

Review sheet for test #2, Thursday April 17th (preliminary draft)

Overview: There will be some material from unit 1 (voting rules), and the remaining material will be from chapters 2-9 of the text.

Chapter 2: The reason for collective choice: allocative efficiency

Broad themes

- Explain what public goods are, give examples, and explain precisely how their existence can drive an argument for collective action, i.e. the existence of government. Do the same with externalities (positive or negative). You should be able to structure this argument in terms of efficiency, defined rigorously as Pareto efficiency. You should also be able to illustrate your arguments using diagrams.

Sections

2.1. Public goods and prisoners' dilemmas

- Explain how a prisoners' dilemma game works (including the story and a representative game matrix), how public goods can create a situation like this, and how governments can improve efficiency in such situations.

2.2. Coordination games

- Explain how a coordination game works (including the story and a representative game matrix), and how it illustrates a type of situations where governments can improve efficiency.

2.3. Public goods and chickens

- Explain how a chicken game works (including the story and a representative game matrix), and how it illustrates a type of situation where governments can improve efficiency.

You can skip sections 2.4 and 2.5.

2.6. Externalities

- As mentioned above, you should be able to explain what externalities are, how they may cause market failures, and what kinds of resolutions governments may be able to effect.

2.7. The Coase theorem

- The Coase theorem is more of an intuitive argument at heart than a formal theorem. Explain this argument, with an eye toward its practical significance. That is, under what circumstances can it be used to argue effectively that government intervention is not necessary despite the existence of an externality, and under what circumstances is this argument less effective?

You can skip sections **2.8-2.13**, except to the extent that they enable you to explain the basic intuition behind the Coase theorem and its limitations, as outlined above.

Chapter 3: The reason for collective choice – redistribution

Sections

3.1. Redistribution as insurance

- We usually think of redistribution as something that makes some people better off at the expense of others, so that some people will need to be forced into accepting redistribution. Use an analogy to insurance to explain why it might be possible to enact a system of redistribution that increases everyone's ex-ante utility and thus wins unanimous agreement.
- Drawing on the ideas of John Rawls, explain how the amount of redistribution decided on by a person with no knowledge of their own relative economic position has a special normative character, i.e. may be described as a 'just' or 'fair' level of redistribution.
- Explain how the existence of moral hazard introduces problems into the idea of the government providing 'insurance against being poor'.
- Use the idea of adverse selection to explain why 'insurance against being poor' provided by private companies to people on a voluntary basis would be more problematic than government redistribution.

3.2. Redistribution as a public good

- Assuming that some people feel compassion for other people, explain how redistribution has the properties of a public good, and thus how a government redistribution program can increase efficiency. Explain why a government concerned with equity might choose more redistribution than a government concerned only with efficiency.

3.3. Redistribution to satisfy fairness norms

- Describe a fairness norm that can be used to argue for more redistribution, and a fairness norm that can be used to argue for less redistribution.

You can skip 3.4.

3.5. Redistribution as taking; **3.8.** Redistribution to special interests

- Explain why the ability of government to redistribute wealth can decrease efficiency and/or equity (in contrast to the arguments above).

3.6 and **3.7** are interesting to read, but they mostly report statistics, and I don't want to test you on them.

Chapter 4: The choice of voting rule

4.1. The unanimity rule

- Explain why the unanimity rule could, in theory, be used to reach Pareto optimal policy outcomes. What are some crucial assumptions that are needed to reach this result.

4.2. Criticisms of the unanimity rule

- Discuss drawbacks of the unanimity rule pertaining to bargaining cost, strategic behavior, and unfairness.

4.3. The optimal majority; **4.4.** A simple majority as the optimal majority.

- Draw and explain two versions of the diagram framing the optimal majority size in terms of the sum of utility loss from tyrannized minorities (C) and the cost of decision-making (D): One version with a continuous C curve and the other with a discontinuous C curve. What is the intuition for this discontinuity, and how does it affect the choice of an optimal majority.

Chapter 5: Majority rule – positive properties

General topics

- In what ways does the simple majority rule system analyzed in this chapter differ from all of the single-winner voting rules that we discussed in unit 1 of the course?
- How does the analysis of majority rule in this chapter contribute to our understanding of democracy in the real world?
- What is meant by ‘single peaked preferences’?

Sections

5.1. Majority rule and redistribution

- Explain how the inclusion of private or semi-private goods in the public budget can be used to effect redistribution, and can lead to an inefficient result.

5.2. Cycling

- Using a diagram, show how a majority rule cycle with three voters and three candidates arrayed in a one-dimensional space implies that at least one voter must not have single-peaked preferences.
- Describe the outcome of a game in which an odd number of people divide a fixed amount of money among themselves through a process of iterative majority rule voting, where voters are myopic in the sense that they vote for any proposal that improves their wealth relative to the current status quo. What does this reveal about the connection between redistribution and intransitive majority preferences?

5.3. The median voter theorem – one-dimensional issues

- State the assumptions and result of the median voter theorem. Informally sketch the intuition behind the proof.

5.4. Majority rule and multi-dimensional issues

- Sketch two-dimensional issue spaces in which voters have unique ideal points and strictly convex preferences – first with one voter, then two, then three. Describe the set of Pareto optimal points, and the set of majority rule equilibrium points (which may be empty) in each case.

You can skim / mostly skip sections 5.5-5.8. All I really expect you to take away from these is that it is possible to establish majority rule equilibrium results through various restrictions of the distribution of voters' preferences.

5.9. Logrolling

- What is logrolling? Give a numerical example in which it improves social welfare, and another example in which it decreases social welfare. Discuss the relationship between logrolling and intransitive majority preferences.