For Hire Transportation services report

A Study by The Institute for Municipal & Regional Policy (IMRP)

CENTRAL CONNECTICUT STATE UNIVERSITY

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INTRODUCTION

This report is presented in fulfillment of Public Act 14-199, which requires the Connecticut Department of Transportation, in consultation with the Department of Motor Vehicle and the Department of Consumer Protection, to conduct a study of for hire transportation services for purposes of recommending how and if emerging technologies should be regulated relative to current schemes. In particular the study: "shall (1) review how emerging technologies, such as smartphone applications, currently fit into the regulatory scheme, and (2) offer recommendations as to how and if such technologies and the businesses offering them should be regulated to ensure the safety of the riding public. Such recommendations shall include, but need not be limited to, mandatory insurance coverage, licensing and background checks on drivers and vehicle safety and maintenance." In doing so, the study requires input from the taxicab, motor vehicle in livery service and for-hire transportation services industries.

The methods used for producing this report include a literature review; review of Connecticut taxi and livery regulations; interviews with for hire transportation companies, insurance industry experts, taxi and livery regulators; as well as surveys. The study team includes economists and transportation and public policy experts. Study findings were limited by a lack of easily accessible, Connecticut specific regulatory data, coupled with the rapidly changing landscape of emerging transportation-related technologies and an ever-evolving regulatory structure in each of the relevant jurisdictions reviewed. Additionally, the study could possibly have benefited from a longer period of structured input, and subsequent evaluation, from all Connecticut stakeholders. Fortunately there is a large body of current research and practice on this issue in other jurisdictions from which the study team was able to draw useful information towards our recommendations, findings and conclusions.

This study is by no means exhaustive, but is intended to give policymakers a solid understanding of the current landscape, with tangible, practical first steps towards understanding and potentially regulating the emerging technologies relative to the current industry structure. In order to more comprehensively address this issue, the study authors recommend that any action taken this legislative session be followed by a longer term, rigorous and open process that produces recommendations for future regulatory action. Consideration should be given to data collection and evaluation, as well as the role of for hire transportation services in the overall state transportation network.

EXECUTIVE SUMMARY

Connecticut has regulated for hire transportation services, including the taxi and livery industry, for nearly one hundred years. Current regulations have been in place for almost two decades. In the past five years, Transportation Network Companies (TNCs)[1] like Uber and Lyft have entered the for hire transportation market through the development of smart phone applications. These applications allow drivers and passengers to coordinate for hire rides. Uber has been operating in Connecticut since 2014 under the contention that as a technology company they are neither a taxi nor a livery company, and therefore do not need to comply with the regulations governing those industries. As per PA 14-199, this report presents recommendations as to where these applications, the companies that run them and the drivers that use them, fit into currently operating for hire transportation regulatory schemes relative to the goal of ensuring safety of the riding public.

TNCs are rapidly expanding their services both nationally and internationally. Connecticut is not unique in trying to address the impact of this new technology on its transportation regulatory systems. Several jurisdictions recently began regulating aspects of the TNC industry separate and apart from taxi and livery regulations. These include: California, Colorado, Virginia, Washington D.C., New York City, Massachusetts, and Oregon. Others have issued cease and desist orders under the argument that TNCs are operating outside of the law and current jurisdictional regulations. Unfortunately, there is not enough evidence to gauge the impact of these new regulations on their respective for hire transportation markets relative to the charge of this study. Additionally, almost all jurisdictions grappling with establishing equitable regulations are in the midst of legal challenges.

New TNC regulations in other jurisdictions have taken on many different forms, which reflect both the vast diversity of existing regulatory schemes throughout the country and the varying policy responses to this new technology. In 2013, California began regulating TNCs through the California Public Utilities Commission, to ensure driver background checks, establish driver training standards and require insurance coverage. Colorado passed legislation in 2014 regulating TNCs differently than the taxi and livery regulations. Some of those regulations include: requiring TNCs to obtain a state permit to operate; ensure drivers have background checks; pass vehicle inspections; and clearly mark vehicles as a TNC car. Additionally, TNCs must provide commercial insurance coverage. Most recently, the Commonwealth of Virginia reached a temporary agreement with TNCs which requires them to obtain a transportation broker's license; conduct extensive background checks on drivers; ensure drivers are operating a properly registered and inspected vehicle; and fulfill specific insurance standards. These state regulations and agreements are too new for us to understand their full impact in each jurisdiction.

Connecticut's regulatory structure regarding for hire transportation services is designed to ensure "convenience, protection and safety of passengers and the public." State statutes define taxicabs, livery vehicles and rideshare companies/private van pools and authorize primary regulatory oversight of these industries to the Connecticut Department of Transportation (DOT) and Department of Motor Vehicles (DMV). Transportation Network Companies are not specifically categorized in the current regulatory scheme, although it is arguable that much of what these companies provide is already defined and regulated by the state. It is clear, however, that certain elements of the TNCs vary substantially from the traditional taxi, livery and ride share industries and therefore may necessitate

[1] The term Transportation Network Company is used to categorize companies who provide for hire transportation services solely through smart phone applications. It is not meant to suggest a separate regulatory category be created for such companies.

the creation of specific designation for TNCs. Regardless of how they are ultimately defined, at the very minimum, the study recommends several fundamental issues that should be immediately addressed by Connecticut regulators to promote TNC passenger safety. In addition, Connecticut should pilot and evaluate measures to avoid price gouging and ensure access to transportation to underserved populations. All of these recommendations are outlined below and discussed in more detail later in this report.

Fundamental Public Safety Issues:

Vehicle Safety: Connecticut should ensure that all vehicles operating in a for hire capacity to transport passengers are safe for those engaging them. TNC vehicles are essentially private passenger vehicles being used for the dual purpose of the owner's personal transportation and for commercial use. This is different from taxi and livery vehicles that have only a commercial purpose. Taxi and livery vehicles are subject to certain state-imposed safety and inspection requirements. TNC vehicles are not currently subject to state-required safety inspections because they are registered as private passenger vehicles, for which periodic safety inspections are not required under state law.

The primary vehicle safety consideration is whether all vehicles used to transport the public for compensation should meet the same vehicular mechanical condition standards regardless of the entity operating them. If the answer to this question from a public policy perspective is in the negative, then there seems to be no compelling case to be made for continuing to require other for hire vehicles to meet state imposed safety standards and record keeping requirements while TNCs are permitted to operate under self-imposed safety standards. However, if the answer to this question as a matter of public policy is in the affirmative, that is, all for hire vehicles should meet essentially the same standards, then we see two possible alternatives for achieving this outcome. These alternatives are outlined below.

Alternative (1)

Current vehicle inspection regulations for taxi companies could be adopted for TNC vehicles. Under this scenario, TNC vehicles would have to be identified to the DMV and presented for an initial inspection prior to initiating for hire activity. The impact on DMV inspection resources under this scenario is unknown as little information is available on the number of TNC vehicles currently operating in Connecticut or how much this number may increase in the future.

The state should also consider requiring TNC vehicles to be registered under the "combination" registration classification, which is the existing classification used for vehicles that are used in part for private passenger transportation and in part for commercial purposes. Registration fees for combination vehicles are higher than passenger vehicle fees.

If current requirements for taxis are adopted for TNC vehicles, those vehicles would also have to be inspected biannually by a DMV licensed dealer or repair shop and the TNC would be required to maintain records of biannual inspections and make that information available to the regulatory agency upon request.

The legislature should revisit the issue of whether livery vehicles should have to meet these standards as well.

Alternative (2)

An alternative to the current regulatory system would be to model a vehicle inspection system for both taxis and TNC vehicles along the lines of the current Colorado requirements. Colorado appears to have implemented a vehicle safety system that ensures that vehicles are in good working condition and safe for passengers. Colorado requires all TNC vehicles to go through a 19-point inspection with an approved licensed mechanic prior to operating in the state and be re-inspected at least annually thereafter. The Colorado law makes the TNC responsible for conducting these inspections or causing them to be done by the certified mechanic. Drivers submit vehicle inspection records to the TNC prior to initial approval as a driver and periodically thereafter.

Under this scenario, DMV would no longer be required to conduct initial inspections for taxis as these would be conducted through third party inspections at approved licensed dealer and repairer shops. DMV would also not be affected by the potential increased workload represented by the unknown number of TNC vehicles that could be operating in the state.

Under this alternative, TNC vehicles should still be required to reregister as combination vehicles to reflect their dual use for both private passenger and commercial purposes.

The legislature should consider whether livery vehicles should fall under these inspection requirements as well.

Driver Qualifications/Background Checks: Passenger safety has consistently been regulated by the state through driver qualification regulations that include criminal background checks and medical reviews. We are recommending that the state consider one of two proposals below to ensure thorough criminal background checks and medical review of driver. The first is the most exhaustive process, but also potentially the most cumbersome and costly. The second is not as comprehensive, but would still allow for some background screening to occur and would most likely entail fewer state resources to achieve. Either process should include standardized criteria for qualifications relative to these checks. It should be noted that the study authors have come across no state specific evidence or data to suggest either process would allow for greater overall public safety. Either process, if followed, should be tracked over time to ascertain the most efficacious method to achieve this goal.

Alternative (1)

All individuals operating in for hire passenger service, including TNC and Livery drivers, could be required to undergo the current DMV public passenger license endorsement process. This would ensure that TNC and Livery drivers are subject to at least as rigorous and complete a background check as are taxi drivers. An option to lessening the time between starting a background check and achieving endorsement would be to allow for conditional approval pending completion of the federal check. In addition to conducting a criminal background check, the DMV license endorsement process requires the DMV medical review department to conduct a medical review to ensure that all drivers are medically fit to transport passengers.

Alternative (2)

All individuals operating in for hire passenger service, including TNC and Livery drivers, could be required to undergo third party background checks, as well as medical checks, prior to operating in a for hire capacity. Background checks and medical checks would then occur

periodically and would be subject to review by a state regulatory body (DOT, DMV, or DCP). Both checks would be standardized as set forth by the regulatory body. This is similar to the recently enacted model in Colorado.

Insurance: Connecticut should address the "insurance gap" that potentially exists in TNC operations and ensure coverage for drivers at all times they are engaged in TNC activity. Currently, aside from private vehicles used to carry not more than five other persons between a place of residence and employment, for hire vehicles are required to have commercial policy coverage. However, in the TNC model, vehicles operate both privately and commercially, with the driver providing private passenger coverage and the TNC providing commercial insurance for the TNC brokered ride. Due to this dual use, according to the insurance industry, there is a potential gap that exists between the commercial and private passenger insurance periods. This could lead to instances of drivers and passengers not being covered at all.

In the interest of assuring continuous insurance coverage for TNC vehicles, the Connecticut Insurance Department should provide DOT with clear guidelines for TNC insurance that defines TNC activity. TNC's should be required to carry primary coverage that specifically covers TNC activity as defined and the TNC should be required to demonstrate proof of coverage to state regulators. Additionally, drivers for TNCs should be required to report their intended TNC activity to their insurance provider prior to beginning such activity. This will ensure that personal auto insurers can adequately assess any additional risk that may occur from the additional activity.

