Shared Mobility and Automated Vehicles: Policy and Data Sharing

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Overview

- Introduction and defining shared mobility
- Shared mobility policies and data sharing
- Automated vehicle policies
- Challenges of regulation and data sharing
- Concluding thoughts and recommendations
Defining Shared Mobility

Shared mobility—the shared use of a vehicle, bicycle, or other low-speed travel mode—is an innovative transportation strategy that enables users to have short-term access to a mode of transportation on an as-needed basis.
Introduction

• Many of these new shared modes that emerge do not fit into traditional regulatory classifications and often require new rules and regulations

• Public agencies need relevant data to appropriately craft these regulations

• Crafting regulation is difficult given current pace of innovation and lack of shared data in some circumstances

• Will discuss shared mobility and automated vehicle policies and how data has (or has not) informed these various policies
Carsharing

• Policies typically include public rights-of-way allocation, parking policies, incentive zoning

City of Oakland, CA / Gig Car Share

• Collects data from one-way carsharing operators at the end of each fiscal year of actual meter usage in order to be reimbursed for lost meter revenue
Microtransit

• Not many existing policies at this time

SFMTA’s private transit program / Chariot

• Stops allowed in legal curb space (white and yellow loading zones)
• Will collect GPS and ridership data
• New routes must complement existing Muni bus service
• Licensing, accessibility, and driver training requirements
Ridesourcing/TNCs

• More than a dozen cities have fees or taxes, but lack of data availability is a problem

City of Chicago

• First city to approve per-trip charge of 52 cents (in 2015)
• In November 2017, approved 15 cent increase that will directly fund public transit improvements.

New York City

• The Taxi and Limousine Commission (TLC) receives and discloses origins and destinations of trips at a granularity higher than zip code (block and lot level), but not clear if this information has informed specific policies, at present.
Dockless Bikesharing

• Policies are sparse, at present, but include permitting and insurance requirements

City of Seattle, WA / LimeBike, Spin, ofo

• First dockless bikesharing regulations in the U.S., managing multiple operators

• Includes bicycle licensing fees, incorrectly parked bicycles must be corrected within two hours during weekday business hours, and ten hours during other times

• Seattle DOT collected ridership, safety, parking, and compliance data from operators through December 2017, and is evaluating now to determine regulations moving forward
Electric Scooter Sharing

• Emerged rapidly in the last few months, no specific e-scooter sharing regulations, at present

• In late March 2018, Bird CEO preemptively suggested “Save our Sidewalks” pledge, offering: 1) Daily Pickup, 2) Responsible Growth, and 3) Revenue Sharing of $1 per vehicle per day
  • Pledge did not include any stipulations regarding data sharing

• 500 scooter per company cap proposed by City of San Francisco received pushback from companies
Shared Automated Vehicles (SAVs)

How do we prevent this...

...from happening with these?
As of February 2018, there were 16 active SAV pilots across eight states around the U.S., half of which are serving passengers and the other half are in a testing only phase.
AV Policy Developments

• Very few developments, at present, on AV/SAV-specific policies or regulations

• Most legislation, to date, relates to road safety, liability and insurance, vehicle design requirements, and operational area

• Most existing U.S. AV legislation is at the state and local levels. There is no enacted federal level AV policy, at present
AV Policy Developments - State

• As of February 2018, **16 states and the District of Columbia (DC)** have passed legislation or issued an executive order that allows for either AV testing or deployment on public roads.

• Only a few states include provisions in their AV legislation that specifically relate to regulation of SAV services, at present
  • Nevada’s AB 69 = **three percent excise tax** of total SAV fare
  • Tennessee’s SB 1561 = **one cent-per-mile tax on AV passenger vehicles**, 2.6 cent-per-mile tax on AV trucks

• However, it is not clear if these regulations are being enforced, at present

• Data collection from operators and auditing processes are unclear as well

*Arizona, Hawaii, Washington, Wisconsin, Massachusetts and Delaware have executive orders and not enacted legislation

Stocker and Shaheen, forthcoming

NCSL and Eno, 2018
AV Policy Developments - Local

• The City of Boston passed an executive order in October 2016 that establishes a multi-phase testing program for entities wishing to operate AVs in the City of Boston.

• The order regulates the time, place, and manner of testing and is initially restricting testing to a 1,000-acre area of the South Boston Waterfront.

• The city also requires quarterly data reports of both companies that are currently testing in Boston (nuTonomy and Optimus Ride). These reports consist of metrics like: number of passenger trips, passenger home zip codes, trip origin and destination, and qualitative user feedback.
Potential Future SAV Policy Developments

- SAV-specific policy and data sharing is sparse to non-existent, at present, and only a few states have bills that claim to impose operating fees on fleet-based SAVs.

- Additional SAV legislation and data sharing will be necessary as an increasing number of SAV pilots are deployed over the coming years.

- Potential adverse impacts (on safety, congestion, and sprawl) of AVs/SAVs will have to be considered when crafting regulations.
Challenges of regulation and data sharing

• Public-private data sharing is necessary in order for informed and effective public policymaking

• Modes needing access to “fixed” rights-of-way (carsharing, microtransit, docked bikesharing) = may be easier to regulate / obtain data from

• More “dynamic” modes with less need for fixed rights-of-way (ridesourcing/TNCs, dockless bike- and scooter sharing, SAVs?) = may be harder to regulate / obtain data from

• Will take work from public, private, university sectors to align incentives and achieve information sharing needed for effective policy
Concluding thoughts and recommendations

• Need to discuss what regulations make sense not just for shared mobility providers but for all transportation modes, especially as more changes occur moving forward

• Stakeholders are beginning to discuss usage-based pricing mechanisms in some cities, which could possibly include:
  • Trip-based fees;
  • Mileage-based pricing;
  • Spatio-temporal pricing (cordon pricing, express lanes, curb pricing);
  • Mode or occupancy-based fees;
  • Access to high occupancy vehicle lanes or express lanes;
  • Others...?
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