Stakeholder Perspectives on the Policy Implications of On-demand Ridehailing Services

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The National Center for Sustainable Transportation Undergraduate Fellowship Report

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Stakeholder Perspectives on the Policy Implications of On-demand Ridehailing Services

A National Center for Sustainable Transportation Research Report

September 2018

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Introduction

A current and ongoing study titled: The Sustainable Transportation Implications of On-demand Ride Services conducted by Susan Pike, UC Davis ITS, focuses on on-demand ridehailing services, such as Uber, Lyft and others in relation to sustainable transportation and potential policies. Specifically, this research strives to gain insight into the different perspectives of various stakeholders in California, and moreover to understand how such services can alleviate existing transportation issues. This current study provides an in-depth look at the manners in which different entities are currently interacting with emerging technology in transportation and the future of government action. Furthermore, it brought to light some of the discrepancies among regions, counties, and cities in California in terms of access to these emerging technologies. I focused on analyzing the responses of 27 stakeholder interviews with the goal of targeting various topics. The interview data is used to look at these three relevant research questions. How do stakeholders of different types engage with on-demand ridesharing services? How do different perspectives vary based on urban and rural localities? Do various stakeholders agree or disagree on the appropriate scale of government for policy relating to these issues?

My findings provide a holistic analysis and comparison of the perceptions of different California-based entities. In order to analyze the interviews, I first conducted a literature review of past research focused on the sustainable implications of on-demand ridehailing services. Then prompted with three major research questions I focused on creating a preliminary coding system to analyze the responses. I compared responses between similar stakeholders, and finally compared the average response of stakeholder types with each other. Table 1 shows the stakeholder types, number of interviews conducted, and number analyzed within this research project.

Table 1. Number of Stakeholder Interviews

<table>
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<th>Stakeholder Type</th>
<th>Interviews Conducted</th>
<th>Transcriptions Analyzed</th>
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<td>City Community Development, Transportation, or Traffic Planners</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Regional Transportation Planning Agencies and Metropolitan Planning Organizations</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>County</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>State Agencies</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Ridehailing Service Providers</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Interest Groups and Non-profits</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>27</td>
</tr>
</tbody>
</table>
Background: Current Status and Potential Impacts

On-demand ridehailing services have spread rapidly across the nation and globe since introduced in San Francisco in 2012 (Greenblatt 2015). According to a Pew Research Center Survey in 2015, 15% of American adults use ridehailing, while a different study finds that 29% of respondents have used ride hailing services (Clewlow and Mishra 2016). However, evidence states that services are primarily used in urban areas by a generally younger and more educated population (Metropolitan Area Planning Council 2018, Rayle et. al 2014). Although the services are used for mostly social and leisure trips, the majority of trips are single passenger (Metropolitan Area Planning Council 2018) which poses questions about the relationship between on-demand ridehailing and the future of pooling, shared use of a vehicle, within the on-demand ridehailing industry.

While the full impact of these services on individual travel behavior is mostly unknown, they potentially provide an opportunity for individuals to live “car-free [or] car-light lifestyle’ (Dutzik et. al 2013) and may provide a quick and convenient alternative where transit gaps are present (Rayle et. 2015). Furthermore, the positive impacts of on-demand ridehailing on sustainability are expected to occur through reductions in VMT, congestion and related emissions. The potential for these outcomes to be fostered by on-demand ridehailing services, would occur when the use of on-demand services permits individuals to use a suite of transportation modes including transit and other public transportation, walking, and biking. The introduction of these services changes the landscape of travel options and may enable some individuals to adopt transit; for example by providing first and last mile service that is less expensive and easier to access than traditional taxis and more feasible than biking or walking.

Travel Behavior

There is some evidence that on-demand ridehailing and other emerging transportation services facilitate positive sustainability outcomes, however there is mixed evidence of the relationship between ridehailing and public transit use. Some research suggests that these shared and on-demand modes serve to complement public transit (Rayle et. al 2014) and substitute for automobile trips (American Public Transportation Association 2016). However, on-demand services are increasingly serving as a substitute for more sustainable modes of transportation, such as transit, walking, and biking (Metropolitan Area Planning Council 2018); in turn having the potential to increase driving and VMT in major cities (Dutzik et al. 2013). On-demand ridehailing can be a complement, supplement, or both to public transportation and other sustainable modes of transportation, which means that there is opportunity for future partnerships. Those who use on-demand ridehailing services also tend to use transit (American Public Transportation Association 2016), although there is also evidence that on-demand ridehailing users might have otherwise used transit (Metropolitan Area Planning Council 2018),
or that using these services in some cases decreases the use of transit (Clewlow and Mishra 2017).

