. San Francisco had one of the most severe caps on the number of licensed taxicabs relative to demand, with far fewer cabs as would be expected given the city's characteristics.<sup>23</sup> As a result, taxi service, particularly for those making telephone requests, was incredibly unreliable. A 2013 study conducted for the City and County of San Francisco found that only 56 percent of residents were picked up within 15 minutes of calling for a cab on weekdays, and only 33 percent on weekends.<sup>24</sup> In other words, half or fewer of customers were served within a reasonable amount of time, undoubtedly discouraging people from using cab service.

Service deficits were also documented in other cities. In Boston, telephone requests for service were answered within 15 minutes just 70 percent to 80 percent of the time in central areas of the city and less than 60 percent of the time in outlying neighborhoods. Moreover, 22 percent of requests were not fulfilled at all.<sup>25</sup> In Los Angeles, only 70 percent of riders were picked up within 15 minutes in 2001.<sup>26</sup> In Austin, Texas, average response times were 20 minutes or greater outside downtown neighborhoods.<sup>27</sup>

TNCs were able to provide much faster and more reliable service. Although cabs in L.A. improved their response time performance significantly from 2001 to 2013, Uber did better, even in outlying neighborhoods. A 2015 study found that in low-income neighborhoods that are not among the highest crime areas of the city, in May and June 2015, 78% of Uber riders were picked up within 10 minutes of a request as compared with only 36% of taxi users.<sup>28</sup> In Portland, Ore., wait times for on-demand service averaged 4.5 minutes for TNCs compared with 8 minutes for taxicabs.<sup>29</sup>

TNCs are viewed more favorably not only on promptness and reliability of service, but on virtually every other service attribute. A national survey by the Pew Center found that large majorities of TNC users feel that TNC services save them time and stress, are less expensive than taxis, and serve neighborhoods that taxis do not visit.<sup>30</sup>

Surveys at the city level yield similar results. In New York City, TNCs were rated more highly than taxis for waiting times, vehicle comfort, drivers and convenience of payment.<sup>31</sup> In Ottawa, Canada, focus group participants rated Uber more favorably on numerous customer experience attributes including shorter wait times, faster travel times, driver courtesy and professionalism, vehicle comfort and cleanliness, safety and security. There were concerns, however, about Uber on matters such as vehicle insurance and taxation.<sup>32</sup>

### ... And declining taxi ridership

TNCs' higher quality of service has attracted customers from taxicabs, and also grown the overall market for ride services. The most dramatic impacts are perhaps the decline in taxi patronage and revenue:

- Los Angeles: ridership fell 43 percent and revenue was down 24 percent between the first half of 2013 and 2016. (Revenues declined less than ridership as airport trips increased rapidly.<sup>33</sup>)
- New York City: ridership fell 23 percent and revenues declined 16 percent between the first half of 2013 and 2016. (Revenues declined less than average fares as trip durations increased.<sup>34</sup>)
- Portland, Oregon: Ridership fell 20 percent between May and August 2015, during which TNCs were permitted to operate on a pilot basis.<sup>35</sup>
- Las Vegas: ridership fell 16 percent and revenue by 10 percent between the first half of 2015 and 2016.<sup>36</sup>
- New Orleans: ridership dropped 18 percent between the last three months of 2014 and 2015, partly affected by a fare increase but primarily due to riders switching from cabs to TNCs.<sup>37</sup>
- Data for earlier periods show ridership declines of 28 percent in Seattle and 35 percent in Boston.<sup>38</sup>

TNCs have also grown the overall market for ride services. In New York City, total trips of Uber and yellow cabs grew by 8 percent between the first five months of 2015 and 2016.<sup>39</sup> Portland, Oregon, saw the overall market increase by almost 40% between May and August 2015.<sup>40</sup> New Orleans experienced a 65 percent increase in combined taxi and TNC rides between the last three months of 2014 and 2015.<sup>41</sup>

Business travelers as well as non-business customers have shifted. Data based on business travel spending on ground transportation found that Uber and Lyft's market share rose from 26% in the second quarter of 2014 to 78% in the second quarter of 2016. Taxis' share of business spending fell from 74% to 22% -- erasing more than two-thirds of business traveler spending on cab service.<sup>42</sup>

One consequence of declining taxi ridership is plummeting value of medallion licenses, which have fallen by roughly 50% in cities including New York, Boston and Chicago. How far and how long will these trends continue? While it is impossible to predict, a recent study found that current medallion prices are not sustainable at current rates of ridership loss.<sup>43</sup>

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## 2. Fingerprinting Drivers

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In recent public debates, the broad question of managing driver-related risks to public safety has been narrowed to questions about mandating fingerprint-based criminal record reviews. Are fingerprint-based checks necessary, or do name-based checks suffice? How can accuracy and fairness be assured in using state and federal databases?

The focus on these questions has created standoffs between TNCs that have ceased operations, at least temporarily, in Austin, Houston, San Antonio and Kansas and cities' very legitimate commitment to their public safety responsibilities. This standoff, and a doubling-down by both sides in the midst of the controversy, impedes development of effective, flexible and adaptive public safety protocols. The solution to this impasse should proceed on two parallel paths: broadening the toolbox used to minimize driver-related risks to public safety, and solving the immediate issues with fingerprint-based criminal record checks. Each of these will be discussed in turn.

The narrow focus on fingerprinting has caused all sides in this debate to ignore opportunities for proactive, nuanced and effective steps to ensure public safety. It is worth looking outside the ride services industry for best practices in fleet safety management programs.

The goal of fleet management -- reducing motor vehicle crashes -- is comparable to those of driver background checks: minimizing driver-related risks to safety. In some ways the approaches overlap: sophisticated fleet management practices include review of driving records to use patterns of past behavior to predict (and thus head off) troublesome potential future behavior, analogous to the role of criminal record reviews.

Best practices in fleet management go well beyond these backward-looking protocols in order to achieve safety goals. Fleets spend far more time monitoring current driver behavior, providing training and feedback and taking follow-up action. They use advanced in-vehicle technology to monitor drivers, with assurances that the monitoring is for safety purposes and does not violate their employees' legitimate privacy interests. They are also very data-oriented. Fleet managers check on progress and make adjustments based crash rates, economic costs, lost productivity and so forth. These programs are quite successful, with documented reductions in motor vehicle collisions ranging from 30 to 53 percent and a return on investment of 3.0 or more.<sup>44</sup>

TNCs and taxi fleets have to an extent developed similar techniques. They monitor driving records, use customer feedback to identify drivers with patterns of complaints and re-train or counsel drivers who have pattern of traffic crashes, violations or customer complaints. Companies can quickly spot patterns that point to higher risk of unsafe or abusive behavior.<sup>45</sup>

While some taxi and TNC companies are thus going beyond background checks, these efforts are not systematic across the industry or integrated into the regulatory system. Regulation should recognize the value and potential of ongoing monitoring, training and driver feedback and ensure that companies have set up effective systems. It should be the responsibility of TNC and taxi companies to design systems that best meet their own needs, however. Regulators should focus on the effectiveness of company systems to manage driver-related risks and reduce the incidence of problems, and development of best practices. (Where independent drivers are involved, regulatory agencies will need to take the lead.)

While this approach is easy to sketch in concept, implementation will need significant attention. It is much easier to carry out traditional process-oriented background checks, vehicle inspections, logbook requirements and so forth than to develop evidence-based safety management systems. For regulators, the key challenge is putting in place good oversight of TNC and taxi company programs, getting the right data for evaluation, and dealing with companies that show poor results.

The place to start is developing data systems to track motor vehicle collisions, bad driver behavior and serious customer complaints. These systems should be developed by each company, with periodic reporting and audits. Regulators should review results, deal with companies that are falling behind, and develop and disseminate best practices.

Even as data and safety management systems are developed, officials still need to decide whether to require fingerprint-based background checks. This is an important decision with far-reaching implications for both public safety and the shape of the ride service industry.

The time and expense associated with fingerprint-based checks can be a barrier for potential TNC drivers, particularly for people who would be "filling empty seats" using options such

### Recommendations

Driver-related risks should be managed using both forward-looking and backward-looking methods:

*Forward-looking:* Regulations should require companies to design and implement safety management systems that monitor, train and provide feedback to drivers.

*Backward-looking:* Regulations should also require fingerprint-based background checks, which is current best practice for identifying drivers with criminal records.

Issues of delay and accuracy should be addressed through proven systems such as LiveScan technology and follow-up where records do not show case dispositions. Temporary licenses can also be issued to bridge the time required to complete these checks.

as UberCommute and Google's WAZ service. Ultimately, the vision is that anyone could be both a supplier of ride services (pick up someone on the way to work) and a user (ride with someone else going, say, to the local movie house). Uber and Lyft's concern is that such people may not sign up if they have to go through a time-consuming and expensive fingerprint-based criminal record check.

