

Political Economics (HT22): Final exam

Question 1: The Redistribution Puzzle [40%]

Consider an economy with a continuum of households of mass 1, who are characterized by unequal income endowments, y , distributed according to the cumulative distribution function $F(y)$. A democratically elected authority taxes income proportionally at rate τ and redistributes it equally with lumpsum, g . Thus the utility of a household (indexed by i) can be written as:

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

In order to finance g , the tax authority implements a distortionary tax, such that the tax policy's budget constraint is given by:

$$g = \Gamma(\tau)\bar{y}. \quad (2)$$

where \bar{y} is mean income, and $\Gamma(\tau) = -\tau^2 + \tau$.

- (a) [8 pts] Identify the most-preferred tax of Household i .
- (b) [10 pts] If the policy is decided by a majority vote, what is the equilibrium tax rate? Make sure to be thorough in your solution by stating and making use of appropriate theorems.
- (c) [7 pts] A researcher notes that, currently, the dispersion of household income in the US is such that the ratio of the median to mean is 0.7. While in Norway it is 0.9. What does the model above predict will be the difference between the two? Comment on this.
- (d) [15 pts] Intrigued by this suggestive evidence, the researcher sets out to test the model's prediction and proposes the following regression model:

$$redist_{C,today} = \alpha + \beta * ineq_{C,today} + \epsilon_C \quad (3)$$

where *redist* measures redistribution policies, *ineq* measures inequality, and C indexes countries. They construct a very large cross-country data set consisting of average tax rates and income inequality. To maximize the inclusiveness of their data set, they use expenditure inequality to proxy for income inequality, when the latter is not available. They present their findings to you, which reveal a significant negative relationship, and conclude that the model predictions are wrong and thus we should reject its insights. Comment on their approach, findings, and conclusion.

Question 2: Disciplining politicians [60%]

In a two period agency model, a single voter chooses among a large pool of identical politicians in each of the two periods. In this dynamic setting, there is a concern that politicians become more efficient at "grabbing" rents the longer they remain in office.

While in office the elected politician can decide to be honest or corrupt. The payoffs to elected official are summarized by:

$$u_{pol} = \begin{cases} R, & \text{if honest} \\ R + r + \rho \mathbb{1}_{inc}, & \text{if corrupt} \end{cases} \quad (4)$$

where $\mathbb{1}_{inc}$ is an indicator function that takes the value 1 when the politician was also in power in the previous period, and 0 otherwise. Thus $\rho \geq -r$ are the additional rents enjoyed by a politician acting corruptly who has gained experience by merely being in power the previous period. If $\rho > 0$ the politician becomes more efficient at grabbing in the second term in office. If $\rho < 0$ the politician becomes less efficient at grabbing in the second term in office.

The voter's payoffs depend on the behaviour of the elected official and are given by:

$$u_{vot} = \begin{cases} 0, & \text{if honest} \\ -r - \rho \mathbb{1}_{inc}, & \text{if corrupt} \end{cases} \quad (5)$$

Both politicians and the voter discount future payoffs with $\delta \in [0, 1]$.

- (a) [5 pts] How would a re-elected incumbent behave when in power in Period 2? What about a newly-elected politician?
- (b) [10 pts] At the beginning of Period 2, under what conditions would the voter decide to re-elect the incumbent? When would she fire him? (Recall the parameter space $\rho \geq -r$)
- (c) [10 pts] Under what conditions could the politician be disciplined by the promise of re-election?
- (d) [15 pts] In light of the concern that incumbents can learn how to become more effective at misappropriating funds during their time in office, a political reform committee is preparing a proposal to institute term limits on politicians. As a student of political economics, they ask for your input on the impacts of such a reform. You may reference both theoretical predictions and empirical results. You may also make use of Table 7 from Ferraz and Finan (2011)¹ included below.
- (e) [20 pts] What role can/does the media play in disciplining politicians? Make use of both the theory and empirics from this course and feel free to expand beyond considerations of corruption.

¹Claudio Ferraz and Frederico Finan (2011) Electoral accountability and corruption: Evidence from the audits of local governments, *American Economic Review*.

TABLE 7—THE EFFECT OF REELECTION INCENTIVES ON CORRUPTION CONTROLLING FOR ABILITY AND EXPERIENCE

Dependent variable	Share of audited resources involving corruption					
	Second-term and first-term later reelected (1)	Second-term and first-term later reelected predicted (2)	Full sample (3)	Full sample (4)	Second-term and first-term that served as previous mayors (5)	Second-term and first-term that served as mayor or legislator in past (6)
Mayor in first-term	-0.04 [0.013]***	-0.034 [0.018]*	-0.027 [0.012]**	-0.030 [0.012]**	-0.038 [0.014]***	-0.027 [0.017]
Mayor with political experience			-0.007 [0.011]			
Number of years in political office				0.008 [0.007]		
Number of years in political office ²				-0.002 [0.001]		
R^2	0.27	0.29	0.21	0.21	0.30	0.29
Observations	313	294	476	476	287	311
Mayor characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Municipal characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Political and judicial institutions	Yes	Yes	Yes	Yes	Yes	Yes
Lottery intercepts	Yes	Yes	Yes	Yes	Yes	Yes
State intercepts	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table reports the effects of reelection incentives on the share of resources involving corruption. Column 1 compares the corruption levels of second term mayors to those of the subset of first term mayors that were reelected in the subsequent mayor elections. Column 2 compares the corruption levels of second term mayors to those of the subset of first term mayors who were predicted to be reelected, based on a propensity score. Column 3–4 is estimated on the full sample. Column 5 includes only municipalities with a second-term mayor and first-term mayors who had a mayor in a previous term. Column 6 includes only municipalities with a second-term mayor and first-term mayors who had been either a mayor or legislator in a previous term. Mayor characteristics include the age, gender, education and party affiliation of the mayor. Municipal characteristics: population expressed in logarithms, percentage of the population that has at least a secondary education, percentage of the population that lives in the urban sector, new municipality, log GDP per capita per in 2002, Gini coefficient. Political and judicial institutions include: effective number of political parties in the legislature, the number of legislators divided by the number of voters, the share of the legislature that is of the same party as the mayor, and whether the municipality is judiciary district, and the amount of resources sent to the municipality expressed in logarithms. Robust standard errors are displayed in brackets.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.