

Informing Voters About Public Finance: Evidence from a Survey Experiment

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Appendix

Appendix A: Experimental Design and Vignettes

Crime Increase Treatment Credit Increase Treatment Crime Decrease Treatment Incumbent Political Knowledge **Evaluations** Questions (Post-Treatment) (Pre-treatment) Crime Increase Treatment Credit Decrease Treatment Crime Decrease Treatment

Figure A.1. Experimental Design

In Figure A.1, branches between nodes represent random assignment to treatment conditions. Next, we present the vignettes from our study in which we randomly assign whether the fictional Mayor Smith has presided over a credit rating upgrade or downgrade, as well as over a crime rate increase or decrease. Both of these conditions are fully crossed for four possible experimental vignettes:

Smith heads into Election Day with credit downgrade, decrease in crime

SPRINGFIELD – Mayor Smith held a final campaign event before local voters head to the polls. In front of a crowd of supporters, Smith expressed pride about the city's performance, "I am so proud of what we have accomplished."

Smith has spent much of his time in office navigating the city through the COVID-19 pandemic. The results have been mixed.

Municipal services are a bright spot for Mayor Smith. City trash collection has operated more smoothly in recent years. And Smith oversaw the opening of two new parks. Response times for fire emergencies are down and construction on the city's sewer upgrade is ahead of schedule.

Heading into the election, crime rates are down. The city's finances are changing too. Its credit rating is down for the first time in a decade according to the rating agency Moody's. This will make government services more expensive to provide in the near future.

Experts say the race for mayor is too close to call.

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Appendix B: Balance/Randomization Tests

Credit Downgrade Crime Increase High Knowledge 0.015 -0.009 (0.019)(0.019)Female -0.025 -0.006 (0.020)(0.020)0.000 -0.000 Age (0.001)(0.001)College Degree 0.018 -0.009 (0.020)(0.020)Nonwhite 0.004 0.022 (0.021)(0.021)Republican -0.015 0.005 (0.020)(0.020)Homeowner -0.007 0.013 (0.020)(0.020)0.036* Kids in K-12 School 0.021 (0.021)(0.021)0.491*** 0.478*** Constant (0.036)(0.036)

3039

3039

Note: p < 0.1; p < 0.05; p < 0.01

Observations

Appendix C: Additional Analyses with Control Variables

	Re-election	Re-election (Skin-in-the-game) Approval Competence				
High Knowledge	0.065**	0.007	0.029	0.018		
	(0.029)	(0.014)	(0.019)	(0.014)		
Credit Downgrade	-0.129***	-0.069***	-0.028**	-0.054***		
	(0.022)	(0.010)	(0.014)	(0.011)		
Crime Increase	-0.137***	-0.099***	-0.068***	-0.075***		
	(0.022)	(0.010)	(0.014)	(0.011)		
High Knowledge × Credit Downgrade	-0.049	-0.006	-0.016	-0.030*		
	(0.033)	(0.015)	(0.021)	(0.016)		
High Knowledge × Crime Increase	-0.063*	-0.028*	0.017	-0.031*		
	(0.033)	(0.015)	(0.021)	(0.016)		
Female	-0.041**	-0.023***	0.031***	-0.037***		
	(0.018)	(0.008)	(0.012)	(0.009)		
Age	0.001**	0.001***	0.001**	0.000		
	(0.001)	(0.000)	(0.001)	(0.000)		
College Degree	0.050***	0.018**	0.030***	0.025***		
	(0.017)	(0.008)	(0.011)	(0.009)		
Nonwhite	-0.046**	-0.028***	-0.016	-0.013		
	(0.019)	(0.009)	(0.012)	(0.009)		
Republican	-0.077***	-0.016*	-0.005	-0.042***		
	(0.018)	(0.008)	(0.012)	(0.009)		
Homeowner	0.046**	0.007	-0.038***	0.032***		
	(0.018)	(0.008)	(0.011)	(0.009)		
Kids in K-12 School	-0.090***	-0.034***	0.007	-0.051***		
	(0.019)	(0.009)	(0.012)	(0.009)		
Constant	0.837***	0.700***	0.576***	0.731***		
	(0.035)	(0.017)	(0.023)	(0.018)		
Observations	3035	3035	3036	3036		

