Supplementary Appendix for:
Off-Cycle and Off-Center: Election Timing and Representation in Municipal Government

Adam M. Dynes
Assistant Professor
Department of Political Science
Brigham Young University
adamdynes@byu.edu

Michael T. Hartney
Assistant Professor
Department of Political Science
Boston College
michael.hartney@bc.edu

Sam D. Hayes
PhD Candidate
Department of Political Science
Boston College
hayessl@bc.edu

Abstract

Who governs America's cities: organized interests or mass publics? Though recent scholarship finds that local governments enact policies that align with citizens' preferences, others argue that it is organized interests, *not* mass publics, that are influential. To reconcile these perspectives, we show that election timing can help shed light on when voters or groups will be pivotal in city politics. Examining 1,600 large US cities, we find that off-cycle elections affect city policy responsiveness asymmetrically, weakening responsiveness on those issues where there is an active and organized interest whose policy objectives deviate from the preferences of the median resident. Here, we focus on public employees interests and find that local governments that are elected off-cycle spend more on city workers than would be preferred by citizens in more conservative cities. We conclude by discussing the implications of these findings for the study of interest groups and representation in local politics.

Table of Contents

A. Full Regression Results from Analyses in Paper

Table A1: Full Regression Results for Table 1, Rows (1) and (2): Election Timing and Association Between Citizens' Preferences and Expenditures and Taxes Per Capita

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	Expenditures Per Capita			Taxes Per Capita		
Sample:	All Cities	Off-Cycle	On-Cycle	All Cities	Off-Cycle	On-Cycle
Residents' Policy Conservatism	-384.11*	-356.15*	-592.47*	-153.96*	-95.96^	-487.04*
	(117.94)	(124.94)	(290.06)	(53.18)	(54.79)	(156.04)
Population (in 100k)	54.90*	52.49*	156.73*	35.95*	35.85*	61.04*
	(7.91)	(7.44)	(49.20)	(3.52)	(3.23)	(26.01)
Median Income (in $100k)	-697.38*	-596.60*	-1,095.73*	90.70	104.97	-143.99
	(208.08)	(223.11)	(510.29)	(94.77)	(98.08)	(285.14)
Median Home Value (in $100k)	236.58*	242.51*	255.95*	182.58*	196.41*	169.04*
	(39.86)	(44.62)	(85.25)	(17.91)	(19.49)	(45.66)
Proportion Black	339.65^	206.73	1,618.88*	336.90*	362.97*	481.54
	(179.63)	(181.53)	(538.52)	(81.21)	(79.87)	(292.82)
Constant	1,723.25*	1,549.25*	1,790.97*	559.82*	407.15*	727.76*
	(154.39)	(132.91)	(251.80)	(88.69)	(64.40)	(150.63)
Observations	1,615	1,247	353	1,574	1,229	330
Number of State Units for Random Effects	51	45	23	50	45	22

Note: Results are from OLS regressions with state-level random effects, following the specifications from Table 2 of Tausanovitch and Warshaw (2014). The dependent variable is expenditures per capita in columns 1 through 3 and taxes per capita in columns 4 through 6. Columns 1 and 4 show the results when all cities are included in the regression. Other columns limit the sample to either cities with off-cycle (2 and 5) or on-cycle (3 and 6) elections. Standard errors are in parentheses. * $p<0.05$, ^ $p<0.1$ (two-tailed).

Table A2: Full Regression Results for Table 1, Rows (3) and (4): Election Timing and Association Between Citizens' Preferences and Scaled Policy Outcomes and Sales Tax Share

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	Scaled Policy Outcomes			Share of Taxes from Sales Tax		
Sample:	All Cities	Off-Cycle	On-Cycle	All Cities	Off-Cycle	On-Cycle
Residents' Policy Conservatism	1.03*	1.02*	0.98*	0.05*	0.05*	0.05^
	(0.19)	(0.21)	(0.42)	(0.01)	(0.02)	(0.03)
Population (in 100k)	-0.00	-0.00	0.01	0.00	0.00	0.00
	(0.01)	(0.01)	(0.06)	(0.00)	(0.00)	(0.00)
Median Income (in $100k)	0.36	0.60	-0.25	-0.14*	-0.15*	-0.09^
	(0.35)	(0.39)	(0.78)	(0.02)	(0.03)	(0.05)
Median Home Value (in $100k)	-0.16*	-0.20*	-0.14	0.00	0.01	-0.00
	(0.06)	(0.07)	(0.12)	(0.00)	(0.01)	(0.01)
Proportion Black	0.19	0.20	0.23	-0.07*	-0.05*	-0.19*
	(0.38)	(0.40)	(1.15)	(0.02)	(0.02)	(0.05)
Constant	0.16	0.12	0.13	0.25*	0.25*	0.22*
	(0.15)	(0.17)	(0.31)	(0.03)	(0.03)	(0.05)
Observations	436	335	101	1,613	1,245	353
Number of State Units for Random Effects	43	37	14	51	45	23

Note: Results are from OLS regressions with state-level random effects, following the specifications from Table 2 of Tausanovitch and Warshaw (2014). The dependent variable is the scaled policy outcome measure in columns 1 through 3 and share of taxes from sales tax in columns 4 through 6. Columns 1 and 4 show the results when all cities are included in the regression. Other columns limit the sample to either cities with off-cycle (2 and 5) or on-cycle (3 and 6) elections. Standard errors are in parentheses. * $p<0.05$, ^ $p<0.1$ (two-tailed).

Table A3: Full Regression Results for Figure 1: Election Timing and Association Between Citizens' Preferences and Policy Outcomes

