Political Economics (HT22):
Postponed exam

Question 1: Multi-dimensional politics [60%]

One example of multi-dimensional politics is the provision of local public goods (e.g. schools, hospitals, infrastructure, etc.). Consider a model where there are $\mathcal{J}$ groups of voters with n voters in each group. Thus the total number of voters is $N = \mathcal{J}n$. Policy is a vector

$$\mathbf{g} = \{g^1, g^2, ..., g^{\mathcal{J}}\} \tag{1}$$

where g^J is the amount of local public goods provided to all members of group J. Assume the preference of an individual in group J is

$$w^J = c^J + ln(g^J) \tag{2}$$

Income, y, and taxes, τ, are equal across individuals. Thus an individual in group J has budget constraint:

$$c^J = y - \tau \tag{3}$$

The government spends all its revenue on providing the local public goods.

$$\sum_J g^J = N\tau \tag{4}$$

(a) [15 pts] Setting aside assumptions on electoral competition for now. What is the socially optimal policy, $\mathbf{g}^*$?

(b) [15 pts] Assume that the allocation of local public goods are decided through legislative bargaining, where each group J is represented by a member of the legislature. One member, a, is chosen as the agenda setter and a "closed rule" process is carried out, where the agenda setter proposes a take-it-or-leave-it allocation of public goods. If the proposal fails to achieve a simple majority, the allocation defaults to $\mathbf{g}^*$. Qualitatively, what does the allocation of local public spending look like in such a decision making system?

(c) [15 pts] Now assume that political competition in this same setting is characterized by the assumptions behind the Downsian model. Specifically two parties, A and B, announce and commit to their policies, $\mathbf{g}^A$ and $\mathbf{g}^B$, in advance of a majority vote. Would the socially optimal policy derived above be an equilibrium in such a case? Why or why not.

(d) [15 pts] Now assume that political competition in this setting is characterized by the assumptions behind the probabilistic voting model. Specifically, in addition to voters shaping their preferences over the local public good policy, $\mathbf{g}$, they also have an individual bias, σ^{iJ} either for or against the ideological position of party B

relative to A. Also, the timing of the model is such that there is the possibility of a scandal hitting either party after they announce their policy commitments. This scandal, δ, can either hurt or improve every voters' perception of Party B relative to A. Voter preferences are given by

$$w^{iJ} = y - \frac{1}{N}\sum_J g^J + ln(g^J) + (\sigma^{iJ} + \delta)D_B \tag{5}$$

where D_B is an indicator variable for Party B winning the election. Individual biases are distributed uniformly over the unit interval $[-\frac{1}{2\phi^J}, \frac{1}{2\phi^J}]$ that can vary across groups of voters. The scandal shock is drawn from a uniform distribution on $[-\frac{1}{2\psi}, \frac{1}{2\psi}]$.

Since parties are only motivated by obtaining office, they set their policy, $\mathbf{g}_A$ in order to maximize the probability of being elected, p_A. Use the expression for p_A below to solve for the equilibrium policies of both parties. Comment on the result, particularly the distribution of public spending, and compare it to the socially optimal policy derived earlier.

$$p_A = \frac{1}{2} + \frac{\psi}{\phi}\frac{1}{N}\sum_J \phi^J [ln(g_A^J) - \frac{1}{N}\sum_J g_A^J - (ln(g_B^J) - \frac{1}{N}\sum_J g_B^J)] \tag{6}$$

where $\phi = \frac{1}{N}\sum_J \phi^J$.

Question 2: Money in politics [40%]

For a well-functioning democracy, it is often argued that campaign finance should be controlled in some way. In their paper, Avis, et al (2022) [1], the authors investigate the effect of spending limits in Brazilian municipal elections. They find a discontinuity where maximum allowable campaign spending in 2016 is higher for some municipalities depending on the level of their spending in 2012, which was the election prior to the spending reform's announcement.

(a) [10 pts] Table 5 from this paper is presented below. Interpret the number 0.121 in the second row of the table.

(b) [20 pts] The authors claim that campaign spending limits have a causal effect on political competition. With reference to their choice of a regression discontinuity research design and its validity, why would we believe them?

(c) [10 pts] Assume that a candidate's electoral success is increasing in campaign spending, and thus donations are an effective way of getting a candidate elected. In reality, for whatever reason, few voters donate, and the total amount of donations is small. In theory, how could this puzzle be explained?

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[1] Avis, E., Ferraz, C., Finan, F., & Varjão, C. (2022). Money and politics: The effects of campaign spending limits on political entry and competition. American Economic Journal: Applied Economics, 14(4), 167-99.

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	0.388	0.532	895	0.137	0.139	0.145	0.117
on running)	(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	0.377	0.504	440	0.229	0.207	0.284	0.168
on running)	(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	0.434	0.313	194	−0.060	−0.172	−0.087	−0.056
on running)	(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.