Offsetting that consideration, however, is the paramount importance of assuring safety any time two strangers are engaging in a for-hire transaction. Although the public accepts user feedback as a satisfactory basis for judging whether an Airbnb accommodation will be comfortable or whether to buy from an Ebay seller, when it comes to personal safety the public wants to be assured that every possible safety precaution has been taken. This is seen in the increasing safeguards put in place by Ebay and also reflected in requirements by a few states that adults volunteering in sports leagues be fingerprinted.

Legislators are thus right to approach background check requirements very carefully. Decisions today will govern what Uber and Lyft need to do. These decisions will also govern how drivers are screened at start-ups like RideFare, Tride and Fasten in Austin and Wingz and DriveSociety in Florida, and

by potential new entrants like Google. TNC fingerprinting practices will ultimately be applied across the ride service industry as cab owners demand equivalent rules and TNCs steadily take market share from the taxi industry. Legislators thus need to have a clear basis to respond to questions that will inevitably be asked after particularly headline-grabbing incidents.

Unfortunately, officials do not definitively know which policy choice produces the best protection for the public. There is a lack of evidence connecting the method used for background checks with the forward-looking risk of criminal or abusive behavior as a driver in a TNC or taxicab. Nor is it known whether the risk is different for TNC drivers versus taxi drivers in dispatch service or taxi drivers serving flag trips.

Until there is more information, officials need to make decisions based on what is known. Two considerations lead to the recommendation that fingerprint-based checks should be utilized.

First, law enforcement officials with years of experience in this area consistently recommend fingerprint-based criminal record checks,<sup>46</sup> with experts stating that the "accuracy of fingerprint checks is eons beyond what you could do in a name check."<sup>47</sup>

Second, while TNCs argue that their own criminal record checks are more thorough than fingerprint-based procedures, this has never been demonstrated and the evidence appears to weigh on the other side. Checks of TNC drivers by district attorneys in San Francisco and Los Angeles found 25 drivers who passed Uber's checks despite having criminal histories. The DAs sued and forced Uber and Lyft to stop claiming that their background checks were "industry leading."<sup>48</sup> Much of the problem stems from the use of name-based checks instead of "biometric" or fingerprints, which cannot be altered. The issue is illustrated by the case of Houston driver who passed Uber's background check despite having 24 aliases, 10 Social Security numbers and an arrest warrant.<sup>49</sup>

While it makes sense to apply established procedures to TNCs, at same time it is critical to address their shortcomings. The first concerns accuracy. TNCs argue that their method of checking criminal records is more accurate and complete than fingerprint-based checks of state and FBI records. The major shortcoming appears to involve FBI records that lack case disposition. Where disposition information is missing, licensing staff can (and certainly should) determine case dispositions using government records or by requesting, if necessary, that the applicant provide the information. A second shortcoming involves processing delays. Delays can be avoided by using LiveScan fingerprinting technology, which provides rapid access to state and FBI criminal records.

These solutions have succeeded in speeding up the fingerprint check process. The Maryland Public Service Commission (PSC), for example, receives FBI and state records for drivers under their jurisdiction within 48 hours, and either processes licenses within a few days after that, or issues temporary licenses if checking records requires more time.<sup>50</sup> Colorado also issues temporary licenses until fingerprint-based background checks are completed. This approach was recently suggested in Seattle as well.<sup>51</sup>

It should also be noted that claims of excessive delays are sometimes overstated. For example, Uber said that it takes up to four months to process drivers in Houston, with the result that 20,000 people in Houston applied to be drivers but gave up before the process was completed. Houston officials report, however, that a survey of Uber drivers showed that almost 46 percent were processed within a week and 84 percent in less than three weeks.<sup>52</sup>

Although arguing forcefully to maintain its current practices, TNCs' own actions suggest that they may be able to work with a fingerprinting requirement. Uber and Lyft do so in New York City as does Uber in Houston. Moreover, Uber supported legislation in New Jersey which would have left it to the state's Attorney General to decide what type of background check should be used.<sup>53</sup>

Notably, the National Employment Law Project, which is concerned with the discriminatory effects of incomplete or inaccurate criminal records, has said that the solution is for both sides to support legislation in Congress that would ensure the accuracy of the FBI database rather than rely on undocumented claims that TNC checks are more accurate.<sup>54</sup>

The merits of fingerprinting and alternative methods will be clarified in coming months in Maryland, California, Massachusetts and Chicago. In Maryland, TNCs must obtain a waiver from the Public Service Commission by December 15, 2015 if they want to rely solely on in-house background checks and avoid state-conducted, fingerprint-based background checks. To obtain a waiver, they must show that their own processes are "as comprehensive and accurate as complying with the supplemental criminal background check" that would be conducted by the PSC. The California Public Utilities

Commission has requested public comment on whether TNC criminal background checks are as effective as fingerprint-based checks.<sup>55</sup>

Legislation recently adopted in Massachusetts mandates that the public utilities and motor vehicle departments report back to the Legislature by August 2017 on the "feasibility of conducting statewide criminal offender record information checks for each operator of a ride for hire vehicle".<sup>56</sup> Chicago's City Council mandated a study to be completed early next year of this issue as well. The bill's sponsor pledged to push for legislation requiring fingerprinting if recommended by the city task force.<sup>57</sup>

TNC's core interest in the debate about background checks appears to be their desire to rapidly process a large volume of background checks to fuel expansion and account for having rapid turnover and a large contingent of part-time drivers. Doing so should not come at a price for public safety, however. Furthermore, public policy should take note of studies showing that part-time and novice drivers have much higher violation histories and motor vehicle crash rates than more experienced drivers.<sup>58</sup> There is thus no public policy purpose served by facilitating high turnover that comes at the expense of public safety.

Mandating fingerprint-based background checks also serves to level the playing field between TNCs and taxis. The same procedures and standards should be used for TNC, taxi and sedan drivers -- who often undergo fingerprint-based checks -- to establish the same level of protection of public safety in addition to achieving equal treatment across industry segments.

The approach recommended here strengthens processes to protect public safety. It benefits TNCs as well as taxis by focusing effort and resources on producing the safest possible outcomes, saving lives, money and time. It allows companies, as they develop comprehensive safety management programs, to take into consideration costs as well as benefits, adapt to their own unique circumstances and experience, and innovate with new technologies that strengthen their safety management protocols.

### 3. Wheelchair-accessible Service

Legislators and taxi regulators have made considerable effort toward responsive and reliable wheelchair-accessible taxi services in their communities. Regulations range from broad provisions that prohibit discrimination against disabled persons to specific steps such as requiring fleets to field a certain number of accessible vehicles, providing discounted medallion licenses, reducing licensing fees, extending vehicle replacement cycles for accessible vehicles and requiring driver training.<sup>59</sup>

Realizing that cost is a major obstacle, New York, Seattle, Austin, Chicago, Minneapolis and Montgomery County, Maryland have established surcharges on all taxi trips to be used to subsidize vehicle purchase and maintenance and the drivers' extra time and effort for each pick-up.<sup>60</sup> To address the problem of low and dispersed trip volumes, Washington DC, New York and Chicago have or are establishing centralized dispatch operations for accessible cabs.<sup>61</sup>

For their part, some TNCs have recently formed partnerships with organizations that own or dispatch accessible vehicles. They also train drivers to help ambulatory disabled passengers.<sup>62</sup>

Despite these efforts, available data on the results are not encouraging. Even with 10 percent of the taxi fleet in Los Angeles being accessible, 31 percent of requested trips are not serviced at all and the average time to arrive is 19 minutes.<sup>63</sup> In Portland, the average wait is 25 minutes for wheelchair users compared with 8 minutes for other customers.<sup>64</sup> A survey on how taxis are used in paratransit programs mandated under the Americans for Disabilities Act (ADA) found that there was "large variation in service quality among drivers and inability to control independent contractors, with ADA riders not being picked up if a 'better ride' is available."<sup>65</sup> The National Council on Disability dryly noted that, "In some locations, a variety of obstacles [to accessible service being available] remain even if taxis that are structurally accessible have been acquired."<sup>66</sup>

While taxis have been subject to a range of requirements and incentives, TNC regulation has given relatively minimal attention to bringing about wheelchair accessible service. California and Maryland require TNC reporting on accessible service but the filings have not been made public.<sup>67</sup>

Even where considerable efforts have been made toward accessible taxi service, shortcomings persist because policy has

focused on the individual elements of accessible service: non-discrimination clauses, vehicle mandates, dispatch services, subsidies and so forth. This "kit of parts" approach assumes that mandates and subsidies will coalesce effectively to produce prompt and reliable service. Experience has shown that this cannot be assumed. Given the challenges in running any dispatch operation, it is not surprising that a decentralized structure where no one is in charge performs poorly.