Dependent Variable:	(1) Salary Expenditures Per Capita	(2) Full-Time Employees Per 1,000	(3) Mean Employee Salary (in $1,000)	(4) Expenditures Per Capita	(5) Taxes Per Capita	(6) Placebo: LGBTQ Rights Policies
Residents' Policy Conservatism	-135.47*	-0.98	-6.39*	-231.90^	-61.88	-51.73*
	(48.89)	(0.78)	(1.40)	(126.24)	(56.63)	(5.85)
On-Cycle Elections (1=yes)	-35.31	-0.53	0.29	-10.00	38.76	0.31
	(26.61)	(0.42)	(0.76)	(68.59)	(31.49)	(3.76)
Interaction: Conservatism*On-Cycle	-336.81*	-3.81*	-5.30*	0.00	-297.69*	10.09
	(81.27)	(1.30)	(2.32)	(0.00)	(95.01)	(8.48)
Population (in 100k)	29.25*	0.37*	0.27*	-419.97*	35.85*	0.60*
	(2.95)	(0.05)	(0.08)	(209.22)	(3.37)	(0.20)
Median Income (in $100k)	-689.25*	-12.87*	13.63*	53.87*	57.33	8.52
	(77.93)	(1.24)	(2.23)	(7.57)	(91.05)	(13.18)
Median Home Value (in $100k)	165.54*	2.07*	2.56*	-745.97*	185.43*	-2.21
	(14.92)	(0.24)	(0.43)	(200.44)	(17.21)	(2.97)
Proportion Black	251.17*	5.89*	-5.53*	238.57*	343.92*	14.14
	(68.00)	(1.09)	(1.94)	(38.37)	(79.09)	(10.30)
Constant	623.62*	12.11*	52.49*	370.17*	379.25*	46.95*
	(28.38)	(0.45)	(0.81)	(175.80)	(33.03)	(4.68)
				1,434.82*		
Observations	1,616	1,616	1,616	(73.03)	1,559	398
R-squared	0.22	0.19	0.22		0.25	0.34
Number of state-unit fixed effects	50	50	50	1,600	49	49

Note: Results are from OLS regressions with state-level fixed effects. * p<0.05, ^ p<0.1 (two-tailed).

B. Robustness Checks: Alternative Model Specifications for Figure 1 & Table A3

In this section, we examine how well the results hold up using alternative specifications, which include an alternative measure of city residents' policy conservatism (city-level presidential vote share for the Republican candidate), robust standard errors clustered at the state-level, additional control variables (primarily institutional ones), and state-level random effects instead of fixed effects. All of the institutional control variables, save for number of services provided, come from Tausanovitch and Warshaw (2014). To measure the number of services provided by each city, we used the US Census Bureau's 2012 Census of Government data on municipal finances, which asks municipalities to indicate their expenditures on 28 different spending categories, which includes common city services such as roads and parks and also uncommon ones such as municipal airports and hospitals. The number of services provided in our sample of cities ranges from 5 to 28. The mean and median are 16 with a standard deviation of 3.4. Our results are robust to these alternative specifications except in two specifications, which involve the outcome expenditures per capita when clustering the standard errors or including the additional control variables. In both cases, the coefficient is still in the right direction but narrowly loses statistical significance. However, all of the results hold when presidential vote share is used instead of the ideal point estimate of residents' ideology

In the main paper, we show the results that only control for demographic variables following the specifications from Tausanovitch and Warshaw (2014). As they point out, there are concerns about multicollinearity when including other electoral institutions as controls since common institutional differences at the municipal-level were enacted as a slate of reforms by Progressives in the late 1800's and early 1900's. Though Progressives did push to change election-timing along with non-partisan elections, city managers instead of mayors, and at-large city councils, Anzia (2012) finds that Progressives sometimes also pushed for on-cycle elections if the timing was to their electoral advantage. Indeed, when we examine the correlation between having on-cycle elections and our other independent variables (Table A4), we find little

correlation between them, including the electoral institutions that were the focus of many

Progressive reformers. Furthermore, a variance-influence factor analysis of our regressions also

fails to find any concerning levels of multicollinearity. Given this lack of correlation and the

robust finding in Tausanovitch and Warshaw (2014) that these other electoral institutions do not

condition policy responsiveness, we do not include them in the analyses in the main paper.

Table A4: Correlation Between Election Timing and Other Independent Variables

	(1) On-Cycle Elections (1=yes)
Residents' Policy Conservatism	-0.02
Repub. Vote Share (2008 Pres.)	0.02
Population (in 100k)	-0.02
Median Income (in $100k)	0.10
Median Home Value (in $100k)	0.17
Proportion Black	-0.10
Number of Services Provided	-0.10
Partisan Elections (1=yes)	-0.04
Proportion At-Large	0.17
Direct Democracy (1=yes)	0.03
Term Limits (1=yes)	0.03
Elected Mayor (1=yes)	-0.10

Table A5: Results with Presidential Vote Share as Measure of Citizens' Preferences

Dependent Variable:	(1) Salary Expenditures Per Capita	(2) Full-Time Employees Per 1,000	(3) Mean Employee Salary (in $1,000)	(4) Expenditures Per Capita	(5) Taxes Per Capita
Repub. Vote Share (2008 Pres.)	184.19*	4.28*	-4.76^	574.96*	76.52
	(90.82)	(1.44)	(2.67)	(234.31)	(101.46)
On-Cycle Elections (1=yes)	296.58*	3.42*	8.23*	580.22*	201.17*
	(65.18)	(1.03)	(1.92)	(167.36)	(73.57)
Interaction: Vote Share*On-Cycle	-734.82*	-8.85*	-17.64*	-1,393.11*	-353.55*
	(144.85)	(2.30)	(4.26)	(371.45)	(163.25)
Population (in 100k)	31.25*	0.40*	0.30*	57.42*	36.97*
	(2.95)	(0.05)	(0.09)	(7.57)	(3.26)
Median Income (in $100k)	-831.38*	-15.04*	13.88*	-889.54*	-131.06
	(82.28)	(1.31)	(2.42)	(211.42)	(92.91)
Median Home Value (in $100k)	181.36*	2.33*	2.97*	255.41*	180.10*
	(15.15)	(0.24)	(0.45)	(38.93)	(16.89)
Proportion Black	404.21*	8.32*	-4.04^	732.06*	409.51*
	(77.17)	(1.22)	(2.27)	(200.02)	(86.86)
Constant	504.21*	9.47*	54.63*	1,112.80*	374.71*
	(47.27)	(0.75)	(1.39)	(121.97)	(52.92)
Observations	1,415	1,415	1,415	1,403	1,369
R-squared	0.23	0.21	0.23	0.09	0.23
Number of state-unit fixed effects	39	39	39	39	38

Note: Results are from OLS regressions with state-level fixed effects. * $p<0.05$, ^ $p<0.1$ (two-tailed).

