

## How can a policy-maker determine and achieve the optimal distribution of resources when lump-sum taxation is possible? What can be done when it is not?

4 part argument:

### Introduction

- how to think about optimality (p-efficient but that does not say everything, think of SWF and pick an optimal allocation)
- its not easy to aggregate all of this, informational problems: these are the problems
- explain that using 2nd welfare theorem you can get to the optimal allocation using lump-sum allocation
- when is lump-sum not available, then what do you do? show other ways of taxation cause some DWL like goods-taxation.

### What is an optimal distribution?

- Explain Pareto-efficiency and explain downsides of not taking into account inequality
- Social welfare function:
  - o They help decide between Pareto-efficient allocations to choose a point on the utility possibility frontier
  - o Introduce different options: utilitarian, Rawlsian, inequality-averse
  - o How does one choose between these: voting? But that has its own problems.

### Lump-sum versus goods taxation

- Lump-sum:
  - o State first and second Fundamental Welfare Theorem
  - o By second Fundamental Welfare Theorem, there exist prices with which to reach the “optimal” allocation:
    - First find the optimal allocations using the utility possibility frontier and social welfare function
    - From this, you can find the set of prices by drawing the budget line
    - Redistribute through lump-sum taxation to a point on the budget line
    - Let markets operate freely
- Show how goods-taxation is less efficient than lump-sum-taxation:
  - o Show with the diagram from the slides that the consumer is on a higher indifference curve with lump-sum taxation with the same government revenue.

### When is lump-sum not available

- General issues around taxes not being popular/lobbying against them.
- The policymaker might not have full information on everyone's preferences
- Is there really perfect competition? Absence of externalities? And are preferences really convex?
- It is not really possible when taxes depend on behaviour: e.g., income, labor, consumption. These will alter prices moving society into the utility possibility frontier.

Income tax inefficiency for labour is usually low because if you are working then usually you keep working capital etc. is much easier to move so taxing those would be probably less beneficial for minimizing DWL

### Conclusion