Additional areas for consideration:

Pricing: One of the more controversial features of some TNCs, such as Uber, is surge pricing. Surge pricing is where the TNC will raise fares when demand is high. The idea of surge pricing is that when demand increases, a higher price can induce more cars providing rides and therefore bring supply and demand back into equilibrium. The extreme of surge pricing was seen in some locations on New Year's Eve when a price for Uber rides increased by a factor of ten or more. The question is whether this is opportunistic price gouging or facilitating the healthy interaction of supply and demand in the market. It is important to note that other for hire vehicles in the state are not allowed to use surge pricing, as their fares are regulated and approved by the state and they are not allowed to change fares as supply and demand changes.

Access: Under the "public interest requires public control" doctrine, (PRI, 2008), Connecticut has elected to regulate the taxicab and livery industries in the area of access. The basic principle of access to a vehicle has helped to define the taxi and livery regulations. Taxicab companies are subject to provide service to all residents that request service in their defined service area. They can't operate outside of their service area for pick-ups. Currently, TNCs operate anywhere in the state and are not required to pick-up all riders.

In addition to addressing the immediate issues as outlined above, Connecticut should consider reviewing its current taxi and livery regulatory structure. Connecticut's regulatory system for taxi and livery service is conducted largely through the Department of Transportation (DOT) and the Department of Motor Vehicles (DMV). Due to the nature of the service provided by taxi, livery and now TNCs, it would seem natural to assume that any additional regulatory requirements covering TNCs should be administered by these two agencies. However, in the case of both agencies, their

regulatory roles in the area of for hire transportation represent a very small part of their overall mission and statutory responsibilities. Both agencies lack the resources to pursue their regulatory roles aggressively and proactively, even within the current structure of the industry. The possible addition of TNCs to the mix of for hire transportation options, especially if some or all of the public safety and protection safeguards as applied to them, would represent an unknown, but likely substantial, additional burden to the regulatory agencies. While DOT and DMV may end up being the default agencies to administer this new responsibility, there may be a need to reevaluate what state entity or entities should have this responsibility as more information is developed on the role and impact TNCs may have.

The final section of this report contains recommendations for future activity relative to such concerns, as well as other issues that should be considered when developing policy in this area.

PART I: BACKGROUND

Across the country, the traditional taxi and livery services are faced with competition from a new source. Often referred to as “transportation network companies,” this new industry is using smart phone technology to connect drivers with riders for a fee. The rise of transportation network companies (TNCs) has been a disruptive force in the taxi and livery industries. The TNCs would argue that they are providing better service at better prices than traditional service providers. The taxi and livery industries tend to see TNCs as unregulated transportation service providers which put the public at risk. The purpose of this report is to investigate what role, if any, TNCs should play in the Connecticut transportation market and how they should be regulated.

Connecticut is unique in that the taxi and livery industries are regulated on a statewide level rather than the local level which is the more typical method of regulating these industries. In order to receive a permit to operate either a taxi company or a livery company the applicant must show proof of “public convenience and necessity.” The rationale for such regulation is that if entry restrictions were loosened the result would be excessive entry with deteriorating service levels and quality. On the other hand, some would argue that such a system unfairly benefits existing providers at the expense of potential entrants. Transportation network companies have been operating outside of this regulatory framework claiming that they are something other than taxis or livery services. They have defined themselves as technology companies providing technology to facilitate rides from independent contractors. In the current unregulated environment for TNC’s many issues have been identified which are addressed in this report.

PART II: HISTORY

TAXI/ LIVERY INDUSTRY

Since the 1920's, Connecticut has regulated transportation services, including the taxi and livery industry. Historically, Connecticut has regulated both the taxicab and livery service industries because both serve the basic transportation needs of the general public (PRI, 2008). Under the "public interest requires public control" doctrine (PRI, 2008), Connecticut has continually elected to regulate the taxicab and livery industries in areas of access, service, pricing, insurance, public and vehicle safety. To date, consumer protection through reasonable and consistent fares, quality service, driver and vehicle safety standards and controlled market entry, has been the stated rationale and motivating factor in Connecticut's decision to regulate taxicab and livery companies. The goal is to protect the consumer by preventing public transportation companies from providing poor service and/or unsafe vehicles (PRI, 2008). The livery industry has an additional burden to demonstrate how the "public's convenience and necessity" will be improved by its existence and operation in the state (PRI, 2008).

Traditionally, there have been fines or other punitive measures imposed on taxicab companies for failure to comply with statutory or regulatory requirements. Through several legal and political challenges, Connecticut has deliberately, continually rejected the option to deregulate the taxi industry and instead has elected to maintain statutory control over both industries. In 2000, the State revised the regulations for the taxi industry and these revisions remain in place. Current livery regulations have been in Connecticut since 1965. In 1979, the authority to regulate the livery industry shifted from the Public Utilities Control Authority to the Department of Transportation. A summary of the statutes currently regulating the taxi and livery industry is provided below.

Statutes regulating Taxi Industry

Currently the taxi industry is subject to the statutory regulations outlined in C.G.S.Sec. 244a. Specifically, Sec. 13b-95 defines a taxicab as, "any motor vehicle operated upon any street or highway or on call or demand accepting or soliciting passengers indiscriminately for transportation for hire between such points along streets or highways as may be directed by the passenger or passengers being transported…" The statutes make it clear that the statutory classification of taxicabs do not include motor buses or vehicles used in livery services. This latter classification is defined in C.G.S. Sec. 244b.

C.G.S Sec. 13b-96 authorizes the Department of Transportation (DOT) to regulate the taxicab industry through its fares, service provisions, operation and equipment, on behalf of passengers and the public. The stated goal in this section is to ensure that taxicab companies provide convenient and safe services to its passengers.

C.G.S. Sec. 13b-97 authorizes the DOT to control market entry through a certification process designed to ascertain whether or not an applicant's proposed services meet the requisite "public convenience and necessity" statutory requirement. Additionally, this section authorizes the DOT to screen applicants for suitability to operate a taxicab service, as determined by motor vehicle and criminal background checks, number of cabs owned and/or operated, the financial profile of the applicant's company, level of commercial insurance coverage for company and drivers, availability of qualified drivers, as measured by Connecticut statutory standards outlined in C.G.S. Title 13b.

Accordingly, Connecticut statutes prohibit the unauthorized operation of a taxicab in C.G.S. Sec. 13b-97b. Per Connecticut statute, any person operating a taxicab without obtaining a certificate from the DOT, as defined above, or without authority granted by the holder of a certificate supplied by the DOT shall be charged with a class A misdemeanor.

In addition to the DOT, taxicab companies are also subject to regulations from the Department of Motor Vehicles (DMV). C.G.S. Sec. 13b-99 grants the DMV the authority to impose safety requirements for taxi drivers and vehicles.

Finally, C.G.S. Sec. 13b-100 lists penalties for violation of any Connecticut statutes regulating the taxi industry.

Statutes regulating Livery Industry

Connecticut has statutory regulations for its livery service. C.G.S. Sec. 13b-101 defines a livery company as one that provides motor vehicles in livery services. The term "livery services" is used to describe motor vehicles used to transport passengers for hire. This section differentiates livery services from taxi and motor bus services.

Statutes regulating Rideshare Companies and/or Private Van Pools

Connecticut does not currently regulate typical commuter car pools or van pools. This includes companies providing professional rideshare services. Connecticut however does limit the number of passengers required to maintain the "rideshare" status.

C.G.S. Sec. 13b-107 regulates individuals carrying passengers for hire in private vehicles. Specifically, the statute allows individuals to carry up to five other individuals within the same location as driver's employment, (typical commuter car/van pools), without obtaining a livery license or a special permit from the DOT. Additionally, Sec. 13b-107(b) states that a company or employee of that company may operate one or more vanpool vehicles each having a seating capacity of not more than fifteen passengers for the purpose of transporting passengers to and from their place of employment, without a livery license or permit from the DOT. As long as individuals and/or companies do not exceed passenger limits and scope of services (employment commute), there will be no fines or penalties levied by a state regulatory authority.

UBER/LYFT

IIn 2014, companies such as Uber and Lyft began operating in Connecticut. Although there are other companies that provide similar services, Uber has the largest presence in CT. Uber was founded in March of 2009 as "UberCab" by Travis Kalanick and Garrett Camp. With help from investors, they were able to raise $1.25 million (Crook & Chokkattu, 2014). In July of 2010, UberCab began operating in San Francisco as a town/black car service. Eventually UberCab changed its name to Uber and in 2011, raised additional capital to expand their domestic and international operations. In 2012, Uber introduced a new service called Uber X, allowing drivers to use personal vehicles other than town/black cars to operate (Crook & Chokkattu, 2014). As of December 2014, Uber is operational in more than 130 cities and 40 countries (Uber Website, 2015).

Lyft was founded in the summer of 2012 by Logan Green and John Zimmer. They began their ridesharing concept with a company called Zimride. Zimride connects people through social media who wish to carpool to a shared destination. Initially, Zimride provided services for University campuses (Lawler, 2014). The service was provided through the popular social media website, Facebook, at Stanford and Dartmouth, where students could connect with one another to share rides (Lawler, 2014). Zimride was later sold to Enterprise Holdings. The success the two founders had with Zimride gave them the idea to launch Lyft. Lyft only operates in the Unites States and its growth has been slower than Uber's. As of December 2014, Lyft operates in 61 cities in 30 states (Lyft Website, 2015).

Uber and Lyft's quick expansion has not been without legal hurdles. Their presence in most jurisdictions has been challenged by the current regulatory system. In Connecticut, over a dozen taxi companies have joined together to sue Uber and Lyft, alleging that they are running unregulated taxi companies. Representatives from the taxi industry have asked the Connecticut Attorney General's office to issue a ruling as to whether transportation network companies are providing taxi services and thus should fall under Connecticut's taxi regulation. Uber's international growth has been met with the same legal hurdles around the world. In countries such as Brazil, France, Germany, South Korea, Spain and India, Uber is banned from operating (Carney, 2015). They are currently waiting court verdicts in Canada, Netherlands, Belgium, Denmark, Norway, Columbia and Thailand to determine if existing taxicab laws and regulations apply to their business model (Carney, 2015).

Uber and Lyft are not the only companies using smart phone technology to connect riders with rides. Companies such as Carma, Sidecar, Zimride and Ridejoy also provide ridesharing services. Taxicab companies have also began to utilize smart phone technology as an alternative method for hailing a cab. Curb is the largest mobile app available to link riders to local taxi companies. As of December 31, 2014, Curb is operational in 60 cities connecting 90 fleets, 35,000 taxis and 6,500 sedans to consumers worldwide (Curb, 2015). Curb is not operational in Connecticut; however, some local taxi companies have their own mobile app service.

PART III: LITERATURE REVIEW

The proper level of regulation for taxi and livery transportation services has been an issue of considerable debate in public policy circles. Some have argued that regulation tends to thwart competition and benefit existing providers at the expense of consumers and potential entrants into the industry. On the other hand, others have argued that there are market failures that warrant some level of regulation. The literature on the topic is mixed; there are some studies that suggest deregulation is beneficial, while others have suggested that deregulation has not made the consumer better off. A major problem is the lack of systematic data as to how well different levels of taxi regulation are serving the welfare and safety of riders.