Table A6: Results with Clustered Standard Errors

Dependent Variable:	(1) Salary Expenditures Per Capita	(2) Full-Time Employees Per 1,000	(3) Mean Employee Salary (in $1,000)	(4) Expenditures Per Capita	(5) Taxes Per Capita
Residents' Policy Conservatism	-135.47*	-0.98	-6.39*	-231.90	-61.88
	(45.56)	(0.80)	(2.31)	(142.65)	(55.52)
On-Cycle Elections (1=yes)	-35.31	-0.53	0.29	-10.00	38.76
	(47.06)	(0.69)	(1.56)	(144.16)	(36.64)
Interaction: Conservatism*On-Cycle	-336.81*	-3.81*	-5.30*	0.00	-297.69*
	(91.58)	(1.71)	(2.15)	(0.00)	(102.39)
Population (in 100k)	29.25*	0.37*	0.27^	-419.97	35.85*
	(2.57)	(0.05)	(0.15)	(274.56)	(8.60)
Median Income (in $100k)	-689.25*	-12.87*	13.63*	53.87*	57.33
	(103.45)	(1.85)	(4.10)	(9.86)	(156.66)
Median Home Value (in $100k)	165.54*	2.07*	2.56*	-745.97*	185.43*
	(18.85)	(0.35)	(0.58)	(311.29)	(41.22)
Proportion Black	251.17^	5.89*	-5.53*	238.57*	343.92*
	(147.91)	(2.22)	(2.34)	(50.17)	(84.77)
Constant	623.62*	12.11*	52.49*	370.17	379.25*
	(50.48)	(0.71)	(1.11)	(234.88)	(110.45)
				1,434.82*	
Observations	1,616	1,616	1,616	(106.16)	1,559
R-squared	0.22	0.19	0.22		0.25
Number of state-unit fixed effects	50	50	50	1,600	49

Note: Results are from OLS regressions with state-level fixed effects. * p<0.05, ^ p<0.1 (two-tailed, robust, clustered at state level).

Table A7: Results with Presidential Vote Share as Measure of Citizens' Preferences and Clustered Standard Errors

Dependent Variable:	(1) Salary Expenditures Per Capita	(2) Full-Time Employees Per 1,000	(3) Mean Employee Salary (in $1,000)	(4) Expenditures Per Capita	(5) Taxes Per Capita
Repub. Vote Share (2008 Pres.)	184.19^	4.28^	-4.76	574.96^	76.52
	(95.75)	(2.15)	(4.58)	(315.66)	(136.40)
On-Cycle Elections (1=yes)	296.58*	3.42*	8.23*	580.22*	201.17*
	(55.88)	(1.00)	(3.06)	(179.21)	(60.70)
Interaction: Vote Share*On-Cycle	-734.82*	-8.85*	-17.64*	-1,393.11*	-353.55*
	(163.16)	(3.21)	(4.52)	(425.53)	(121.13)
Population (in 100k)	31.25*	0.40*	0.30^	57.42*	36.97*
	(2.28)	(0.05)	(0.16)	(9.36)	(7.98)
Median Income (in $100k)	-831.38*	-15.04*	13.88*	-889.54*	-131.06
	(130.67)	(2.06)	(3.84)	(350.52)	(190.46)
Median Home Value (in $100k)	181.36*	2.33*	2.97*	255.41*	180.10*
	(17.30)	(0.34)	(0.42)	(48.50)	(20.60)
Proportion Black	404.21*	8.32*	-4.04	732.06*	409.51*
	(160.28)	(2.63)	(4.35)	(260.38)	(80.36)
Constant	504.21*	9.47*	54.63*	1,112.80*	374.71*
	(54.10)	(0.94)	(2.53)	(117.65)	(69.07)
Observations	1,415	1,415	1,415	1,403	1,369
R-squared	0.23	0.21	0.23	0.09	0.23
Number of state-unit fixed effects	39	39	39	39	38

Note: Results are from OLS regressions with state-level fixed effects. * p<0.05, ^ p<0.1 (two-tailed, robust, clustered at state level).

Table A8: Results with Institutional Controls

Dependent Variable:	(1) Salary Expenditures Per Capita	(2) Full-Time Employees Per 1,000	(3) Mean Employee Salary (in $1,000)	(4) Expenditures Per Capita	(5) Taxes Per Capita
Residents' Policy Conservatism	-100.71*	-0.40	-5.55*	-83.11	-0.42
	(49.23)	(0.79)	(1.47)	(128.85)	(58.33)
On-Cycle Elections (1=yes)	-38.75	-0.69	0.16	-6.53	41.13
	(26.85)	(0.43)	(0.80)	(70.20)	(32.06)
Interaction: Conservatism*On-Cycle	-247.82*	-2.72*	-5.35*	-302.13	-327.93*
	(82.01)	(1.31)	(2.45)	(214.55)	(97.98)
Population (in 100k)	21.72*	0.26*	0.22*	36.29*	30.51*
	(2.94)	(0.05)	(0.09)	(7.70)	(3.47)
Median Income (in $100k)	-504.97*	-10.30*	14.68*	-334.20	161.96^
	(79.97)	(1.28)	(2.39)	(209.09)	(95.51)
Median Home Value (in $100k)	147.69*	1.81*	2.44*	192.15*	170.32*
	(14.66)	(0.23)	(0.44)	(38.32)	(17.38)
Proportion Black	194.00*	4.63*	-3.51^	296.35	346.47*
	(71.15)	(1.14)	(2.12)	(187.26)	(85.02)
Number of Services Provided	31.64*	0.48*	0.14	81.37*	28.30*
	(3.47)	(0.06)	(0.10)	(9.08)	(4.15)
Partisan Elections (1=yes)	-48.96	-0.35	-2.31*	-44.78	70.17^
	(29.83)	(0.48)	(0.89)	(78.17)	(36.14)
Proportion At-Large	-4.09	0.05	0.14	29.81	41.43
	(21.21)	(0.34)	(0.63)	(55.59)	(25.45)
Direct Democracy (1=yes)	2.92	0.25	0.08	95.77^	31.90
	(19.79)	(0.32)	(0.59)	(51.85)	(23.60)
Term Limits (1=yes)	9.95	-0.08	1.60*	15.86	-39.12
	(22.10)	(0.35)	(0.66)	(57.96)	(26.23)
Elected Mayor (1=yes)	-31.80	-0.53^	-0.86	-97.64^	-40.36^
	(19.60)	(0.31)	(0.58)	(51.39)	(23.55)
Constant	132.76*	4.49*	50.72*	123.86	-98.40
	(64.42)	(1.03)	(1.92)	(168.55)	(76.83)
Observations	1,454	1,454	1,454	1,448	1,422
R-squared	0.26	0.22	0.24	0.14	0.28
Number of state-unit fixed effects	50	50	50	50	49

Note: Results are from OLS regressions with state-level fixed effects. * $p<0.05$, ^ $p<0.1$ (two-tailed).

