UNIVERSITY OF OSLO
DEPARTMENT OF ECONOMICS

Exam: **ECON4640 –Political economics**

Date of exam: Monday, May 31, 2010   **Grades will be given: June 16, 2010**

Time for exam: 09:00 a.m. – 12:00 noon

The problem set covers 4 pages (incl. cover sheet)

Resources allowed:
- No resources allowed

The grades given: A-F, with A as the best and E as the weakest passing grade. F is fail.

Short questions (1/3 of the grade)

Answer briefly (1/2 to 1 page each) two (2) of the following three (3) questions

1. Explain why simply regressing voting behavior on individual income may be an inappropriate approach to study the effect on personal income on voting behavior. Suggest some improvements to attempt to find the causal effect of income on voting.

2. Explain why politicians may favor inefficient means of redistribution when efficient means are also available. Provide some examples of such inefficient policies, and attempt to justify why they are chosen.

3. Explain how the trade off between efficiency and government revenues are different in the dynamic models of redistribution of Hassler, Storesletten, and Zilibotti (2007) relative to those of ordinary static models of redistribution.

Essay question (2/3 of the grade)

Answer all of the following questions

1. Consider a society with an continuum (an infinite number) of individuals with mass normalized to one. The individuals have incomes y, uniformly distributed on $[0, 1]$. This income can be spent on private consumption c and a public good g, where the public good is financed by a linear tax τ with $0 \leq \tau \leq 1$. Hence $c = (1 - \tau)y$ and $g = \tau \frac{1}{2}$ (the mean income is $1/2$). Each individual derives utility

$$U = c + \gamma \ln g \tag{1}$$

where $0 < \gamma < 1$. Find each person's preferred tax rate, and derive their preferred level of consumption of private and public goods.

2. From now on, we make the following assumption on the political game: There are two political parties, A and B, who are only concerned about winning the election. There is complete information, and parties can commit to their platforms. Which platforms do the two parties propose?

3. Assume now that all individuals have income $y = 1$, but they are of different types ℓ, with ℓ uniformly distributed on $[0, 1]$. The public good can be of different types t with $0 \leq t \leq 1$. When the public good provided is of type t, an individual of type ℓ derives utility

$$U_\ell = c + \left[2 - (t - \ell)^2\right] \ln(g + 1) \tag{2}$$

Voting is in two stages: First the tax rate τ is determined, then the type t. Consider first the second stage (i.e. condition on some tax rateτ): Explain how t is determined, and find the equilibrium outcome.

4. Find each voter's preferred level of τ as a function of her ℓ, given the equilibrium t you found above. Show that the median voter theorem still applies, and find the chosen τ in equilibrium.

5. Explain how the model above (possibly with some modifications) can be used to discuss the effect of social heterogeneity on public policies. What is the predicted effect of increased heterogeneity?

6. The attached Tables III and IV are taken from Alberto Alesina, Reza Baqir, and William Easterly: "Public Goods and Ethnic Divisions," (Quarterly Journal of Economics, 1999). They look at the effect of racial heterogeneity ("Ethic fractionalization") on public goods provision in a sample of US cities. Their measure of heterogeneity is the ELF measure. Explain how this measure is constructed and interpret it.

7. Discuss the effects of heterogeneity on public policies found in Tables III and IV. Do they support your predicted effects above?

8. Alesina et al. use a standard OLS technique. Discuss to what extent their findings can be seen as causal effects of heterogeneity. Can you suggest any improved techniques to increase out belief in the causality of the effect? Be as precise as possible.

TABLE III
DEPENDENT VARIABLE IS EXPENDITURE SHARE ON ROADS, CITY SAMPLE

RHS var.	1	2	3	4	5	6
Constant	0.14	0.12	0.18	0.18	0.29	0.28
	(31.44)	(14.07)	(7.35)	(7.40)	(9.33)	(9.22)
Ethnic fractionalization	−0.098	−0.090	−0.080	−0.079	−0.060	−0.083
	(−8.69)	(−7.68)	(−6.39)	(−6.34)	(−4.72)	(−6.38)
Income per capita		1.11E-06	1.14E-06	7.00E-07	−1.47E-07	9.34E-07
		(2.52)	(2.56)	(1.30)	(−0.26)	(1.70)
Log of population			−0.006	−0.006	−0.006	−0.006
			(−2.66)	(−2.72)	(−2.62)	(−2.86)
Percentage BA graduates				0.028	0.085	0.007
				(1.25)	(3.42)	(0.26)
Mean to median income ratio					−0.096	−0.047
					(−6.03)	(−2.86)
Fraction of population >65						−0.253
						(−6.25)
No. of obs.	1020	1020	1020	1020	1020	1020
Adj R^2	0.07	0.07	0.07	0.07	0.11	0.13

Heteroskedasticity-corrected t-statistics are in parentheses.

TABLE IV
COEFFICIENTS ON ETHNIC IN TWO REGRESSIONS FOR EXPENDITURE SHARES

| Dependent variable: | Regressions | | #obs | Adj. R^2 |
	1 (no controls)	6 (all controls)		
City				
Share of spending on roads	−0.098	−0.083	1020	0.13
	(−8.69)	(−6.38)		
Share of spending on sewerage and trash pickup	−0.047	−0.079	1020	0.09
	(−2.97)	(−4.34)		
Share of spending on police	0.057	0.099	1020	0.10
	(4.58)	(7.37)		
Share of spending on fire protection	−0.002	−0.004	1020	0.05
	(−0.18)	(−0.40)		
Spending on roads per capita	−36.4	−37.0	1020	0.08
	(−4.30)	(−3.59)		
Metro				
Share of spending on roads	−0.076	−0.058	304	0.22
	(−9.14)	(−4.84)		
Share of spending on police	0.024	0.020	304	0.18
	(4.26)	(2.39)		
Share of spending on education	−0.145	−0.174	304	0.17
	(−4.21)	(−3.62)		
Share of spending on health	0.219	0.269	304	0.10
	(5.46)	(4.03)		
Share of spending on welfare	−0.030	−0.047	304	0.01
	(−1.73)	(−2.62)		
Spending on roads per capita	−137	−111	304	0.15
	(−7.19)	(−4.44)		
County				
Share of spending on roads	−0.076	−0.055	1386	0.21
	(−15.72)	(−9.26)		
Share of spending on police	0.031	0.038	1386	0.20
	(10.96)	(10.44)		
Share of spending on education	−0.109	−0.103	1386	0.13
	(−5.27)	(−4.18)		
Share of spending on health	0.138	0.125	1386	0.07
	(6.78)	(5.02)		
Share of spending on welfare	−0.043	−0.051	1386	0.05
	(−6.41)	(−7.03)		
Spending on roads per capita	−139	−96	1386	0.11
	(−13.29)	(−7.20)		

Regressions 1 and 6 include the set of control variables that are in regressions 1 and 6 in Table III. Heteroskedasticity-corrected *t*-statistics are in parentheses.