

Transportation Network Companies

Testimony of

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and

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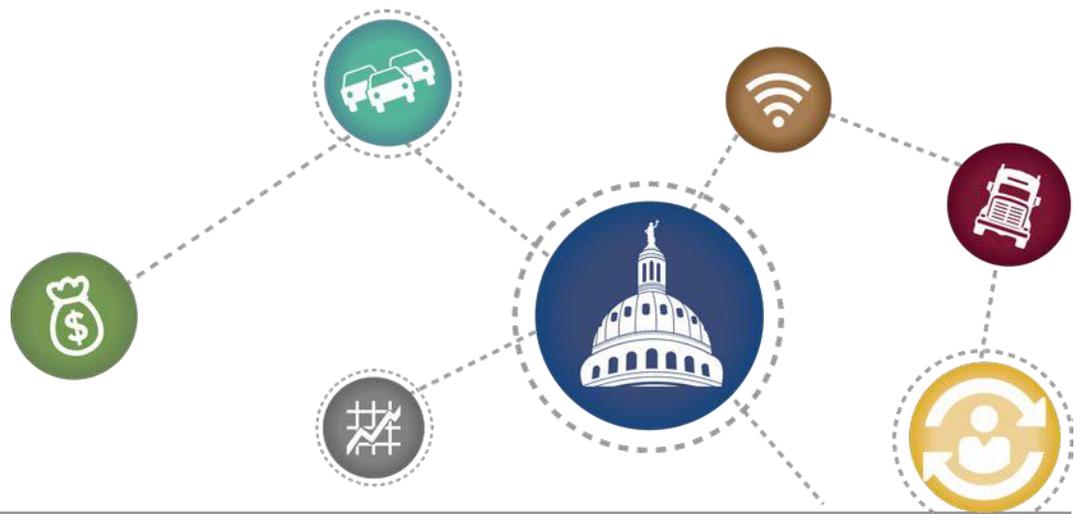
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Texas A&M Transportation Institute

to the

Texas Senate Committee on Business and Commerce

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Introduction

Chairman Hancock and Members, I am Ginger Goodin, Director of the Texas A&M Transportation Institute Policy Research Center, and I am joined today by Maarit Moran, TTI Associate Transportation Researcher and Principal Investigator of the research to be discussed at this hearing. In your briefing material is a map summarizing the nationwide legislation enacted to authorize and regulate transportation network companies through March 1, 2017.

Background

Since 2010, a number of private companies have entered the transportation services market by offering new travel options that use digital technology to provide an on-demand and highly automated private ride service. The most well-known of the transportation network companies, or TNCs, as these companies are frequently classified, may be Uber and Lyft, although there are many companies operating in this arena. TNCs have expanded rapidly in cities worldwide. However, they do not fit neatly into current regulatory schemes and have caused some disruption in the transportation marketplace.

We take no position regarding any desirability or lack thereof of regulating TNCs at any level of government. Our purpose is to help policy makers navigate the inherent policy considerations. To that end, we examined laws and lawmaking efforts in other states as well as regulatory efforts in a number of Texas cities, and we compiled the state-level information into an easily accessed interactive online map.

TNC Consideration by States

Lawmakers have considered TNC legislation in almost every U.S. state. As of March 1, 2017, 43 states and the District of Columbia have enacted legislation to legalize and regulate the activity of TNCs. Six of those states, including Texas, have only regulated insurance requirements for TNCs and TNC drivers.

These laws address a range of issues including permits and fees, insurance and financial responsibility, driver and vehicle requirements, operational requirements, passenger protections, data reporting, and regulatory and rule-making authority. The legislation for each state is available to the public in a policy brief and on the interactive map we developed and placed online at <http://tti.tamu.edu/policy/technology/tnc-legislation/>.



Transportation Network Company (TNC) Legislation

Transportation Network Companies (TNCs) such as Uber and Lyft have provided app-based ride-sourcing services in U.S. cities since 2012. In 2014, Colorado enacted the first state-level legislation to authorize and regulate TNC operations. As of March 2017, 43 states and the District of Columbia have passed some sort of TNC legislation. The first map summarizes the approved legislation from each of those states.

TNC regulation is also being introduced at the city level in many states. As of March 2017, 19 Texas cities have approved some sort of TNC regulations. The second map on the next tab summarizes the approved legislation in Texas cities. In some cities, regulations on taxis have also been amended. Both maps will be updated regularly with new and municipal updates statewide. Ongoing research will review specific TNC regulations, such as safety requirements and operational restrictions, and the implications for transportation policy and planning.

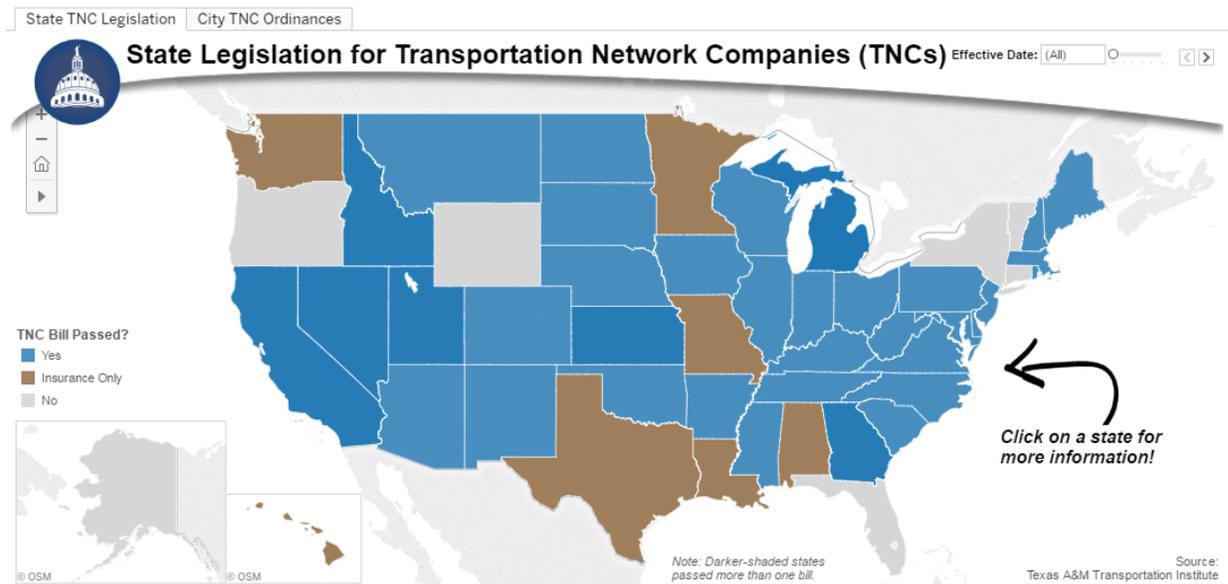


Figure 1: Map of State TNC Legislation <http://tti.tamu.edu/policy/technology/tnc-legislation/>

Local Policies

At the local level, a number of Texas cities have considered or taken action regarding TNCs. Nineteen cities in Texas passed ordinances to regulate TNCs between late 2014 and December 2016. We have added a Texas map to our website that displays all Texas cities that have addressed TNCs in regulation through March 2017.