To rethink existing approaches, a good place to start is to ask, "what matters most to producing high quality accessible taxi service?" Case studies from around the country point to "soft" factors, namely, the goals and commitment of companies and drivers. The key to good service starts with fleet operators and drivers' having "commitment to serving people with disabilities and older adults," a desire to grow their business by serving this market, and effective incentives so that drivers view these trips as "good trips" that make financial sense.<sup>68</sup>

Accessibility programs should thus start with identifying companies and drivers who are committed to providing the service and have the necessary resources (vehicles, maintenance facilities and dispatching systems) to meet demand. These programs should have funding to underwrite the incremental capital and maintenance costs of accessible vehicles and to make these "good" trips for drivers.

Each participating company should be responsible for structuring its own operations and driver incentives. Red Top Cab in Arlington, Virginia, which has a well-regarded accessible taxi program, is an illustration of how this can work. Drivers are given specialized training, per-trip financial incentives for subsidized trips, and lower lease fees for driving an accessible vehicle. Drivers are attracted by the financial incentives and the relatively steady flow of subsidized trips throughout the year, in contrast with the seasonality that marks the regular taxi business. Notably, most of the company's drivers participate in subsidized transit agency programs for seniors and people with disabilities.<sup>69</sup>

Another common difficulty with accessibility programs is cumbersome government procurement processes.<sup>70</sup> This problem can be addressed by qualifying companies through an application process with no limit on the number of companies that may be qualified over time. This is likely faster than the traditional contracting process, keeps the door open to entry of

**Recommendations**

Regulators should create programs to subsidize accessible trips, funded through a per-trip fee applied to all TNC, taxi and sedan trips.

Trips should be served by companies that are determined to be qualified to do so, based on companies and drivers having the commitment and resources to effectively provide accessible service.

new companies, and avoids dependence on a single provider. Participants could be traditional taxi fleets, taxi dispatch companies with affiliated owner-drivers, TNCs or sedan companies.

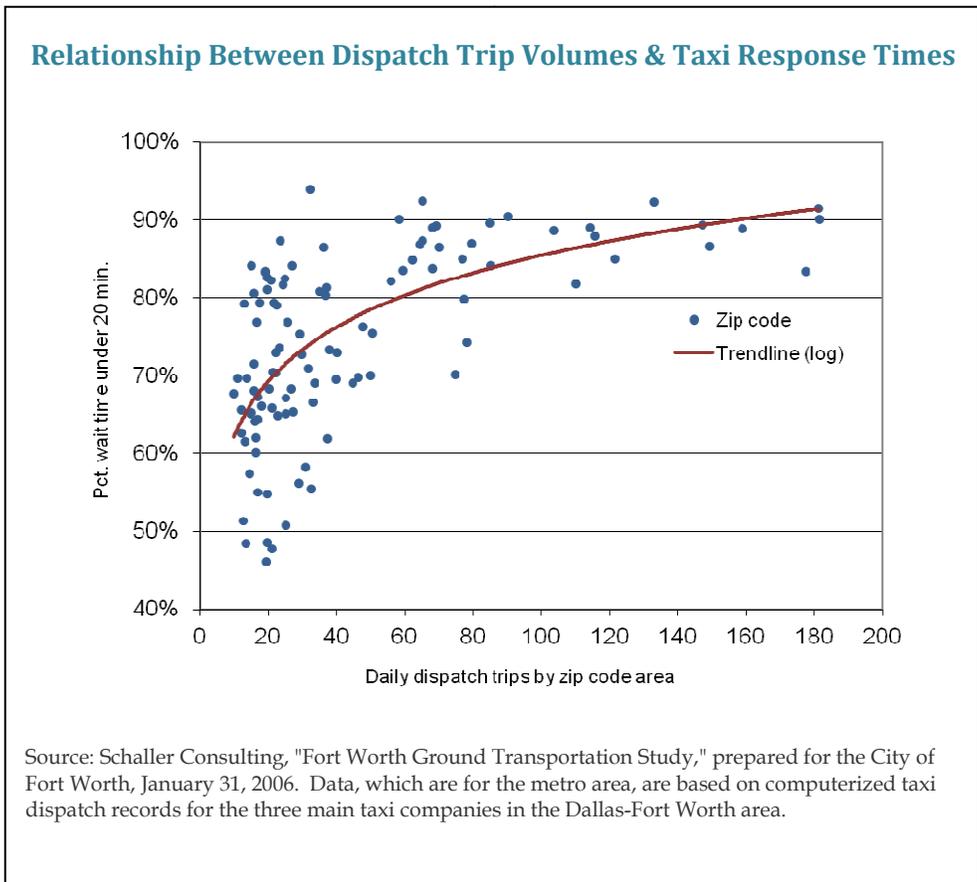
Customer choice and competition can be introduced to this equation by including several companies in the program and structuring payment through user-side subsidies, in which participants pay a set amount of the fare and the program covers the balance. Wheelchair users can select which

company to call, thus creating a customer-driven financial incentive for service quality. San Francisco and Denver have user-side subsidy programs with consumer choice and Boston has piloted a similar program for ADA participants. The programs also address specific concerns of drivers, for example, by paying for both completed trips and no shows.<sup>71</sup>

Program costs should be funded through trip fees that apply to all ride service operators, TNCs as well as taxis, as Seattle and counties in Maryland have done,<sup>72</sup> to maintain equity across industry sectors as well as generate adequate funds.

Another key step is to aggregate trips from the variety of agencies, programs and funding sources that need accessible ride services of some type. Aggregation of trips addresses one of the major obstacles to providing prompt accessible service, which is that their geographic dispersion can create extensive "deadheading" to the passenger pick-up. As illustrated in the figure below for taxi trips in the Dallas-Ft. Worth area, response times improve dramatically as trip volumes grow, simply because the larger number of cabs in each zone makes it more likely that a cab is near the passenger pick-up location.

San Francisco's SFTaxi program provides one example of consolidating a variety of ADA and non-ADA programs as well as different service providers.<sup>73</sup> Similarly, the Massachusetts Bay Transportation Authority is aggregating trips through a centralized call center for three vendors, including one taxi company, that provide regular ADA services.<sup>74</sup>



The approach outlined here is a major departure from current mandates for vehicles, dispatchers, drivers and so forth. It will take some time to show the effectiveness of this approach and win support from advocates who fought hard to obtain targeted mandates. A good way to move forward is to implement the approach outlined here as targeted pilot programs to be tested, refined and then expanded as success is demonstrated.

## 4. Independent contractor or employee?

The debate over whether drivers should be treated as employees or independent contractors is another example where a narrow framing of the issue thwarts development of workable and productive solutions. Posing the issue in either/or terms diverts attention from the legitimate and often shared interests of drivers, companies and the communities they serve. It also inspires misleading claims about the implications of treating drivers more like employees, suggesting that drivers' needs for flexibility and independence as well as workplace protections and benefits are necessarily irreconcilable.<sup>75</sup>

Drivers' employment status need not be seen as a stark choice between independent contractor or employee status. The path to a reasonable and effective solution can be found by focusing on the legitimate and often shared interests of drivers, companies and the communities they serve:

- Drivers' core interests include fair treatment, job security, decent wages, a social safety net and a voice in key decisions that affect them, instead of being "subjected to all of the downsides of 'entrepreneurship' with few of the upsides"<sup>76</sup> and feeling "squeezed and at times dehumanized by a business structure that promises independence but often leaves them at the mercy of increasingly powerful companies."<sup>77</sup>
- TNCs' (and taxi companies, assuming the same rules are applied to them) vital interests include managing their operations to ensure safe drivers and vehicles and reliable and consistent service.
- Communities in which TNCs and taxis operate have important interests in integrating and connecting ride services (TNC and taxi) with a variety of transportation needs such as contracted social service transportation, disabled transportation services and feeder services for public transportation.<sup>78</sup>

While TNCs and driver groups suing them appear to have antagonistic goals, the two sides have also acted constructively to advance the core interests of both parties. In a legal

settlement (later rejected by the judge in the case), Uber agreed to recognize drivers associations as a vehicle to hear and address drivers' concerns. Both Uber and Lyft have also agreed to arbitration procedures for disputes with drivers and agreed not to deactivate drivers without showing cause.<sup>79</sup> TNCs have also recognized their mutual interest in providing rapid service, advising drivers of the best times and neighborhoods to look for ride requests.<sup>80</sup>

Despite sometimes claiming to be simply peer-to-peer technology platforms, TNCs in fact exercise substantial control over drivers. They do so for good reason -- in order to offer consistent and attractive service. TNCs set fares, determine the types and ages of cars that drivers use, respond to passenger complaints, refund overcharges and counsel drivers with a pattern of complaints. They also alert drivers to "hot spots" of

**Worker protections and benefits should be extended to drivers in ways that satisfy their desire for both independence and fair treatment, while companies should be able to exercise enough control to consistently assure prompt and reliable service.**

customer demand and provide financial incentives for drivers to work in those areas. TNCs deactivate drivers whose ratings fall below pre-determined levels, and prohibit drivers from marketing other businesses to passengers.<sup>81</sup> These actions go far beyond the arms-length relationship that is sometimes portrayed.