Table A9: Results with Presidential Vote Share as Measure of Citizens' Preferences and Institutional Controls

Dependent Variable:	(1) Salary Expenditures Per Capita	(2) Full-Time Employees Per 1,000	(3) Mean Employee Salary (in $1,000)	(4) Expenditures Per Capita	(5) Taxes Per Capita
Repub. Vote Share (2008 Pres.)	100.01	3.52*	-6.30*	485.67*	140.78
	(91.84)	(1.45)	(2.84)	(240.42)	(104.95)
On-Cycle Elections (1=yes)	173.68*	1.73^	7.91*	434.56*	252.98*
	(65.50)	(1.04)	(2.02)	(171.55)	(75.84)
Interaction: Vote Share*On-Cycle	-470.34*	-5.48*	-16.92*	-1,045.09*	-479.03*
	(144.76)	(2.29)	(4.47)	(378.98)	(167.70)
Population (in 100k)	22.31*	0.27*	0.25*	36.87*	31.19*
	(2.94)	(0.05)	(0.09)	(7.71)	(3.36)
Median Income (in $100k)	-609.76*	-11.88*	15.49*	-378.93^	-19.10
	(84.04)	(1.33)	(2.60)	(220.04)	(97.03)
Median Home Value (in $100k)	156.56*	1.96*	2.68*	194.37*	164.19*
	(14.77)	(0.23)	(0.46)	(38.68)	(16.94)
Proportion Black	272.87*	6.14*	-3.16	512.56*	390.12*
	(80.62)	(1.28)	(2.49)	(212.65)	(93.03)
Number of Services Provided	32.92*	0.51*	0.16	82.91*	26.48*
	(3.62)	(0.06)	(0.11)	(9.48)	(4.15)
Partisan Elections (1=yes)	-23.96	-0.02	-2.02*	-46.14	99.61*
	(31.15)	(0.49)	(0.96)	(81.79)	(36.47)
Proportion At-Large	-10.49	-0.04	0.46	5.10	50.51^
	(22.70)	(0.36)	(0.70)	(59.44)	(26.23)
Direct Democracy (1=yes)	12.13	0.37	-0.04	99.18^	28.88
	(20.77)	(0.33)	(0.64)	(54.46)	(23.90)
Term Limits (1=yes)	9.87	-0.12	1.61*	-4.53	-25.08
	(23.22)	(0.37)	(0.72)	(60.81)	(26.60)
Elected Mayor (1=yes)	-10.01	-0.16	-1.09^	-33.79	-6.66
	(21.28)	(0.34)	(0.66)	(55.75)	(24.63)
Constant	31.55	1.80	53.22*	-173.99	-110.87
	(77.46)	(1.23)	(2.39)	(202.75)	(88.63)
Observations	1,282	1,282	1,282	1,279	1,259
R-squared	0.27	0.24	0.25	0.15	0.27
Number of state-unit fixed effects	39	39	39	39	38

Note: Results are from OLS regressions with state-level fixed effects. * p<0.05, ^ p<0.1 (two-tailed).

Table A10: Results with Random Effects

Dependent Variable:	(1) Salary Expenditures Per Capita	(2) Full-Time Employees Per 1,000	(3) Mean Employee Salary (in $1,000)	(4) Expenditures Per Capita	(5) Taxes Per Capita
Residents' Policy Conservatism	-152.48*	-1.15	-7.89*	-260.02*	-74.30
	(48.73)	(0.78)	(1.37)	(127.35)	(58.26)
On-Cycle Elections (1=yes)	-33.00	-0.51	0.53	4.64	44.98
	(26.47)	(0.42)	(0.74)	(69.02)	(32.34)
Interaction: Conservatism*On-Cycle	-371.65*	-4.19*	-5.16*	0.00	-415.47*
	(80.88)	(1.29)	(2.28)	(0.00)	(97.58)
Population (in 100k)	29.29*	0.37*	0.27*	-651.50*	36.40*
	(2.96)	(0.05)	(0.09)	(210.78)	(3.50)
Median Income (in $100k)	-671.37*	-12.69*	14.48*	55.19*	79.20
	(78.18)	(1.24)	(2.23)	(7.73)	(94.27)
Median Home Value (in $100k)	162.88*	2.04*	2.51*	-707.24*	182.99*
	(14.97)	(0.24)	(0.43)	(203.97)	(17.83)
Proportion Black	252.86*	5.96*	-7.24*	235.02*	365.30*
	(67.79)	(1.08)	(1.91)	(39.07)	(81.37)
Constant	741.73*	14.61*	47.95*	408.91*	533.89*
	(64.25)	(1.12)	(1.16)	(177.38)	(80.49)
				1,703.08*	
Observations	1,616	1,616	1,616	(148.35)	1,559
Number of state-unit fixed effects	50	50	50		49

Note: Results are from OLS regressions with state-level random effects, following the specifications from Table 2 of Tausanovitch and Warshaw (2014). * p<0.05, ^ p<0.1 (two-tailed).

Table A11: Results with Presidential Vote Share as Measure of Citizens' Preferences and Random Effects

Dependent Variable:	(1) Salary Expenditures Per Capita	(2) Full-Time Employees Per 1,000	(3) Mean Employee Salary (in $1,000)	(4) Expenditures Per Capita	(5) Taxes Per Capita
Repub. Vote Share (2008 Pres.)	183.56*	4.42*	-8.41*	558.64*	71.83
	(89.59)	(1.43)	(2.63)	(229.23)	(99.44)
On-Cycle Elections (1=yes)	294.34*	3.42*	7.96*	599.08*	204.69*
	(64.80)	(1.03)	(1.93)	(166.14)	(73.14)
Interaction: Vote Share*On-Cycle	-730.05*	-8.87*	-15.89*	-1,409.75*	-364.59*
	(143.91)	(2.29)	(4.27)	(368.13)	(161.88)
Population (in 100k)	31.22*	0.40*	0.30*	57.81*	37.00*
	(2.94)	(0.05)	(0.09)	(7.55)	(3.25)
Median Income (in $100k)	-824.83*	-15.00*	14.80*	-897.70*	-127.70
	(81.81)	(1.30)	(2.43)	(209.80)	(92.31)
Median Home Value (in $100k)	180.45*	2.32*	2.95*	258.74*	180.04*
	(15.06)	(0.24)	(0.45)	(38.65)	(16.80)
Proportion Black	405.93*	8.49*	-6.88*	706.51*	405.12*
	(76.10)	(1.21)	(2.23)	(195.47)	(85.07)
Constant	591.70*	11.46*	51.66*	1,257.32*	418.55*
	(74.08)	(1.29)	(1.71)	(162.46)	(72.73)
Observations	1,415	1,415	1,415	1,403	1,369
Number of state-unit fixed effects	39	39	39	39	38

Note: Results are from OLS regressions with state-level random effects, following the specifications from Table 2 of Tausanovitch and Warshaw (2014). * $p<0.05$, ^ $p<0.1$ (two-tailed).

