

Microeconomics and Mechanism Design

Master 2

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1 Introduction

1. Social choice theory and its axiomatic method
2. Social states, preferences, social goals and mechanisms
3. The Mount-Reiter diagram
4. An example: King Solomon's dilemma
5. Matching theory and Social choice theory

2 Social choice theory

1. The basic structure of the social choice theory
2. Axioms for social choice functions
3. An axiomatic characterization of the Majority rule
4. Some impossibility results
 - The impossibility of a Paretian liberal
 - The Muller-Satterthwaite theorem
 - The Arrow impossibility theorem

3 Mechanism design

1. The basic structure of the mechanism design problem
2. Axiomatic foundation of Nash equilibrium
 - Solution concept for strategic games
 - Axiomatic approach to the Nash equilibrium solution
3. Nash implementation
 - Incentive compatibility and implementation
 - Maskin's result.

4 Matching

1. One-to-one matching problems
 - Matching problem as a social choice problem
 - Stable matching
 - The lattice structure of stable matchings
 - The Core of a one-to-one matching problem and its set of stable matchings
2. Nash implementation
 - Nash implementation of the stable social choice function
 - An impossibility result for resolute and stable social choice functions
3. The Gale-Shapley algorithm
 - The Deferred Acceptance algorithm
 - Optimal stable matchings
 - Strategy-proofness

5 References

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