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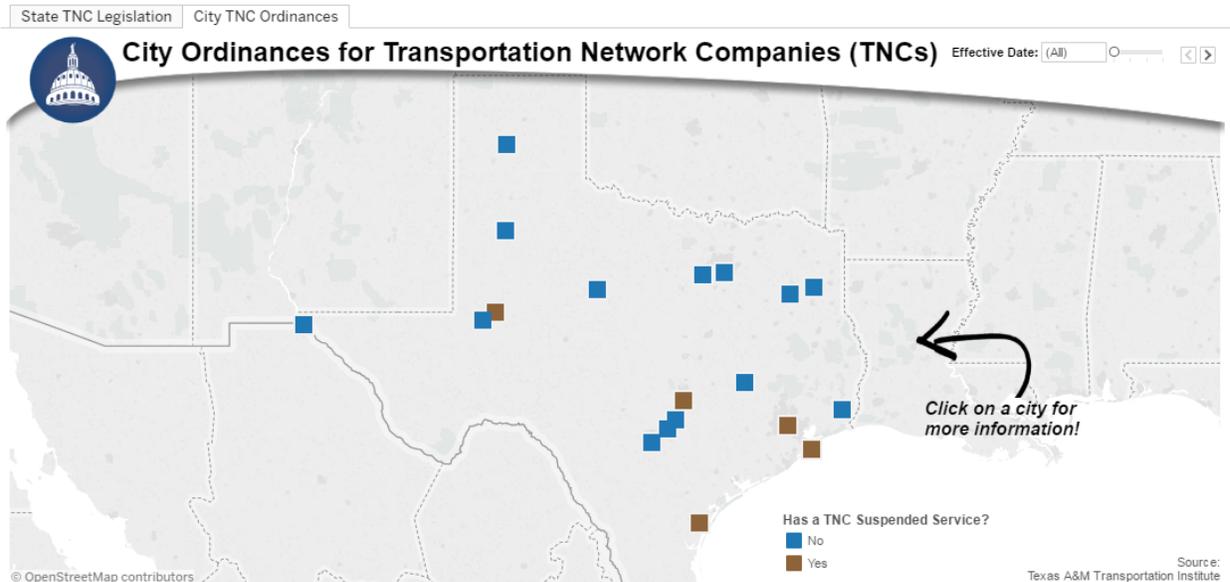


Figure 2: Map of Texas TNC Ordinances <http://tti.tamu.edu/policy/technology/tnc-legislation/>

Policies at the local level address many of the same issues as found at the state level, such as operating permits, insurance, and zero tolerance policies for drivers. There are some differences. For example, at least six cities require the disclosure of dynamic or surge pricing. Four cities place limits on how that kind of pricing is used. Several Texas cities have also addressed the regulation of taxi operations at the same time as introducing regulations that reflect the new business models and the use of technology introduced by TNCs.

Conclusion

The policy brief itself is attached to this testimony. We have included it because it highlights key topics associated with TNC regulations. However, given the dynamic nature of this field, TTI will continue to provide the most recent information on our website at tti.tamu.edu/policy. Thank you for inviting us to appear today; we are open to any questions you may have.



Policy Implications of Transportation Network Companies

This policy brief presents a brief introduction to transportation network companies (TNCs) and their services, a review of state-level legislation across the United States, and the municipal regulations that have been implemented in Texas in response to the introduction of TNC services, current as of the 2016 Texas Legislative Interim. This report presents the findings from the first of a multi-phased research effort to understand the policy implications of TNCs.

Introduction

Since 2010, a number of private companies have entered the transportation services market by offering new travel options that use digital technology to provide an on-demand and highly automated private ride service. TNCs, as these companies are frequently classified, have expanded rapidly in cities worldwide with the support of consumers and investors. Uber alone has served over 1 billion rides worldwide (1) in the six years since it began operations and claims its networks cover 75 percent of the U.S. population (2). Yet a 2015 survey suggested that only 15 percent of American adults have used TNC services, and 33 percent have not heard of the services (3).

TNCs have faced criticism and even protests from opponents and taxicab representatives who argue that TNCs are operating illegally outside of otherwise highly regulated markets (4). TNCs and their proponents contend that TNCs provide innovative services that do not fit traditional approaches to transportation regulation.

This report is designed to help Texas policy makers navigate the evolving policy considerations presented by the rising popularity—and accompanying controversy—of TNCs. This report reviews legislation passed in 35 state equivalents intended to protect public safety and regulate TNC operations. These laws address policy areas including permits and fees, insurance and financial responsibility, driver and vehicle requirements, operational requirements, passenger protections, data reporting, and regulatory and rule-making authority. This report also reviews municipal TNC ordinances enacted in Texas cities.

Key policy questions that emerged from this review of state and municipal TNC legislation include whether to regulate TNCs; if so, at what level of government; how to harmonize TNC policies with existing taxi and transportation policies; and how to address public safety without stifling market competition. Given a rapidly changing economic and regulatory landscape, this report is current through May 2016.

What Is a Transportation Network Company?

TNCs' primary business offering is to provide transportation services using digital technologies that connect passengers to drivers who use their personal vehicles to provide rides. This service is also called ride sourcing or ride hailing (5).

Definition

The definition of a TNC is itself a point of debate: TNCs have argued that they are not transportation providers, and opponents have argued that TNCs provide the same service as taxi companies. In Texas law (House Bill [HB] 1733, 84th Regular Session, codified as new Chapter 1954, Insurance Code), a TNC is defined as “a corporation, partnership, sole proprietorship, or other entity operating in this state that uses a digital network to connect a transportation network company rider to a transportation network company driver for a prearranged ride.” In other states, TNC definitions typically include the following elements:

- Use of a digital platform or software application, typically accessed via smartphone.
- A prearranged ride between drivers and passengers.
- A driver using a personal vehicle to provide transportation.

