Insight Into Inequality: Exploring Differential Responsiveness in U.S. Cities

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Research Question

Whose opinion is represented in city policy outcomes?

Background

Much of the existing literature examines differential responsiveness to economic status, generally finding that elected officials appear to be much more responsive to the opinions of individuals who are wealthy compared to the middle class and poor when making policy decisions in a variety of political contexts.

In addition to its focus on class, this scholarship also tends to focus on district or state level representation. Less is known about unequal responsiveness at the local level, as local politics research is often hampered by a lack of available public opinion data.

However, local politics scholarship provides evidence of disparities at the local level. For example, Hajnal and Trounstine (2014) show that Black, Latinx, and poor residents feel less-well served by local governments than White and wealthier members of their communities. These gaps are persistent even when controlling for policy outcomes, with the gaps in satisfaction along racial lines being the most severe.

Hypotheses

Wide gaps in satisfaction are probably an indicator that American democracy is far from equally responsive to all citizens. Further, it is race, not class, that appears to mediate this relationship at the local level. Given the findings by previous research, I hypothesize that policy outcomes will be more reflective of White opinion than Black or Latinx opinion.

Assessing Representation

We can think about policy outcomes as a function of weighted group opinon, where $\bar{X}_G$ is the mean ideology among racial group G within the city sample and P_G is the proportion of racial group G within the sample. Multiplying the proportion of the sample with raw group mean ideologies takes into account the different sizes of the groups in the electorate.

Assuming there are three groups, White, Black, and Latinx, then the mean policy position can be represented in the form

$$Policy = \bar{X}_W P_W + \bar{X}_B P_B + \bar{X}_L P_L \tag{1}$$

Following previous scholarship, we can turn the formal model into a statistical model that allows the weights placed on the groups to vary. If mean preferences are represented without regard to group characteristics (in this analysis, the group characteristic is race), then the coefficients in a regression of policy outcomes on the proportion weighted group means should all be equal in size and significance. If the coefficient of one group is larger than the others, this is consistent with the hypothesis that policy responds more to this group than to others.

$$Policy = \beta_0 + \beta_1 \bar{X}_W P_W + \beta_2 \bar{X}_B P_B + \beta_3 \bar{X}_L P_L + \varepsilon \tag{2}$$

β_0	intercept
β_1	weight placed on White preferences
β_2	weight placed on Black preferences
β_3	weight placed on Latinx preferences

Data

Measuring Public Opinion Using a Group-Level IRT Model

Sources: 2006, 2007, 2008, 2009, 2010, 2012, 2014 CCES
Sample: 68 policy items
Process:
1. Code all policy question responses as liberal or conservative (1=liberal, 0=conservative).
2. Estimate group-level opinion using a group-level item response model. Developed by Caughey and Warshaw (2015), the essential idea is to model individual latent ability (θ_i) as distributed normally around group means and marginalize over the distribution of abilities. So, rather than model individual responses to each question, it instead models the total number of "correct" responses in group g:

$$s_{gj} = \sum_{i}^{n_{gi}} y_{[i]gj} \tag{3}$$

Where s_{gi} is distributed binomial (n_{gj}, p_{gj}), n_{gj}=the number of non-missing responses, and p_{gj}= the probability that a randomly sampled member of group g correctly answers item j:

$$p_{gj} = \Phi[(\bar{\theta}g - k_j)/\sqrt{\sigma_\theta^2 + \sigma_j^2}] \tag{4}$$

$\bar{\theta}_g$	mean of the θ_i in group g
σ_θ	within-group standard deviation of abilities
k_j	threshold of item j
σ_j	dispersion of item j

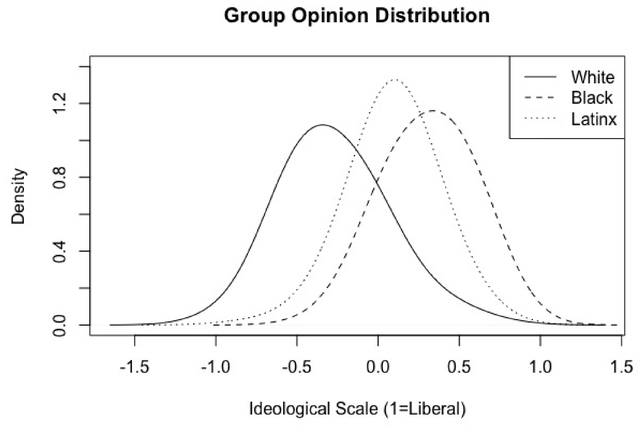

Figure 1: The distribution of group opinion estimates derived from the model. White opinion tends to be more conservative than both Black and Latinx opinion.