The impact of on-demand ridehailing services on individual behaviors, such as car ownership provides insight into potential positive or negative sustainable outcomes. On one hand existing literature suggests that users are less likely to have a car at home or drive more infrequently (Rayle et. al 2014) through a reliance on a range of personal transportation options (Smith 2016) in turn reducing personal auto use and ownership levels. The direct impact of this on VMT and emissions is unknown. However, other findings state that majority do not exhibit a change in vehicle ownership and no distinctive difference in the number of vehicles owned by ridehailing users compared to non-ride hailing individuals (Clewlow and Mishra 2017). Whether increasing auto ownership or decreasing auto ownership, on-demand ridehailing has the potential to change individual travel behaviors in favor of environmental sustainability.

There is mixed evidence of the impacts of on-demand ridehailing services on congestion and land use. Some research finds that the addition of new trips to roadways adds congestion, especially impactful during rush hours in major cities (Metropolitan Area Planning Council 2018), while other research finds that ride hailing has the potential to reduce parking demand and allow for mixed land uses (Henao 2017). The distinction becomes more important when talking about urban versus rural areas; these services are much more prominent, and thus impactful on travel behavior for the urban population, while more often than not rural areas have very little interaction with on-demand ridehailing.

Past research on-demand ridehailing impacts is sparse; specific studies have focused on smaller scales such as major cities like San Francisco and Boston and only recently has one paper combined the findings of previous research to suggest that ride-hailing is contributing to a net increase in VMT and GHG emissions, but at an uncertain magnitude (Rodier 2018). This work suggests that on-demand ridehailing services, along with carshare can affect shifts towards more sustainable transportation patterns, including reduced household vehicle holdings, and individual VMT. However, on-demand ridehailing services also have the potential to increase auto travel, VMT and possible congestion if there is a tendency to replace transit trips with on-demand ridehailing. In order to achieve the best sustainable transportation outcomes with on-demand ridehailing, policy intervention is likely necessary. This study and analysis provides insight into the perspectives of stakeholders confronting the positive and negative impacts of on-demand ridehailing and their thoughts on potential policies.

**Methodology**

**Transcriptions of Interviews**

In addition to coding the interviews, I transcribed 11 interviews with various stakeholders. Each interview consisted of Susan Pike asking a series of questions related to the topics of discussions on on-demand ridehailing services or ridesplitting, reactions to potential policies,
appropriate scale of government for policy action, among other questions. Each respondent replied to the questions in varying lengths. Each interview lasted 25 to 30 minutes and sound quality greatly varied.

**Literature Review: Potential Impacts of On-demand Ridehailing Services**

Conducted an in-depth literature review of past research and findings related to on-demand ridehailing services and VMT, emissions, public transit ridership, and individual behaviors. This background information provides context for analyzing the interview transcripts.

**Preliminary Coding of Interviews**

The preliminary coding of interviews consisted of breaking down each broad question into individual sections for each stakeholder interview. This was achieved by reading the transcriptions and listening to the interview audio recordings. Here are the questions asked respondents and how their responses were analyzed based on the responses. The numbered points are the questions asked in the interview, while the lettered points are the topics I identified. Some respondents did not provide answers to all of the topics; however, the majority did respond to most of the topics.

1. **Have you been discussing or hearing about on-demand ride services in the context of sustainable transportation?**
   A. Is respondent knowledgeable about services?
   B. Where is the information coming from, what is the source, and what is their personal level of information (low, medium, high)?
   C. Are the potential impacts of such services positive or negative?
   D. What themes are present in the response?

2. **Is your agency involved in any work related to on-demand ride services and sustainable transportation mobility?**
   A. Are they involved (Yes, No, or other)?
   B. What is the involvement and approach?
   C. What is it trying to address?
   D. Other relevant information about work relating to these topics

3. **What are your reactions to these proposed or existing policies: taxing all trips except for multi-passenger or pooled or allowing the use of public facilities for passenger loading and unloading for multi-passenger trips?**
   A. How did the respondent react to policies (positive, negative, or other emotions such as cautious)?
   B. What are major concerns for each?
   C. Current policies that they are conducting or ideas that they may have?
   D. Any other general concerns about increasing or incentivizing on-demand ride services or ridesplitting.
4. **What are the primary hurdles for policies to help increase multi-passenger trips or alleviate other transportation challenges?**
   A. Categorize hurdles (financial, individual behavior, etc.)

5. **Who do you talk to about these topics and who would you like be in a dialogue with?**
   A. Who are they talking to?
   B. Who do they want to be in a dialogue with?
   C. Are they talking to everyone that they want to be engaging with (Yes or No)?

6. **If policies or programs were to be implemented what scale of government would be most appropriate?**
   A. What level of government is most appropriate and why?
      a. Local, regional, state, federal, other – including all levels or none government involvement

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**Research Questions**

Three research questions guided the analysis of the 27 stakeholder interviews.
1. How do stakeholders of different types engage with on-demand ridesharing services?
2. How do different perspectives vary based on urban and rural localities?
3. Do various stakeholders agree or disagree on the appropriate scale of government for policy relating to these issues?