Close supervision of drivers and vehicles is consistent with public expectations. A Pew Center survey found that large majorities of TNC users believe that TNCs and their drivers should be jointly responsible for making sure that drivers are properly trained and vehicles are clean and safe.<sup>82</sup>

State and federal policy could recognize that drivers need at least some of the protections and benefits of traditional employees. In fact, city and state legislative bodies have already done so to a limited extent. Seattle adopted an

### Recommendations

Legislation should provide drivers with civil rights protections, and should ensure that worker benefits are either provided by law or left to meaningful channels of negotiation between drivers and companies.

Legislation should provide companies (TNC and taxi) with the right to exercise an appropriate level of control over their operations that is critical to prompt, reliable and consistent service.

ordinance giving TNC drivers the right to collectively negotiate on pay and working conditions.<sup>83</sup> A similar bill was introduced in California (although later withdrawn).<sup>84</sup> States have also provided drivers with direct benefits that typically accrue only to employees. Arkansas law provides drivers with whistleblower protections already afforded employees. New York State has for many years mandated that taxi and black car drivers (now including TNC drivers) be covered by workers compensation.

Additional worker protections and benefits could be extended to drivers in a number of ways. Seth Harris and Alan Krueger, in a widely discussed Brookings Institution paper, explore opportunities to give gig economy workers greater opportunity to "participate in the social compact" and address imbalances in bargaining power between these workers and the companies they work for.<sup>85</sup> While these authors propose to create a third category of "independent worker," legislation could provide individual protections and benefits without having to resolve whether a third category is needed or appropriate.<sup>86</sup> Additional protections and benefits could include civil rights protections, workers compensation and unemployment insurance, collective bargaining rights (which would necessitate changes to federal anti-trust law), and making payments into the Affordable Care Act so that companies are not free riders.<sup>87</sup> Protections and benefits such as these could be integrated into the types of laws that have been adopted in several states declaring that TNC drivers are independent contractors provided that TNCs meet certain tests such as the degree of control over when and where drivers work.

TNC objections to employee status stem in part from the cost of employee benefits. Yet the cost of providing civil rights protections is negligible. The cost of key benefits, particularly

if targeted to full-time drivers who make the most compelling case for them, appears to be manageable. *Fortune* magazine calculated the cost to Uber of a package that includes unemployment compensation, workers compensation, health insurance, 401k contributions and vacation and sick leave for full-time drivers at about 9 percent of total fare revenues. Adding in the employer share of FICA and Medicaid contributions would bring costs of a quite robust benefits package to 15 percent of revenues.<sup>88</sup> These sums are on the order of recent Uber fare cuts and on the low end compared with other employers that realize a 20 to 40 percent savings from making their workers independent contractors.<sup>89</sup>

Another objection to treating TNC drivers as employees is that they are mostly part-time workers and chose the job for its flexibility and independence. As Uber's CEO and founder Travis Kalanick put it, "drivers value their independence – the freedom to push a button rather than punch a clock, to use Uber and Lyft simultaneously, to drive most of the week or for just a few hours."<sup>90</sup>

It seems obvious that both part-time and full-time drivers should come under civil rights protections. On the other hand, drivers' part-time or full-time status is fairly considered in assessing unemployment insurance, Social Security and medical coverage and other worker benefits. The stronger case for such benefits is presented by drivers who work full-time or close to it, and depend on driving as a primary source of income. These drivers comprise a very substantial part of TNC operations and service: 41 percent of Uber rides in the company's twenty largest U.S. markets are provided by drivers who work at least 35 hours a week. In addition, 38 percent of the service is provided by drivers working roughly half-time (16 to 34 hours a week).<sup>91</sup> Thus, the real bulk of the service is provided by drivers who depend on driving for either all or substantial amounts of their income, and represent something close to full-time commitment to the job.

In devising legislation, elected officials should consider which worker protections and benefits make sense to require by law, and which should be left to negotiation between the parties, and provide for a meaningful negotiating process. Legislation should also provide TNC and taxi companies with the right to exercise an appropriate level of control over their operations that is critical to prompt and reliable service, supplied consistently and equitably. In this way, the public as well as companies and drivers will benefit.

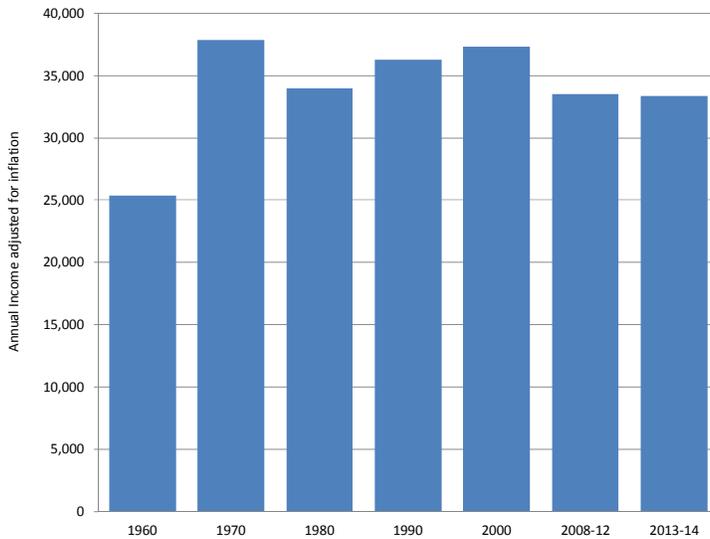
The overheated rhetoric that often accompanies debate on these issues should not obscure the opportunity for a workable and equitable solution. Thus, it is worth noting that these recommendations do not prevent TNCs from continuing their current practice of paying on a commission basis. Nor will these recommendations result in drivers having to work

company-determined hours or in company-determined geographic areas. What these recommendations would do is bring much-needed equity and fairness to an industry whose workers have long lacked both.

### Taxi driver incomes have been stagnant for decades

Complaints about driver incomes are long-standing in the taxi industry, where driver incomes have been stagnant or declining since 1970, even as the industry has grown. This history supports the need for public policy action to address drivers' status in the ride services industry.

**Incomes of Taxi Drivers and Chauffeurs in the U.S.**



Sources: 1960-2000 data from U.S. Decennial Census.  
 2008-14 data are from American Community Survey (ACS).  
 Census data downloaded from IPUMS-USA, University of Minnesota, [www.ipums.org](http://www.ipums.org).  
 Data are for full-time drivers (working 40 hours per week and 40 weeks per year).

## 5. State or local regulation?

When Sidecar, Uber, Lyft and other TNCs began to offer exclusive-ride, on-demand ride services in 2012, controversy erupted over who if anyone had regulatory authority over them. Local taxi regulators, often under pressure from the taxi industries they regulated, either sought to force compliance with existing regulations or to shut down the start-ups altogether. TNCs claimed to be simply peer-to-peer technology platforms and thus not subject to regulation. When that argument was rebuffed, they asked for state-level regulation under a new and more flexible Transportation Network Company category.

Numerous states, led by California and Colorado, did establish statewide regulatory frameworks specifically for TNCs. However, as discussed earlier, most of the states with the largest ride services industries have not done so. As a result, TNCs remain regulated by local government in New York, Texas, Florida, Illinois and New Jersey. (See table at right.)

The issue is far from settled in these states, however, with bills for state TNC regulation pending and likely to be taken up later this year or in 2017.

TNCs continue to argue for statewide regulation to avoid a “patchwork” of city laws and the more extensive regulations that local regulators might adopt. Local governments have often resisted state legislation that would split jurisdiction for TNCs and taxis between state and local agencies. Local officials are concerned about the competitive impacts of TNCs on local taxi industries, traffic impacts, service to disabled residents and integrating ride services with contracted social service and transit services. Local governments also tend to feel that states lack effective enforcement of licensing, vehicle inspection, insurance and other rules, to the detriment of public safety and fair competition with taxis.

Discussion of jurisdictional issues often conflates the question of "who regulates" and the question of "how much regulation is needed." Policy is framed as a choice between far-reaching local regulation and a "lighter" touch at the state level.

The questions of "who" and "how much" are actually very separate and distinct issues, however, and should be

considered in sequence. The first question to answer is "how much" is needed. Once that question is answered, policy makers can then constructively consider who is best positioned to administer the regulatory system.

Taxi regulation provides a useful reference point for "how much" regulation is needed. The central lesson is that the scope of regulation that is needed is governed by market characteristics (chiefly the amount of flag service) and industry structure (the number of independent taxi owners).