Measuring Policy Outcomes

Sample: U.S. cities with a population size greater than 100k.
Sources: Following previous work that examines responsiveness at the city level, I adopt a mixed approach and measure city policy outcomes using:
• A scaled measure of policy outcomes developed by Tausanovitch and Warshaw (2014). Positive values indicate more *conservative* policy outcomes.
• Three other policy measures available via the 2007 Census of Governments: per capita taxes, per capita expenditures, and the proportion of revenues derived from sales tax. Increased expenditures and taxes indicate *liberal* outcomes, while larger values of sales tax revenue indicate a more regressive tax structure that falls more heavily on poor residents (*conservative* outcomes).

Results

Association Between Policy Outcomes & Group Preferences

	Dependent variable:			
	Policy	Expenditures/capita	Sales Tax	Taxes/capita
$\bar{X}_{Black}P_{Black}$	1.14	96.22	−0.26	955.70
	(1.98)	(1,592.33)	(0.22)	(765.55)
$\bar{X}_{White}P_{White}$	**−1.41**	**2,003.92**	**−0.14**	**796.26**
	(0.45)	(463.71)	(0.06)	(223.02)
$\bar{X}_{Latinx}P_{Latinx}$	−1.96	936.96	−0.00	421.39
	(1.12)	(797.65)	(0.11)	(380.86)
Constant	−1.35	**2,363.36**	0.17	**1,363.69**
	(1.21)	(838.81)	(0.10)	(440.82)
Controls for group proportion?	Y	Y	Y	Y
Observations	78	224	161	222

Bold entries, p<.05; Random effects for each state included in order to account for state heterogeneity.

Policy Implications: Predicted vs. Observed Outcomes

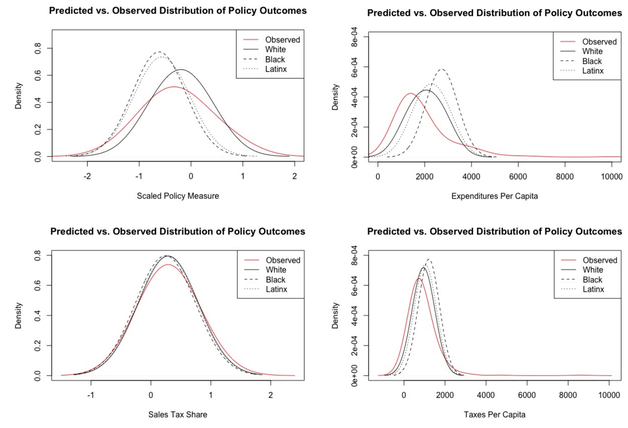

Figure 2: One way of thinking about the substantive implications of the findings presented above is to consider a hypothetical situation in which the effect of Black and Latinx preferences is equivalent to that of White preferences. We can test this idea by setting the coefficients of Black and Latinx preferences to the value of the coefficient of White preferences in each of the models in the Table above and generating predicted values for each of the dependent variables. These predicted distributions are illustrated in Figure 2.

Discussion

• In this project, I develop group-level public opinion estimates using a group-level IRT model in order to test for differential policy responsiveness at the local level.
• As predicted, some opinions appear to count more than others.
• Unequal responsiveness has consequences for policy outcomes.
• Future research should explore *why* these differences exist.

References

[1] Caughey, Devin and Christopher Warshaw. 2015. "Dynamic Estimation of Latent Opinion Using a Hierarchical Group-Level IRT Model." *Political Analysis* 23(2): 197-211.
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[3] Tausanovitch, Chris and Christopher Warshaw. 2014. "Representation in Municipal Government." *American Political Science Review* 108(3): 605-641.