EC721B FINAL EXAMINATION, FALL 2013

Please do not write your name on your blue book, only your ID number.

Answer ALL questions. Provide detailed reasoning/proofs for your answers to questions 2 and 3. For question 1 your answer should be brief and concise.

1. (10 pts.) Indicate whether you agree, disagree either fully or partially with the following statements, providing the underlying reason for your answer.

(a) The invalidity of the Downsian assumptions that competing candidates commit to their policy platforms and have no policy preferences of their own is shown convincingly by empirical evidence in most countries against the main implication of these assumptions that candidates must converge to the same policy platforms.

(b) There is no essential difference between pork-barrel politics in developed countries (where congressmen target 'swing' constituencies in specific locations with highway and bridge construction projects) and clientelism in developing countries.

(c) Models of the role of caste in Indian politics that have been successfully tested empirically predict that reservations of political office for low caste candidates will result in worsening competence and quality of elected officials.

(d) Models of political influence of elite special interest groups invariably generate unique equilibrium predictions.

2. (5+10+5 = 20 marks) There are two dates $t = 1, 2$, and three types of voters. N_h voters have high income y_h at both dates, N_l voters have low income $y_l < y_h$ at both dates, and N_m voters have low income y_l at $t = 1$, and either y_l again or $y_l + d$ at $t = 2$, depending on whether a public decision is taken or not (g is 1 or 0) at $t = 1$. No voter discounts future incomes relative to current income, i.e., the discount rate is zero.

At each date each voter can decide whether to run for election. The winner is determined by plurality voting (whoever gets the most votes wins, with ties broken randomly). Running for election is costless. The elected candidate at each date decides on a linear income tax

consisting of a linear tax rate $\tau \in [0,1]$ and a lumpsum income support T provided to each citizen by the government. So the income tax paid by a citizen with income y is $\tau y - T$. The government must balance its budget at each date. At $t = 1$ the public decision g entails no costs or revenues, so the government budget constraint states that T equals τ times the per capita income at that date.

(a) Provide a condition on the parameters of the model such that if $g = 1$ has been chosen at $t = 1$, then the outcome at $t = 2$ will involve $\tau = 0 = T$ for sure, while if $g = 0$ has been chosen then the outcome at $t = 2$ would be $\tau = 0 = T$ with probability one half, and $\tau = 1, T = \frac{y_l + y_h}{2}$ with probability one half.

(b) Now provide an additional condition under which there exists a subgame perfect equilibrium outcome of this game in which $g = 0$ is chosen at $t = 1$ with positive probability.

(c) Interpret this result, and comment on its broader implications.

3. (2+3+5+5+5=20 points) A rural economy has three types of agents: landless (owning 0 land), small (owing 1 unit of land each) and big (owning $k > 2$ units of land each), in proportions $\lambda_0 (= 1 - \lambda_1 - \lambda_k), \lambda_1, \lambda_k$ where the total amount of land $L = \lambda_1 + k\lambda_k$ is given. Assume that there are enough landless relative to big agents in the sense that $\lambda_0 > (k-1)\lambda_k$.

An agent earns an income $y(l)$ from owning l units of land, where the function $y(.)$ is strictly increasing and strictly concave. All agents share the same strictly increasing, strictly concave, smooth utility function u defined over their own income.

The government chooses a policy of land reform, defined by $r \in [0, k-1]$, wherein it takes away r units of land from each big agent, selects $r.\lambda_k$ landless agents randomly from the set of all landless and gives then one unit of land each.

(a) Derive payoffs of each type as a function of the land reform policy r.

(b) What is the utilitarian welfare optimal land reform policy r_W?

(c) There are two parties A, B competing to win an election. Each party commits to a land reform policy in advance of the election. The fraction of landless and small agents that are informed voters are α_0, α_1 respectively, where $0 < \alpha_0 < \alpha_1 < 1$. All big agents are informed voters. An informed voter of type i with payoff function $W_i(r)$ chooses party A if $W_i(r_A) + \epsilon > W_i(r_B)$, where ϵ is an iid uniform voter-specific loyalty shock with constant density f and zero mean. An uninformed voter chooses party A if $\epsilon > 0$. The probability that party A wins is increasing in its vote share. Show that both parties have a dominant strategy of selecting the same (Downsian) policy r_D. Compare r_D with the utilitarian welfare optimal policy r_W. Does r_D depend on the land distribution (e.g., represented by the fraction of small landowners λ_1)?

(d) Now suppose the big agents can form a lobby and make campaign contributions (in the form of time spent mobilizing and persuading voters to vote for a given party) to the two parties, as in the Grossman-Helpman model. Assume that the payoff of a big agent equals $u(y(k-r)) - \frac{C_A+C_B}{\lambda_k}$, where C_A and C_B denote (aggregate time) contributions of the lobby to the two parties respectively (divided equally among all members of the lobby). Uninformed voters vote for party A if $h[C_A - C_B] + \epsilon > 0$ where $h > 0$ is a given parameter. Informed voters are not affected by party campaigns. Characterize the resulting equilibrium policy r_L (making the same assumptions as in the Grossman-Helpman model, that only the influence motive operates). Compare this with r_D and r_W.

(e) Does r_L depend on the land distribution? How? Do you think a dynamic extension of this model might be interesting? Explain in connection with some of the papers read in the class.