HISTORICAL RATIONALS FOR REGULATION

Poor Consumer Information

One argument for regulation is that the taxi industry is one where the consumer historically has had imperfect information. In the market for many goods, the consumer has the ability to inspect the good and inquire about the price before making a purchasing decision. Taxis are different in this aspect because the customer hails a ride and has little or no information about the price of the ride, or the quality of the car or the driver. Dempsey (1996) has argued that the consumer has little ability to engage in price comparison or to acquire information about the quality of a particular trip because the cost of acquiring that information has traditionally been high relative to the cost of the trip. Similarly, Gallick and Sisk (1987) also argue that the search costs for the typical consumer are relatively high and thus they argue that a medallion system would serve to enhance consumer welfare. Schaller (2007) also argues for the existence of imperfect information.

Difficulty of Comparison Shopping

Related to this imperfect information problem is the difficulty of comparison shopping. It is difficult for consumers to compare one taxi to another on the basis of price and service quality. The difficulty of comparison shopping reduces price competition among providers and is another argument for regulation. One thing to note is that these studies were all done before the introduction of smartphone applications (apps), so one may argue that the problem of comparison shopping and gathering information on prices is considerably decreased with the availability of smartphone apps. Also, Uber includes information on rider's evaluation of driver quality which is information that is not typically available to consumers even in regulated taxi markets. A flaw in these studies cited here is that they rely mainly on economic theory to reach their conclusions and their conclusions are not backed up by empirical data.

Open access can lead to lower quality and cherry picking

Service quality is another argument for regulation in taxi markets. Schaller (2007) argues that open entry encourages too many firms entering the market and thus service quality suffers. Schaller reaches this conclusion from anecdotal evidence and past research such as the PriceWaterhouse (1993) study. He argues that open entry particularly increases supply at airports and other high demand locations for taxis.

Regulated markets can provide more equitable service

In addition, with open entry there may be a tendency towards cream skimming, or taxis tending to go to the more lucrative markets and not serving the less desirable areas such as low income neighborhoods or less densely populated areas. Regulation can also help ensure that broader service is available, for example, a condition of a taxi permit may be that the taxi company must serve certain communities and that service must be provided 24 hours a day instead of just during the more lucrative hours. Regulated taxis may be required to act as a common carrier that is required to accept any passenger to any destination in their service area. That is, they cannot legally pick and choose the most lucrative trips and refuse the less desirable trips.

The costs of providing dispatched 24/7 service can lead to larger taxi companies

Economies of scale may be another argument for a regulated taxi industry. For example, the costs of setting up and running a dispatch service (Schaller, 2007) may be large enough that large firms may be able to serve a market more efficiently than smaller firms. In addition, the cost of providing 24 hour a day service may make it economically unfeasible for smaller firms to operate in the taxi market. Once again, it must be noted that transportation network companies are a unique innovation in the dispatch component of this market. TNCs are effectively companies that do nothing but electronically dispatch rides to independent contractors, so the economies of scale argument for dispatching may have less merit today.

Environmental benefits from a regulated taxi industry

Externalities are another argument for regulation. Dempsey (1996) argues that with open entry there is an increase in highway congestion as well as increased energy consumption and pollution. He argues that when entry into the taxi market is increased through deregulation the number of trips per vehicle often decreases. As a result there are more empty taxis creating more congestion and more pollution. This argument is based purely on economic theory since data on how taxi utilization affects congestion and energy consumption is not available.

Arguments for Deregulation of the Taxi Industry

Deregulation can increase entry into the market

The other side of the argument is that regulation can impose costs on both producers and consumers of taxi services and some deregulation can actually enhance the welfare of consumers. The taxi industry is one where there are few barriers to entry outside of regulation. For example, Staley (1996) reports that when Indianapolis deregulated their taxi industry there were 32 new taxi companies within six months, with three quarters of these companies owned by minorities or women. Barrett (2010) found that when taxis were deregulated in Ireland, the number of taxis increased 97% from 2002 through 2009. In addition, waiting time for taxis fell during this time period. Since then the number of taxis has fallen about 20%, but there is still a significant increase in taxis since 2000. (Taxi Statistics for Ireland, 2014).

Is regulation and innovation compatible: the case of ridesharing

One question that Ranchordas (2015) addresses is, how do we simultaneously regulate and allow and encourage innovation and protect consumers? For example, the State of Connecticut encourages ridesharing as a way to reduce congestion and environmental

pollution. In addition, safety and public protection are less important issues because most pure ridesharing is among people who have some relationship with each other. Firms like Uber and Lyft take this a step further and call their service ridesharing, although their service is predominantly among people who don't have any previous relationship to each other. One of the problems Ranchordas points to is the problem of regulating when an innovation hits the marketplace. If we overregulate, we may drive away a service that many consumers find beneficial. If we under regulate, we risk putting consumers at risk in terms of safety.

Uncertainty and regulated markets

One of the features of a regulatory system that can hinder innovation is uncertainty. For example, if regulated firms have too much uncertainty as to what the regulators will accept, then it may discourage those firms from attempting any innovation. Ranchordas argues that while there is always going to be some uncertainty in the regulatory process, an excessive amount of uncertainty can stifle innovation. Another problem is that regulations may change more slowly than practice. This is most likely always going to be the case, since entrepreneurs have an incentive to try new things in the marketplace and see if they are profitable. Regulators typically don't have either the resources or the incentives to attempt to regulate what hasn't come on the market. Unfortunately we do not have the data to really understand how uncertainty in a regulated environment affects behavior by firms. Uncertainty in the regulatory process is difficult to quantify and in addition we have no way of knowing how many firms don't enter the Connecticut market because of regulatory uncertainty.

Mitigating the negative effects of Regulation

However, according to Ranchordas, regulators don't need to take a passive role. For example, when regulating new innovations such as transportation network companies, it may be desirable to implement temporary regulations and then evaluate how well those regulations are working before issuing final regulations. In addition, it may be desirable to include sunset provisions in regulations to ensure that they are periodically updated. This may be particularly desirable in an industry such as the for hire transportation industry, where regulated firms have a vested interest in those regulations and those who use those services oftentimes live outside of the jurisdiction or have little political power. Ronchardas argues that regulating in the sharing economy ought to be based on a few broader principles rather than the detailed regulations that exist in many industries. For example, in the case of transportation network companies, it may involve issues such as background checks, insurance requirements and safety inspections.

Regulation as a barrier to entry

One question that can be raised is whether existing regulations serve as a barrier to entry for new firms to enter the market. There have been many studies that have shown that in some jurisdictions a taxi license can have a high market value. For example, Proctor (2014) finds that the value of a taxi license in Vancouver is approximately $800,000. The highest prices tend to be in those jurisdictions that have a fixed number of taxi licenses or medallions. In this situation there is no way to enter the market other than to purchase a license or medallion from someone who already owns the license.

The other extreme is open entry which allows anyone who meets basic requirements, such as insurance and licensing to enter the market. Examples of jurisdictions with open entry include Phoenix, Arizona and Indianapolis, Indiana. Connecticut's regulations are in between

these two extremes (PRI, 2008). New taxi and livery companies can enter the market if they prove public convenience and necessity. According to the Program Review and Investigations Committee (PRI) report, over the ten year period from 1997 to 2007 the number of certificates ranged from a low of 80 in 1999 to a high of 103 in 2007. While this number does not tell us much about the level of taxi service available, since that is based on the number of vehicles, it does give us an idea about entry into the market. The data suggests that the Connecticut market is not completely closed to new licenses. This does not, however, suggest that there are no barriers to entry.

Obtaining a taxi certificate in Connecticut

There are two routes to getting a taxi certificate in Connecticut. The first route is to apply for a new license, which requires a public hearing and the demonstration of public convenience and necessity. Approximately 16% of the applications to the Connecticut Department of Transportation were for new certificates. Data from the PRI Report showed that approximately half of the applicants actually completed the application process. In addition, the process tends to take a considerable amount of time, with the average time being 224 days or approximately 7.5 months.

The faster route, which does not require a public hearing, is to purchase a license from another taxi company. This can be done in one of two ways, either a full sale is completed (for all of the taxis the firm is allowed to operate) or a partial sale is completed (for only some of the taxis the firm is allowed to operate). The PRI report suggests that a certificate for a taxi in a partial sale has an average value of between $25,000 and $40,000. This would suggest that there are some barriers to entry, although not as extreme as in places like Vancouver where the cost of a taxi license may be up to $800,000 (Canadian dollars).

Literature on Transportation Network Companies

Given that transportation network companies are relatively new, it should not be surprising that there is little literature on them. There are a couple of working papers on the topic. For example, Rayle et al. (2014) compare ridesharing companies to traditional taxis. In their paper they consider the transportation services provided by TNCs as ridesourcing as opposed to ridesharing. An example of ridesharing would be where two co-workers carpool and use one car to get to work in an informal arrangement. Ridesourcing is where a driver is hired in the marketplace to provide a ride. They argue that ridesharing reflects a situation where the driver and the riders share a common destination. However, with ridesourcing, the objective of the driver is not a destination but the compensation that comes from providing the transportation. They did an intercept survey of ridesourcing users in San Francisco, CA and compared the results to other data on taxi users and San Francisco residents in general. They found that the typical user of ridesourcing was younger than the typical taxi user. They also found that users of ridesourcing services tended to have more education than the typical resident of San Francisco. They did not have data on the education level of taxi users. Ridesourcing trips tended to have more passengers than taxi trips, with ridesourcing averaging 1.8 passengers per trip to 1.1 passengers for a taxi. A big difference between taxis and ridesourcing was the wait times. According to their survey, 90% of ridesourcing users reported a wait time of 10 minutes or less, compared to 35% for taxis. The participants were asked their reasons for choosing ridesourcing and the top two responses were ease of payment and short waiting times.

Driver compensation and working conditions

Krueger and Hall (2015) report on the characteristics and average compensation of Uber drivers in a report commissioned and funded by Uber. They report that as of 2014, there are approximately 160,000 individuals who drive as what Uber calls, “driver-partners”, which are essentially independent contractors who agree to use Uber’s smart phone app to solicit and accept passengers in their personal vehicles for compensation. Uber has grown to this number in approximately two years, so the company is experiencing explosive growth.

Age and Education

They find that the typical Uber driver is younger than the typical taxi driver with 19.1% of Uber drivers 29 years old or less, while 8.5% of taxi drivers fall in this age category. Similarly 24.5% of Uber drivers are 50 or older compared to 44% of taxi drivers. In addition, Uber drivers tend to be more educated, with almost half of Uber drivers having a college degree versus 18.8% of taxi drivers having a college degree. Compared to taxi drivers, drivers for Uber work fewer hours.