	Optimistic	Nice Place to Live	Raise Family	Start Business	Handling of Finances	Handling of Crime
High Knowledge	0.004	0.024	0.013	0.029*	0.042**	0.023
	(0.016)	(0.015)	(0.016)	(0.016)	(0.017)	(0.017)
Credit Downgrade	-0.061***	-0.056***	-0.053***	-0.067***	-0.125***	-0.039***
	(0.012)	(0.012)	(0.012)	(0.012)	(0.013)	(0.013)
Crime Increase	-0.082***	-0.099***	-0.116***	-0.079***	-0.084***	-0.219***
	(0.012)	(0.012)	(0.012)	(0.012)	(0.013)	(0.013)
High Knowledge × Credit Downgrade	-0.021	-0.019	-0.021	-0.034*	-0.084***	0.016
	(0.018)	(0.018)	(0.018)	(0.018)	(0.019)	(0.019)
High Knowledge × Crime Increase	-0.016	-0.022	-0.033*	-0.033*	-0.015	-0.094***
	(0.018)	(0.017)	(0.018)	(0.018)	(0.019)	(0.019)
Female	-0.031***	-0.019**	-0.027***	-0.020**	-0.028***	-0.038***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)
College Degree	0.022**	0.023**	0.024**	0.019*	0.014	0.006
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)
Nonwhite	-0.017*	-0.023**	-0.018*	-0.019*	-0.003	-0.019*
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Republican	-0.041***	-0.034***	-0.055***	-0.042***	-0.038***	-0.042***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.010)
Homeowner	0.027***	0.014	0.014	0.014	0.029**	0.029**
	(0.010)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)
Kids in K-12 School	-0.042***	-0.036***	-0.044***	-0.046***	-0.043***	-0.044***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)
Constant	0.742***	0.731***	0.743***	0.720***	0.745***	0.767***
	(0.019)	(0.020)	(0.020)	(0.020)	(0.021)	(0.021)
Observations	3039	3038	3038	3037	3037	3033

Appendix D: Analyses with Alternative Measures of Political Sophistication (Knowledge of State and Local Finance)

In our main analyses, we measure political knowledge using general questions about American political institutions. Zaller (1992) writes that general political knowledge is an excellent predictor of overall political sophistication and strongly associates with how well citizens are able to process new or less salient information about politics. In this Appendix, we examine whether specific knowledge of an issue related to public finance conditions how voters incorporate information about municipal credit into their evaluations of incumbent performance.

We measure knowledge specific to public finance by asking respondents if their state is spending more money than it takes in, less money than it takes in, or about as much money as it takes in. We repeat this as well for respondents' cities. Because states and cities are required to balance their budgets, there is a clear "wrong" answer choice that we can use to separate respondents who are unaware of this requirement on local finances. On this specific measure of public finance knowledge, 42.5 percent of respondents incorrectly responded that their states were running budget deficits, and 42.9 percent responded that their cities were running budget deficits. We code respondents who indicate that their states and cities are not running deficits as high-knowledge on these measures (57.5 and 57.1 percent respectively).

Figure D.1 presents average treatment effects on our outcome variables of interest for reading about a credit downgrade and a crime rate increase across voters who correctly identified that their state is *not* running a budget deficit (High-knowledge) and voters who did not know this fact (Low-knowledge). Once more, we are most interested in the average treatment effect of a credit downgrade across levels of public finance-specific political knowledge.

The pattern of results, across ten outcome measures, presented in Figure D.1 is nearly identical to that presented in Figure 1 in the main text. Once more, reading about a credit downgrade caused evaluations of Mayor Smith and the city of Springfield to decline significantly. More importantly for this study, we observe no examples of high-knowledge voters who correctly indicate that their state balances its budget (or runs a budget surplus) displaying significantly larger or smaller average treatment effects of reading about a municipal credit downgrade than voters who believed that their state is spending more money than it collects in a given year. As with general political knowledge, voters with low knowledge of public finance still absorb and process information about municipal credit downgrades similar to voters with high issue-specific knowledge. This is an important finding that once again demonstrates the usefulness of periodic updates about the credit risk of city governments to voters of all stripes.

Finally, we repeat the analyses presented in Figure D.1, but for respondents who correctly indicated that their city is not spending more money than it collects each year. These conditional average treatment effects are presented in Figure D.2 and are nearly identical to those presented in Figure D.1.

In sum, formation about changes to municipal credit ratings has powerful effects on voters' evaluations of mayoral incumbents. This is the case even in the presence of another prevailing signal of incumbent performance, changes to the crime rate. We should be especially mindful of this in light of the fact that crime is an easy and salient issue in local elections, while public finance is considerably less discussed and receives significantly less media attention outside of the most extreme cases.