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**Findings and Results**

These findings focus on a broad summary of respondents’ answers to the previous questions. Noting the breadth of topics discussed, some responses are omitted and a more generalized approach focusing on the average response is utilized in these results. The responses of each interviewee were looked at using the preliminary coding explained in the methodology section. Then stakeholders of the same type were grouped and analyzed with a focus on a general consensus or lack of consensus. The responses of stakeholder groups were compared. The findings are grouped by topic. Specific references to interviewees are protected by a confidentiality agreement.

**Knowledge and Discussions of On-demand Ridehailing Services**

Findings reveal that the majority of stakeholders are aware of on-demand ridehailing services, while some are even aware of ridesplitting options such as Uberpool or Lyftline. The few localities that are unaware and not engaged in discussions about these topics are, unsurprisingly, stakeholders located in rural areas. The stakeholder involvement in such discussions primarily consists of conversations, and some are more involved in actual pilots and programs. However, the level of conversations ranges from broad discussions including
emerging technology like autonomous vehicles to partnerships, programs, and pilots with apps like Waze, Scoop or thinking about micro-transit and current dial-a-ride programs. Only one NGO stakeholder seems to be explicitly focused on conversations related to policy actions around these topics. The distinction of level of information is clearly reiterated in this question as stakeholders in bigger cities are more explicitly thinking about and discussing these services, as well as multi-passenger trips. On the other hand, smaller and more rural jurisdictions are mostly aware of the services, they are still relatively new, do not have it at all, or have only a couple of drivers. The information gap is definitely apparent as some professionals are more able to speak to the sustainable impacts of such services, while others just mention their existence.

**Positive and Negative Sustainable Impacts**

Stakeholders with the ability to speak to the positive impacts of these services focused a range of topics. While the industry perspective is that ridesplitting or multi-passenger ridership aligns with business interest and sustainability, this was a different perspective than that of cities, counties, and MPO’s. Most city stakeholders relate positive outcomes to things like parking, congestion and improved mobility. One of the state agencies focused solely on safety benefits of reduced cars on the road.

The negative impacts noted by interviewees consisted of exacerbating congestion, VMT increases, infrastructure deterioration, enabling sprawl, and the three stakeholder MPO’s explicitly mentioned the impact on public transportation, which aligns with past research on the supplementary nature of these services in relation to public transit use. One county respondent specifically focused on the need for more planning and policy work in order to prepare for new technology. While not every stakeholder had a response, most of the negative potential impacts related to topics discussed in past research and studies, such as VMT, congestion, emissions, and transit ridership. The various perspectives of different stakeholders were evident through these answers; developers and planners focused on topics like sprawl, infrastructure, and congestion, while cities and counties focused on more individual behaviors like improving mobility, convenience, and better financially. Finally, industry perceptions focus on the alignment of business and sustainability in relation to services like ridesplitting, while a state agency primarily saw these emerging technologies through the lens of safety.

**Involvement in Policymaking and Potential Ideas**

Most stakeholders are not explicitly involved in creating policies related to on-demand ridehailing services. Furthermore, the majority of cities, county, and state agencies are not directly involved in developing policies related to ridesharing or ridesplitting. However, some are involved in conversations and investigating potential policies, partnerships, and programs. While one county level stakeholder is involved in policy action, the other two are not even extensively served by the on-demand ridehailing industry, making it irrelevant. Examples of involvement include involvement in partnerships and programs or conversations and investigation into potential policies, programs, and partnerships.
Some ideas that arose in the stakeholder interviews include pick up and drop off hubs, mandated ridership criteria, senior transportation programs using Uber/Lyft, connectivity with Lightrail, pilots, financial incentives, first mile last mile initiatives, and shared mobility. Most cities are not involved, however a couple are definitely thinking a lot about policies and programs. Some MPO’s have been working with micro-transit and other apps, such as Scoop, Waze and Rideamigos to tackle the one size fits all solution by using these services to replace fixed routes. Both the state and industry stakeholders focused on road pricing, and rewarding on a vehicle per passenger basis. One idea that has come up in either a potential way or current is the idea of a subsidy; one MPO subsidizes four rides per year and encourages alternative commuter options and ridematching services. However, in summary, as stated by a state agency stakeholder they are in “diagnosis and prognosis, not yet prescription” relating to potential policies.