TNC services are sometimes inaccurately called ride sharing (6). Ride sharing refers to carpools and vanpools in which travelers organize to share rides and, often, the costs of those rides. The emerging concept of *real-time* ride sharing, in which providers facilitate carpools with technologies like those used by TNCs, is defined in U.S. Public Law 112-141 as an arrangement “where drivers, using an electronic transfer of funds, recover costs directly associated with the trip provided through the use of location technology to quantify those direct costs, subject to the condition that the cost recovered does not exceed the cost of the trip provided” (7). TNC services differ from ride sharing because their drivers working for a profit are compensated beyond the direct costs (i.e., fuel and tolls).

Many cities and some states have existing laws to regulate private transportation services. Policies in some regions classify TNCs as a subset of the vehicles-for-hire industry, which includes taxis, car services, and limousines. *Transit Cooperative Research Program Report 75* published in 2002 defines private for-hire vehicle (PHV) services as services that:

- “Provide surface transportation for passengers;
- Are owned and operated by private, for-profit firms; and
- Generate revenues through fares, scrip, or contracts” (8).

The report notes that the terminology pertaining to various PHV services (e.g., taxi, black car, and livery services) is not consistent across geographies. PHVs are not defined by the technologies used, though the report does discuss the use of cell phones (smartphones did not yet exist) for dispatch.

How TNC Services Work

TNCs provide ride-sourcing services that operate much like traditional taxis: a traveler requests a ride and pays for a driver who provides that service. Potential passengers must download a TNC’s application (typically for free) to a smartphone, tablet, or computer and register with a valid credit card. The TNC’s software application (see the example in Figure 1) facilitates the ride request, connects passengers to a driver, uses global positioning systems (GPS) to navigate to the pick-up and drop-off locations, and shares the vehicle’s progress and estimated arrival with both driver and passenger. After the trip is complete, the application automatically charges the fare to the linked credit card, logs the trip, and generates a receipt.

Other TNC Services

Ride sourcing is the primary and most prominent service offered by TNCs. In 2012, Uber Technologies, Inc., and Lyft, Inc., began offering ride sourcing with nonprofessional drivers in personal vehicles, along with the now defunct Sidecar (9). Other TNCs include Via, Wingz (which focuses on airport travel), RideAustin, and Get Me (10, 11, 12, 13). TNC apps allow the companies to easily provide multiple services through the same digital interface. Table 1 shows services that TNCs provide. Available services vary based on local market conditions, regulations, partnerships, and pilot projects.

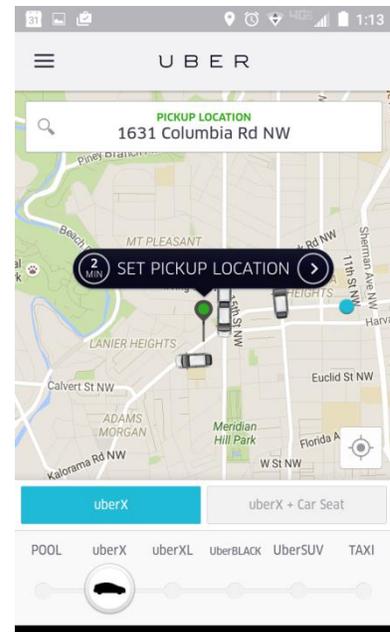


Figure 1. Uber Application Home Screen, Which Includes Six Service Options to Select from at the Bottom of the Screen.

Table 1. Services Provided by TNCs.

Type of Service	Description	Examples
Ride sourcing	TNC drivers provide passengers with a ride in a personal vehicle for a fee.	Lyft, UberX, Wingz, RideAustin, Get Me
Ride splitting	A ride-sourcing service. TNC drivers provide a ride that can be shared by several travelers, sharing a similar route, for a discounted rate.	LyftLine, UberPOOL, Via
Car-pooling	A TNC facilitates a transaction between two commuters traveling a similar route. A potential passenger pays to be picked up by a commuter that shares a similar route; the TNC shares the fare with the driver (14).	Lyft Carpool
Taxi/car services	Professionally licensed drivers or chauffeurs provide rides. In New York, Washington, D.C., and Chicago, Uber has entered agreements to allow users to hail licensed taxicabs using their app.	UberBLACK, UberTaxi
Other	TNCs have also offered food delivery, courier service, wheelchair-accessible rides, and even helicopter rides (15, 16).	UberEATS, Get Me, UberRUSH, UberACCESS

Transportation Network Company Policy Review

The emergence of TNCs has generated uncertainty about the legal status of TNC services, criticism from the taxicab industry, and public safety concerns. TNCs have negotiated and clashed with policy makers as both parties navigate this new industry. Regulators and members of the public have made allegations that TNCs are illegally operating as unlicensed taxicabs, vehicles for hire, or other regulated transportation services across the country.

Shortly after ride-sourcing services launched in 2012, the California Public Utilities Commission (CPUC) sent cease-and-desist letters to three TNCs and fined them \$20,000 each for operating unlicensed businesses that provide prearranged passenger transportation (17). In 2013, CPUC released the first state-level ruling to legalize TNC services statewide under its existing authority and define the term *transportation network company*. Since then, many states and cities have passed legislation authorizing TNC operations. TNCs continue to face challenges about the legality, safety, and equity of their operations.

TNC Policy in Texas

TNCs operate in dozens of Texas cities, both with and without local ordinances that regulate their services. TNCs have also suspended service in several Texas cities where ordinances were enacted. In May 2016, Uber and Lyft suspended operations in Austin after a public vote affirmed an ordinance that required fingerprint-based background checks, sparking further debate about the role of state and local policy makers in TNC operations (18).