State	Pct of U.S. market*	Status
New York	19.3%	State bill stalled; city regulation of TNC and taxis
California	11.1%	State TNC regulation; city and county taxi regulation
Florida	6.3%	State bill stalled; county regulation of TNCs and taxis
Texas	5.9%	State bill stalled; city regulation of TNCs and taxis
Illinois	5.1%	City regulation of TNCs and taxis
New Jersey	4.6%	State bill stalled; city regulation of TNCs and taxis
Pennsylvania	3.9%	State passed 90-day TNC bill; state reg of taxi except Philadelphia
Massachusetts	3.3%	State TNC regulation; city taxi regulation
Virginia	2.9%	State TNC regulation; county taxi regulation
Nevada	2.6%	State TNC and taxi regulation, by multiple agencies
Maryland	2.6%	State TNC regulation; mix of state/county taxi regulation
Ohio	2.5%	State TNC regulation; city taxi regulation
Arizona	2.3%	State TNC and taxi regulation
Georgia	2.1%	State TNC regulation; city taxi regulation
North Carolina	1.9%	State TNC regulation; city taxi regulation
All other	23.7%	
US total	100.0%	

Highlight indicates states with legislative stalemates in 2016.  
 \*Market share based on number of "taxi drivers and chauffeurs."  
 Source: 2010-14 American Community Survey

The simpler case is where telephone orders constitute the bulk of taxi business. In these cities, the taxi industry is organized around a few fleet operators who generally exercise strong day-to-day oversight on their drivers and vehicles. The scope of regulatory activity is relatively limited -- focused on driver and vehicle licensing, ensuring compliance with vehicle inspection and insurance requirements, and responding to complaints from elected officials and the public.

Administration of regulations tends to be relatively straightforward. Regulators can expect to iron out problems in a phone call to the owner/manager of the cab company concerned. Coordination with hotels, entertainment venues and the airport is informal and easily carried out. There is

### Recommendations

TNC, taxi and sedan regulation should be under one roof to ensure consistency and a level playing field for dispatched services.

Flag markets should be regulated by a highly capable agency with a strong local presence, able to carry out the complex and extensive duties involved with close attention to local circumstances. Local agencies (city, county or regional) are typically best positioned to carry out these responsibilities.

Thus, in urban areas with significant flag markets, regulatory authority most likely should be at the local level.

Markets with little flag service (aside from airport taxi stands, which can be regulated separately by the airport operator) also need a capable regulatory agency, but either state or local agencies may be able to effectively carry out the relatively lighter duties involved.

Within these broad guidelines, the regulatory structure needs to account for industry and market characteristics, the geographic extent of city, county and metro areas, and current responsibilities of potential regulatory agencies.

nominal need for street enforcement although the local police department can keep an eye out for any issues. Summonses are adjudicated through court or administrative tribunals that handle a variety of cases.

These cities tend to have little or no need to make decisions about entry of new companies, fleet size or fares, either because these are not regulated, or the small number of people involved in these decisions presents straightforward decision processes.

This description fits most small and mid-size cities, although there are exceptions. Some relatively small cities have extensive flag markets due to nature of the market, such as

tourism in New Orleans and the international trucking industry in Laredo, Texas. Both cities have a large contingent of independent taxi owners (or owners who are only nominally affiliated with a fleet) and greater-than-average regulatory needs for cities of their size.

A more extensive regulatory apparatus is generally needed in cities with a large volume of flag trips. Regulators must play a more active role because drivers are able to make a living on flag trips and thus lack effective oversight that is built into dispatch operations. In addition, the sheer size and complexity of these cities raises a wider variety of issues, adds complexity, and requires more resources and more formal processes.

This dynamic is seen most clearly in cities such as New York, Chicago, Boston, Miami and San Francisco. These cities have large ride services markets, a large volume of flag trips, dense concentrations of jobs and population, taxi industries composed of a combination of fleet owners and independents, extensive taxi regulatory systems, and relatively large and capable regulatory agencies.

Driver and vehicle licensing and related functions are similar to those in smaller cities, but involve a larger volume of drivers and vehicles and thus require more formal and extensive management systems. It is more likely that drivers are fingerprinted as part of background checks in larger than in smaller locales. The regulatory agency may have its own vehicle inspection operation with garages and certified mechanics. Due to the volume of summonses, there may also be an administrative tribunal dedicated to adjudication of taxi summonses.

Regulators in larger cities, and cities with large flag markets, are also far more likely to need dedicated taxi enforcement, either as a unit of the police department or as a separate group of inspectors integrated into the regulatory agency. If there is a significant number of unlicensed drivers or vehicles on the street, enforcement personnel are likely to need to stop and tow unlicensed vehicles, thus needing backup to maintain safety of personnel, and tow pounds to store vehicles.

The scope of regulation in cities with significant non-airport flag markets will likely encompass difficult issues of controlling entry and setting the number of vehicles and rates of fare. Agencies are likely to go through formal procurement or regulatory processes to issue additional vehicle licenses (e.g., by franchise, request for proposal, auctions), set fares and also to transfer vehicle ("medallion") licenses.

Interagency relations tend to be more extensive in larger and more complex cities. Regulators need to take input from stakeholders, address issues raised by elected officials, industry stakeholders and the public, and coordinate with

street, airport and policing agencies. Regulatory agencies in these large and complex cities also rely on formal rule-making processes, with attendant legal expertise and capability, and staff with planning and analytical expertise.

In sum, a far more extensive apparatus, from setting regulatory policy to rule-making, licensing, enforcement, adjudications and interagency coordination, is needed for taxi regulation in large cities with substantial flag business. Regulators must step in to assure quality and accountability of service and prevent oversupply. The demands on licensing operations, oversight of vehicle inspections and street enforcement are greater in this situation than where strong fleet operators take at least partial responsibility for these functions.

More intensive, hands-on regulation is also generally needed for cabs at airport taxi stands. As a result, airport authorities usually exercise a strong regulatory role to prevent oversupply, ensure vehicle and driver quality and protect against abuses such overcharging for cabs authorized to pick-up on their premises.<sup>92</sup>

Given "how much" regulation is needed, the question of "who regulates" properly focuses on who can best do the job. On this issue, the pattern is overwhelmingly that flag markets demand a strong, locally-focused regulatory agency. This is most often a city or county agency -- as in New York, Chicago, Boston, Miami and San Francisco. Local agencies are best positioned to do this, taking account of local circumstances and needs, coordinating with sister agencies on issues ranging from management of street space to traffic and personal safety and coordinating policy with other transportation services.<sup>93</sup>

The alternative to city or county regulation is a state agency with some type of dedicated city-specific focus. Examples are evident in Las Vegas, Philadelphia, Denver and Baltimore. Although the particulars differ in each case,<sup>94</sup> the common thread is a set-up in which the regulatory agency can tailor its rules, licensing and vehicle inspection processes, outreach and enforcement actions to city-specific circumstances.

Where dispatch trips predominate, regulatory authority can more readily be assigned to either state or local agencies. It is still important that regulators have field enforcement capability to track down and take action against any unlicensed operators, and an ear-to-the-ground capability to know when licensed operators are evading vehicle inspection, insurance or other requirements. Airport cab stands are likely to need more extensive regulations, which can be handled by the ground transportation division of the airport operator.

It is essential that the regulatory system create a level playing field for taxi, TNC and sedan services. Disparities in regulation of TNCs and taxis will thwart the taxi industry from competing effectively with TNCs. This trend would be detrimental to wheelchair users, people without smartphones or banking relationships (who TNCs are not required to serve) as well as to drivers who have benefitted from having the option of working for either taxi owners or TNCs. A continuing market shift to TNCs may also lead to market domination by one or perhaps two TNC companies, undermining the benefits that competition has produced up until now.

## The central considerations on jurisdictional issues are ensuring regulatory capacity and erasing counterproductive disparities in TNC and taxi regulations.

Achieving a level playing field has proven to be challenging even where one agency regulates all ride services, as regulators have to reconcile historically extensive taxi regulations with much less intensive TNC regulations. The difficulties are greatly compounded once regulatory authority is split across different agencies and different levels of government, with the effect of institutionalizing disparities in regulation, as currently seen in California.

To avoid institutionalizing disparities in regulation between TNCs and taxis, regulation of all ride services should be under the same roof, regardless of whether jurisdiction is lodged at the state or local level. This is the strongest rationale for statewide regulation of taxicabs -- providing the benefits of consistency across both local jurisdictional boundaries and between taxi and TNC industries. Thus, it makes sense that states with little non-airport flag service would choose statewide TNC and taxi regulation.

This approach is not workable, however, where there is a substantial amount of non-airport flag business. As discussed above, there needs to be a regulatory authority with a strong and effective local focus. At the same time, the regulatory structure needs to address concerns about creating (or perpetuating) a patchwork of local regulations and licensing requirements. There are several ways to address this concern in creating the regulatory structure.

