What Drives Cities to Take Meaningful Climate Action?  
An Assessment of State and City Level Determinants  
Celeste Rousseau, Master of Public Policy Program  
Michigan State University

Introduction
Extensive climate change policy research confirms that the complexity of social, economic, and cultural processes influences environmental protection practices substantially and therefore an array of local characteristics should be taken into special consideration when trying to act locally.

Many of the trends that impact emission reduction strategies can be identified within local conditions like growth in population and the increasing consumption of goods and services that create GHGs. Further, the way in which unique local political culture coincides with the multilevel nature of climate governance drives these local characteristics and is found to be especially determinate of the format, civic support, and overall life of climate mitigation policy.

Q. What city level effects tend to overwhelm a less facilitative state context? What causes cities in highly facilitative states to not take action? Three ways in which analyzing local case studies can better our overall climate protection initiative:

- Utilizing analytical strategies such as investigating local procedures as associated with national and international methods
- The connection of the causal process to local reduction strategies
- Increasing knowledge, commitment, and ability in order to manage the complex causal process of climate risk

Research Design

| Method of analysis: Multilevel probit and logit models with ordered outcome variable (less to more aggressive action) |
| Levels of observation: 42 states; 34 cities |
| Purpose: Analyze probability of meaningful action focused on city and state level forces associated with climate action |

Findings

<table>
<thead>
<tr>
<th>City Level</th>
<th>Model 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-8.338*</td>
</tr>
<tr>
<td>Air Quality</td>
<td>4.694</td>
</tr>
<tr>
<td>Population Density</td>
<td>0.023*</td>
</tr>
<tr>
<td>Population</td>
<td>0.074*</td>
</tr>
<tr>
<td>Human Capital</td>
<td>0.024*</td>
</tr>
<tr>
<td>Partisan Preferences</td>
<td>0.037*</td>
</tr>
<tr>
<td>Fiscal Capacity</td>
<td>0.040*</td>
</tr>
<tr>
<td>Fiscal Deficit</td>
<td>-0.98*</td>
</tr>
<tr>
<td>Carbon Industry Strength</td>
<td>-0.042*</td>
</tr>
</tbody>
</table>

A. State context matters
- Fiscal limits reduce likelihood of city adoption
- "Home Rule-ness" slightly increases likelihood of city adoption
- State Climate Agenda = no effect

B. Cross-level interaction
- City responsiveness to worse air seems to be conditioned by degree of fiscal limitation

Case Studies
Grand Rapids, Michigan:
- State predictor 0; Yet city takes meaningful action [1]
- Population approaching 200,000
- Environmental concerns as part of municipal agenda
- Operating at fiscal surplus
- Problem severity represents the knowledge component of our analysis as the city has identified necessity to devote resources to better environmental conditions

Fairfield, Iowa:
- State predictor = 1; Yet city does not take meaningful action [0]
- Population of 10,000 People; Small population
- Operating at fiscal surplus
- Fiscal capacity corresponds to the ability component of the analysis

Salinas, California:
- State predictor = 1; Yet city does not take meaningful action [0]
- Carbon intensive operations form an organized opposition
- Organized opposition reflects the effects of the commitment component of the analysis

Conclusion
- The trends suggest that there is necessity to develop a consistent and convergent application of climate science and that guidance of policy makers is important to assess socioeconomic factors, climate risk and vulnerability.
- It is of grave importance that we understand that state context matters when trying to act locally, in addition to the local conditions themselves.
- In order for policy makers and legislative officials to effectively implement and enforce operational environmental controls, it has been found to be essential for them to become just as educated on the subject as well as allocating the proper fiscal resources.
- Recommendation: In order to implement climate risk management into local planning and decision-making, public and private realms of society must come together to take responsibility for the worsening conditions of their environment and further allocate efficient time, thought, and resources in order to reduce vulnerability to ongoing environmental threats in addition to the State taking a facilitative role.

Acknowledgements
Special thanks to my committee members: Dr. Joshua Sapotichne, Department of Political Science, Michigan State University  
Dr. Valentina Bali, Department of Political Science, Michigan State University  
Dr. Eric Juenke, Department of Political Science, Michigan State University