Work week

They find that 35% of taxi drivers work more than 50 hours a week compared to 7% of Uber drivers. Krueger and Hall argue that this may be due to the fact that taxis are typically leased for a fixed time (i.e. 12 hours or one week) and therefore taxi drivers have an incentive to drive more hours to take full advantage of the fixed cost of the lease. In terms of compensation, they find that drivers for Uber earn on average $19 an hour versus just under $13 an hour for taxi drivers. One problem with these figures is that they are not directly comparable, since taxi earnings are after all expenses such as lease expenses. Uber drivers are using their own personal vehicles, so they are still responsible for gasoline, wear and tear and other expenses

One limitation of this literature is that many of the studies cited in this literature review are fairly old studies. This is primarily true due to the fact that systematic data on subjects such as passenger satisfaction, passenger safety and how well the public is being served by the taxi industry is just not available. The takeaway for Connecticut from this literature review is that we need more data to truly determine how well the public is being served. Another limitation is the lack of literature for the livery industry. This is likely due to the fact that in many jurisdictions taxis and liveries are regulated together.

In summary, the arguments for regulation are focused on the limited ability of consumers to judge quality and comparison shop based on price before a trip. Changes in technology may make these arguments for regulation weaker, such as where a consumer can see the average rating of an Uber driver before requesting a ride. In addition, with competing apps, it may make it easier for prospective riders to comparison shop. Another argument for regulation is that in a regulated industry the government can mandate that certain areas be served in exchange for a permit to have a taxi company. The counterargument to regulation is that it can serve as a barrier to entry to keep out competition. The lack of systematic data makes it difficult to determine the optimal point on the regulation/deregulation continuum.

PART IV: OTHER JURISDICTIONS REGULATIONS

SUMMARY OF TAXICAB AND LIVERY SERVICE REGULATIONS

Besides Connecticut, nine other states currently regulate the taxicab and livery industries at the state level. Each of these states requires proof of public convenience and necessity for market entry. These states have historically treated the taxicab and livery service industries in a similar manner as public utilities. That is, they control rates, vehicle safety, and driver and owner qualifications. They also mandate hours of operation and services to all members of the public requesting service. The following is a list of nine states regulating taxicab and livery services at the state level: Colorado, Delaware, Kentucky, Montana, Nebraska, New Mexico, Pennsylvania, Rhode Island and West Virginia. The remaining states allow their large towns or municipalities to regulate these industries at the local level. Notable municipalities are Washington, D.C., New York City, Boston, Newark, San Francisco and Los Angeles. At one time, the following jurisdictions considered deregulation of the taxi and livery services industries: Phoenix and Tucson, Arizona; Berkeley, Oakland and San Diego, California; Tampa and Orlando Florida; Atlanta, Georgia; Indianapolis, Indiana; Portland Oregon; Seattle, Spokane and Tacoma, Washington. Some of the jurisdictions succeeded in deregulating these industries for a period of time. Deregulation efforts were focused on reducing restrictions on rates and market entry. However, each of these jurisdictions currently imposes some regulation on existing taxi and livery companies operating within their municipalities. Typically, these regulations impose standards for rates, market entry, accessibility, vehicle safety, criminal background checks and other consumer protection safeguards.

Specifically, the following are the current regulation citations for jurisdictions listed above:

Arizona: (Statewide regulations) Arizona State Statute 41-2097

California: Berkeley Municipal Code Chapter 9.52; Oakland Municipal Code Chapter 5.64;

City of San Diego Council Policy Council Policy 500-02.

Florida: Laws of Florida Chapters 2001-299; Orlando Municipal Code Chapter 55.

Georgia: (Atlanta) Atlanta City Codes Div. 5 – Taxicabs Sec. 162

Indiana: (Indianapolis) Indianapolis Municipal Code Sec. 996

Oregon: (Portland) Portland Municipal Code Chapter 16.40

Washington: Seattle Municipal Code 6.310.300; Spokane Municipal Code Chapter 10.34;

Tacoma Municipal Code Chapter 6B.220.

Like Connecticut, most jurisdictions require some evidence of a taxicab company's legitimacy, financial stability and viability of its business model prior to permitting it to operate within the jurisdiction. Most require substantial state and/or federal background checks of both business owner and drivers.

SUMMARY OF TRANSPORTATION NETWORK COMPANIES REGULATIONS

The following is a sample of U.S. jurisdictions that have passed legislation defining, categorizing and regulating Transportation Network Companies (TNCs). Most have created a category for TNCs under

their codes/statutes that is distinct from that of taxicabs, livery services and/or commuter vanpools (traditional rideshare companies). By labeling these companies as TNCs, several jurisdictions have opted to create new regulations to fit this business model. Many other jurisdictions are currently grappling with whether or not to fit TNCs into their existing regulations for transportation for hire companies, and/or how. We have listed a relevant sample of regulatory structures devised to accommodate TNCs within their respective jurisdictions.

California Regulations Summary

Level: *State/Municipality*

Citation: CPUC Decision 13-09-045 Adopting Rules and Regulations on TNCs dated September 23, 2013 and including revisions dated June/July 2014; AB 2293 (re: insurance coverage). Governor's press release dated September 17, 2014 announcing signing of AB2293.

Rationale: Public safety and encouraging market entrance.

Highlights of Current Requirements:

In September 2013, the California Public Utilities Commission began regulating TNCs in California. These rules and state statutes require TNC drivers to drive their own private vehicles, but the statutes do not specify how drivers should register these vehicles with the state's Department of Motor Vehicles. Rather the Public Utilities Commission left the burden on the TNC companies to ensure that they do not violate state statutes.

The California Public Utilities Commission (PUC) defines Transportation Network Companies (TNCs), "…as an organization whether a corporation, partnership, sole proprietor, or other form, operating in California that provides prearranged transportation services for compensation using an online-enabled application (app) or platform to connect passengers with drivers using their personal vehicles." (CPUC Decision 13-09-045, 2013).

The TNC, (not individual drivers), must obtain an operating permit from the California PUC. TNCs must conduct background checks for each driver, establish a driver training program, implement a zero-tolerance policy on drugs and alcohol, and require the following insurance coverage, (CPUC Decision 13-09-045, 2013): California's legislation creates a firewall that protects personal auto insurance policyholders from subsidizing commercial activities and gives TNCs flexibility (and time) to meet the new insurance requirements.

California will also work with its insurance regulators and companies to secure new insurance products to effectively cover this business model. For example, California requires TNCs to provide insurance from the moment a driver turns on the app. The "App On to Match" timeframe will now have a lower primary insurance coverage requirement of $50,000/$100,000/$30,000 with excessive coverage of $200,000. (AB2293) This requirement will be phased in over time and is scheduled for implementation on July 1, 2015.

Regarding leveling the competitive environment for all for-hire transportation companies, the PUC has ordered a review of its existing regulations of livery services to ensure all regulations are, "up to date, and that the rules are responsive to the needs of today's transportation market." (CPUC Decision 13-09-045, 2013)

Legal Challenges/Future considerations:

Prior to the passing of California's legislation, the PUC levied $20,000 in fines against Uber, Lyft and SideCar for operating in the state without authorization, and other violations of state law. The PUC's Safety and Enforcement Division also issued cease-and-desist letters to each of these companies requiring each to immediately halt service in the state. In 2013 the PUC entered into settlement agreements with the same companies. The PUC agreed to allow the companies to temporarily operate in the state in exchange for certain assurances regarding rider and passenger safety. This temporary agreement remains in place as the state formulates a long-term regulatory structure for TNCs. In its second phase of adapting TNC regulations, California's PUC will update the General Order (GO) 115 and 157 series to include new regulations relating to the "charter-party carrier" subclass of TNC. (CPUC Decision 13-09-045, 2013).

California has insisted on resolving the "insurance gap" issue prior to phase II of its TNC regulations. The issue concerns the potential gap in insurance coverage between a driver's personal policy and the TNC's commercial policy. This "no-insurance loophole" allegedly exists when a TNC driver is available to work but does not have a passenger in the vehicle. TNC insurance level requirements will continue to be a contentious issue within the state. AB 2293 will not take effect until July 1, 2015.

The California model provides an important example for Connecticut regulators because it imposes TNC guidelines in stages. This method of adopting regulations provides the state with maximum flexibility to both monitor and analyze the economic and safety implications of new regulations on all stakeholders.

Colorado Regulations Summary

Level: *State*

Citation: Colorado SB 14-125 Transportation Network Companies Regulation signed into law on June 5, 2014; Governor's press release: Governor signs, "The Transportation Network Company Act" dated June 5, 2014.

Rationale: Allow state's Public Utilities Commission (PUC) to regulate industry in a similar manner as taxicab and livery services operating in the state.

Highlights of Current Requirements:

IIn June 2014, Colorado passed a bill authorizing Uber and Lyft to operate its ridesharing services in the state. The Governor signed SB 125 (Senate Bill) to prevent TNCs from ceasing operation in the state. The legislation created the category of Transportation Network Companies within Colorado statutes, which subjects these companies to limited state regulations.

Colorado has created a category of regulation for TNCs that is distinct from its existing regulations for Taxicab and Livery Services companies. Colorado labels its new TNC legislation as "ridesharing laws". The new statute puts TNCs under the oversight of the state's public utilities commission Colorado PUC allows TNCs to legally operate in the state provided they meet the following standards: In order to obtain an operating permit, a TNC must demonstrate that its drivers have passed both criminal background and driving history checks.

Each driver's car must pass vehicle inspections and be clearly marked as TNC cars. Drivers must carry personal car insurance in addition to the commercial insurance policy that the TNC carries on their behalf. However, this requirement can potentially lead to an "insurance gap" that may negatively impact passengers and other third parties in the case of an accident. As in other jurisdictions, Colorado's TNC drivers are not currently required to maintain commercial insurance coverage between riders. Colorado TNCs must only provide up to $1 million in liability insurance from the time that a driver accepts a request to the moment that the rider leaves the car.

Legal Challenges/Future Considerations:

The state did not fully resolve the issue of the "insurance gap" that has been a contentious issue within the jurisdiction. This gap coverage refers to the potential gap in coverage when a driver is on the app waiting to be connected to a rider. Currently, many personal insurance policies won't cover drivers who use their personal cars for commercial purposes. State insurance companies have threatened to raise rates if forced by the state to cover drivers under this tiered system. They argue that TNC drivers should be considered commercial drivers at all times in which drivers are engaged in commercial activity. To address their concerns, the Colorado legislature passed a measure attempting to close the "gap" in liability coverage during commercial activity.

District of Columbia (DC) Regulations Summary

Level: District/Municipality

Citation: "Vehicle-for-Hire Innovation Amendment Act of 2014" dated October 28, 2014; B20-0753: "Transportation Network Services Innovation Act of 2014" Council of the District of Columbia; D.C. Code Title 50 Chapter 3; Title 31; Taxicabs and Public Vehicles for Hire.

Rationale: To amend/update/strengthen existing regulations under the District of Columbia Taxicab Commission Establishment Act of 1985, define and include "vehicle-for-hire companies" in regulatory scheme, loosen regulations in certain areas for all vehicle-for-hire companies in the district and preserve public safety.