One option is to set up a regional licensing agency to achieve "one-stop shopping." This is probably most readily done where county lines encompass the metro area, although it may be possible to create an effective regional agency that consolidates a multi-county area. Notably, Los Angeles officials recently stated that they favor a regional approach.<sup>95</sup>

Another option is to include provisions for reciprocity within each region or across the state. Various neighboring governments already recognize each others' licenses for defined purposes, such as in the New York City area between city and suburban regulators. Reciprocity is particularly useful where TNCs want to be able to pull drivers across metro areas for special events -- e.g., San Antonio and Austin drivers to Houston for next year's Super Bowl.<sup>96</sup>

Another model involves combining regional and local roles. A good example of this is seen in Orange County, California. The county transportation agency is responsible for taxicab company, driver and vehicle licensing under an "open entry" system. The City of Anaheim -- which has an extensive flag market at hotels and Disneyland -- controls which companies can pick up passengers in Anaheim and the number of authorized vehicles through a franchise process. The other

major source of flag trips, John Wayne Airport, contracts with two cab companies for service to its taxi stand. Thus, while the county regulation encompasses a "light touch," the two major generators of flag trips retain the tools to prevent oversupply of flag markets, set standards for service quality and assure accountability.<sup>97</sup>

Similarly, officials in the Seattle area are considering a plan in which all licensing functions would be carried out by King County, while cities would allocate the public right of way for pickup and drop-off space, parking and the like.<sup>98</sup>

Jurisdictional issues have been difficult to resolve because they raise a complicated set of issues that only a few states have fully addressed even in the taxi context. It is easy to achieve one goal -- statewide consistency, for example, or adaptation to local circumstances -- but difficult to balance these competing goals. The approach outlined here is designed to guide state and local officials in finding that balance and thus creating a regulatory structure that protects the public safety, promotes good service and fair competition, facilitates innovation and ensures equity.

## *In California, Many Continuing Issues*

Continuing debates in California, which was the first state to regulate TNCs, illustrate the unfinished nature of TNC regulatory issues.

At the regulatory level, the California Public Utilities Commission (CPUC), which asserted jurisdiction over TNCs several years ago, continues to consider regulatory requirements on a range of issues. Earlier this year it decided to require that TNC vehicles be inspected at state-licensed facilities. It is currently in the midst of a formal proceeding to consider whether to require fingerprint-based criminal records.

Meanwhile, the state Legislature began to address the problem of split jurisdiction. At the end of August, the Legislature passed a bill (AB 650) that stated the intent of transferring taxi regulation to state agencies, with the exception of San Francisco which would be exempted because of its unique medallion system. The bill also mandated that taxis be permitted to pick up dispatch (but not flag) trips outside the jurisdiction in which they are licensed.

Companion legislation to reorganize state agencies involved with TNC regulation did not pass, however, leaving the current situation unclear. It is possible that Governor Jerry Brown would order the reorganization on his own authority, or ask the Legislature to return to the issue. Under the reorganization plan, which was supported by the Governor and key legislators, rule-making responsibilities would stay with the CPUC, licensing functions would move to the motor vehicles department and enforcement would move to the California Highway Patrol.

If adopted, statewide taxi regulation would address issues of disparities in regulations applying to taxis and TNCs, and the taxi industry's desire to work across municipal

and county boundaries. A statewide taxi industry association backed the bill, seeing it as the way to create a uniform statewide licensing system and a means to wipe the slate clean of local regulations, replaced with a "lighter" regulatory touch by the CPUC

Although not ultimately included in the final bill, an amendment that was adopted by a Senate committee in mid-August notably addressed the differing needs for regulation of flag services discussed in this report. The amendment would have allowed cities that currently regulate taxis to require a "curb service" permit for street hail and taxi stand pick-ups. It would have allowed cities to protect against oversupply, but it prohibited cities from overlaying service standards to protect passengers obtaining cabs by hail or taxi stand.

Developments in California illustrate the difficulty and complexity of devising a regulatory structure that covers TNCs, taxis and sedan and properly balances considerations of regulatory consistency and adaptation to local circumstances. The reorganization plan also raises issues of coordination among state agencies. If regulatory responsibilities are divided across several agencies, elected officials, industry stakeholders and the public could end up shuttling between agencies asserting that evident problems should be addressed by someone else.

Compliance and enforcement may also be issues under the reorganization. Whether the California Highway Patrol, assigned as the enforcement agency, would sufficiently prioritize taxi, TNC and sedan enforcement is an open question.

The eventual outcome in California depends on decisions by both the Governor and likely additional legislation. Stay tuned.

## Conclusion

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Albert Kahn, who as a leading academic economist and head of the Civil Aeronautics Board in the 1970s is viewed as the father of airline deregulation, wrote that the "proper object" of any regulatory structure is to "find the best possible mix" of competition and direct regulation.<sup>99</sup> Regulatory issues surrounding nascent TNCs such as Uber and Lyft and the long-standing taxi industry can easily appear at first glance to be a tangle of contradictions and tensions, pulling between the desire to rely on market competition to produce quality, price and innovation and the recognition that public safety, equity, universal service and management of the public right of way can necessitate regulatory intervention.

Yet there are ways to untangle the issues that have stymied resolution of controversies over TNC regulation this year in state capitols from New York to Texas. The first key is to recognize that the needed scope of regulation differs not by industry sector (TNC versus taxi) but by how the service is obtained -- by dispatch or at taxi stand or street hail (flag). Due to the effectiveness of market competition and consumer choice in producing attractive dispatch service, regulation of dispatch trips should focus primarily on public safety. Regulation of flag services, where market competition is ineffective, should also address oversupply, fare gouging and other problems with service quality as well as public safety issues.

The path to resolving other key issues also is illuminated by recasting them in more productive ways. Regarding both driver background checks and wheelchair accessible service, officials should focus on outcomes rather than processes. Management of driver-related risks should include both backward-looking criminal record checks and forward-looking fleet safety management practices. Policies for wheelchair accessible service should start with finding operators and

drivers who show the commitment and have the physical and management resources to provide quality service rather than the "kit of parts" mandates that apply separate requirements for dispatchers, vehicle owners and drivers.

As a linchpin of service, close attention should be given to the role of drivers in both the TNC and taxi industries. State and federal policy can extend traditional worker protections and benefits to drivers in ways that balance drivers' needs for fair treatment and job security with their desire for flexibility and independence, while also serving TNCs' important interest in having sufficient controls over day-to-day operations to provide consistent and reliable service.

Finally, regulatory authority should be structured in cities with substantial flag markets to meet the need for locally-focused regulation. This will generally mean that TNC and taxi regulation in large urban areas should be done by city or county agencies that have an effective local presence and can take account of local circumstances, coordinate with other local agencies and connect ride services with other transportation services.

It is well worth the time and effort required to work through these issues and get them right. TNCs and taxicabs have been and will likely continue to be the fastest-growing mode of motorized urban transportation in the country.<sup>100</sup> Their importance for urban mobility will continue to grow, supporting economic development, dense and energy-efficient residential and commercial land use, and enhancing the livability and attractiveness of urban places. Achieving the right blend of regulation and market competition is critical to realizing the potential of these services.