As of May 2016, Texas lawmakers have passed one bill to regulate TNC operations in one regard: insurance. HB 1733 implemented a set of insurance liability requirements for TNCs and TNC drivers, effective January 1, 2016 (19). The law requires the following:

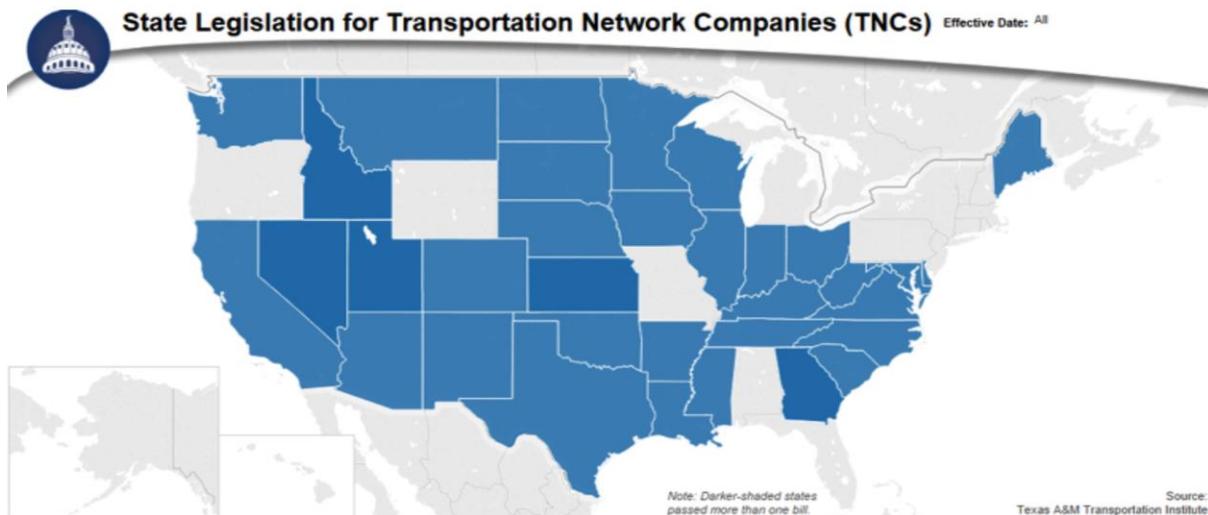
- TNC drivers must have primary automobile insurance that allows them to operate as TNC drivers. The TNC, TNC driver, or a combination can maintain the automobile insurance.
- When a TNC driver is logged in but not yet engaged in a ride (“between” rides), insurance must provide:
 - Minimum liability coverage of:
 - \$50,000 for bodily injury/death per person per incident.
 - \$100,000 for bodily injury/death per person per incident.
 - \$25,000 for damage to or destruction of property of others per incident.
 - Uninsured/underinsured motorist coverage as required by Texas insurance code.
 - Personal injury protection coverage as required by Texas insurance code.
- From the time a driver accepts a ride until the passenger departs (“engaged” in ride), insurance must provide minimum coverage of:
 - \$1 million total liability for death, bodily injury, and property damage per incident.

- Uninsured/underinsured motorist coverage as required by Texas insurance code.
- Personal injury protection coverage as required by Texas insurance code.
- TNC drivers must carry proof of insurance and provide that proof, and must disclose whether they were logged in and/or engaged in a prearranged ride.
- If a TNC driver's coverage lapses or is insufficient, a TNC shall provide the required coverage.
- TNCs must disclose to TNC drivers the limitations of the TNC insurance coverage and limitations, and must inform drivers that a driver's personal auto policy may not cover TNC services.

HB 1733 is the only legislation in Texas that explicitly addresses TNCs. The existing Texas Transportation Code may have implications for TNC activities and will be reviewed in a subsequent phase of this research.

U.S. State-Level TNC Legislation

Lawmakers have considered TNC legislation in almost every U.S. state. As of May 2016, 33 states and the District of Columbia have enacted legislation to legalize and regulate the activity of TNCs. In addition, the Delaware Department of Transportation signed a memorandum of understanding in 2015, a formal but not legally binding agreement, with Uber to authorize the TNC to operate in the state (20). This review of state-level TNC legislation considered these 35 state equivalents shown in Figure 2.



Source: (21)

Figure 2. TNC State Legislation Passed in the United States. States in Blue Passed One or More Bills to Regulate TNC Operations Statewide. States in Gray Have Not Passed TNC Legislation as of May 2016.

This research identified 31 specific policies in state-level TNC legislation within the following policy areas:

- Permits and fees.
- Insurance and financial responsibility.
- Driver and vehicle requirements.
- Operational requirements.
- Passenger protections.
- Data reporting.
- Regulatory and rule-making authority.

Table 2 identifies how many states, among the 35 states with TNC laws, addressed each of the 31 policies. No state included every policy. Nevada included 24 out of the 31 policies, the most of any state. Half of the 35 states with TNC legislation enacted 18 or more of these 31 policies. Washington State, addressing only insurance, enacted the fewest, with three of the 31 policies. Twenty-three of these policies are discussed in this section, while more information on all 31 can be found in a supplementary technical memorandum.

Table 2. Summary of 31 Policies in State-Level TNC Legislations.

Policy Area	Number of States That Address Policy Area among the 35 States
Permits and Fees	
Define companies as TNCs	30
Require a TNC permit	24
Establish or specify a fund for TNC revenue	7
Require a permit or license for TNC driver/operator	5
Insurance and Financial Responsibility	
Meet insurance requirements for TNC and TNC driver	35
Require TNC driver to have available proof of insurance while operating	29
Disclose to TNC driver certain limitations of coverage	34
Comply with definition of employee or workers compensation criteria	8
Driver and Vehicle Requirements	
Meet set of driver requirements/submit application	30
Conduct or comply with background check requirement	30
Prohibit drug and alcohol use (zero tolerance policy)	26
Complete vehicle safety inspection or compliance requirement	23
Establish a driver-training program	3
Operational Requirements	
Prohibit street hails	23
Prohibit cash payments	16
Disclose fares and rates to passengers	27
Provide electronic receipt to passengers	24
Make available driver identifying information to passengers	24
Display trade dress or emblem on TNC vehicle	10
Impose limitation on TNC driver hours	4
Disclose dynamic pricing and require passenger's consent	1
Limit dynamic pricing in state of emergency	3
Passenger Protections	
Implement nondiscrimination policy	24
Protect passengers' personally identifying information	12
Provide passenger opportunity to request wheelchair-accessible ride	18
Collect data on accessible ride requests	3
Data Reporting	
Retain driver and trip records	22
Comply with additional reporting requirements	5
Regulatory and Rule-Making Authority	
Establish state preemption of local authority	21
Establish airport rule-making authority	13
Establish agency rule-making authority	10

Permits and Fees

Require a TNC Permit

Twenty-four states require TNCs to apply for a permit to operate. Permitting agencies include state public utility regulators and transportation agencies. Examples of permitting agencies are shown in Table 3.

Table 3. Examples of TNC State Permitting Agencies.