Highlights of Current Requirements:

The D.C. Council legalized TNCs ridesharing apps in DC in 2014. DCs legislation (The "DC Model"), defines vehicle-for-hire companies, as "a company operating in the District of Columbia that uses a digital network or software application to connect a passenger to transportation network services provided by a transportation network operator. (B20-0753, 2014). The term vehicle for hire is used in several jurisdictions to describe a general category of taxis, limousines, shuttle services and other paid transportation used by consumers to transport them to selected destinations. The D.C. Council has decided to designate this category for TNCs. A transport network operator, (driver), is defined as "an individual who operates a motor vehicle that is: (a) owned or leased by the individual, (b) not a commercial vehicle as defined by section 2(3) of the Uniform Classification and Commercial Driver's License Act of 1990, effective September 20, 1990, (c) not licensed as a public vehicle-for-hire under section 20 of the DC Taxicab Establishment Act of 1985, effective March 25, 1986, (d) used to provide transportation network services, (transportation of a passenger between points chosen by the passenger and that is prearranged by a transportation network application company)."(B20-0753,2014).

The DC Model of regulating TNCs is similar to the Colorado model. Trademarks, logos or other identifying marks are required to be visible to assist Commission inspectors to identify TNC vehicles and monitor and control violations. However, TNCs are not required to release their inventory and driver information to the Taxicab Commission. As in California, the background check requirement is controversial because there is no requirement for fingerprint identifications. Taxicab companies have complained about this lack of requirement as well as the regulation standards they deem inequitable to existing taxicab requirements.

DC Council requires TNCs to register with the District, conduct owner and driver local and national criminal background checks. For the TNC owner/applicant the background check must be completed by a third-party and include multi-state/juris criminal records locator or other similar commercial nationwide database with validation (primary source search); and national sex offender registry database; and a driving record check. The criminal background check must not have specified violations for the past 7 years. As of October 2014, TNCs are required to suspend any driver based on customer complaints of drug or alcohol use or discriminatory practices when selecting riders.

In addition to background checks, D.C. requires TNCs to transmit 1% of all gross receipts to its Office of the Chief Financial Officer. The "D.C. model" prohibits "street hails" by TNC drivers, and requires annual vehicle safety inspections. D.C. police officers have the authority to check drivers' phones if they suspect that a TNC driver is transporting a passenger obtained through an illegal street hail. As in other jurisdictions, DC requires a $1million commercial insurance policy covering liability from the time that a drive is en route to pick up a rider through the time of drop off at designated location. DC permits insurance (liability) coverage to drop to a lesser amount during periods of commercial inactivity (a time period when a driver has the app on but is neither picking up nor transporting a passenger).

Legal Challenges/Future Considerations:

It is likely that many of the legal issues raised in the failed amendments introduced by the Teamsters and D.C. Taxicab Commission, will resurface in the near future. Issues such as, setting floors for rideshare app pricing to prevent TNCs from undercutting taxi fares in order to gain competitive advantage, and mandating TNCs to fully display logos/trade dress on vehicles while "on duty", are most likely to resurface in future D.C. Council sessions.

The Teamsters union representatives have also hinted at attempting to unionize TNC drivers in addition to representing taxi drivers. Some Uber drivers in Seattle and California are union members. The issue of unionization may be problematic with Uber's stated "partnership" business relationship with drivers.

Virginia Regulations Summary

Level: *State*

Citation: Virginia Department of Motor Vehicles, cease-and-desist letter(s) to Uber and Lyft dated June 5, 2014; Joint news release from Attorney General's Office and Governor dated August 6, 2014 regarding Temporary Agreement between the Commonwealth of Virginia and Uber and Lyft; HB 1662 and SB 1025 (in reconciliation stage – not yet signed into law, as of January 30, 2015).

Rationale: Passenger safety; increase transparency in day-to-day operations; and, create a level competitive environment for all for-hire transportation services in the Commonwealth.

Highlights of Current Requirements:

Forces Transportation Network Companies to comply with existing Virginia statutes. TNCs must The regulations force Transportation Network Companies to comply with existing Virginia statutes. TNCs must maintain a Virginia transportation broker's license. They must provide full transparency and documentation about rates charged. TNC drivers are barred from accepting street "hails". The Virginia Department of Motor Vehicles has required TNC companies to adhere to a list of guidelines in order to maintain legal status in the jurisdiction. However, the DMV reserves the right to revoke the temporary operating authority. DMV's conditional guidelines require TNCs to conduct, "extensive" background checks of drivers, with immediate disqualifiers including convictions for any felony, fraud, sexual offenses, violent crimes, or registration as a sex offender. TNCs must conduct a review of driving histories for each driver, with disqualifications for drivers convicted of three or more moving violations in the last three years, DUI(s), underage drinking, refusal to submit to a breathalyzer test, hit and run offense(s), eluding law-enforcement or a revocation of a driver's license. Virginia has adapted a "zero tolerance" policy for a driver's use of drugs or alcohol, and a suspension pending investigation of any driver accused of violating the zero tolerance policy. TNCs must employ drivers who are properly licensed and over the age of 21. Driver vehicles must carry a maximum of seven passengers and must be properly registered and inspected for safety and emissions, where applicable.

Virginia's DMV requires full transparency of driver records and requires TNCs to provide these records to the DMV upon request/demand. Typically these requests will occur if the DMV receives complaints; however, Virginia will subject TNCs to periodic audits of drivers' records. Regarding insurance, TNCs drivers in Virginia must maintain automobile liability insurance on behalf of all drivers and an additional $1 million of coverage from the moment a driver accepts a trip request until the passenger leaves the vehicle, and liability insurance for drivers who are logged onto the companies' software but not providing services.

Legal Challenges/Future Considerations:

The Virginia legislation follows a series of cease-and-desist letters written by Virginia's Department of Motor Vehicles, which included more than $35,000 in civil penalties for operating in Northern Virginia without required permits. After Governor's temporary agreement with TNCs, Virginia DMV continues to craft a regulatory structure to cover this business model. Virginia Department of Motor Vehicles is currently leading a study to develop legislation beyond the temporary agreement. All stakeholders will be involved in crafting a long-term regulatory framework for TNCs in the Commonwealth.

Seattle, Washington Regulations Summary

Level: *Municipal*

Citation: Chapter 6.310 of the Seattle Municipal Code; Mayor's Press Release dated March 19, 2014; Seattle City Council Committee for Taxi, For-Hire and Limousine Regulations records (C.B. 118036); Res. 31503: Continuing Work plan for Taxi, For-Hire, Limousine, and Transportation Company Regulations.

Rationale: TNCs already operating in the state and require some regulatory framework; public safety; level competitive environment for all transportation for-hire companies.

Highlights of Current Requirements:

Regulations create a pilot program for TNCs and affiliate drivers and vehicles. TNCs, (but not individual drivers), must be licensed by the City. Cap the number of rideshare cars on the road to 150 per company. For example, the three TNCs currently operating in Seattle can have only 450 vehicles on the road at any given time. Over the next two years, increase the number of taxi licenses issued by the City by 200. Establishes a zero tolerance drug use policy for affiliate drivers and requires rate transparency for TNCs and licensing fees.

Legal Challenges/Future Considerations:

Although deregulation has not been seriously considered, Seattle's Mayor has indicated an interest in loosening regulations on all transportation for-hire companies across the board. The open debate about insurance levels and caps on TNC vehicles will influence future legislation. Additionally, the Mayor is interested in resolving issues of driver training, fees, rates and use of technology.

RECENT DEVELOPMENTS IN OTHER JURISDICTIONS

Almost all jurisdictions are grappling with establishing an equitable regulatory process for transportation for hire companies. There is daily news of ongoing disputes and legal challenges throughout the U.S. The regulatory process of creating standards for Transportation Network Companies is ever evolving and extremely dynamic. The following are a few notable examples:

California:

Department of Motor Vehicles' proposal to require TNC drivers to obtain commercial driver's licenses has been withdrawn. California DMV originally stated that the requirement acknowledges the commercial nature of TNC services. The current California Vehicle Code states, "any passenger vehicle used or maintained for the transportation of persons for hire, compensation, or profit is a commercial vehicle. Even occasional use of a vehicle in this manner requires the vehicle to be registered commercially." This law has been in effect since 1935. The implications for implementing this requirement would also affect the insurance requirements for TNC drivers. Should California require TNCs to register for commercial plates, they would simultaneously have to show proof of commercial insurance coverage. Whether showing corporate level insurance coverage can satisfy that proof, must be decided. If California DMV again reverses, and requires TNCs to register for commercial plates, TNC companies will likely consider this as a backdoor method of regulating them in the same manner as taxicab companies.

California Prosecutors filed suit against Uber for misleading business practices. The district attorney's offices in both San Francisco and Los Angeles have recently (Tuesday, January 26) filed a misleading business practices claim against Uber. The prosecutors accuse Uber of misrepresenting consumers on issues of screening drivers and assessing fees. The suit challenges Uber's claims about the quality of its background checks. Specifically, the prosecutors' claim alleges that Uber does not require fingerprint identification. Taxicab

companies in California require fingerprint identification of all of drivers. Uber currently, according to the complaint, allows potential drivers to submit personal information on its website. The prosecutors state in their complaint that this leaves the background checking system vulnerable to checking, and clearing false identities.

To bolster their complaints, California prosecutors list examples of Uber drivers with criminal records. This legal challenge is a result of a San Francisco area Uber driver striking and killing a six-year-old girl in December. The driver had a criminal history of reckless driving at the time of the accident. On its UberX platform, Uber charges riders a $1 "Safe Rides Fee", that is stated to cover the cost of the company's background checks. Prosecutors cite this fee as evidence of their claim of Uber's "misrepresenting consumers".

There are ever-evolving legal challenges to new regulations in California. This jurisdiction should be monitored closely as it will continue to influence the decisions of regulatory bodies throughout the U.S., as it relates to transportation for-hire companies.

The following jurisdictions provide specific examples of regulatory attempts to treat TNCs similarly to taxicab and livery services companies:

Houston, Texas:

City Council passed an ordinance allowing TNCs to operate in Houston. Houston treats TNCs similarly to its taxicab, limousine and shuttle companies by requiring that at least 3% of a TNC's fleet comply with existing wheelchair accessibility standards. The new ordinance gives the City Council authority to impound TNC vehicles operating without a permit and eliminates the minimum limousine fare of $70. TNC drivers in Houston are required to pass physicals and criminal background checks. Houston's ordinance follows the California model of requiring driver insurance coverage whenever the driver is logged onto the app and available to accept riders.

Houston is one of the few jurisdictions requiring specific wheelchair accessibility standards for TNC vehicle. This requirement satisfies one of the taxicab industry's concerns about regulators ensuring an equitable competitive environment for all transportation for hire companies operating within the jurisdiction.

New York City:

In New York City the Taxi and Limousine Commission (TLC) approved an extension of a pilot program for street-hailing smartphone apps, including Hailo and Taxi Magic. TLC currently requires common standards for background checks for TNCs and taxicab companies. Both types of companies are required to screen drivers using the F.B.I. fingerprint database. Additionally, New York requires all cars for hire to be associated with a "base". A base is similar to a dispatch provision currently used by taxicab companies. Uber has developed base stations in New York. Lyft has no similar "physical" presence in the City.

Office of Administrative Trials and Hearings (OATH) has temporarily banned five of Uber's six bases (physical dispatch stations), for noncompliance after Uber did not submit ride records to NYTLC in October 2014. Uber is required to submit electronic trip data for rides from April 2014 – mid-

September 2014. Uber was also fined $200/base. Uber has argued that the requirement to submit trip data violates Uber's right to protect its trade secrets. Uber has appealed the fines and suspensions of operations, which by law, permits their continued operations from these sites pending the outcome of the appeal.