# C. Placebo Outcomes & Alternative Model Specifications

In this section, we examine whether election timing impacts the relationship between citizens' preferences and four other policy outcomes where, based on our theory, election timing should not have any impact on city responsiveness to the mass public. In these placebo analyses, we replicate the very same model specifications used in the previous section of this appendix. Across all of these models, we fail to uncover any evidence that election timing impacts the relationship between citizens' preferences and these policy outcomes. Two of the outcomes, scaled policy outcomes (on environmental and sustainability policies) and share of taxes from sales taxes, are part of our replication of Tausanovitch and Warshaw (2014). In addition, these two are not directly linked to the common interest of public employees to increase municipal spending on staff. The other two outcomes, which we highlight in the manuscript as placebo tests, are LGBTQ rights (also used by Warshaw 2019) and prohibitions on employment discrimination by gender identity. Both are measured by the Human Rights Campaign, which is a national advocacy organization that pushes for LGBTQ friendly policies and tracks their adoption at the municipal-level. Though there are clearly some well-known organizations working on LGTBQ issues (especially in state and national politics), Anzia (2020) does not find evidence that these groups are as well-organized and reliably active on a nationwide basis in municipal politics, especially as compared to public employees who can constitute anywhere from 10 to 30%+ of the potential electorate in a city (American Community Survey). As such, we do not expect election timing to either enhance or dilute policy responsiveness to a city's median resident on these outcomes, which is what we find in the analyses below. Across the many specifications presented below, the interaction between election timing and residents' preferences approaches statistical significance in only one case (Column 1 of Table A16). Even then, it is in the opposite direction than we would anticipate if cities with on-cycle elections were always more responsive to public opinion across all issues areas regardless of whether interest groups were organized around that issue or not.

Table A12: Placebo Outcomes using same specification as Figure 1 and Table A3 (Demographic Controls and State-Level Fixed Effects)

Dependent Variable:	(1) LGBTQ Rights Policies	(2) Gender Identity Protections	(3) Scaled Policy Outcomes	(4) Share of Taxes from Sales Tax
Residents' Policy Conservatism	-51.73*	-6.21*	1.07*	0.04*
	(5.85)	(0.80)	(0.26)	(0.01)
On-Cycle Elections (1=yes)	0.31	-0.76	-0.11	-0.01
	(3.76)	(0.77)	(0.14)	(0.01)
Interaction: Conservatism*On-Cycle	10.09	0.00	-0.22	0.02
	(8.48)	(0.00)	(0.45)	(0.02)
Population (in 100k)	0.60*	-1.73	-0.02	0.00
	(0.20)	(1.79)	(0.01)	(0.00)
Median Income (in $100k)	8.52	0.71*	0.17	-0.13*
	(13.18)	(0.12)	(0.37)	(0.02)
Median Home Value (in $100k)	-2.21	-5.55*	-0.14*	0.00
	(2.97)	(1.68)	(0.07)	(0.00)
Proportion Black	14.14	-0.08	-0.19	-0.07*
	(10.30)	(0.40)	(0.47)	(0.02)
Constant	46.95*	-2.89*	0.22	0.24*
	(4.68)	(0.97)	(0.16)	(0.01)
Observations	398		436	1,598
R-squared	0.34		0.11	0.05
Number of state-unit fixed effects	49	1,390	43	50

Note: Results are either from OLS (for columns 1, 3, and 4) or logit (for column 2) regressions with state-level fixed effects. * p<0.05, ^ p<0.1 (two-tailed).

Figure A1: Placebo Outcomes using same specification as Figure 1 and Table A3
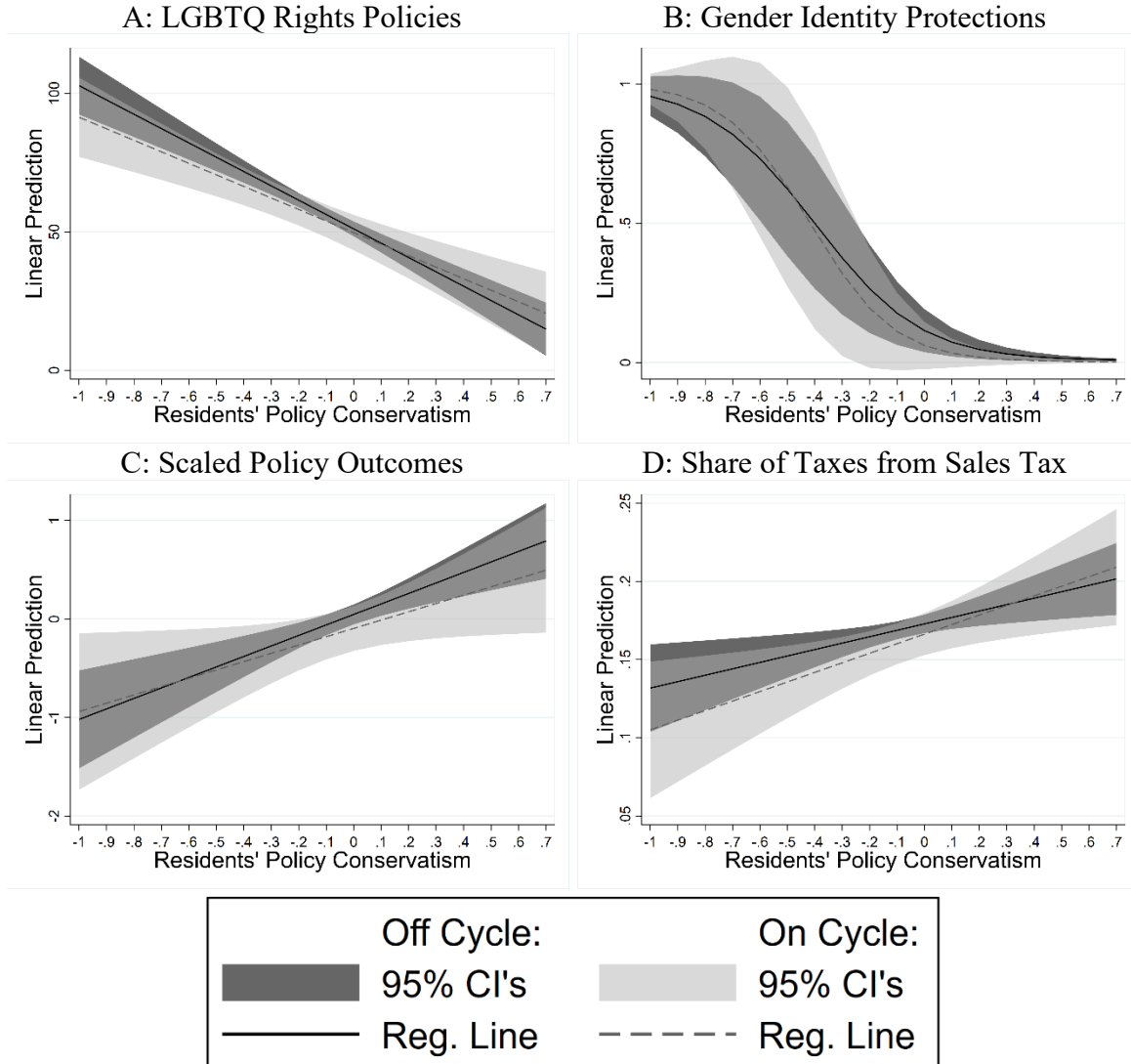
Notes: This Figure shows the relationship between residents' policy conservatism and several placebo outcomes (within each panel) based on whether the municipalities' elections are held off cycle (black line, dark gray CI's) or on cycle (gray dashed line, light gray CI's). See Table A12 in the appendix for full regression results.

