

Exam for the course

POLITICAL ECONOMICS

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Remarks:

- The exam consists of 5 pages including this one.
- You have to solve ALL exercises.
- The exam is 60 minutes.
- The maximum number of points is 60.
- Write clearly!
- Make sure you explain carefully all steps of your arguments!

Good luck!

Question 1: Median Voter Theorem (10 points)

- a) Define the condition of single-peaked preferences and explain the related median voter theorem. (5 points)
- b) Define the condition of single-crossing preferences and explain the related median voter theorem. (5 points)

Question 2: Brief questions on miscellaneous issues (12 points)

2.1 Incumbent Power (4 points)

Why might an incumbent politician be able to earn a positive rent over several periods? How do term limits influence the incumbent's decision to extract rents?

2.2 Citizen Candidate Model (4 points)

Explain the impact of entry costs in citizen candidate models. In what respect do they influence the equilibrium?

2.3 Special-Interest Politics (4 points)

In the lobbying model from the Persson/Tabellini textbook, how would you characterize the voting equilibrium from a normative perspective if all groups were organized as lobbies? Please provide an intuitive explanation (no math!).

Question 3: Structure-Induced Equilibrium (14 points)

One way to prevent cycling in multidimensional policy space is to separate the voting process with respect to each policy dimension. Figure 1 shows the two-dimensional preferences for individuals 1, 2 and 3. The respective bliss points are denoted by A , B and C .

- Draw the political best-response functions for both the x - and the y -dimension into the diagram. What is the critical level of x below which individual 2 becomes the median voter with respect to the y -dimension (please denote this by \tilde{x})? (6 points)
- Assume voting takes place simultaneously. What will be the equilibrium outcome? Please denote the bundle with T in the diagram. (4 points)
- How will the voting equilibrium change if voting takes place sequentially and x is voted on first (the parliamentary chamber, say, deciding about x can act as Stackelberg leader)? Please denote this bundle with Q in the diagram. (4 points)

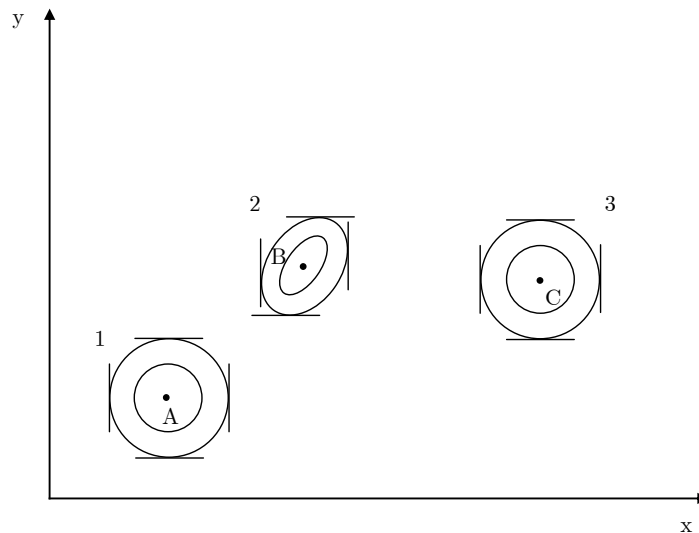


Figure 1: Separate voting

Question 4: Citizen Candidates and Probabilistic Voting (24 points)

There are two political candidates (A and B) each proposing a level of taxes τ and public goods g . The public good g is financed through a proportional income tax. The candidates can, however, also use public funds for private consumption. The amount diverted to private consumption is denoted by r . A continuum of citizens of measure one, indexed by i , have all the same income 1. The government's budget constraint is thus: $\tau = g + r$.

The citizens' preferences over private consumption, c , and the public good, g , are described by: $W_i = c_i + H(g)$ with $c_i = (1 - \tau)$. Citizen i will vote for candidate A if:

$$(1 - g_A - r_A) + H(g_A) > (1 - g_B - r_B) + H(g_B) + \sigma_i + \delta.$$

Parameters σ_i and δ describe the individual's preferences in favour of party B . The parameter σ_i is distributed uniformly on $[-\frac{1}{2\phi}; \frac{1}{2\phi}]$ and δ on $[\alpha - \frac{1}{2\phi}; \alpha + \frac{1}{2\phi}]$ with $\alpha > 0$, implying that one candidate may have a competitive advantage. Candidates do not know the value of δ . Political candidates care only about their private consumption, r . If they win the election, their utility level is r and zero if they lose.

- a) Show that the share of people voting for A is given by: $S_A = 1/2 + \phi[W(g_A, r_A) - W(g_B, r_B) - \delta]$, where $W(g_A, r_A)$ and $W(g_B, r_B)$ denotes the citizens' utility from the proposed policy of candidate A and B , respectively. (3 points)
- b) Derive candidate A 's probability, p_A , of winning the election. (4 points)
- c) Solve for the equilibrium level of candidate A 's rent, r_A , given that each candidate chooses $g_A = g_B = g^*$ and that $r_B = \frac{1}{2\phi} + \frac{1}{3}\alpha$. (8 points)
- d) Which of the two candidates is more likely to win the election? (3 points)
- e) How do the expected rents of candidates A and B change, if the competitive advantage, α , of the one candidate increases? (6 points)

Figure for Question 3:

