Political Economics
Problem Set 2

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Note

The solution to this problem set should be uploaded to Studentportalen no later than **December 3** at 24:00. Write your individual answers on computer and put your name at the top of the document. This problem set is about Electoral competition and empirical challenges in Political Economics. Please carefully motivate your answers. For any questions concerning the exercises, send me an e-mail at davide.cipullo@nek.uu.se. My office is **E434** at the Department of Economics. Good luck!

1. **Electoral competition.** In a society of N individuals there are two political candidates, L (*Left*) and R (*Right*) that compete for office under a majority rule. Voters belong to three different groups: working-class, middle class and upper-class. The share of working class voters is assumed to be α_w, the share of middle-class voters is α_m and the share of upper-class voters is $\alpha_u = 1 - \alpha_w - \alpha_m$. Each voter $i \in \{1, ...N\}$ has quasi-linear utility function: $U_i = c_i + ln(G)$, where c_i is private consumption and G is a public good. The individual budget constraint is $c_i = (1-t)w_i$, where w_i represents individual income, and t is the tax rate. All voters belonging to a group have the same income. In particular, all individuals belonging to the working class have $w_i = 1$, all middle class voters have $w_i = 2$ and all upper class voters have $w_i = 3$. The sum of private income is W and the government budget constraint is $G = \sum_{i=1}^{N} tw_i$. The politicians propose t and G before the election, and must commit on their proposal. Also, candidates differ in ideology (assume for simplicity that is unrelated to t and G), and voters take this into account when deciding who to vote for. Thus, voters do not immediately change their vote from candidate L to candidate R if candidate L proposes a policy which yields a higher utility or viceversa, but the probability of voting for a certain candidate changes when proposed policies change. The probability that a working-class voter votes for the right-wing candidate can be characterized by the probabilistic function $p_w^R = F_w(U_w^R - U_w^L)$, where U_w^R is the utility that a working-class voter gets from the policy of party R and U_w^L is the utility that a working-class voter gets from the policy of party L. Analogously, middle class voters and upper class voters have probabilistic voting functions $p_m^R = F_m(U_m^R - U_m^L)$ and $p_u^R = F_u(U_u^R - U_u^L)$.

   (a) Which tax rate, t and level of public good G, will office motivated candidates propose prior to the election if commitment is possible? Would your answer vary if politicians were policy motivated?

   (b) Suppose instead that tax rate and public good are decided by a benevolent social planner that maximizes an utilitarian SWF. Show analytically which groups affect the decision on tax rate and public good. How does your solution compares to (a)?

   (c) Suppose that different groups have different voting turnout. Only a share β_w of individuals from the working class decides to vote, while all individuals from the other groups vote. How and why does your answer to question (a) change? Motivate. It is not required to solve the model again, as long as your motivation is correct and you report the correct formulas for t and G.

(d) Suppose instead that voters do not value ideologies (i.e. consider a deterministic voting model). Solve for tax rate and the level of public good if $\alpha_w = 0.72$. Would your answers change if politicians were policy motivated? Why?

(e) Suppose now that voters do not value ideologies, and that $\alpha_w = 0.72$, $\alpha_m = 0.20$, and $\beta_w = 0.3$. Solve for tax rate and the level of public good.

2. **Short essay questions.** Answer in around half page each.

(a) Discuss why the citizen-candidate model yields the prediction that the elected candidate implements her preferred policy, while in the probabilistic voting model the elected candidate does not even when candidates are policy motivated.

(b) Describe the effect of lobbying on policy platforms when politicians are office motivated. If lobbying takes the form of campaign contribution, how much contribution would you expect the probabilistic voting model to predict in favor of the candidates? Motivate.

3. **Empirical challenges in Political Economics.** Answer the following questions in a short paragraph each. Algebra is not required but clearly explain your intuition.

(a) Suppose you are interested in investigating whether the duration in office differs across gender. You have data from Italian municipalities, where the incumbent mayor is term-limited after two consecutive terms. Your empirical strategy is a close-election regression discontinuity design, in which you compare municipalities where a male candidate won the last election by a narrow margin with municipalities in which a female candidate won the last election by narrow margin. Your dependent variable of interest is an indicator equal to 1 if the elected mayor is re-elected after the following election, and zero otherwise. What are the main threats to your empirical strategy? Suppose your results show that the mayor is less likely to be re-elected in municipalities where a woman won last election by a narrow margin. Would you be able to draw the conclusion that your results are driven by voters' discrimination against women? Motivate.

(b) Women got the right to vote at different point in times in the United States, based on State-specific reforms. The probabilistic voting model predicts that women enfranchisement would lead to policies closer to women's preferences, and you want to test whether this predictions find support in the data. Your strategy is a difference-in-differences design, in which you explore the staggered phase-in of women enfranchisement, so that your identifying variation comes from the years in which women had the right to vote in some US states, but not in others. Discuss the main threats to the validity of your empirical analysis and propose an example of potential violation of the parallel trends assumption in this setup.