## Endnotes

- <sup>1</sup> See Ginger Goodin and Maarit Moran, *Policy Implications of Transportation Network Companies*, Texas Transportation Institute, August 30, 2016; and Harriet Taylor, "Uber and Lyft Are Getting Pushback From Municipalities All Over the U.S.," CNBC, September 2, 2016. The current status of legislation by state is available at: <http://tti.tamu.edu/policy/technology/tnc-legislation>
- <sup>2</sup> The states with the largest ride services industries are (in rank order): New York, California, Florida, Texas, Illinois, New Jersey, Pennsylvania and Massachusetts, each with at least 3 percent of the U.S. industry. These states account for over one-half of the industry nationally. Source: Author's calculation using American Community Survey data on the number of hours worked by "taxi drivers and chauffeurs" 2010-14. Pennsylvania did pass legislation allowing Uber and Lyft to operate for 90 days and thus legally provide service during the Democratic National Convention, but the issue will need to be revisited. Illinois adopted legislation in late 2014 setting insurance, driver and vehicle standards, but regulation is under city jurisdiction. Massachusetts adopted TNC legislation in July 2016 while also mandating that a task force and certain state agencies study and report back on issues that stymied legislation in other states.
- <sup>3</sup> See Property Casualty Insurers Association of America, "PCI Applauds Innovation and Common Sense Approach to Fixing Transportation Network Company Insurance Gaps: 39 States Have Enacted Ride Hailing Legislation," available at <http://www.pciaa.net/industry-issues/transportation-network-companies>. The website also includes a map showing the status of legislation on TNC insurance requirements.
- <sup>4</sup> These include Gett and Via in New York City, Wingz and DriveSociety in Florida, and a number of new TNCs that came onto the scene in Austin, Texas when Uber and Lyft pulled out after voters defeated a referendum proposal to roll back new requirements for fingerprint criminal record checks.
- <sup>5</sup> Jack Nicas, "Google Takes on Uber With New Ride-Share Service," *Wall Street Journal*, August 31, 2016.
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- <sup>8</sup> Priya Anand, "Backseat Driving With The Head Of Uber's Autonomous Car Team," BuzzFeed, September 18, 2016. The article quotes Anthony Levandowski, head of Uber's self-driving car team, as saying, "In a world where car ownership kind of goes away and you use Uber for all your transportation needs, you're going to need more drivers than you have today on the Uber platform. The fraction of drivers might change over time, but we anticipate having a huge need as far as maintaining and servicing the vehicles, as well as driving vehicles."
- <sup>9</sup> Elon Musk, "Master Plan, Part Deux," Tesla blog post, July 20, 2016.
- <sup>10</sup> Policy statement on autonomous vehicles by the National Association of City Transportation Officials (NACTO), which addressed both potential benefits and issues with self-driving vehicles. "New technology has the capacity to reduce the footprint of vehicular travel, moving more people in new forms of medium and low density transit, while creating space for safe and inviting walking and cycling infrastructure.... At the same time, policy at every level of government should address head-on the destructive potential for increased traffic, emissions from additional driving, and on-street congestion that could easily result from automated vehicle technology." Available: <http://nacto.org/wp-content/uploads/2016/06/NACTO-Policy-Automated-Vehicles-201606.pdf>
- <sup>11</sup> Douglas Hanks, "In Uber legislation, an end to county training for taxi drivers," *Miami Herald*, January 15, 2016. Matthew Flamm, "Drivers are breaking up with Uber to get back with yellow," *Crain's New York Business*, June 5, 2016. Laura Nelson, "L.A. seeks to keep taxis competitive with Uber, Lyft," *Los Angeles Times*, December 23, 2014.
- <sup>12</sup> For discussion of competition in the taxi business, see Competition Bureau of Canada, *Modernizing Regulation in the Canadian Taxi Industry*, November 2015; and Paul S. Dempsey, "Taxi Industry Regulation, Deregulation, & Re-regulation: The Paradox of Market Failure," *Transportation Law Journal*, Vol. 24, No. 1, 1996. More general discussions are found in Alfred E. Kahn, *The Economics of Regulation: Principles and Institutions*, MIT Press, Cambridge, Mass., 1988, and Federal Trade Commission, *How Consumers Win When Businesses Compete*, April 20, 2007.
- <sup>13</sup> The regulatory implications of the dispatch/flag distinction are discussed in detail in Bruce Schaller, "Entry controls in taxi regulation: Implications of US and Canadian experience for taxi regulation and deregulation," *Transport Policy*, Vol. 14, Nov. 2007. See also Dempsey, "Taxi Industry Regulation, Deregulation, & Re-regulation: The Paradox of Market Failure."

<sup>14</sup> For discussion of market failure in the taxi business, see Transportation Research Board, *Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services*, TRB Special Report 319, December 2015; Competition Bureau of Canada, *Modernizing Regulation in the Canadian Taxi Industry*; and Dempsey, "Taxi Industry Regulation, Deregulation, & Re-regulation: The Paradox of Market Failure." See also Kahn, *The Economics of Regulation: Principles and Institutions*.

<sup>15</sup> This history is reviewed and summarized in Transportation Research Board, *Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services*; Schaller, "Entry controls in taxi regulation: Implications of US and Canadian experience for taxi regulation and deregulation;" Price Waterhouse, *Analysis of Taxicab Deregulation and ReRegulation*, International Taxicab Foundation, Kensington, MD, 1993 and Gorman Gilbert and Robert E. Samuels, *The Taxicab: An Urban Transportation Survivor*, University of North Carolina Press, Chapel Hill, North Carolina, 1982.

<sup>16</sup> See sources in previous footnote. Notable for this discussion is that the cities that deregulated in the 1970s or '80s and kept it in place were cities with a preponderance of dispatch trips and few flag trips. Examples are Spokane and Tacoma, WA, Berkeley, CA and Springfield, IL.

<sup>17</sup> Nevada Transportation Commission, "Taxicab Statistics," June 2016 and June 2015.

<sup>18</sup> Schaller, "Entry controls in taxi regulation: Implications of US and Canadian experience for taxi regulation and deregulation."

<sup>19</sup> Several reviews sponsored by governmental and intergovernmental agencies have come to the same conclusion with respect to dispatch service and recognized the greater regulatory needs associated with flag service. These reports have not, however, delved into methods to implement a two-tiered structure. See Transportation Research Board, *Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services*; Competition Bureau of Canada, *Modernizing Regulation in the Canadian Taxi Industry*; and International Transport Forum, *App-Based Ride and Taxi Services, Principles for Regulation*, Corporate Partnership Board Report, 2016.

<sup>20</sup> TNCs are regulated as black cars in New York City. Black cars and car services, together with limousines, are regulated as "for-hire vehicles," the equivalent of what this report refers to as sedans. A limited number of car service vehicles have been converted to "green taxis" and can pick up both flag and dispatch trips. These are the only vehicles in New York City that offer this most traditional type of taxi service.

<sup>21</sup> LeighFisher, *Commercial Ground Transportation at Airports*, Airport Cooperative Research Program Report 146, Transportation Research Board, 2015.

<sup>22</sup> Nelson\Nygaard Consulting Associates, *Anaheim Taxicab Franchise Study - Final Report*, City of Anaheim, November 2011.

<sup>23</sup> Based on Bruce Schaller, "A Regression Model of the Number of Taxicabs in U.S. Cities," *Journal of Public Transportation*, Winter 2005.

<sup>24</sup> Hara Associates, *Managing Taxi Supply*, San Francisco Municipal Transportation Commission, April 3, 2013.

<sup>25</sup> Nelson\Nygaard Consulting Associates, *Taxi Consultant Report*, City of Boston, October 11, 2013.

<sup>26</sup> Los Angeles Department of Transportation, *Los Angeles Taxicab Review and Performance Report*, April 2015.

<sup>27</sup> Ray A. Mundy, *Austin Taxi/Pedicab/ELSV Study*, City of Austin, September 2, 2011.

<sup>28</sup> Rosanna Smart, Brad Rowe, Angela Hawken et. al., "Faster and Cheaper: How Ride-Sourcing Fills a Gap in Low-Income Los Angeles Neighborhoods," BOTEK Analysis Corporation, July 2015.

<sup>29</sup> Portland Bureau of Transportation, *Portland's Private for-Hire Transportation Market*, October 2015.

<sup>30</sup> Aaron Smith, *Shared, Collaborative and On Demand: The New Digital Economy*, PewResearchCenter, May 19, 2016.

<sup>31</sup> City of New York, *For-hire vehicle transportation industry: Data pack*, 2016.

<sup>32</sup> City of Ottawa, "Taxi and Limousine Regulations and Services Review - Customer Experience," October 14, 2015

<sup>33</sup> Los Angeles Department of Transportation data provided to the author.

<sup>34</sup> Taxi and Limousine Commission data posted on the TLC website. See: <http://www.nyc.gov/html/tlc/html/about/statistics.shtml>

<sup>35</sup> Portland Bureau of Transportation, *Portland's Private for-Hire Transportation Market*.

<sup>36</sup> Nevada Transportation Commission, "Taxicab Statistics."

<sup>37</sup> City of New Orleans, *Operational Updates on the Taxicab and For-Hire Bureau and Analysis of Taxicab and TNC Ridership Data 2013-2015*, February 22, 2016.

<sup>38</sup> Taylor Soper, "The Uber effect: Seattle taxi industry revenue dipped 28% in past 2 years," *Geekwire*, June 11, 2015, and Jack Newsham and Dan Adams, "Boston taxi ridership plummets," *Boston Globe*, August 19, 2015.

<sup>39</sup> Taxi ridership available on TLC's website and Uber ridership data provided by TLC to the author.

<sup>40</sup> Portland Bureau of Transportation, *Portland's Private for-Hire Transportation Market*.

<sup>41</sup> City of New Orleans, "Operational Updates on the Taxicab and For-Hire Bureau and Analysis of Taxicab and TNC Ridership Data 2013-2015."

<sup>42</sup> Certify, "Ride-hailing Services Leave Taxis Far Behind," July 21, 2016.