Table A13: Placebo Outcomes with Presidential Vote Share as Measure of Citizens' Preferences

Dependent Variable:	(1) LGBTQ Rights Policies	(2) Gender Identity Protections	(3) Scaled Policy Outcomes	(4) Share of Taxes from Sales Tax
Repub. Vote Share (2008 Pres.)	-87.74*	-8.20*	1.96*	0.11*
	(13.99)	(1.51)	(0.49)	(0.03)
On-Cycle Elections (1=yes)	-4.74	1.13	-0.37	-0.02
	(8.57)	(1.32)	(0.39)	(0.02)
Interaction: Vote Share*On-Cycle	15.57	-5.08	0.47	0.01
	(20.19)	(4.46)	(0.84)	(0.05)
Population (in 100k)	0.58*	0.80*	-0.02	-0.00
	(0.21)	(0.11)	(0.01)	(0.00)
Median Income (in $100k)	3.98	-6.39*	0.14	-0.16*
	(14.41)	(1.69)	(0.39)	(0.03)
Median Home Value (in $100k)	1.10	0.50	-0.14*	0.00
	(3.15)	(0.32)	(0.07)	(0.00)
Proportion Black	9.64	-2.67*	0.31	-0.04
	(12.12)	(1.02)	(0.52)	(0.02)
Constant	85.03*		-0.68*	0.20*
	(7.50)		(0.27)	(0.01)
Observations	337	1,215	390	1,401
R-squared	0.28		0.12	0.06
Number of state-unit fixed effects	39	26	34	39

Note: Results are either from OLS (for columns 1, 3, and 4) or logit (for column 2) regressions with state-level fixed effects. * p<0.05, ^ p<0.1 (two-tailed).

Table A14: Placebo Outcomes with with Clustered Standard Errors

Dependent Variable:	(1) LGBTQ Rights Policies	(2) Gender Identity Protections	(3) Scaled Policy Outcomes	(4) Share of Taxes from Sales Tax
Residents' Policy Conservatism	-51.73*		1.07*	0.04*
	(6.15)		(0.15)	(0.02)
On-Cycle Elections (1=yes)	0.31		-0.11	-0.01
	(3.63)		(0.09)	(0.01)
Interaction: Conservatism*On-Cycle	10.09		-0.22	0.02
	(7.54)		(0.29)	(0.03)
Population (in 100k)	0.60		-0.02*	0.00
	(0.40)		(0.00)	(0.00)
Median Income (in $100k)	8.52		0.17	-0.13*
	(18.13)		(0.24)	(0.05)
Median Home Value (in $100k)	-2.21		-0.14*	0.00
	(3.01)		(0.06)	(0.01)
Proportion Black	14.14		-0.19	-0.07*
	(11.47)		(0.38)	(0.03)
Constant	46.95*		0.22*	0.24*
	(6.03)		(0.10)	(0.02)
Observations	398		436	1,598
R-squared	0.34		0.11	0.05
Number of state-unit fixed effects	49		43	50

Note: Results are either from OLS (for columns 1, 3, and 4) or logit (for column 2) regressions with state-level fixed effects. Estimates for column 2 are missing because Stata cannot run a fixed effects logit model with clustered standard errors. * p<0.05, ^ p<0.1 (two-tailed, robust, clustered at the state level).

Table A15: Placebo Outcomes with Presidential Vote Share as Measure of Citizens' Preferences and Clustered Standard Errors

Dependent Variable:	(1) LGBTQ Rights Policies	(2) Gender Identity Protections	(3) Scaled Policy Outcomes	(4) Share of Taxes from Sales Tax
Repub. Vote Share (2008 Pres.)	-87.74*		1.96*	0.11*
	(16.35)		(0.41)	(0.03)
On-Cycle Elections (1=yes)	-4.74		-0.37^	-0.02
	(10.18)		(0.19)	(0.02)
Interaction: Vote Share*On-Cycle	15.57		0.47	0.01
	(25.37)		(0.49)	(0.04)
Population (in 100k)	0.58		-0.02*	-0.00
	(0.52)		(0.01)	(0.00)
Median Income (in $100k)	3.98		0.14	-0.16*
	(12.39)		(0.25)	(0.06)
Median Home Value (in $100k)	1.10		-0.14*	0.00
	(1.33)		(0.07)	(0.01)
Proportion Black	9.64		0.31	-0.04^
	(10.52)		(0.46)	(0.02)
Constant	85.03*		-0.68*	0.20*
	(8.53)		(0.24)	(0.01)
Observations	337		390	1,401
R-squared	0.28		0.12	0.06
Number of state-unit fixed effects	39		34	39

Note: Results are either from OLS (for columns 1, 3, and 4) or logit (for column 2) regressions with state-level fixed effects. Estimates for column 2 are missing because Stata cannot run a fixed effects logit model with clustered standard errors. * p<0.05, ^ p<0.1 (two-tailed, robust, clustered at the state level).