**Tax Policy Reaction**

Reactions to the potential tax policy which would be imposed on all trips using on-demand ride services except those that use ride-splitting (two or more people traveling together would not be taxed) had primarily negative responses. The city-based and county-based stakeholders responded mostly negative due to political (unpopularity of taxing in conservative areas), enforcement, and monitoring challenges, while a couple deemed it irrelevant due to the lack of presence in the area. Other stakeholder categories had either more mixed responses (MPO’s) or a more cautious approach relating to implementation and enforcement. One interesting response highlighted the bi-state nature of its region and the challenge of taxing regions with different political orientations. A state agency highlighted concerns about accessibility and equity; making sure that everyone can access the services. Finally, the power of the entrenched taxi industry was mentioned in an interview in relation to lobbying and taxing.

**Public Facilities Policy Reaction**

Respondents answered primarily positively to the idea of a public facilities policy: on-demand trips using ride-splitting would be permitted airport access and the use of public facilities such as taxi-stands and in some cases bus stops for passenger pick-up and drop-off or ride-splitting. Other respondents either had no reaction, since in rural areas this type of policy is not applicable. There was also evidence of cautious sentiments due to issues relating to implementation and enforcement. More rural and less dense cities are concerned that they do not have congestion or parking problems, while in dense areas such a policy may be more relevant since space is limited and in high demand and thus need much more coordination.

**Concerns and Hurdles**

At the state, city, and MPO level many respondents mentioned concerns relating to equity and accessibility. Some of those concerns dealt with the concept of pricing people out of a service, language, disability, and incomes barriers. At the industry level the concerns dealt with political viability of flexible pricing structures, urban planning and behavior changes, while NGO respondents mentioned lack of government capacity, poor policy communication and multi-jurisdictional challenges as major hurdles. One unique response focused on the environmental
justice aspect of technology and how such solutions do not benefit low-income residents. An MPO respondent mentioned the negative relationship between transit operators, taxi cab industry and on-demand ridehailing services. Some major themes relating to hurdles deal with government capacity (especially in smaller jurisdictions), cost, and the role of some locales as “second-wave adopters” in terms of policy action.

Conversations

There is variation across who is talking to who. While some cities, counties, MPO’s are having discussions with transit operators and developers, others are not talking to anyone about these issues. At the state and NGO level there are more conversations with policymakers, academia, as well as industry. In terms of who respondents wish to be in dialogue with, primarily there is a desire to speak more directly with transit authorities, industry, and some mention of “disenfranchised groups,” such as the disabled, youth and seniors. The vast majority of stakeholders are not engaging with everyone that they hope to be talking to.

Policy Venue/Scale

At the city level, the majority of stakeholders focus on regional level of government due to issues that transcend jurisdictional boundaries. A couple mentioned the state, two mentioned the federal level in order to create guidelines, and one mentioned the local level as appropriate. County stakeholders are divided between local, county, and state level. Industry focuses on federal and state taxing authority. Overall, the city/local level is primarily deemed as inefficient in terms of enforcing and coordinating, and the regional level or the state as the most governable scale.

Conclusions

Based on the three guiding research questions the results vary.

1. How do stakeholders of different types engage with on-demand ridesharing services?

   There is variation among stakeholders throughout California engaging with these services. While some are more explicitly involved in policy conversations, the implementation of programs and thinking about the sustainable implications, other stakeholders have very little interaction with or discussions about these emerging services. This breadth of responses across stakeholders, many of which who deal specifically with transportation in their region, relates to a lack of a clear consensus on the appropriate approach and policies relating to on-demand ridehailing services in California.

2. How do different perspectives vary based on urban and rural localities?

   This distinction was very clear throughout the interview responses. Urban localities and rural localities have very different perspectives and relationships with on-demand
ridehailing services. This means that a “one size fits all” response is not adequate nor will it frame these services within the context of the future of sustainable transportation.

3. Do various stakeholders agree or disagree on the appropriate scale of government for policy relating to these issues?

While there is not a clear agreement on the appropriate scale by all stakeholders, most believe that the regional scale is the most appropriate for various reasons relating to enforcement and coordination. There was also mention of state and federal policies as well. While this highlights the importance of policy in relation to these services, a singular vision of what this policy should look like is not available.

Going forward, while these services do not impact every jurisdiction, it is clear that the majority of stakeholders feel that some sort of intervention either at a regional or state level is necessary. While the future sustainable outcomes of on-demand ridehailing services are unclear, their implications and role within transportation sector need to be at the forefront of transportation discussions and policy. Emerging technology within the transportation sector is changing the landscape and the “traditional notions” of transit and mobility. While concerns about equity and accessibility to emerging technology should always be prominent in discussions, going forward much is unknown about their overall impact. Debates, discussions, and policy change at local, state, and national scales will continue to ensure that such services fit within the sustainable transportation framework and serve to provide improved mobility to all. Most importantly the outcomes of this study reiterate how the policy approach to on-demand ridehailing services cannot be a one size fits all solution since urban and rural localities have varying degrees of engagement with ridehailing. Also equally important is ensuring that these services are accessible to all and not excluding people based on location, socio-economic status, technology access, or disability.
References


