

EC260

The Political Economy of Public Policy

Instructions to candidates

Time allowed: 2 hours

This paper contains ten questions. Answer any two questions.

All questions will be given equal weight.

- 1) What is the collective action problem? Why is it so pervasive in politics? Discuss with reference to at least two examples.
- 2) This question is composed of several sub-questions indexed from (a) to (h). The weight of each sub-question (expressed as a percentage) is given in square brackets
 - (a) Define a dominant strategy [10/100]
 - (b) Define Nash Equilibrium [10/100]

(c) Consider the following normal form matrix, where i and j are the players, A and B the strategies and numbers in brackets indicate the pay-offs for both players, i.e. $3 > 2 > 1 > 0$. The first number refers to player i 's pay-off

		Player j	
		A	B
Player i	A	(3,1)	(0,0)
	B	(2,2)	(1,3)

- (c) Is there a dominant strategy? [10/100]
- (d) What are the Nash equilibria? [10/100]

Consider now an election in which three voters, i , j , and k , are deciding among three alternatives, A, B, and C. Alternative A is the “status quo” and alternatives B and C are the “challengers”. At the first stage players choose which of the two challengers should be considered by casting votes for either B or C, with the majority choice being the winner and abstention not allowed. At the second stage, players vote between the status quo A and whichever alternative was victorious in the first round, with majority rule again determining the winner. Players vote simultaneously in each round and care only about the alternative that is finally selected, and are indifferent as to the

sequence of votes that leads to a given outcome. The payoff functions are the following:

$$U_i(A)=2, U_i(B)=0, U_i(C)=1;$$

$$U_j(A)=1, U_j(B)=2, U_j(C)=0;$$

$$U_k(A)=0, U_k(B)=1, U_k(C)=2.$$

(e) Describe this situation as an extensive form game [10/100].

(f) What is the equilibrium of this game if voters always vote sincerely? [20/100];

(g) Find the equilibrium of this game if the voters vote strategically [20/100].

(h) What insights about politics we might gain from questions (e) -(h)? [10/100]

3). Should we be worried about the effects of rent-seeking? Which institutional mechanisms might affect the rate of rent-seeking behaviour?

4.) How and why might a politician seek to control bureaucracy?

5) Consider a polity with two types of agents, the poor, who owns nothing, and the rich, who can use an input, x , to produce income, y , in such a way that $y=x$.

The input has a cost equal to $\frac{1}{2}x^2$. The rich also have an exogenous wealth equal

to W . The number of poor is N and the number of rich is M and we have $N > M$.

The poor can use a proportional tax on income (of the rich) to redistribute income to themselves. Define the tax revenue as $T=My$, then we have the following payoff functions:

$$\text{Rich: } W + x(1-t) - \frac{1}{2}x^2$$

$$\text{Poor: } T/N$$

Answer the following questions (weights, expressed as percentage, are given in square brackets):

- i) What is the income of a generic rich agent (including W) and of a generic poor agent if no taxation (and therefore no redistribution) is allowed? [10/100]
 - ii) Calculate the tax rate, the income of a generic rich agent (including W) and the income of a generic poor agent in a Nash equilibrium in which all citizens vote over the value of tax rate t . [20/100]
 - iii) Considering again the case in ii), explain what happens to t if:
 - a. W increases; [10/100]
 - b. M decreases; [10/100]
 - c. N decreases. [10/100]
 - iv) Discuss the insights of this model with reference to EITHER the commitment problem OR the empirical evidence on welfare spending. [40/100]
- 6) Discuss the available empirical evidence on the impact of electoral rules on public policy.
- 7) Discuss the role of information and mass media in influencing elections and public policy
- 8) Give an account of vote-trading and the effects of vote-trading in legislatures focussing on the role of legislative procedures and organisation.
- 9) Either
- a. Explain how Democracy as an institutional process distinct from Oligarchy can help establish redistribution
 - b. Explain the differences between commitment and coordination problems. Give an account of the response of a policy maker when faced with these problems .
- 10) Give an account of how elections and political institutions can affect the *quality* of the political elite.