

I. Honesty in politics (weight 60%)

Questions 1) to 4) have weight of 1/6, question 5) weight 1/3.

Consider a country with two political parties, A and B , competing for office. The government taxes all citizens at a flat tax rate τ and provides an amount g of public goods. A citizen with income y_i then gets utility

$$U_i = (1 - \tau)y_i + H(g) \quad (1)$$

where H is an increasing and concave function. Normalizing the size of the electorate to unity and letting \bar{y} denote average income, the public budget constraint is

$$\tau\bar{y} = g + r \quad (2)$$

where r are rents acquired by the politician. Finally, a politician gets utility

$$R + \alpha r \quad (3)$$

when in office and zero when not in office. R denotes the (costless) ego rent from being in office, and $\alpha \geq 0$ is a parameter.

- 1) Find the preferred policy (g, r) for a voter with income y .
- 2) Consider a case where parties know the electorate perfectly and simultaneously announce platforms (g_A, r_A) and (g_B, r_B) to maximize their probability of winning. All voters have the same income y and vote for the party that is closest to their preferred policy. Describe the policy platforms proposed by the two parties. Explain why this outcome occurs.
- 3) How would this change if income varies between individuals according to a distribution function $F(y)$? Explain.
- 4) Consider now a case where the politicians do not know the voters perfectly. Specifically, the utility of voting for party A is still given by equation (1) whereas the utility of voting for party B is given by

$$U_i = (1 - \tau)y_i + H(g) + \sigma_i + \delta \quad (4)$$

where $\sigma_i \sim U\left(-\frac{1}{2\phi}, \frac{1}{2\phi}\right)$ and $\delta \sim U\left(-\frac{1}{2\psi}, \frac{1}{2\psi}\right)$. Assume parties maximize expected utility. Find the proposed platform by the two parties in this case (you can assume all voters have the same y_i). Why does your conclusion differ from the conclusion to Question 2?

- 5) Can elections alone eliminate political corruption, or is it also necessary that politicians can face legal consequences such as imprisonment for being corrupt? Critically discuss the following argument arguing that accountability through elections can be sufficient to prevent corruption.

Letting unelected judges decide over the faith of elected politicians can be dangerous and ultimately weaken democracy. In countries suffering from political corruption, it is much better to instead seek to improve electoral accountability. As has been shown in numerous surveys, voters state that they dislike corruption and would not vote for a candidate they know is corrupt. The problem in countries plagued with political corruption, however, is that voters do not have enough information about which candidates are corrupt. Improving transparency should thus, in theory, be sufficient to eliminate political corruption. Judicial

interference in politics is not necessary. The prediction that more transparency is the key to eliminate corruption is proven to be correct in the Brazilian setting by Ferraz and Finan (2008)¹, who show that once voters are informed about corruption, corrupt politicians are essentially not reelected.

II. Regression Discontinuity (weight 40%)

Each question has the same weight

Colonnelli et al (2020)² use a close election regression discontinuity design to study political patronage. Their main results are presented in Table 2, pasted below.

Figure 1: Table 2 from Colonnelli et al (2020)

TABLE 2—EFFECT OF SUPPORTING THE WINNING PARTY ON PUBLIC EMPLOYMENT PROBABILITY AND TOTAL EARNINGS

| Dependent variable: Group of supporters: | Employed public | | | Total earnings | | |
|---|------------------|-------------------|------------------|------------------------|-----------------------|----------------------|
| | All (1) | Candidates (2) | Donors (3) | All (4) | Candidates (5) | Donors (6) |
| Mayor | 0.105 (0.005) | 0.124 (0.005) | 0.067 (0.009) | 1,077.973 (118.236) | 1,281.960 (82.703) | 533.717 (252.498) |
| Observations | 1,447,538 | 867,888 | 550,832 | 1,447,538 | 867,888 | 550,832 |
| Mean D.V. runner-up | 0.225 | 0.241 | 0.199 | 4,322 | 3,749 | 5,262 |
| Supporters | 418,146 | 233,238 | 177,590 | 418,146 | 233,238 | 177,590 |
| Elections | 5,419 | 5,413 | 3,162 | 5,419 | 5,413 | 3,162 |

Notes: The table presents the estimated β from equation (1), and the dependent variable is an indicator for employment in the public sector (columns 1–3) or total earnings (columns 4–6). Results in columns 1 and 4 are estimated on the sample of all supporters. Results in columns 2 and 5 are estimated on the sample of candidates to the local council, and results in columns 3 and 6 are estimated on the sample of donors. The sample is restricted to supporters of the winning party or of the runner-up in a close election, using a 5 percentage point margin of victory to define an election as close. *Mean D.V. runner-up* shows the average of the dependent variable for the supporters of the runner-up in the post-election period. Standard errors are shown in parentheses and are double clustered at the supporter and election level.

1. What is the interpretation of the number 0.105 in Column 1?
2. The authors claim that this coefficient is an estimate of the causal effect of the election on obtaining a public sector job. Consider the following argument that the correlation should not be interpreted as a causal effect:

One concern with close election regression discontinuity design is electoral fraud. Vote buying in Brazil is still quite common. The fact that supporters of the winning party are more likely to have municipal jobs could thus be driven by, for instance, incumbent mayors engaging more in vote buying and also having more qualified supporters.