New York City may soon allow 400 livery and UberBLACK drivers to convert their cars to yellow cabs as part of a yearlong pilot program sponsored by the Taxi and Limousine Commission. Cars must be under two years old. As part of the pilot program, drivers must lease cab medallions for $1,000/wk. prior to operating in the City. This decision would reverse a 20 year-old NY TLC requirement that allows only new cars to the City's taxi fleet. The rationale for this pilot program is to cut expenses for TNC drivers and make it easier to switch from working in one part of industry to another.

New York Attorney General reached an agreement with Uber regarding "surge pricing" during emergencies. The agreement would cap Uber's surge pricing during citywide emergencies. The Attorney General cited the New York City's 1979 law against price gouging. Uber agreed to donate 20% of its elevated fares charged during emergencies to the American Red Cross.

PART V: OUTSTANDING ISSUES IN CONNECTICUT

SUMMARY OF TAXICAB AND LIVERY SERVICE REGULATIONS

There are several outstanding issues that Connecticut needs to consider if it determines that TNCs should be included in the mix of for hire passenger transportation options for Connecticut citizens. These include: (1) vehicle safety, (2) background checks, (3) insurance requirements, (4) pricing, and (5) access to a vehicle. Connecticut's current regulatory system for taxi and livery service is conducted largely through the DOT and the DMV. Due to the nature of the service provided by taxi, livery and, now, TNC's is substantially the same, it would seem natural to assume that any additional regulatory requirements covering TNCs should be administered by these two agencies. However, in the case of both agencies, their regulatory roles in the area of for hire transportation represent a very small part of their overall mission and statutory responsibilities. Both agencies lack the resources to pursue their regulatory roles aggressively and proactively, even within the current structure of the industry. The possible addition of TNCs to the mix of for hire transportation options, especially if some or all of the public safety and protection safeguards as applied to them, would represent an additional burden to the regulatory agencies, probably a substantial one, since there is virtually no reliable information on the number of driver's or vehicles that operate utilizing this new technology. While DOT and DMV may wind up being the default agencies to administer this new responsibility, there may be a need to reevaluate what state entity or entities should have this responsibility as more information is developed on the role and impact TNCs may have.

A. VEHICLE SAFETY

Connecticut taxi and livery companies must meet several regulatory requirements regarding the mechanical condition of their vehicles. Requirements relating to vehicle condition and inspection generally have two objectives to: (1) establish a baseline standard for what is necessary to provide safe transportation to the public and (2) provide a mechanism that forces service providers to address in a timely manner vehicle mechanical issues that could affect service reliability. TNCs such as Uber and Lyft have developed their own internal policies for addressing vehicle safety and mechanical condition.

Safety inspection requirements do not, in and of themselves, eliminate the possibility of equipment-related failures that could lead to an accident or an in-service breakdown, and there is little data in Connecticut that tracks the relationship between inspection frequency and actual on-the-road performance of the vehicle. Nevertheless, the objectives noted above would seem to be desirable goals to be pursued in the public's interest.

Current System

Taxicab Vehicle Safety Requirements

- Required to be no more than ten (10) model years old and there is no mileage limitation.
- Initial vehicle inspection done by the DMV prior to the vehicle going into service.
- Throughout the vehicles operation period, certificate holders are required to:
    - o Self-inspect vehicles every 3 months
    - o Biannually each vehicle is to be inspected by a DMV licensed dealer or repair shop to assure that the vehicle is in a safe, clean and sanitary condition.

All vehicle inspection records are to be maintained for at least 24 months and should be presented to the DOT upon request. At any time, the DOT has the ability to inspect any taxicab at the request of the commissioner to ensure that certificate holders are properly maintaining the vehicles. Taxicabs that don't pass inspections are forbidden from operating until they are repaired. Any violations to the vehicle safety requirements will constitute in suspension, revocation or non-renewal of the taxicab registration.

Taxicabs are also required to be easily identifiable (all taxicabs in the fleet must be the same color), operate with a dome light and keep a clean appearance, with no visible signs of rust, chipped paint or cracked mirrors/window.

Livery Vehicle Safety Requirements

Unlike taxicabs, not all livery vehicles are required to be inspected. Sedan-type vehicles with a seating capacity of seven (7) seats or less are not required to be inspected unless sold. However, all livery vehicles with a seating capacity of eight (8) passengers or more must be inspected by the DOT prior to registration. Unlike DMV inspections, DOT inspections of livery vehicles focus on seating capacity, match with vehicle described in permit and number allowed under the permit (PRI, 2008). Livery vehicles must meet physical and equipment specifications and are identified by "L" license plates.

Transportation Network Company Vehicle Safety Procedures

TNCs are not regulated by the state and the only information available regarding vehicle inspections was either provided directly by the company representative or their website. The two most notable TNCs vehicle inspection protocol is summarized below.

<u>Uber:</u>
Currently, there are several different options for vehicle inspections depending on the state of operation. It is difficult to clearly understand the vehicle inspection process for Uber drivers in Connecticut. California and Colorado have passed legislation requiring vehicle inspections and the system established allows inspections to be complete several ways: (1) cars can be inspected at an Uber partnered body shops, (2) inspections can be completed at a Bureau of Automotive Repair (BAR) certified auto shop or (3) drivers can use YourMechanic.com. This website connects drivers with mechanics who come to a driver's residence and inspects their car for a $50 fee. The inspection form must be uploaded to Uber's website as proof of inspection. Uber drivers are also required to operate vehicles that are no more than ten (10) model years old.

<u>Lyft:</u>
Lyft has developed an internal inspection protocol that allows experienced Lyft drivers to inspect new vehicles. Prior to driving for Lyft, the driver must request a "mentor" (an experience Lyft driver) to meet the driver, inspect the vehicle and validate the capability of the driver. The mentor is provided with a vehicle safety checklist that must be submitted to Lyft. All Lyft vehicles are required to be no more than twelve (12) model years old, with the exception of Columbus, Minneapolis, Seattle and Washington, D.C. where vehicles must be no more than ten (10) model years old.

<u>Proposal</u>

Connecticut should ensure that all vehicles operating in a for hire capacity to transport passengers

are safe for those engaging them. TNC vehicles are essentially private passenger vehicles being used for the dual purpose of the owner's personal transportation and for commercial use. This is different from taxi and livery vehicles that have only a commercial purpose. Taxi and livery vehicles are subject to certain state-imposed safety and inspection requirements. TNC vehicles are not currently subject to state-required safety inspections because they are registered as private passenger vehicles, for which periodic safety inspections are not required under state law.

The primary vehicle safety consideration is whether all vehicles used to transport the public for compensation should meet the same vehicular mechanical condition standards regardless of the entity operating them. If the answer to this question from a public policy perspective is in the negative, then there seems to be no compelling case to be made for continuing to require other for hire vehicles to meet state imposed safety standards and record keeping requirements while TNCs are permitted to operate under self-imposed safety standards. However, if the answer to this question as a matter of public policy is in the affirmative, that is, all for hire vehicles should meet essentially the same standards, then we see two possible alternatives for achieving this outcome. These alternatives are outlined below.

Alternative (1)

Current vehicle inspection regulations for taxi companies could be adopted for TNC vehicles. Under this scenario, TNC vehicles would have to be identified to the DMV and presented for an initial inspection prior to initiating for hire activity. The impact on DMV inspection resources under this scenario is unknown as little information is available on the number of TNC vehicles currently operating in Connecticut or how much this number may increase in the future.

The state should also consider requiring TNC vehicles to be registered under the "combination" registration classification, which is the existing classification used for vehicles that are used in part for private passenger transportation and in part for commercial purposes. Registration fees for combination vehicles are higher than passenger vehicle fees.

If current requirements for taxis are adopted for TNC vehicles, those vehicles would also have to be inspected biannually by a DMV licensed dealer or repair shop and the TNC would be required to maintain records of biannual inspections and make that information available to the regulatory agency upon request.

The legislature should revisit the issue of whether livery vehicles should have to meet these standards as well.

Alternative (2)

An alternative to the current regulatory system would be to model a vehicle inspection system for both taxis and TNC vehicles along the lines of the current Colorado requirements. Colorado appears to have implemented a vehicle safety system that ensures that vehicles are in good working condition and safe for passengers. Colorado requires all TNC vehicles to go through a 19-point inspection with an approved licensed mechanic prior to operating in the state and be re-inspected at least annually thereafter. The Colorado law makes the TNC responsible for conducting these inspections or causing them to be done by the certified mechanic. Drivers submit vehicle inspection records to the TNC prior to initial approval as a driver and periodically thereafter.

Under this scenario, DMV would no longer be required to conduct initial inspections for taxis as these would be conducted through third party inspections at approved licensed dealer and repairer shops. DMV would also not be affected by the potential increased workload represented by the unknown number of TNC vehicles that could be operating in the state.

Under this alternative, TNC vehicles should still be required to reregister as combination vehicles to reflect their dual use for both private passenger and commercial purposes.

The legislature should consider whether livery vehicles should fall under these inspection requirements as well.

B. DRIVER QUALIFICATIONS/BACKGROUND CHECKS

Current System

Connecticut requires taxicab and livery drivers to obtain a license with a public passenger endorsement. A commercial driver's license is not required for vehicles with a seating capacity of less than 16 seats. At a minimum taxicab drivers must have a "base" license with at least an "F" public passenger endorsement (PRI, 2008). Higher level public passenger endorsements that are necessary to drive a school bus or other types of student transportation also allow individuals to drive taxicabs or livery vehicles. Part of the endorsement process requires the DMV medical review department to review applications for a history of medical conditions such as high blood pressure or seizures.

As part of the public passenger endorsement process for a driver's license, all taxicab applicants must undergo a state and federal background check dating back at least ten (10) years. The background checks are conducted by the Connecticut State Police and include (1) fingerprints, (2) state check, and (3) FBI check. Drivers must also notify the certificate holder within three (3) days after the date of any conviction or violations of federal, state or local criminal law or safety/motor vehicle violations. Also, drivers must provide notice of any revocation, suspension, cancellation or disqualification on their endorsement or permit by the end of business the following day. A certificate holder is required to review the driving records of each driver to ensure eligibility every twelve (12) months.

Livery driver's background checks are not as rigorous as the taxicab driver, but include a fingerprint and state check conducted by the Connecticut State Police. Similarly, permit holders are required to ascertain that each driver holds a valid operator's license.

Uber reports that all its prospective drivers undergo a rigorous background check conducted by a third party vendor. Potential drivers are screened against county courthouse records, federal courthouse records, and a multi-state criminal database going back for a period of seven (7) years. Drivers are also screened using the National Sex Offenders Registry. The final part of the background check involves a lifetime Social Security trace. Uber also maintains that drivers' motor vehicle history records are checked as part of this process. The check is conducted using identifying information provided by the prospective driver. As of the writing of this report, the background check process used by Uber was not based on use of a biometric identifier, such as fingerprints.