Figure D.1. Treatment Effects of Credit Downgrade and Crime Increase on Mayoral Evaluations by State Public Finance Knowledge

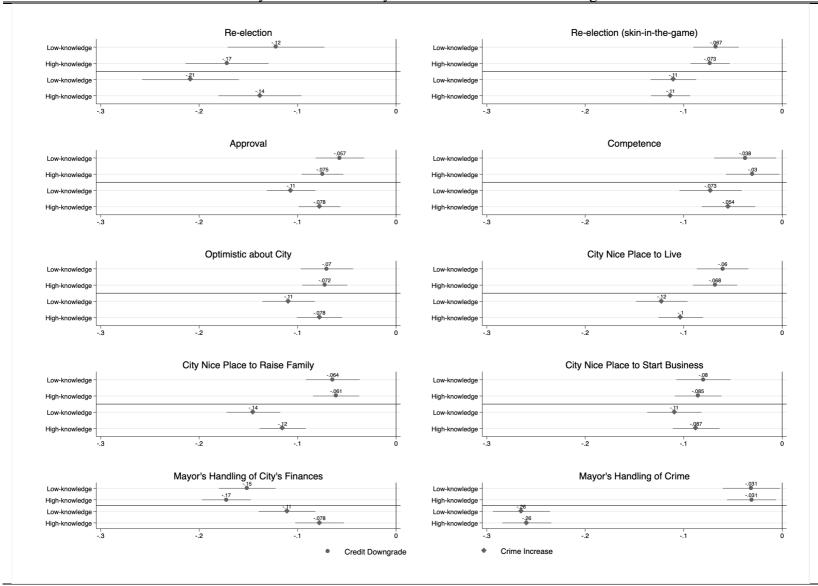
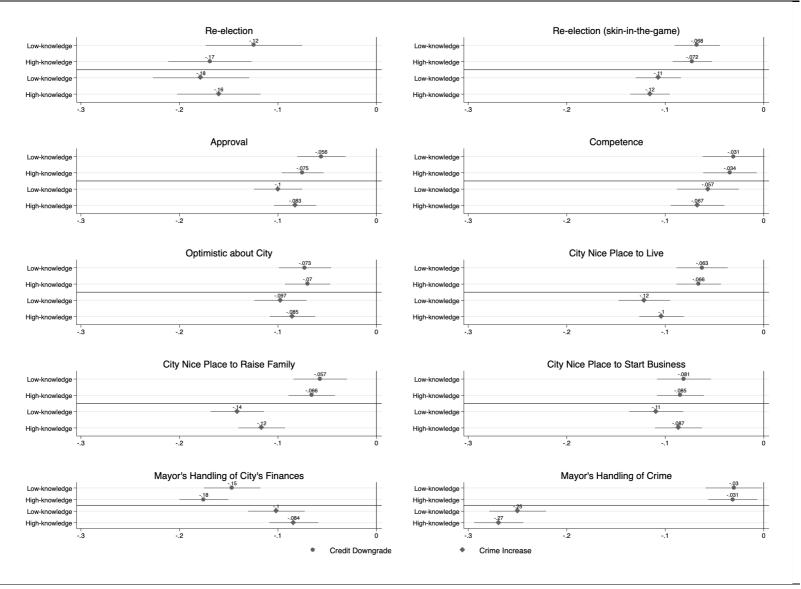


Figure D.2. Treatment Effects of Credit Downgrade and Crime Increase on Mayoral Evaluations by City Public Finance Knowledge



Appendix E: Ethical Statement & Preregistration

The authors confirm that this research complies with American Political Science Association Council Principles and Guidance for Human Subjects Research. Participants gave informed consent after reading a statement at the start of the survey. They knew they were part of a research study and that their responses would be confidential and securely stored. Each participant read one of twelve fictional newspaper articles about a mayor ("Mayor Smith") running for reelection in "Springfield." This mild deception was necessary to embed the experimental treatments within the articles, as real newspaper content could not provide the needed control. Participants were debriefed at the end of the survey, informed the articles were fictional, and the study's purpose was explained.

The research followed APSA's principles on deception and was approved by the Institutional Review Boards of [REDACTED]. Participants faced no risk, and the study did not interfere with political processes. Compensation was provided according to Lucid's user agreement, offering rewards like cash or in-game currency. Compensation was comparable to other U.S. online survey platforms, and participants were entered into a lottery for a \$100 gift card bonus.

We also have no apparent conflicts of interest and have no external funding to report.

Lastly, our experiment was preregistered with the Open Science Foundation. The document is available [REDACTED]. The text of the preregistered hypothesis relevant to this study is, "Voters who are more aware of current events will be less likely to support mayors when provided with information showing that credit ratings worsened relative to voters who are less aware of current events."