

Political Economy Field Exam

Fall 2018

Please answer all four questions. Each question will be graded equally. You have three hours to complete the exam.

Question 1: Take a society with a population of 1 where the rich have income $y^r = \frac{\theta \bar{y}}{\delta}$ and where δ is the proportion of rich in the population, θ is a measure of income inequality and \bar{y} is average income. Similarly, the income of the poor is defined by $\frac{(1-\theta)\bar{y}}{1-\delta}$. Assume a linear tax rate τ with convex distortionary cost $C(\tau)$. Assume an initial situation of non democracy. Assume that with probability q the cost of revolution is $\mu^H = \mu < 1$ and with probability $(1 - q)$ it is $\mu^L = 1$. If there is a revolution, the rich are expropriated and the poor get $(1 - \mu)\bar{y}$ each period forever (assume an infinite horizon framework with discount rate β).

1. Derive the Markov perfect equilibrium in a situation where in each stage game, μ is revealed first, elites set the tax rate afterwards and the poor finally decide whether or not to stage a revolution. Derive the different parameter conditions under which either a) there is never a revolution or redistribution, b) revolution is unavoidable c) a revolution can be averted via redistribution. Derive these different conditions by developing value functions for the poor and the rich in different states μ^H, μ^L .
2. Explain what would change in the analysis if we drop the assumption of Markov perfection. Do not necessarily develop the formal analysis of this case.

Question 2: In recent years, there seems to be a realignment of dimensions of politics in advanced democracies with the pro/anti-globalization dimension uniting populist extreme right and extreme left against center left and center right. Go over existing families of voting models and discuss how these models may or may not be appropriate to incorporate this change. How do you think this issue should best be modeled. Note: there is no single good answer here, but this is to test your deep thinking about the field of political economics.

Question 3: There is a growing body of research within political economy analyzing the relationship between culture and institutions. Discuss why culture might affect institutions and vice versa? What is the empirical evidence on these relationships? Describe 3 empirical papers on this topic, and include a discussion about their data, econometric methodology, contributions, and limitations.

Question 4: Consider a two period model. Taxes are fixed at $\bar{\tau}$ and the government budget must be balanced in both periods. Preferences of the voters in period $t = 1, 2$ are $w_t = y(1 - \bar{\tau}) + \alpha g_t$, where $\alpha \geq 1$ is an exogenous parameter and y denotes income. The government budget constraint is $g_t = \eta(\bar{\tau}y - r_t)$, where η reflects the politician's competence in providing the public good, and is distributed uniformly over $\left[1 - \frac{1}{2\xi}, 1 + \frac{1}{2\xi}\right]$. If a politician with competence η is removed from office, a new politician is appointed whose competence is drawn at random from the same distribution.

Rents are constrained to be nonnegative and bounded from above at a level below the available tax revenue, i.e. $r_t \leq \bar{r} < \bar{\tau}y$. The objective function of the period 1 incumbent politician is: $v_I = r_1 + p_I \beta (R + r_2)$, where $0 < \beta < 1$ is a discount factor and p_I is the probability that the incumbent is reelected. R denotes ego rents from winning the election.

The timing of events is as follows: (1) An incumbent politician is in office in period 1 and chooses rents for that period r_1 , without knowing his own competence η . (2) The value of η is realized

and public good provision g_1 is residually determined so as to satisfy the budget constraint. Voters observe their own utility but neither η or r_1 . (3) Elections are held. If the incumbent wins, his competence remains. If he loses, an opponent is appointed with competence drawn at random from the same distribution. (4) Period 2 rents r_2 are set, and public goods residually determined.

1. Solve for the equilibrium behavior in both periods. What are equilibrium rents in periods 1 and 2? Do rents in the first period depend on η ? How will voters behave? What is the probability of winning?
2. Discuss how the equilibrium would change if the incumbent knew his own competence when setting policy in period 1?
3. Discuss two papers that test this theory empirically? What were the strengths and weakness of these papers? Describe the data, econometric approach, and robustness of the findings.