Lyft's website points out that every driver is screened for criminal offenses and driving incidents. Their search also goes back seven (7) years and includes driving records, national and county-level

databases as well as National Sex Offenders Registry. Lyft ensures that all drivers have a valid driver's license, no more than three (3) moving or major violations in the past three (3) years, and any DUIs/extreme infraction (no violent crimes, sexual offenses, theft, property damage, felonies, or drug) in the last seven (7) years.

Proposal

Passenger safety has consistently been regulated by the state through driver qualification regulations that include criminal background checks and medical reviews. We are recommending that the state consider one of two proposals below to ensure thorough criminal background checks and medical review of driver. The first is the most exhaustive process, but also potentially the most cumbersome and costly. The second is not as comprehensive, but would still allow for some background screening to occur and would most likely entail fewer state resources to achieve. Either process should include standardized criteria for qualifications relative to these checks. It should be noted that the study authors have come across no state specific evidence or data to suggest either process would allow for greater overall public safety. Either process, if followed, should be tracked over time to ascertain the most efficacious method to achieve this goal.

Alternative (1)

All individuals operating in for hire passenger service, including TNC and Livery drivers, could be required to undergo the current DMV public passenger license endorsement process. This would ensure that TNC and Livery drivers are subject to at least as rigorous and complete a background check as are taxi drivers. An option to lessening the time between starting a background check and achieving endorsement would be to allow for conditional approval pending completion of the federal check. In addition to conducting a criminal background check, the DMV license endorsement process requires the DMV medical review department to conduct a medical review to ensure that all drivers are medically fit to transport passengers.

Alternative (2)

All individuals operating in for hire passenger service, including TNC and Livery drivers, could be required to undergo third party background checks, as well as medical checks, prior to operating in a for hire capacity. Background checks and medical checks would then occur periodically and would be subject to review by a state regulatory body (DOT, DMV, or DCP). Both checks would be standardized as set forth by the regulatory body. This is similar to the recently enacted model in Colorado.

C. INSURANCE

Services offered by transportation network companies are relatively new to the marketplace and have created some challenges for the insurance industry. Insurers have traditionally established a dividing line between vehicles that will be used strictly for private personal transportation and those that will be used for commercial purposes. This distinction influences how relative risk is calculated.

Companies like Uber and Lyft have essentially created a hybrid category because they hire drivers to use their personal automobile to provide paid rides for customers. However, insurers providing private passenger vehicle coverage include a "livery" exclusion in the policy that applies when personal automobiles are used to carry passengers for hire. TNC operations have thus introduced a level of uncertainty into the insurance marketplace.

Current System

Currently, taxi and livery companies are required to have a commercial insurance policy with a minimum single liability limit of $100,000 that includes bodily injury liability for passengers and property damage. Although companies are permitted to self-insure under state regulations if they demonstrate sufficient capacity, few actually do. Taxi and Livery companies must show proof of insurance with any application to the DOT. This coverage applies at all times that the vehicles are in use.

The insurance coverage for TNC's has been much less clear than the commercial insurance policy required of taxi and livery companies. In Connecticut and other places where it currently operates, Uber maintains that the insurance coverage applicable to an Uber driver changes based on their status on the app. When an Uber driver is not logged into the app their personal automobile insurance policy is in effect. Once a driver is logged onto the app, but has not accepted a trip, their personal auto insurance is the primary insurance and Uber offers contingent liability coverage as a back-up. Upon accepting a trip the Uber commercial insurance coverage becomes the primary insurance until the ride is complete. It should be noted that the Uber commercial liability coverage of $1,000,000 far exceeds the current required coverage for either taxi or livery companies operating in the state.

New Challenges

The Insurance Association of Connecticut and the Department of Insurance met with the study team to discuss a potential gap in insurance coverage for TNC drivers. The insurance gap exists when a driver is waiting to be matched with a rider and coverage by the Uber policy is contingent on the driver's personal policy not providing coverage. Although TNC's may interpret personal auto insurance policies as providing coverage, insurers have been very clear that they do not cover any damages or losses sustained when the car is being used for TNC activities. Therefore, a driver that is logged onto the app that is not matched with a rider does not have insurance coverage. Furthermore, the lack of clear guidelines for TNC coverage allows TNC's to challenge every claim made to the personal insurer. That means delays in compensation and increased costs to insurance companies to handle investigations and litigation. Those increased costs could be reflected in the premiums for every driver in the state and in effect, subsidize TNC activity. Insurance companies often do not know if a driver is using their vehicle for TNC purposes until after an accident has occurred. TNC drivers typically believe that they are covered and are unaware of the livery exclusion in their personal auto policy. Many states, including Connecticut, issued a consumer alert to inform drivers of the potential gap in coverage.

Insurance companies must also address how to handle the higher exposure of TNC drivers when they are not logged onto the app. For example, a driver might consistently travel to a popular location for higher fares or to acquire more rides. If the driver is not logged onto the app and travels 30 miles to a better service area the exposure to their personal policy might be greater. The public should be concerned that their policy rates increase due to the underreporting and over exposure of TNC driver's activity.

Proposal

Connecticut should address the "insurance gap" that potentially exists in TNC operations and ensure coverage for drivers at all times they are engaged in TNC activity. Currently, aside from private vehicles used to carry not more than five other persons between a place of residence and

employment, for hire vehicles are required to have commercial policy coverage. However, in the TNC model, vehicles operate both privately and commercially, with the driver providing private passenger coverage and the TNC providing commercial insurance for the TNC brokered ride. Due to this dual use, according to the insurance industry, there is a potential gap that exists between the commercial and private passenger insurance periods. This could lead to instances of drivers and passengers not being covered at all.

In the interest of assuring continuous insurance coverage for TNC vehicles, the Connecticut Insurance Department should provide DOT with clear guidelines for TNC insurance that defines TNC activity. TNC's should be required to carry primary coverage that specifically covers TNC activity as defined and the TNC should be required to demonstrate proof of coverage to state regulators. Additionally, drivers for TNCs should be required to report their intended TNC activity to their insurance provider prior to beginning such activity. This will ensure that personal auto insurers can adequately assess any additional risk that may occur from the additional activity.

D. PRICING

One of the more controversial features of some TNCs such as Uber is surge pricing. Surge pricing is where the TNC will raise fares when demand is high. For example, suppose a convention comes to town which ends on a Friday at noon. The demand for rides to the airport will experience a temporary increase. The idea of surge pricing is that when demand increases, a higher price can induce more cars providing rides and therefore bring supply and demand back into equilibrium. The extreme of surge pricing was seen in some locations on New Year's Eve when a price for Uber rides increased by a factor of ten or more. So the question is whether this is opportunistic price gouging or facilitating the healthy interaction of supply and demand in the market. Taxi companies often complain about surge pricing because their fares are regulated and approved by the state and they are not allowed to change fares as supply and demand changes.

Current System

Under our current system of taxi regulation, taxi and livery companies are allowed to set their own fares, provided those fares are approved by the Connecticut Department of Transportation. However, once those fares are set they cannot be changed without the approval of the Department of Transportation. Ridesharing services at this point in time are essentially unregulated, so they are free to set whatever fares they wish.

New Challenges

One problem with regulated fares is that when demand increases there is no mechanism for quickly increasing supply, therefore waiting times for taxis tends to increase. Surge pricing has two effects, one is that some riders will choose not to pay the higher fares and thus seek other transportation alternatives such as public transportation. The second effect is that it should make it more lucrative for drivers to enter the market and thus increase supply at times of peak demand. The distributional consequence of surge pricing may be that low income consumers get shut out transportation services at peak times.

Some companies, such as Lyft limit their surge pricing to 400% of the normal fare. Even in the case of Uber and New Year's Eve, they predicted that there would be significant price surges before

they happened and published a graph showing that the peak fares would be from 12:30 – 2:30 AM (Badger, December 31, 2014). The question that needs to be resolved is whether TNCs are a transportation company modeled after airlines, where the public has widely accepted that at certain times airfares will be more expensive than at other times, or should the fares of TNC provided transportation be regulated in a similar way to taxis.

Proposal

One alternative is for the state to do nothing and leave its current regulations unchanged. If this route is taken, one should be concerned about possible unintended consequences. For example, taxi and livery companies in Connecticut might have an incentive to redefine themselves as ridesharing companies and thus avoid all fare regulation. The downside of this possibility is that some areas in Connecticut may receive less service if this happens.

A related question is if TNCs like Uber and Lyft can change their fares as market conditions change, should we allow taxis to do the same thing? A big difference between the TNCs and traditional taxis is the ability to dynamically change supply as conditions in the market change. A representative of the taxi industry in Connecticut has suggested that regulations might be changed so that during periods of peak demand taxi companies could contract with livery companies to provide transportation services. Another alternative which has been approved in Pennsylvania is called Yellow X. Yellow X is a ridesharing service which is run by a taxi company. The drivers are licensed taxi drivers, the vehicles are the driver's personal vehicles and the taxi company inspects the vehicles. Essentially what happens is the taxi company leases the personal vehicle for a short period of time, usually a few hours.

The last possibility would be to require that all transportation providers, taxis, liveries and TNCs are all required to file their rates for approval with the state Department of Transportation. It is conceivable that such a rate system could be a tiered rate schedule where different rates are allowed to be charged at different times. The downside of this approach is that it may require information that the regulators do not have access to. One of the problems that regulators face is the paucity of data that would indicate the demand for transportation services and how well the public is being served.

It is recommended that the concept of surge pricing needs further study. There are two possible effects, surge pricing can bring about additional supply during high demand times or it can have no effect on supply and just increase profits for TNCs and their drivers. The first effect can enhance the welfare of riders, the second effect benefits mostly the providers, not the riders. The TNCs could be temporarily allowed to engage in surge pricing, subject to a cap on the multiple of the normal fare charged. TNCs could also be required to notify the Department of Transportation when surge pricing is in effect. During this time of temporary approval of surge pricing the issue could be studied further to determine the effect on riders in Connecticut.

E. ACCESS

Under the "public interest requires public control" doctrine, (PRI, 2008), Connecticut has elected to regulate the taxicab and livery industries in the area of access. The basic principle of access to a vehicle has helped to define the taxi and livery regulations. Taxicab companies are subject to provide service to all residents that request service in their defined service area. They can't operate outside of their service area for pick-ups. Currently, Uber and Lyft can operate anywhere in the state and are not required to pick-up all riders.

Current System

Per Connecticut state statute, taxicab companies are required to provide 24 hours per day, seven days per week availability of service and restrict the number of hours drivers can operate a taxicab within a 24-hour period. Taxicab companies must provide vehicles that allow wheelchair access and other disability accommodations. They are also required to provide drivers with appropriate language skills to meet the service needs of the general public, as required. Additionally, taxicab companies are required to meet the transportation needs of individuals in both geographically and demographically underserved areas.

Taxicab companies are regulated by the DOT to operate in an authorized territory. Certificate holders may transport passengers between all points within the authorized territory. They may also transport passengers from any point within their territory to any point outside the territory or from a point outside the territory back to their territory. DOT also regulates the number of vehicles a taxicab company can operate in a specific town. (PRI, 2008).