To what extent is this a worry? Discuss.

¹Ferraz, Claudio, and Frederico Finan. “Exposing corrupt politicians: the effects of Brazil’s publicly released audits on electoral outcomes.” *The Quarterly Journal of Economics* 123.2 (2008): 703-745.

²Colonnelli, Emanuele, Mounu Prem, and Edoardo Teso. 2020. “Patronage and Selection in Public Sector Organizations.” *American Economic Review*, 110 (10): 3071-99.

3. Folke (2014)³ also uses a close election regression discontinuity design, but he studies the effect of political parties in a Swedish context. Explain how he can use the RDD methodology and what a close election implies in his setting with proportional elections. How should we interpret the numbers -16.7 and -19.9 on the party New Democracy in Table 3?

³Folke, Olle. "Shades of brown and green: party effects in proportional election systems." *Journal of the European Economic Association* 12.5 (2014): 1361-1395.

Figure 2: Table 3 from Folke (2014)

TABLE 3. Estimated effects of seat shares on policy outcomes.

| Spec. | Refugee immigrants | | | Environmental policy | | | Tax rate | | |
|----------------------------|--------------------|-------------------------------------|-----------------------------------|----------------------|------------------------------------|----------------------------------|-----------------|-----------------------------------|-----------------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| | Base | 2SLS | OLS | Base | 2SLS | OLS | Base | 2SLS | OLS |
| Conservative Party | -3.89 (3.13) | -6.08 (4.11) | 0.32 (1.29) | 1.12 (0.71) | 1.12 (0.93) | -0.09 (0.25) | -2.20 (2.52) | -2.76 (3.16) | -0.89 (1.54) |
| Center Party | -3.59 (3.38) | -5.49 (4.25) | -1.21 (1.04) | -0.25 (0.82) | -0.42 (1.00) | 0.07 (0.19) | -1.27 (3.50) | -1.42 (4.61) | -1.09 (0.94) |
| Liberal Party | 4.34 (3.67) | 2.50 (4.38) | -2.24* (1.25) | -0.73 (0.91) | -0.64 (1.04) | -0.13 (0.30) | 1.05 (2.46) | 1.25 (3.19) | 0.34 (2.50) |
| Christian Democrats | -5.91* (3.02) | -7.43** (3.59) | 1.59 (1.42) | -0.32 (0.72) | -0.19 (0.85) | -0.12 (0.31) | -1.11 (3.21) | -1.08 (4.05) | -2.39 (1.71) |
| Environmental Party | -2.51 (3.38) | -4.23 (4.11) | 0.66 (1.20) | 1.69** (0.73) | 1.97** (0.85) | 0.10 (0.42) | 4.23 (3.29) | 4.67 (4.24) | 0.22 (1.16) |
| Left Party | -5.83 (3.95) | -6.84 (4.47) | -0.64 (0.97) | -0.95 (1.01) | -0.99 (1.06) | 0.15 (0.23) | 0.73 (3.85) | 0.44 (4.45) | 0.89 (0.90) |
| New Democracy | -16.7*** (6.06) | -19.9*** (7.48) | -2.28 (1.59) | -1.83 (1.31) | -2.05 (1.57) | -0.37 (0.42) | 0.04 (6.96) | 0.76 (8.24) | 2.79* (1.54) |
| Local Party | -5.94 (5.33) | -8.79 (6.52) | 1.38* (0.76) | -0.21 (0.90) | 0.02 (1.08) | -0.06 (0.16) | 6.45 (11.51) | 7.50 (13.98) | -0.92 (0.67) |
| Policy Index | | | | | | | | | |
| Importance | | 0.292*** (0.096) | 0.028 (0.019) | | 0.062** (0.027) | 0.007 (0.012) | | -0.276 (0.297) | -0.088 (0.101) |
| weight | | | | | | | | | |
| Policy Index | | 0.603*** (0.192) | -0.009 (0.046) | | 0.055 (0.046) | 0.015 (0.014) | | -0.314 (0.257) | -0.123 (0.100) |
| No Weight | | | | | | | | | |
| Observations | 1711 | 1710 | 1711 | 861 | 860 | 861 | 2001 | 2000 | 2001 |

Notes: Robust standard errors, clustered on municipality, in parentheses. $\lambda = 0.25\%$ for the reduced-form and 2SLS specifications. Each specification includes a fourth-order polynomial of the vote shares, election period and municipality fixed effects. The unit of observation is a municipality in an election period, the sample period is 1985–2006 for refugee immigrants, 1993–2001 for environmental policy and 1982–2006 for the tax rate. The dependent variable for refugee immigrants is the log per capita number of placed immigrants. For environmental policy, it is environmental ranking score relative to the maximal score and for the tax rate it is the municipal tax rate measured in percentage points. *Significant at 10%; ** significant at 5%; *** significant at 1%.