Authorized TNC Permitting Agency	State Examples
Department of Motor Vehicles	Virginia, West Virginia
Department of Transportation	Arizona, Delaware, South Carolina
Public Utilities Commission	California, Ohio
Transportation Authority	Nevada

A TNC typically applies for and obtains an operating permit by providing proof of compliance with requirements outlined in the legislation, such as insurance or driver information requirements. Permit fees range from a \$500 annual filing fee in Montana (\$300 is returned if no public hearing is required) to a \$111,250 annual permit fee in Colorado. In some states the permit fees are proportional to the size or extent of a TNC operation. Georgia requires a master license fee that ranges from \$1,500 for one to five vehicles to \$300,000 for over 1,001 vehicles. In South Carolina, legislation requires that TNCs obtain a permit and remit a local assessment fee of 1 percent of gross trip fares collected. The revenue is applied to administrative costs to regulate TNCs. Any funds remaining after administrative costs have been paid are distributed back to incorporated municipalities based on the proportion of TNC trips that originated in each municipality (22).

Insurance and Financial Responsibility

Meet Insurance Requirements for TNC and TNC Driver

Lawmakers in all 34 states and Washington, D.C., addressed insurance requirements and financial liability for TNCs and TNC drivers. Four states passed bills in 2015 that focused, almost exclusively, on insurance requirements: Minnesota, Louisiana, Washington, and Texas.

While TNCs have provided some form of insurance since their inception, the companies relied primarily on drivers' personal policies for the period during which TNC drivers are logged in but waiting for a ride request. This created uncertainty about coverage during the between-ride period and raised public safety concerns (23). Personal automobile policies often include a livery exclusion: a clause asserting that coverage may not be provided for a vehicle while it is used for commercial purposes or for a fee. TNC drivers also do not carry commercial driver's licenses and commercial insurance that covers a vehicle 24 hours a day and seven days a week as is typically required for professional taxi and vehicle-for-hire drivers (24).

In 2015, Uber, Lyft, and numerous insurers signed onto the National Association of Insurance Commissioners' (NAIC's) TNC insurance compromise model bill to present to state legislatures and address public concerns about TNC insurance. NAIC suggests that TNC insurance account for three distinct periods:

- Period 1: A TNC driver is logged on to the TNC app and available for a ride.
- Period 2: A TNC driver is en route to an accepted passenger.
- Period 3: A passenger has been picked up and is in a TNC vehicle (24).

Many states, including Texas, have insurance legislation that is similar to this model. The model bill suggests the following coverage, which can be covered by the TNC, the TNC driver, or a combination of the two:

- Period 1: primary insurance coverage with minimum liability limits of \$50/\$100/\$25, as well as other required state coverage (such as uninsured/underinsured coverage).
- Periods 2 and 3: primary insurance coverage with minimum liability limits of \$1 million for death, bodily injury, and property damage, as well as other required state coverage (25).

Comply with Definition of Workers Compensation Criteria

Eight states mention the employment classification of TNC drivers in legislation but do not specifically require TNCs to meet new or existing workers compensation standards. Indiana and Ohio explicitly state in statute that TNC drivers are not employees of the TNC. North Carolina lawmakers wrote that the “presumption that TNC drivers are contractors” can be refuted through a test of common law determining employment status (26). Colorado ruled that the director may, by rule, determine if TNCs have an obligation to provide or offer workers compensation insurance for TNC drivers (27).

The classification of TNC drivers as contractors or employees can have implications for the benefits that drivers receive and the liability that TNCs sustain. While a job as a TNC driver may provide flexibility and independence, it may also allow companies to evade existing requirements designed to provide protections for workers such as participation in Social Security or catastrophic insurance coverage (28). TNCs typically do not employ drivers directly but rather hire them as independent contractors who choose when, where, and how often to work. TNCs have also been involved in several lawsuits related to the status of TNC drivers. In June 2016, Uber settled two class action lawsuits with drivers who wanted to be classified as full-time employees. In addition to the settlement fees that were as much as \$100 million, Uber introduced new software features that assist drivers and said it would support an association called the Independent Drivers Guild in New York City (29).

Driver and Vehicle Requirements

Meet Set of Driver Requirements/Submit Application

Thirty out of 35 states outline a set of requirements for drivers and/or require a driver application. Lawmakers typically limit who can be a TNC driver to ensure safety, but the specific requirements vary by state. Policies commonly require drivers to be at least a certain minimum age (ranging from 18 to 21 years) and have a valid driver’s license, valid vehicle registration, and proof of automobile liability insurance. Current policies for Lyft and Uber require drivers to be 21 years or older; have a license, registration, and personal automobile insurance; comply with vehicle standards; and pass a background check (30, 31).

Texas, Minnesota, Louisiana, Washington (the four states that only regulate insurance), and Montana were the only five states that did not stipulate any requirements for driver qualifications. Specific driver and vehicle policies from state TNC legislation are discussed below.

Conduct or Comply with Background Check Requirement

Thirty states require TNCs to have a background check conducted for a TNC driver before, or within a specified amount of time after, that driver is allowed to operate. State TNC legislation varies in terms of who conducts the background check, what databases are reviewed, and what disqualifies a driver from work eligibility. Different standards and expectations for background checks among TNCs, policy makers, the taxicab industry, and the public have led to some controversy.

Most states require a background check that evaluates applicants' history based on their name and identification. This typically includes a local and national criminal background check, conducted by a TNC or a third-party provider, that includes a multistate/multijurisdictional criminal records database, the national sex offender public database, and a driving history report. Most states specify violations that would exclude an individual from being permitted to operate as a TNC driver in the state. In Mississippi, for example, unacceptable violations include one of the following:

- More than three moving violations in the prior three-year period.
- One of the following major violations in the prior three-year period:
 - Attempting to evade the police.
 - Reckless driving.
 - Driving on a suspended or revoked license.
- Conviction, within the past seven years, of one of the following:
 - Any felony.
 - Misdemeanor driving under the influence, reckless driving, hit and run, or any other driving-related offense or any misdemeanor violent offense or sexual offense (32).

TNCs have strongly opposed fingerprint-based background checks on the grounds that the company screening processes in place are adequate, if not superior. Uber halted operations in Kansas after a bill passed that required a background check by the Kansas Bureau of Investigation. This bill was vetoed by the governor and replaced by a new bill, which has since become law, that allows Uber to conduct background checks and face civil lawsuits if they hire ineligible drivers. Uber supported the compromise bill and resumed operations in Kansas within minutes of its signing (33). After the City Council in Austin, Texas, approved fingerprint-based background checks in May 2016, Uber and Lyft suspended operations in the city (18).