These requirements currently do not exist for TNCs. As it stands drivers for TNCs have the option to accept or reject a fare based on geographic distance, rider rating systems and/or inability to safely transport certain disabled passengers. They are not confined to specific territories and operate throughout the state. TNCs pose a challenge to the current regulated system because their presence has created an uneven competitive market. There is added cost to taxicab companies to meet the current regulatory compliance for their company and drivers. Additionally, limiting taxi's operation to authorized service areas, while TNC's can operate anywhere provides for a competitive advantage to TNCs. Unlike taxi's, TNCs are not limited to the number of vehicles that can operate in any given area.

Proposal

One alternative is for the state to do nothing and leave its current regulations unchanged. If this route is taken, one should be concerned about possible unintended consequences. For example, TNCs could flood the busier markets such as New Haven and Hartford and avoid service to less populous areas of the state. TNCs could also choose to operate only on days that are perceived as more lucrative whereas taxicab companies must operate 24/7 creating higher costs for the taxi industry. In addition, the taxicab companies are limited to the number of vehicles they can operate in an authorized territory and can't increase supply as quickly as TNCs due to regulations. TNCs also have a competitive advantage to immediately increase or decrease supply based on the level of activity in any given location. TNC drivers also have the ability to choose riders, whereas taxi drivers must provide service to everyone in their service area.

A related question is if TNCs like Uber and Lyft can operate in any location, at any time, and choose riders, should we allow taxis to do the same thing? This would essentially create an open market system. As addressed in the literature review above, Schaller (2007) argues that open entry encourages too many firms entering the market and thus service quality suffers. This is particularly the case at airports and other high demand locations for taxis. In addition, with open entry there may be a tendency towards cream skimming, or taxis tending to go to the more lucrative markets and not serving the less desirable areas such as low income neighborhoods or less densely populated areas.

A third option would be to treat TNCs as livery services. This would require the TNC to apply for a permit from the regulatory agency. The permit should attest that the public's convenience and necessity will be improved now or in the future by the operation of this service (PRI, 2008). Similar to an intrastate livery permit, the TNC permit would allow vehicles to travel to any town within Connecticut, but only is service is arranged in advance. TNCs would not be able to accept street hails or line up at a taxi stand; only electronic hails could be used to accept riders.

Lastly, TNC's could be treated as taxicab companies. This would require the TNC to apply for a permit from the regulatory agency. The applicant would need to attest to the public's convenience and necessity to operate in specific towns with a specific number of vehicles. Current taxicab regulations state that public convenience and necessity include (but is not limited to) showing the availability of qualified operators in the area and that the number of vehicles requested is justified given the need (PRI, 2008). Similar to a taxicab permit, TNCs would need to apply to expand their fleet or service area.

In addition to grappling with how to address service areas and market entry, Connecticut should ensure that geographically and demographically underserved areas have access to a vehicle. Many residents in these areas rely on current taxi services for trips to doctor's appointments, grocery stores, work, school or even their weddings. Regardless of the path taken, Connecticut should monitor the market effects of TNCs to ensure that current services for those communities are not negatively disrupted. One of the problems with our current system is that the state currently lacks the information to determine how well the current system is serving current residents. Most of the information tends to be of a more anecdotal nature, which has its limitations for determining how the current system is serving residents of Connecticut.

F. OTHER ISSUES

In addition to the issues outlined above, there are several issues that have not been considered by other states that are unique to the smart phone application ridesharing concept. Those include car seat and child restraint laws, the use of a hand-held device while driving, number of hours a driver can be on the road, and data collection and privacy.

Child Restraint Law: In Connecticut, the operator of a personal vehicle is responsible for ensuring that children are properly restrained in the car. The child's age and size determines the type of child restraint system required. The operator of a taxi or livery vehicle is exempt from this requirement and the child restraint system is the responsibility of the adult passenger. TNCs drivers are currently not exempt from the child restraint laws with regards to the passengers they carry.

Hand-Held Devices: The TNC model relies on the use of a smart phone application to pair drivers with riders. The application requires drivers to use a hand-held cell phone to pick-up passengers, get them to their destination, and determine the trip rate. Hand-held cell phones or mobile electronic devices may not be used while operating a motor vehicle. State law also prohibits using these devices when a vehicle is temporarily stopped because of traffic, road conditions or a traffic control sign or signal. You may use your cell phone or mobile electronic devices if parked safely on the side or shoulder of a highway. Drivers are permitted only to use hands-free mobile telephone accessories. TNC drivers must use a hand-held cell phone while logged onto the app and this may put them at greater risk for violating the cell phone law.

Hours of Operation: Currently there is no restriction on the number of hours a TNC driver can operate. Taxicab drivers are not permitted to work a shift longer than twelve (12) hours or longer than sixteen (16) hours in a twenty-four (24) hour period. It is also conceivable that an individual who operates a taxicab might also operate a TNC vehicle in the same day. The hours of operation should not exceed the current regulated limit for "for hire" service drivers regardless of the service type they are operating.

Data Collection and Privacy: The issues of data collection and privacy have historically been lower tier concerns in taxi and livery regulatory schemes in Connecticut. However, with the recent influx of emerging technologies into this arena and other "sharing" economies - and their corresponding collection and subsequent use of "big data," data collection and privacy requires significant consideration from policymakers and practitioners (Anderson & Rainie, 2012). Additionally, larger traditional taxi and livery markets have utilized aggregated data sets collected on the industry for a multitude of transportation policy planning purposes (Qian, Zhan, & Ukkusuri, 2013; Rayle, Shaheen, & Chan, 2014; Amat, Origosa, & Estrada, 2013).

Currently, data collected by the State of Connecticut relative to taxi, livery or ride sharing is minimal and based on narrowly defined regulatory needs to determine "convenience, protection and safety of passengers and the public." For instance, the DOT has information on the number of companies registered to operate in the state, along with their corresponding vehicles. They also collect information from taxi drivers on each trip taken, although this appears to be on a paper form and it is not clear if the information is stored in an accessible database that could either be prone to data breaches or utilized for planning purposes.

All data collected by state agencies are subject to the applicable federal and state laws, including the Connecticut Freedom of Information Act and the Connecticut Personal Data Act. Data collected by non-state entities such as taxi and livery companies and TNCs are subject to the applicable federal and state laws, including CGS 743dd, which requires the safeguarding of certain personally identifying information.

Technology inherently brings with it both opportunity and reason for concern. From a data privacy perspective, consumers and policymakers have reason to be concerned regarding the safeguarding and use of this data via the free market and government alike (Oram, 2014). As recent data breaches of both public and privately collected data have shown, there is a multitude of personal level data available and potentially unsecure from unscrupulous and unintended users.

From a public policy perspective, opportunities include a more efficient public transportation system, able to adapt to changing environments in real time (Listokin, 2014). Indeed, spending on these technologies has far outpaced spending on traditional transportation infrastructure in recent years. As regulations and planning are primarily a local or regional function, how policymakers choose to interact with new and emerging technology will have a significant impact on the future of public and private transportation systems throughout the country (Townsend, 2014).

PART VI: GENERAL OVERVIEW OF OPTIONS FOR A CONNECTICUT REGULATORY AGENCY

The following is a list of options for regulating transportation for hire service in the future. The list is in no particular order of preference, or ranking.

A. Do nothing; maintain a two –tier system. This option maintains the status quo and allows transportation network companies to coexist in the market, continuing to serve different consumer bases and territories. This option may satisfy certain consumers, but will allow an uneven competitive environment. (Most jurisdictions, to-date)

B. Treat transportation network companies as taxi companies and regulate accordingly. With this option, TNCs would be subject to statutory requirements outlined in C.G.S Secs. 13b-95 to 13b-100. This option will level the competitive environment for all transportation for hire services in the state. (Similar to the New York City and Houston, Texas model)

C. Treat transportation network companies as taxi companies and reduce or modify regulations for all transportation for hire services in the state. This would level the competitive environment for all existing and future transportation for-hire companies. However, this option must not violate the legislative intent to avoid deregulation of public transportation services. (Similar to Colorado Governors, stated goals)

D. Treat transportation network companies as livery companies and regulate accordingly. This option would subject TNCs to all provisions in C.G.S. 13b-101 to 13b-199. Although this option would not completely level the competitive environment for the taxicab industry, it would create a regulatory process for all new market entrants. The State would establish some control over the number of new entrants, public safety requirements, driver qualifications and insurance requirements. (Similar to portions of the New York City model)

E. Treat transportation network companies as rideshare companies and regulate accordingly. Many TNCs hire drivers that will carry a limited number of passengers at any given time. Treating TNCs as rideshare companies would not require the State to establish new regulations outside of ensuring that TNCs remain compliant with limits on number of passengers and scope of services. (Similar to most jurisdictions that typically limit the number of passengers per vehicle, to be considered exempt from regulation).

F. Create a separate or hybrid system of regulations to address the unique aspect of TNC companies. This option would require the State to develop a system of regulating TNCs and likely other types of transportation for-hire services that do not fall within the traditional taxicab, livery or rideshare categories. Connecticut can follow the example of other jurisdictions to fit TNCs within the regulatory structure of the state, while continuing to allow TNCs to self-identify/categorize their business models. (Similar to California, Washington, DC, Virginia, Seattle, Washington)

G. Create a multi-tiered regulatory scheme to treat transportation network companies according to services provided. In this regulatory environment, TNCs can continue to self-identify/categorize their business models; however state regulators can categorize the

services provided and regulate accordingly. For example if a TNC is providing transportation for hire similar to UberX services, they should be regulated in the same manner as a taxicab company. If, for example, a TNC is providing transportation for hire in a manner similar to UberBLACK, they should be regulated under the livery service statutes. Finally, as many TNCs have expressed an interest in van pooling to decrease the number of vehicles on the roads, this service would be regulated in the same manner as existing rideshare companies. This option provides the most complex regulatory scheme. However, it serves to level the competitive environment based on practice, and not labels. (Similar to many aspects of the New York City model).

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INSTITUTE FOR MUNICIPAL AND REGIONAL POLICY

Central Connecticut State University

The Institute for Municipal and Regional Policy (IMRP) is a non-partisan, University-based organization dedicated to enriching the quality of local, state and national public policy. The IMRP tackles critical and often under-addressed issues with the intent of ensuring the most positive outcomes for affected individuals and entities. In doing so, the IMRP bridges the divide between academia, policymakers, practitioners, and the community.

Working for fair, effective, and just public policy through applied research and community engagement, the IMRP utilizes the resources of CCSU students, staff and faculty to develop, shape, and improve public policy on issues of municipal and regional concern. The IMRP accomplishes this through a variety of targeted approaches such as: public education and dialogue; published reports, articles and policy papers; pilot program design, implementation and oversight; and the facilitation of collaborations between the University, government, private organizations, and the general community.

The IMRP aspires to be a respected and visible presence throughout the State of Connecticut, known for its ability to promote, develop and implement just, effective public policy. The IMRP adheres to non-partisan, evidence-based practices and conducts and disseminates its scientific research in accordance with strict, ethical standards.

The IMRP is responsive to social and community concerns by initiating projects addressing specific needs and interests of the general public and policymakers, as well as sponsoring conferences, forums, and professional trainings. Access to state-of-the-art technology and multi-media enhances the IMRP's ability to advance best practices to improve the quality of public policy in the State of Connecticut and nationwide.