Table A16: Placebo Outcomes with Institutional Controls

Dependent Variable:	(1) LGBTQ Rights Policies	(2) Gender Identity Protections	(3) Scaled Policy Outcomes	(4) Share of Taxes from Sales Tax
Residents' Policy Conservatism	-53.68*	-6.17*	0.98*	0.05*
	(6.12)	(0.85)	(0.26)	(0.02)
On-Cycle Elections (1=yes)	0.36	-0.48	-0.11	-0.01
	(3.91)	(0.80)	(0.13)	(0.01)
Interaction: Conservatism*On-Cycle	14.93^	-1.44	-0.26	0.01
	(8.94)	(1.83)	(0.44)	(0.03)
Population (in 100k)	0.41^	0.59*	-0.00	-0.00
	(0.22)	(0.13)	(0.01)	(0.00)
Median Income (in $100k)	12.04	-5.13*	-0.13	-0.13*
	(13.89)	(1.86)	(0.38)	(0.03)
Median Home Value (in $100k)	-4.22	-0.17	-0.10	0.00
	(3.15)	(0.42)	(0.06)	(0.00)
Proportion Black	7.34	-2.31*	-0.01	-0.09*
	(11.03)	(1.05)	(0.47)	(0.02)
Number of Services Provided	0.72	0.13*	-0.10*	0.00*
	(0.51)	(0.06)	(0.02)	(0.00)
Partisan Elections (1=yes)	6.44	-0.24	-0.20	-0.00
	(4.40)	(0.47)	(0.19)	(0.01)
Proportion At-Large	-2.45	0.05	0.05	0.00
	(2.77)	(0.32)	(0.11)	(0.01)
Direct Democracy (1=yes)	5.54^	0.35	0.12	-0.00
	(2.97)	(0.37)	(0.10)	(0.01)
Term Limits (1=yes)	-2.43	-0.35	0.00	-0.01
	(2.81)	(0.39)	(0.11)	(0.01)
Elected Mayor (1=yes)	-0.05	0.01	0.34*	-0.01
	(2.73)	(0.31)	(0.12)	(0.01)
Constant	34.59*		1.49*	0.21*
	(9.91)		(0.36)	(0.02)
Observations	371	1,239	428	1,446
R-squared	0.37		0.19	0.07
Number of state-unit fixed effects	49	33	43	50

Note: Results are either from OLS (for columns 1, 3, and 4) or logit (for column 2) regressions with state-level fixed effects. * p<0.05, ^ p<0.1 (two-tailed).

Table A17: Placebo Outcomes with Presidential Vote Share as Measure of Citizens' Preferences and Institutional Controls

Dependent Variable:	(1) LGBTQ Rights Policies	(2) Gender Identity Protections	(3) Scaled Policy Outcomes	(4) Share of Taxes from Sales Tax
Repub. Vote Share (2008 Pres.)	-97.80*	-8.43*	1.96*	0.11*
	(14.57)	(1.66)	(0.49)	(0.03)
On-Cycle Elections (1=yes)	-11.81	1.11	-0.25	-0.01
	(9.20)	(1.36)	(0.38)	(0.02)
Interaction: Vote Share*On-Cycle	30.13	-4.54	0.16	-0.01
	(21.34)	(4.55)	(0.82)	(0.05)
Population (in 100k)	0.36	0.72*	-0.00	-0.00
	(0.23)	(0.13)	(0.01)	(0.00)
Median Income (in $100k)	9.53	-6.07*	-0.25	-0.15*
	(15.15)	(1.98)	(0.40)	(0.03)
Median Home Value (in $100k)	-0.62	0.34	-0.09	0.00
	(3.26)	(0.37)	(0.06)	(0.00)
Proportion Black	-0.55	-2.29*	0.54	-0.05^
	(13.09)	(1.15)	(0.52)	(0.03)
Number of Services Provided	0.77	0.15*	-0.11*	0.00*
	(0.56)	(0.06)	(0.02)	(0.00)
Partisan Elections (1=yes)	6.99	-0.16	-0.13	-0.00
	(4.88)	(0.47)	(0.19)	(0.01)
Proportion At-Large	-1.32	-0.03	0.03	0.00
	(3.10)	(0.34)	(0.12)	(0.01)
Direct Democracy (1=yes)	6.73*	0.41	0.12	-0.00
	(3.21)	(0.36)	(0.11)	(0.01)
Term Limits (1=yes)	-0.31	-0.63	0.04	-0.01
	(3.13)	(0.43)	(0.11)	(0.01)
Elected Mayor (1=yes)	-0.92	-0.18	0.41*	-0.01
	(3.12)	(0.33)	(0.12)	(0.01)
Constant	74.32*		0.74^	0.17*
	(12.14)		(0.44)	(0.03)
Observations	316	1,111	383	1,277
R-squared	0.32		0.21	0.07
Number of state-unit fixed effects	39	26	34	39

Note: Results are either from OLS (for columns 1, 3, and 4) or logit (for column 2) regressions with state-level fixed effects. * p<0.05, ^ p<0.1 (two-tailed).

Table A18: Placebo Outcomes with Random Effects

Dependent Variable:	(1) LGBTQ Rights Policies	(2) Gender Identity Protections	(3) Scaled Policy Outcomes	(4) Share of Taxes from Sales Tax
Residents' Policy Conservatism	-61.22*	-6.06*	1.06*	0.05*
	(5.17)	(0.76)	(0.21)	(0.01)
On-Cycle Elections (1=yes)	-0.89	-0.73	-0.19^	-0.01
	(3.19)	(0.66)	(0.11)	(0.01)
Interaction: Conservatism*On-Cycle	12.09	0.00	-0.15	0.00
	(8.08)	(0.00)	(0.42)	(0.00)
Population (in 100k)	0.68*	-1.10	-0.01	0.02
	(0.20)	(1.48)	(0.01)	(0.02)
Median Income (in $100k)	16.48	0.72*	0.36	0.00
	(12.61)	(0.11)	(0.35)	(0.00)
Median Home Value (in $100k)	-3.96	-5.69*	-0.17*	-0.14*
	(2.80)	(1.65)	(0.06)	(0.02)
Proportion Black	-5.24	-0.15	0.12	0.00
	(8.81)	(0.38)	(0.38)	(0.00)
Constant	45.53*	-3.09*	0.21	-0.07*
	(4.49)	(0.90)	(0.15)	(0.02)
Observations	398		436	
Number of state-unit fixed effects	49	-1.13^	43	0.25*

Note: Results are either from OLS (for columns 1, 3, and 4) or logit (for column 2) regressions with state-level random effects, following the specifications from Table 2 of Tausanovitch and Warshaw (2014). * $p<0.05$, ^ $p<0.1$ (two-tailed).