Prohibit Drug and Alcohol Use (Zero Tolerance Policy)

Twenty-six states require a TNC to establish and enforce a zero tolerance policy that prohibits drug and alcohol use for an individual operating as a TNC driver. Many states also specify that a TNC post the policy on its website or application, enable riders to report a complaint of a driver suspected of violating the zero tolerance policy, and conduct an investigation of every reported complaint.

Complete Vehicle Safety Inspection or Compliance Requirement

Twenty-three states require either a vehicle inspection or specify that a TNC is responsible for ensuring that TNC vehicles comply with a vehicle safety and emissions standard. Although the exact wording and requirements vary by state, a TNC is typically required to either ensure that a TNC vehicle “meets the state’s motor vehicle safety and emissions requirements for a private motor vehicle” (34) or inspect “or cause to be inspected every motor vehicle used by a driver to provide transportation services” (35).

In addition, TNC drivers in all states have to meet the minimum vehicle requirements required by their primary automobile insurance and/or vehicle registration, which is required for TNC drivers in all state TNC legislation reviewed.

Establish a Driver-Training Program

Two states—California and Nebraska—and Washington, D.C., require TNCs to establish a driver-training program. For example, Nebraska LB629-2015 states that a TNC shall establish “a driver-training program designed to ensure that each driver safely operates his or her personal vehicle prior to the driver being able to offer services on the transportation network company’s online-enabled application or platform”(36).

Operational Requirements

Thirty states institute requirements related to the operation of TNC services. Some of these restrictions differentiate TNCs from traditional taxicabs, such as prohibitions on street hails and cash payments, which have led to challenges from the taxicab industry. Several operational requirements reinforce features already employed by TNCs as part of their business model, such as the use of a TNC app to facilitate rides and payment.

Prohibit Street Hails

Twenty-three states explicitly prevent TNCs from accepting any solicitation for a ride that does not come through the TNC application. This policy serves to codify one difference in operations between TNCs and taxis. Taxis are allowed to pick up passengers who wave or hail them down on public streets. TNC services were developed, and often defined, to use a smartphone app to connect travelers and drivers and GPS to direct both parties to the pick-up location. Passengers receive the license, make, and model of TNC vehicles, and the vehicles are typically identified by a trade dress (discussed below).

Prohibit Cash Payments

Sixteen states explicitly restrict TNCs from accepting cash payments. In contrast, Ohio explicitly allows TNC drivers to accept cash payments if allowed by the TNC (Ohio HB 237 Section 4925.08). The custom of cashless transactions simplifies the customer interaction and may provide added safety for drivers by reducing the attraction of robbery (37). On the other hand, the prerequisite that a passenger have a credit card to access TNC services may preclude bankless or credit-card-less populations from using and benefiting from TNC services.

Provide Electronic Receipt to Passengers

Twenty-four states require TNCs to provide an electronic receipt to a passenger that, typically, must include the origin and destination of the trip, the trip's total time and distance, and an itemized account of the total fare paid by the rider.

TNCs provided an electronic receipt before it was required by legislation. This is one of many features of TNC smartphone applications that are designed to provide convenience and security to their customers.

Display Trade Dress or Emblem on TNC Vehicle

Ten states require that a trade dress, company emblem, or logo be displayed on the TNC vehicle while in operation (see Figure 3 for an example). Similarly, taxi companies are typically required to meet specific requirements to post company and fare information on and in a taxi vehicle. Taxi regulations may also specify design elements of their signage. Some state TNC laws specify features of TNC signage, such as requiring approval of trade dress, visibility from a certain distance, and visibility at night (e.g., South Carolina HB 3525).



Source: (38)

Figure 3. Lyft's Trade Dress.

Impose Limitation on TNC Driver Hours

Four states restrict the number of hours that a TNC driver can operate. For example, drivers are limited to 12 or 13 hours of work during a 24-hour period. Although a small proportion of states enacted this rule for TNCs, taxi drivers and other transportation providers are typically held to similar standards.

Disclose Dynamic Pricing and Require Passenger's Consent

Dynamic pricing is a technique that Uber and Lyft developed as part of their business models to manage the supply of available drivers with the demand for rides. Both companies inform passengers and provide an opportunity to verify acceptance of the rate increase through the app in all U.S. markets as company policy. Nebraska is the only state to require by law that TNCs disclose the use of dynamic pricing and provide an opportunity for passengers to confirm that they accept the higher rate (39).

Limit Dynamic Pricing in State of Emergency

Three states including Washington, D.C., place a limitation on a TNC's use of dynamic, or surge, pricing during a declared state of emergency. Nevada Assembly Bill 176 gave the Nevada Transportation Authority (NTA) the power to set a maximum fare during an emergency. NTA determined that a TNC "shall not charge a rate in excess of twice the base rate on file with the authority upon the date of the emergency" (40).

Passenger Protections

Several elements of state TNC legislation aim to protect the rights of passengers using the services.

Implement Nondiscrimination Policy

Twenty-four states including Washington, D.C., require that a TNC must have or adopt a nondiscrimination policy. In addition, it was common for states to require TNCs to comply with existing nondiscrimination laws such as accommodation of service animals. Some states include geographic discrimination in the regulations, while others do not.

Protect Passengers' Personally Identifying Information

Twelve states require that TNCs follow a policy to safeguard TNC passengers' personally identifying information (PII). Typically, TNCs may not disclose a passenger's PII to a third party, except in certain circumstances including:

- The customer knowingly consents.
- It is required by law.
- It is needed to investigate a complaint or violation against a TNC or TNC driver (41).

TNC apps enable many of the convenient features that draw users to the services but also allow access to the personal and location information of passengers.

Provide Passenger Opportunity to Request Wheelchair-Accessible Ride

Eighteen states required that TNCs have an accessibility policy. A typical policy states that TNCs must provide a way for potential passengers to request wheelchair-accessible vehicles through the TNC app. In most cases, TNCs are not required to provide an accessible ride, but if they cannot, the TNCs must connect the passenger to another service/option that can if such an option is available. Some legislation also specifies that TNC drivers must accept passengers with service animals and mobility devices. Washington, D.C., requires TNCs to ensure their app is accessible to blind, deaf, and visually/hearing impaired individuals.

Collect Data on Accessible Ride Requests

Three states—California, Virginia, and Washington, D.C.—require data collection related to wheelchair-accessible ride requests. These policies are designed to provide information on traveler accessibility needs and/or the impact of TNC services on wheelchair-accessible services.

Data Reporting

Retain Driver and Trip Records

Twenty-two states require that a TNC retain a record of each trip and driver for a set amount of time, ranging from one to six years. States may request access to these records via audits or report requests.

