The Conditional Impact of Resources on Political Participation: Evidence from a Mixture Model

Ines Levin

University of California, Irvine

February 24, 2017
What is Political Participation?

- Involvement in activities that may ultimately affect political outcomes, where the consequences of the activity are determined by the action of multiple individuals.
- Examples: voting, donating, working for political campaigns, attending political meetings, contacting government officials, and protesting.
Participation and Resources

• Participating in the different activities requires performing certain tasks
  – Casting a ballot
  – Donating
  – Writing letters
  – Giving speeches
  – Organizing meetings

• Performing these tasks requires access to resources
  – Time
  – Cognitive abilities
  – Civic skills
  – Money

• Previous studies consistently found a positive association between access to resources — most notably, **education** — and political participation.
• But this image is not really an accurate characterization. Resource-based models explain little of the overall variation in individual behavior.
Goal of the paper

- Demonstrate how finite mixture modeling can be used to learn about latent participation intensities that do not fit the resource-mobilization hypothesis.
- I use this technique to measure latent predispositions toward participation/abstention that cannot be explained in terms of access to resources ...
- ... and to evaluate the impact of resources conditional on these latent inclinations.
- Requires examining patterns of behavior across a range of political activities that vary in terms of how demanding they are.
Participatory types and conditional effect of resources

- The model identifies types of individuals who – holding access to resources constant – are **systematically more (or less) likely to participate** than others.

- **Activists**: Over-participate across activities.
  - Almost always participate in low cost activities; often participate in high cost activities.

- **Apathetics**: Under-participate across activities.
  - Sometimes participate in low cost activities; almost never participate in high cost activities.

- The effect of increased access to resources varies across participatory types depending on the kind of activity.
Standard Binary Choice Model

- Suppose $y^*$ is a measure of the latent utility associated with participating in a given activity that can be written as:

  $$y^* = a + x'b + \epsilon$$

  - $a$ and $b$ are activity-specific coefficients, $x$ is a vector of individual attributes, and $\epsilon$ is a random disturbance term.

- Individuals are assumed to behave consistently with utility maximization, and are predicted to participate if $y^* > 0$.

- $\epsilon$’s are assumed to be drawn from the same distribution for all individuals – from normal or logistic distributions symmetric and centered around zero.

- In the logistic case, we use a logistic link function to map representative utilities (the systematic component of $y^*$) to participation probabilities.
Alternative Model (I): Varying Intercepts

- Suppose there are some individuals for whom error terms are symmetrically distributed, but centered away from zero. [After accounting for $x$ their identities still matter!]

- In this case, we write the error term as the sum of a zero-mean disturbance $u$, and a type-specific constant $\bar{u}_T$.

$$\epsilon = u + \bar{u}_T$$

- We can re-specify the model by estimating a type-specific intercept, $\tilde{a}_T$, that equals the old intercept, $a$, plus the type-specific constant, $\bar{u}_T$.

$$\tilde{a}_T = a + \bar{u}_T$$

- Then, the re-specified latent utility $y^*$ can be written as:

$$y^* = \tilde{a}_T + x'b + u$$

- In order to be able to estimate type-specific intercepts, I assume that individual types are fixed across activities.
American Citizen Participation Study (VSBN 1990)

- Nation-wide survey conducted during the spring of 1990. Included interviews to more than 2,500 voting-age respondents.

- I consider eleven binary indicators of participation in political activities, related to voting, making monetary contributions, involvement in time-based acts, and political discussion.

- The latent utility is specified as a linear function of common measures of access to resources — including education, income, job level, job skills, vocabulary skills, time spent at work — and demographic controls.
Distribution of assignment probabilities

- **P(\text{Type} = \text{activist})**
  - Mean = 21.4%

- **P(\text{Type} = \text{apathetic})**
  - Mean = 33.9%

- **P(\text{Type} = \text{moderate})**
  - Mean = 44.7%
Distribution of individual type assignments
Distribution of individual type assignments
Baseline participation probabilities
Effects of increase in education (by activity and type)
Effects of increase in time spent at work
(by activity and type)
Effects of increase in job skills
(by activity and type)
## Correlates of type assignment

<table>
<thead>
<tr>
<th></th>
<th>Apathetic</th>
<th>Moderate</th>
<th>Activist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political information (0-10 scale)</td>
<td>3.9</td>
<td>4.9</td>
<td>5.4</td>
</tr>
<tr>
<td>Political efficacy (0-16 scale)</td>
<td>8.6</td>
<td>9.5</td>
<td>10.7</td>
</tr>
<tr>
<td>Strength partisanship (1-4 scale)</td>
<td>2.7</td>
<td>3.1</td>
<td>3.2</td>
</tr>
<tr>
<td>Recruit attempts (0-5 scale)</td>
<td>0.4</td>
<td>0.8</td>
<td>1.7</td>
</tr>
</tbody>
</table>

- I’m currently analyzing re-interview data, with the goal of determining whether 1990 classifications are predictive of behavior years later.
Conclusion

- Large heterogeneities in political participation exist that do not fit the resource-mobilization hypothesis.
- Finite mixture modeling can be used to learn about individuals’ latent participation intensities.
- The influence of resources on the probability of participating in political activities varies conditionally on latent heterogeneities.
- In order to account for these latent heterogeneities, we need to consider information about involvement in a variety of political activities.


• Other studies that use either finite mixture modeling or latent class analysis to learn about latent participation intensities:
  