Table A19: Placebo Outcomes with Presidential Vote Share as Measure of Citizens' Preferences and Random Effects

Dependent Variable:	(1) LGBTQ Rights Policies	(2) Gender Identity Protections	(3) Scaled Policy Outcomes	(4) Share of Taxes from Sales Tax
Repub. Vote Share (2008 Pres.)	-108.71*	-7.67*	1.85*	0.12*
	(12.32)	(1.45)	(0.42)	(0.03)
On-Cycle Elections (1=yes)	-8.47	0.75	-0.48	-0.02
	(8.56)	(1.20)	(0.38)	(0.02)
Interaction: Vote Share*On-Cycle	20.17	-4.39	0.64	0.01
	(19.90)	(3.98)	(0.81)	(0.05)
Population (in 100k)	0.69*	0.77*	-0.01	-0.00
	(0.21)	(0.10)	(0.01)	(0.00)
Median Income (in $100k)	14.56	-6.33*	0.24	-0.16*
	(13.97)	(1.69)	(0.38)	(0.03)
Median Home Value (in $100k)	-0.66	0.39	-0.16*	0.00
	(3.01)	(0.32)	(0.06)	(0.00)
Proportion Black	-10.77	-2.79*	0.49	-0.04
	(10.54)	(0.97)	(0.42)	(0.02)
Constant	92.15*	1.96*	-0.62*	0.22*
	(7.06)	(0.81)	(0.24)	(0.04)
Observations	337	1,415	390	1,401
Number of state-unit fixed effects	39	39	34	39

Note: Results are either from OLS (for columns 1, 3, and 4) or logit (for column 2) regressions with state-level random effects, following the specifications from Table 2 of Tausanovitch and Warshaw (2014). * $p<0.05$, ^ $p<0.1$ (two-tailed).

D. Municipal Officials' Views on Representation

To address the concern that cities that historically adopted on-cycle elections did so because they tend to be more systematically responsive to their residents and that this trend continues to more recent years, we examine survey data from the 2016 American Municipal Officials Survey (Butler and Dynes 2016), which surveyed a broad sample of municipal officials from across the US in 2016.[1] The survey included a question asking officials whether they generally favored their constituents' preferences or their own when those preferences conflicted. As we show in Table A20, officials' attitude on being a delegate or trustee do not differ by election timing.

Figure A2 shows the question wording and possible responses, which are coded on a 1 to 5 scale, where 1 = "Do what their constituents want, even if it conflicts with what the elected official thinks is right." And 5 = "Do what they think is right, even if it conflicts with what their constituents want." Thus, lower numbers indicate the official favors a delegate form of representation while higher numbers indicate they favor a trustee form of representation. We show the results for all respondents in the survey in columns 1 and 2 as well as for only those respondents from cities with a population above 20,000 (according to the 2010 Census), which matches the size of cities in our other analyses. Either way, the results are the same.

The analysis in Table A20 controls for the same city-level variables used in the main results in this paper. The results hold when we include respondent-level variables (partisanship, ideology, years in office, ambition for current office, ambition for higher office, office held). We do not include those data in the replication files to preserve respondents' confidentiality.

---

[1] Dynes, Hassell, and Miles (2019) is an example of a publication using other sets of questions from the 2016 American Municipal Officials Survey.

Figure A2: Question Measuring Municipal Officials' Views on Representation

Elected officials have a variety of different ideas about their relationship with their constituents. Below are two alternatives. Please click on a circle that best represents your views.

If you completely agree with the statement, select the circle closest to that statement. If you don't completely agree, you may select a circle between the two statements.

When it comes to important issues, elected officials should ...

Do what their constituents want, even if it conflicts with what the elected official thinks is right. ○ ○ ○ ○ ○ Do what they think is right, even if it conflicts with what their constituents want.

Table A20: Municipal Officials' Views on Delegate vs. Trustee Representation

Dependent Variable: Views on Representation. 1= Favors Delegate, 5=Favors Trustee	(1)	(2)	(3)	(4)
	All Officials in Survey		Officials in Cities w/ Population > 20,000	
On-Cycle Elections (1=yes)	0.13	0.14	0.16	0.04
	(0.08)	(0.09)	(0.13)	(0.16)
Population (in 100k)		0.00		0.01
		(0.01)		(0.01)
Median Income (in $100k)		0.37*		0.24
		(0.13)		(0.32)
Percent Own Home		-0.01		0.01
		(0.01)		(0.02)
Percent Black		0.00		-0.00
		(0.00)		(0.00)
Constant	3.58*	3.51*	3.56*	3.36*
	(0.03)	(0.10)	(0.04)	(0.22)
Observations	2,162	1,920	934	693
Number of state-unit fixed effects	0.00	0.01	0.00	0.01

Note: Results are from OLS regressions with state-level fixed effects. * p<0.05, ^ p<0.1 (two-tailed).

References

Anzia, Sarah. 2012. "Partisan power play: The origins of local election timing as an American political institution." *Studies in American Political Development* 26(1): 24-49.

Anzia, Sarah. 2020. Local Interests: Interest Groups and Public Policy in U.S. City Government. Book Manuscript.

de Benedictis-Kessner, Justin. 2018. "Off-Cycle and out of Office: Election Timing and the Incumbency Advantage." *Journal of Politics* 80(1): 119–132.

Butler, Daniel M., and Adam M. Dynes. 2016. "2016 AMOS." *American Municipal Officials Survey*. http://www.municipalsurvey.org/wp-content/uploads/2017/12/AMOS2016_details-of-sample.pdf

Dynes, Adam M., Hans J.G. Hassell, and Mathew R. Miles. 2019. "The Personality of the Politically Ambitious." *Political Behavior* 41(2): 309-336.

Human Rights Campaign. 2021. "Cities and Counties with Non-Discrimination Ordinances that Include Gender Identity." Accessed January 4, 2021. https://www.hrc.org/resources/cities-and-counties-with-non-discrimination-ordinances-that-include-gender.

Human Rights Campaign Foundation. 2013. "Municipal Equality Index: A National Evaluation of Municipal Law, 2013." Report (ISBN: 978-1-934765-28-9, ISBN: 1-934765-28-7)

Tausanovitch, Chris, and Christopher Warshaw. 2014. "Representation in Municipal Government." *American Political Science Review* 108(3): 605–41.

Warshaw, Christopher. 2019. "Local Elections and Representation in the US." *Annual Review of Political Science*. 461-479.

Pierson, Kawika, Michael L. Hand, and Fred Thompson. 2015. "The Government Finance Database: A Common Resource for Quantitative Research in Public Financial Analysis." *PLoS ONE* 10(6):1-22. Accessed June 8, 2020. http://www.willamette.edu/mba/research_impact/public_datasets/