Comply with Additional Reporting Requirements

Five states request additional reporting on particular aspects of TNC operations, such as wheelchair-accessible ride requests or the frequency of accidents. For example, North Dakota requires a TNC to provide reports every six months that include (42):

- The jurisdictions in which the TNC operates.
- The number of reported accidents while passengers were in the vehicle.
- The number and types of reported traffic violations and any other violations while passengers were in the vehicle.

Regulatory and Rule-Making Authority

Establish State Preemption of Local Authority

Twenty-one states include a policy to preempt or limit the authority of local municipalities to regulate, tax, or impose rules on TNCs. Most recently, the Mississippi governor signed HB 1381 into law in April 2016, preempting a local ordinance passed in Jackson, Mississippi, earlier that year and imposing statewide measures including operating fees and restrictions, driver requirements, and insurance (43).

Establish Airport Rule-Making Authority

Thirteen states authorize airports to impose rules, restrictions, and fees on TNCs that operate on their property. Major airports commonly impose license requirements, operational rules, and per-trip fees on taxicabs that pick up passengers at airport locations. Similarly, TNCs comply with airport regulations in many regions, while other airports, including Atlanta, Detroit, and Boston, do not currently allow TNCs to pick up passengers (44). In Texas, TNCs are legally operating at Dallas/Fort Worth International (DFW), Dallas Love Field, George Bush Intercontinental, and San Antonio International Airports. To drop off passengers at DFW Airport, TNC drivers must obtain an additional DFW Airport Permit (45) and wait for ride requests in a designated staging area, where a computerized system assigns ride requests to drivers through a first-in, first-out queuing process (46).

Municipal-Level TNC Regulation in Texas

Ten cities in Texas passed ordinances to regulate TNCs between late 2014 and May 2016. Several cities where TNCs already operate, including Bryan, El Paso, and Lubbock, are planning or considering ordinances in 2016. Still other Texas cities, including Amarillo and Waco, have TNCs operating in their regions but have not yet passed bills to legalize or regulate their activity. Fort Worth passed an ordinance in 2015 to approve a resolution to amend the Code of Rules and Regulations of the Dallas/Fort Worth International Airport Board to incorporate TNCs under the airport's existing authority (47). This ordinance, which does not directly regulate TNCs, is not included in the following review of TNC ordinances.

Among the 10 Texas cities with TNC ordinances, several have faced withdrawal of services from Uber and/or Lyft related to disagreements over policies such as background checks, reporting requirements, and vehicle restrictions. In March 2015, San Antonio amended the city's TNC ordinance, and Uber and Lyft suspended operations in the city. In October 2015, the City Council passed a temporary, compromise agreement, and Uber and Lyft returned to San Antonio. TNCs suspended operations in Austin, Corpus Christi, Galveston, and Midland in 2016. The other five cities passed TNC ordinances, and TNCs continue to operate in their jurisdictions.

Table 4 presents a summary of 26 TNC policies enacted by municipal ordinance in the same policy areas addressed in state-level TNC legislation. Some notable findings include:

- Permits are required in 10 Texas cities. Most fees are an annual lump sum, but several cities request a percentage of gross receipts: 2 percent in Corpus Christi and Houston. Five cities require an additional license or permit for each TNC driver, ranging in cost from \$5 to \$120 per vehicle.
- Six cities require that TNCs disclose the use of dynamic pricing to passengers. At the state level, this was required by only Nebraska. Four cities limit TNCs' ability to use dynamic pricing during "abnormal market disruptions" that result in a declaration of a state of emergency.
- In four Texas cities, TNCs Uber and/or Lyft halted operations because of disagreements about the nature of background check requirements. Houston successfully negotiated with TNCs to implement fingerprint-based background checks, but no other Texas municipality has implemented such a policy without facing opposition from TNCs. In early 2016, Corpus Christi and Galveston enacted TNC ordinances that required fingerprint-based background checks that led Uber to suspend operations. After the Austin City Council updated the city's TNC ordinance to include fingerprint background checks and other requirements, a lobby group with the support of TNCs forced a special election to redact the ordinance and replace it with policies that had TNC support. On May 7, 2016, Austin voters voted against the TNC-supported ordinance. Uber and Lyft "paused" operations in Austin in response (48).

- Many of the same policy areas and issues are addressed at the municipal level as at the state level. Municipal ordinances also included two policies to address the behavior of drivers in the roadways and a TNC vehicle age restriction, which are included in Table 4.

Table 4. Summary of 26 Policies in Texas Municipal TNC Ordinances.

Policy Area	Description	Cities with TNC Policy in Ordinance		
		Count	TNCs in Operation	Cities TNCs Suspended Operations
Permits and Fees				
Define companies as TNCs	Defines ride-sourcing companies as TNCs.	9/10	Abilene, College Station, Houston, San Marcos, San Antonio	Austin, Corpus Christi, Galveston, Midland
Require a TNC permit	TNCs must obtain a permit to operation and pay an associated fee.	10/10	Abilene, College Station, Dallas, Houston, San Marcos, San Antonio	Austin, Corpus Christi, Galveston, Midland
Require a license for TNC driver	Requires TNC drivers to obtain individual licenses in addition to TNC permit.	5/10	Dallas, Houston	Corpus Christi, Galveston, Midland
Insurance and Financial Responsibility				
Meet Texas insurance requirements	TNCs must comply with the requirements set forth in Texas Insurance Code Chapter 1954, including updates that became effective January 1, 2016 (49).	10/10	Abilene, College Station, Dallas, Houston, San Marcos, San Antonio	Austin, Corpus Christi, Galveston, Midland
Workers compensation	No ordinances address the employment status or compensation of TNC drivers.	0/10		
Driver and Vehicle Requirements				
Meet set of driver requirements/ submit application	TNC drivers must meet a set of requirements such as valid driver's license, minimum age (typically 18 to 21), vehicle registration, and personal automobile liability insurance.	9/10	Abilene, College Station, Dallas, Houston, San Marcos, San Antonio	Austin, Corpus Christi, Midland
Comply with background check requirement	TNC drivers must undergo a background check, with varied specifications by city.	7/10	College Station, Dallas, Houston, San Marcos, San Antonio	Austin, Midland
Prohibit drug and alcohol use	TNCs must have a plan or a policy to prohibit the use of illegal drugs or alcohol. In College Station, the ordinance directly bans TNC drivers from driving impaired (50).	8/10	Abilene, College Station, Dallas, Houston, San Marcos, San Antonio	Austin, Galveston, Midland