- <sup>43</sup>David Gabel, "Are Traditional Taxi Firms Doomed? An Answer from the Capital Market," June 4, 2016. Available at [https://www.researchgate.net/publication/303301581\\_Are\\_Traditional\\_Taxi\\_Firms\\_Doomed\\_An\\_Answer\\_from\\_the\\_Capital\\_Market](https://www.researchgate.net/publication/303301581_Are_Traditional_Taxi_Firms_Doomed_An_Answer_from_the_Capital_Market)
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- <sup>54</sup>See Maurice Emsellem, "The Pros and Cons of Fingerprinting Uber Drivers," *Huffington Post*, July 13, 2016 and Nayantara Mehta, *Ensuring Fairness in Background Checks for On-Demand Work*, National Employment Law Project Policy Brief, June 2016.
- <sup>55</sup>See Maryland Code, Public Utilities Article Section 10-404(e) and California Public Utilities Commission, "CPUC Solicits Comments on Background Checks for TNC Drivers," Press Release, June 22, 2016
- <sup>56</sup>House Bill 4064, Section 14.
- <sup>57</sup>John Byrne, "Aldermen OK weaker Uber rules after Emanuel threatens to adjourn chaotic meeting," *Chicago Tribune*, June 22, 2016.
- <sup>58</sup>See Bruce Schaller, *Higher Pay, Safer Cabbies: An Analysis of the Relationship Between Driver Incomes and Taxi Crashes in New York City*, report prepared for Transportation Alternatives, January 2004.
- <sup>59</sup>Jon E. Burkhardt, John Doherty, Joseph Rubino and Joohee Yum, *A Survey on the Use of Taxis in Paratransit Programs*, Easter Seals Project Action, December 2008. District of Columbia Taxicab Commission, *Annual Report on Accessible Vehicle For Hire Service*, Disability Advisory Committee Report, Sept. 30, 2015. Nelson\Nygaard Consulting Associates, *Local and State Partnerships with Taxicab Companies*, National Cooperative Highway Research Program Research Results Digest 366, Transportation Research Board, 2012.
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- <sup>69</sup>Ellis, *Use of Taxis in Public Transportation for People with Disabilities and Older Adults*.
- <sup>70</sup>Ellis, *Use of Taxis in Public Transportation for People with Disabilities and Older Adults*.
- <sup>71</sup>See Ellis, *Use of Taxis in Public Transportation for People with Disabilities and Older Adults* for details on San Francisco and Denver. For Boston, see Nicole Dungca, "MBTA pilot taxi partnership could include Uber," *Boston Globe*, November 14, 2015.
- <sup>72</sup>Luz Lazo, "Prince George's Uber, Lyft users could soon be paying a county surcharge," *Washington Post*, September 29, 2015.
- <sup>73</sup>Ellis, *Use of Taxis in Public Transportation for People with Disabilities and Older Adults*.

<sup>74</sup> Andy Metzger, "MBTA Eyes Savings, Better Service with Centralized 'Ride' Call Center," *State House News Service*, June 7, 2016.

<sup>75</sup> An example of misleading rhetoric is the widely reported statement by Jessica Santillo, an Uber spokeswoman, that employee status would mean that drivers "would drive set shifts, earn a fixed hourly wage and lose the ability to drive using other ridesharing apps as well as the personal flexibility they most value." She added, "Drivers would have to drive when assigned to drive – in shifts pre-arranged by Uber, resulting in a loss of flexibility." None of these would occur simply due to being classified as employees. Steven Greenhouse, "Uber: On the Road to Nowhere; Uber drivers are getting creative in their fight for basic workplace rights," *American Prospect Magazine*, Winter 2016.

<sup>76</sup> Alex Rosenblat and Luke Stark, *Uber's Drivers: Information Asymmetries and Control in Dynamic Work*, Centre for European Policy Studies, Brussels, Belgium, November 23-25, 2015.

<sup>77</sup> Noam Scheiber, "Solo Workers Unite to Tame Their Gig Jobs," *New York Times*, February 3, 2016.

<sup>78</sup> Ellis, *Use of Taxis in Public Transportation for People with Disabilities and Older Adults*.

<sup>79</sup> Michael Hiltzik, "How Uber's big settlement may make things worse for its drivers," *Los Angeles Times*, April 22, 2016. Nick Wingfield and Mike Isaac, "Seattle Lets Uber Drivers Form Unions," *New York Times*, December 15, 2015. Mike Isaac, "Lyft Settles, But Drivers Will Remain Contractors," *New York Times*, January 28, 2016.

<sup>80</sup> Rosenblat and Stark, *Uber's Drivers: Information Asymmetries and Control in Dynamic Work*

<sup>81</sup> Rosenblat and Stark, *Uber's Drivers: Information Asymmetries and Control in Dynamic Work*. Scheiber, "Solo Workers Unite to Tame Their Gig Jobs." Dug Begley, "Taxi wars: Trying to find a ride with Uber – and failing," *Aljazeera America*, September 17, 2015

<sup>82</sup> Aaron Smith, "Shared, Collaborative and On Demand: The New Digital Economy," Pew Research Center, May 19, 2016.

<sup>83</sup> Nick Wingfield and Mike Isaac, "Seattle Lets Uber Drivers Form Unions."

<sup>84</sup> Liam Dillon, "Uber and Lyft are winning at the state Capitol - here's why," *Los Angeles Times*, May 7, 2016.

<sup>85</sup> Seth Harris and Alan Krueger, *A Proposal for Modernizing Labor Laws for the Twenty-First-Century Work: The Independent Worker*, Brookings Institute, December 2015.

<sup>86</sup> Shayna Strom and Mark Schmitt, *Protecting Workers in a Patchwork Economy*, Century Foundation, April 7, 2016.

<sup>87</sup> Harris and Krueger, *A Proposal for Modernizing Labor Laws for the Twenty-First-Century Work: The Independent Worker*. Strom and Schmitt, *Protecting Workers in a Patchwork Economy*.

<sup>88</sup> Stephen Gandel, "Uber-nomics: Here's what it would cost Uber to pay its drivers as employees," *Fortune*, September 17, 2015, and author's calculations.

<sup>89</sup> Strom and Schmitt, *Protecting Workers in a Patchwork Economy*.

<sup>90</sup> Travis Kalanick, "Growing and Growing Up," Uber Newsroom blog post, April 21, 2016.

<sup>91</sup> Based on data provided by Uber for its 20 largest U.S. markets, which show that in October 2015, 53 percent of drivers were signed-in for 1 to 15 hours per week; 30 percent for 16 to 34 hours; 12 percent for 35 to 49 hours and 5 percent for 50 to 70 hours. Using the median hours in each category, it can be calculated that 21 percent of service hours are provided by drivers working 1-15 hours/week; 38 percent of service hours by drivers working 16-34 hours/week; 25 percent of service hours by drivers working 35-49 hours/week; and 15 percent of service hours by drivers working 50-70 hours/week. It is not possible to compare these data directly to taxi driver working hours because U.S. Census data on hours and weeks worked exclude taxi drivers who moonlight from other jobs (moonlighting drivers' occupation is based on their primary occupation). Among taxi and limo drivers for whom driving is their primary occupation, 81 percent work at least 35 hours a week (2010-14 American Community Survey).

<sup>92</sup> Leigh Fisher, *Commercial Ground Transportation at Airports*. It is worth noting that standards for drivers and vehicles set by airports also benefit non-airport customers who use the same cabs elsewhere in town.

<sup>93</sup> Sam Schwartz Inc., *Mobility Services Project, Phase I Summary Report*.

<sup>94</sup> The particulars vary by state. In Nevada, a separate state agency is charged with regulating taxis and sedans in Clark County (which includes Las Vegas), while a separate state agency currently has jurisdiction over cabs elsewhere in the state as well as TNCs. There are proposals in Nevada for all taxi and TNC regulation to be assigned to a single state agency, but the disposition of that bill have yet to be determined. In Maryland, the Public Services Commission (PSC) regulates taxis statewide, except that certain counties may elect to take on regulation themselves, as the larger counties in the Washington DC area have done. The PSC has regulations for taxicabs specific to Baltimore City and Baltimore County. In Pennsylvania, a state agency regulates cabs in most of the state, but the Philadelphia Parking Authority regulates taxis and sedans in Philadelphia. The Philadelphia Parking Authority was created by a city ordinance, but most of its Board is now appointed by the Governor, so it is difficult to classify as either a state or local agency. In Colorado, the state Public Utilities regulates taxis, sedans and TNCs and has separate regulations for Denver-area cabs.

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<sup>95</sup> Letter from Eric Spiegelman, President of the Los Angeles Taxi Commission, to Hon. Evan Low, California State Assembly, August 23, 2016. Spiegelman proposed that AB 650, which would move toward transferring taxi regulatory authority from cities to the state, be amended to create a regional taxi and TNC authority covering Los Angeles and Orange counties. Taxis are currently regulated by each city in L.A. County, and through an intergovernmental agreement, by the Orange County Transportation Authority.

<sup>96</sup> Uber cites this as a reason for statewide regulation in Texas. Shelby Hodge, "Uber tussles with city of Houston over regulations," *Houston CultureMap*, July 19, 2016.

<sup>97</sup> Nelson\Nygaard Consulting Associates, *Anaheim Taxicab Franchise Study - Final Report*.

<sup>98</sup> Sam Schwartz Inc., *Mobility Services Project, Phase I Summary Report*.

<sup>99</sup> Kahn, *The Economics of Regulation: Principles and Institutions*.

<sup>100</sup> Transportation Research Board, *Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services*.