

Smart City Research Cluster Final Research Report, Part I

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1. Research Executive Summary

Gathering data on public opinion has long been recognized as essential for efficient government. The information collected in polls can inform leaders about the existence of problems, the issues citizens would like to see addressed, and the types of solutions citizens would favor or oppose. While national and state officials have the benefit of numerous national and state opinion polls, city officials have traditionally been more limited in their ability to utilize opinion polling. Telephone polls are prohibitively expensive for local governments and local media organizations, and it is also increasingly difficult to gather representative samples via telephone given changes in communications technology.

My project uses geographically targeted advertisements on the Facebook social media platform to recruit city residents into city surveys. Any advertiser on Facebook can purchase ads directed at predefined demographic and geographic targets. I use these ads to route city residents to the Qualtrics survey software platform, where I survey them on their attitudes toward local issues.

I fielded my first survey in August 2017, recruiting 974 survey completions at a total cost of about \$2,900, or about 3 dollars per respondent. A similarly sized telephone survey would cost an estimated \$32,000, whereas online panel companies such as Qualtrics and Survey Sampling International would charge about \$5 per respondent, but would be able to recruit only 300 respondents. My second survey is currently in the field and should be completed this week.

Substantively, my results show that police, fire, and EMS services are ranked highly by city residents. For instance, 77% of Memphians say the police are respectful in their neighborhood, and 64% say the promptly respond to calls; 95% say firefighters are respectful, and 95% say the fire department responds promptly to calls. Residents are also positive toward garbage collection, with 84% agreeing that garbage collections are on time. Residents are more negative toward the maintenance of city streets, with just 45% reporting that major streets are well-maintained. More broadly, 48% of Memphians are overall satisfied with city services, and 70% are satisfied with their own neighborhood as a place to live. Crime is a pressing issue for most Memphians: 75% believe that crime has been increasing in the city over the past year. Finally, knowledge of local government is low: over 40% of Memphians could not offer an opinion on the performance of their own city councilor.

Methodologically, my results speak to the challenges and opportunities of using Facebook as a survey recruitment platform. My August sample was diverse, with respondents from around the city. However, it was not representative of the racial and economic makeup of the city. On the August sample, I also found that Facebook's technology for targeting ads by "race" does not work, so can not be used to correct for survey non-representativeness. On the December survey, I am experimenting with Facebook's targeting of ads by education and age, and so far the results are encouraging.

2. Next Steps

After discovering that Facebook's ad targeting algorithm fails to identify respondents by race, I have been experimenting with targeting based on education and age. So far, the results are encouraging: a near-perfect match in terms of age, and a much higher success rate with education as opposed to race. The failure of the race targeting raises interesting questions about the ability of Facebook and other "big data" firms to classify individuals into demographic categories, and will be of interest to social scientists seeking to use Facebook as a general method of survey recruitment.

In my results, I have also discovered that city residents are also generally more favorable of the City Council as an institution, and less favorable toward their own city councilor. This is the opposite of what is observed at the national level, where voters much prefer their own member of Congress compared to Congress as an institution.

3. External Funding

Based in part on my results in this project, I have submitted an application for an Andrew Carnegie Research Fellowship, in which I propose to extend my research design to 50 cities. The awards will be announced in April 2018. Depending on the outcome of this grant, I will also apply for a National Science Foundation grant in Summer 2018. I am also considering a proposal to the Russell Sage Foundation's Computational Social Science Initiative in Spring 2018.

4. Publications and Conference Presentations

I presented the results of my August survey at the 2017 American Political Science Association annual meeting in September 2017. I have been accepted to present these results at the 2018 Midwest Political Science Association Meeting in April 2018. I also presented my results at the FedEx Institute in September.

5. Student Involvement

I have involved one of our Master's students in this project by having her proofread versions of my surveys and offer feedback on questions.