Policy Area	Description	Cities with TNC Policy in Ordinance		
		Count	TNCs in Operation	Cities TNCs Suspended Operations
Complete vehicle safety inspection or compliance requirement	TNC vehicles must meet the vehicle safety standards of Texas registration and inspection. Houston and Midland specify that TNC vehicles cannot display visible damage, must be clean, and must have functional heating and cooling.	10/10	Abilene, College Station, Dallas, Houston, San Marcos, San Antonio	Austin, Corpus Christi, Galveston, Midland
Impose vehicle age restriction	TNC vehicles may not be older than a certain age (typically 7 to 10 years) or below a certain mileage threshold.	4/10	Houston	Corpus Christi, Galveston, Midland
Establish a driver-training program	TNCs must establish or require a driver-training program.	4/10	Dallas, Houston, San Antonio	Austin
Operational Requirements				
Prohibit street hails	Prohibits street hails by TNC drivers. Four cities also prohibit TNC drivers from soliciting passengers at locations such as bus stations or taxi stands.	9/10	Abilene, College Station, Houston, San Marcos, San Antonio	Austin, Corpus Christi, Galveston, Midland
Prohibit cash payments	Prohibits cash payments for TNC services.	3/10	Abilene, College Station, San Marcos	
Disclose fares and rates to passengers	TNCs must disclose fare calculation methods, rates, and estimated fares to passengers. Nine cities require electronic receipts.	10/10	Abilene, College Station, Dallas, Houston, San Marcos, San Antonio	Austin, Corpus Christi, Galveston, Midland
Display trade dress	Trade dress or company logo must be visible on TNC vehicles.	3/10	Houston	Corpus Christi, Galveston
Impose limitation on TNC driver hours	Limits number of hours a TNC driver can work consecutively.	3/10	Houston	Corpus Christi, Austin
Disclose dynamic pricing	TNCs must disclose the use of dynamic pricing to their passengers and provide an opportunity for passengers to consent to the higher rate.	6/10	Abilene, College Station, San Marcos	Austin, Galveston, Midland
Limit dynamic pricing in state of emergency	Limits TNCs' ability to use dynamic pricing during "abnormal market disruptions" that result in a declaration of a state of emergency (50).	4/10	College Station, San Marcos	Austin, Midland
Require lawful behavior in travel lanes	TNC drivers must show lawful behavior in travel lanes, such as pulling over to the curb to drop off passengers.	5/10	College Station, Houston	Austin, Corpus Christi, Galveston
Minimize travel routes	TNC drivers must take the most direct route to a destination.	2/10	Dallas, College Station	

Policy Area	Description	Cities with TNC Policy in Ordinance		
		Count	TNCs in Operation	Cities TNCs Suspended Operations
Passenger Protections				
Implement nondiscrimination policy	Requires TNCs to enact and follow a nondiscrimination policy. Dallas and Corpus Christi also require that TNCs provide service "city wide."	6/10	Abilene, College Station, Dallas, San Marcos, San Antonio	Midland
Protect passengers' personally identifying information	Requires that TNCs do not disclose PII about passengers without consent.	3/10	Abilene, San Marcos	Midland
Institute accessibility policy	Requires TNCs to allow passengers to request a wheelchair-accessible ride and, if not available, connect the passenger to a service that can provide one.	8/10	Abilene, College Station, Dallas, Houston, San Marcos	Austin, Corpus Christi, Midland
Data Reporting				
Retain driver and trip records	TNCs must retain trip and driver records to fulfill audit or report requests, typically for one year.	5/10	College Station, Abilene, Houston, San Antonio	Austin
Comply with additional reporting requirement	Requires additional reports on activity (origin and destinations and accessibility requests).	4/10	Houston, San Antonio	Austin, Midland
Regulatory and Rule-Making Authority				
Establish airport rule-making authority	Enables airports to exert authority over the operations of TNCs through fees, operating guidelines, and/or permits.	4/10	Dallas, Houston, San Antonio	Corpus Christi

Note: In May 2016, the Midland City Council approved a revised TNC ordinance. This update is not included in Table 4.

Findings

In Texas and other states, policy makers are considering whether TNCs should be regulated at all and, if so, at what level of government and how the TNCs should be regulated. Thirty-four states and Washington, D.C., have passed legislation with different sets of policies. Every state regulates insurance requirements, and many address driver requirements, vehicle standards, and operational features. Several states' TNC legislation preempted previously enacted city ordinances or prohibited municipalities from enacting future ordinances. In contrast, the South Dakota Legislature did not impose operational policies on TNCs and allowed local jurisdictions to enact regulations on all aspects of TNC operations except insurance. Some states enacted policies related to the employment status of drivers, driver training, the use of dynamic pricing in emergencies, wheelchair accessibility requirements, and data collection. Policy makers may consider which aspects of TNC services may present risks to public safety and which policies

may be self-regulated by TNC business practices. Policies such as the prohibition of street hailing or the requirement of electronic receipts mirror existing TNC business practices, while accessible vehicle requirements and nondiscrimination are regulated in the taxicab industry because the market may not provide this otherwise.

Taxicabs have traditionally been regulated at the local level, while TNCs are increasingly being regulated at the state level. TNCs and taxicab services exhibit some differences but serve similar, or at least overlapping, markets. In most regions, TNCs and taxicabs face different policies such as permitting requirements, insurance requirements, background checks, fare regulation, and fleet size restrictions.

Some states and cities are already considering TNC regulations in the context of existing taxi or vehicle-for-hire laws. As of May 1, 2016, Lubbock city council members are reviewing a proposed ordinance that would update the existing vehicle-for-hire regulations and introduce a section to regulate TNCs. The ordinance would eliminate restrictions on the number of vehicles in a taxi fleet and would not dictate taxi rates, and rate meters would not be required if users can pay electronically. TNCs would have to comply with policies similar to those imposed on taxis—apply for a permit, undergo a background check, and comply with a vehicle inspection (51).

This report presents policy makers with background information on TNCs and a review of policy issues addressed by municipal and state TNC legislation. TNCs, taxi services, cities, and consumers are rapidly adapting to this new transportation services market. As it continues to evolve, policy makers and researchers can consider the implications of TNC services, and the policies that guide them, in relation to:

- Ensuring safety and security for drivers, travelers, and pedestrians.
- Understanding the evolving role of technology and technology platforms in transportation provision.
- Integrating on-demand transportation options into mobility plans and programs.
- Managing transportation goals such as congestion reduction, air quality control, and expansion of mobility and accessibility.
- Addressing equity concerns about access to transportation services by those who do not have smartphones or credit cards.

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