ECON 4640: Political Economics

Question 1: Citizen-Candidate Model [50%]

Consider a society inhabited by a continuum of citizens with incomes distributed uniformly between 0 and 2. Each citizen i has preferences over private consumption c and a publicly provided private good g that are given by

$$w^i = \sqrt{c^i} + \sqrt{g}.$$

The public good g is financed through a proportional income tax τ, and the government budget constraint is $\tau y = g$ where y is average income. Private consumption is $c^i = (1-\tau)y^i$.

Consider the following timing:

1. Any citizen may enter as a political candidate at a cost ε.
2. An election is held among the candidates; the candidate who gets plurality wins the election, and a tie is resolved by the toss of a coin.
3. The winning candidate selects a tax rate; if there are no candidates, then a default tax rate $\bar{\tau}$ is implemented.

Note. The mean and median of a random variable $X \sim U[a,b]$ is $(a+b)/2$.

(a) [15%] What optimal policy would a winning candidate with income y^i implement?

(b) [15%] Suppose that $\varepsilon = 2\sqrt{\frac{1}{2}} - \sqrt{\frac{3}{4}} - \sqrt{\frac{1}{4}}$. In what region must the status quo policy $\bar{\tau}$ lie in order for the equilibrium with only the citizen with median income as candidate to exist? Note that the median income candidate must prefer implementing his/her own tax policy and paying the cost of running to accepting the outside option (i.e. default tax rate $\bar{\tau}$).

(c) [10%] Characterize the two-candidate equilibria by listing down the three conditions for its existence.

(d) [10%] Describe what would happen in a two-candidate equilibrium if the median candidate would enter. How would the set of possible equilibria change if voters voted sincerely, that is, voted for the candidate that gave them highest utility.

Question 2: Money in Politics [35%]

The main regression specification in Avis et al (2020) is

$$\begin{aligned} Y_{m,2016} = \alpha + \beta \mathbf{1}\{S_{m,2012} > 142,857\} + \delta_0 \log(S_{m,2012}) + \\ \delta_1 \log(S_{m,2012}) \mathbf{1}\{S_{m,2012} > 142,857\} + \varepsilon_{m,2016}. \end{aligned}$$

Results are presented in Table 5, reproduced below.

(a) [5%] Explain the regression equation (each variable).

(b) [5%] Which parameter are the authors most interested in? Why and what does it mean?

(c) [5%] Why do they control for $\log(S_{m,2012})$?

(d) [5%] What does it mean that BW (bandwidth) is 0.919 in the first row?

(e) [5%] How do we interpret the coefficient 0.119 in the second row of Column (1)?

(f) [5%] Under which condition can we interpret this as (an estimate of) the causal effect of higher caps on campaign spending?

(g) [5%] Do you think this condition holds? Explain.

TABLE 5—EFFECTS OF CAMPAIGN SPENDING LIMITS ON INCUMBENTS

	Linear optimal bandwidth				With controls	Quadratic	Means
	Mean	BW	Observations	(1)	(2)	(3)	(4)
Panel A. All incumbents							
Rerun	0.616	0.919	2,325	0.057	0.061	0.050	0.029
	(0.026)			(0.031)	(0.033)	(0.050)	(0.027)
Reelection	0.227	0.607	1,596	0.119	0.121	0.111	0.102
	(0.025)			(0.040)	(0.040)	(0.043)	(0.028)
Panel B. All incumbents who rerun in 2016							
Reelection (conditional on running)	0.388	0.532	895	0.137	0.139	0.145	0.117
	(0.025)			(0.044)	(0.046)	(0.062)	(0.024)
Change in vote share	−0.107	0.831	1,367	0.017	0.052	0.048	0.049
	(0.012)			(0.017)	(0.023)	(0.030)	(0.012)
Incumbent share of spending	0.461	0.890	1,462	0.043	0.027	0.040	0.036
	(0.010)			(0.019)	(0.020)	(0.026)	(0.015)
Panel C. Incumbents with high spending in 2012							
Reelection (conditional on running)	0.377	0.504	440	0.229	0.207	0.284	0.168
	(0.052)			(0.061)	(0.059)	(0.082)	(0.032)
Change in vote share	−0.150	0.453	418	0.112	0.108	0.115	0.077
	(0.021)			(0.027)	(0.026)	(0.032)	(0.015)
Incumbent share of spending	0.468	0.534	463	0.074	0.054	0.086	0.044
	(0.020)			(0.026)	(0.026)	(0.032)	(0.019)
Panel D. Incumbents with low spending in 2012							
Reelection (conditional on running)	0.434	0.313	194	−0.060	−0.172	−0.087	−0.056
	(0.053)			(0.093)	(0.105)	(0.132)	(0.034)
Change in vote share	−0.071	0.253	147	−0.132	−0.166	−0.204	−0.039
	(0.028)			(0.033)	(0.035)	(0.050)	(0.014)
Incumbent share of spending	0.428	0.253	149	0.008	−0.024	0.002	−0.019
	(0.030)			(0.050)	(0.047)	(0.069)	(0.018)
Bandwidth	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	0.2
Polynomial order	One	One	One	One	One	Two	Zero
Municipal controls	No	No	No	No	Yes	No	Yes

Notes: Each figure in columns 1–4 reports the estimate and standard error of a separate regression. Standard errors in parentheses, clustered by party. Includes state and party fixed effects. The mean is the estimated value, based on specification (1), of the dependent variable for a municipality at the cutoff point whose spending limit is R$108,039. In panel A the sample consists of all incumbents who are not term limited. In panel B the sample consists of incumbents who choose to rerun in 2016. The sample is further restricted to incumbents with 2012 spending over R$108,039 in panel C and below this amount in panel D.

Question 3: Caps on Campaign Spending [15%]

(a) [15%] Critically discuss the following argument made by a researcher:

> It is tempting to conclude that laws capping campaign spending reduce the influence of money on politics. This is, unfortunately, an illusion. Consider, for instance, the standard probabilistic voting model with campaign finance. The equilibrium in this model does not involve *any* donations. Still, donors can have a large influence on policies. Since the equilibrium involves no donations at all, limiting campaign spending cannot reduce the influence of money on politics. We also have no empirical evidence suggesting that stricter caps on campaign spending reduce the influence of money on election. The closest is Avis et al (2022) who claim to show that stricter campaign spending caps lead to less wealthy winners of elections. This correlation, however, is likely driven by the fact that larger municipalities both have richer politicians and allow for more campaign spending.