Lecture 12
Fiscal Policy
(Based on Chapter 12 of Perkins et al.)
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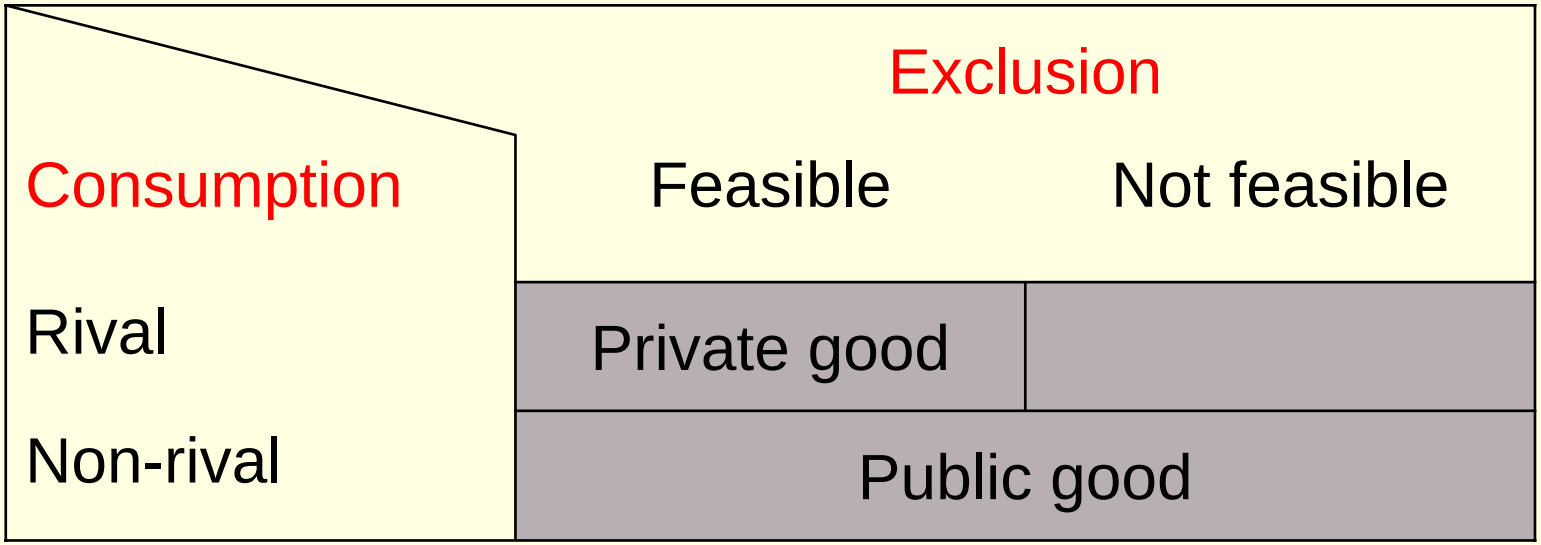
Government Budget

- Expenditure
  - Government machinery
    - Size of the government
  - Public goods
  - Subsidies
    - Pressure groups
  - Transfers
    - Social security

- Revenue
  - Taxes
  - Profits of public sector enterprises
  - User fees
    - Public goods

Public Goods …. 1

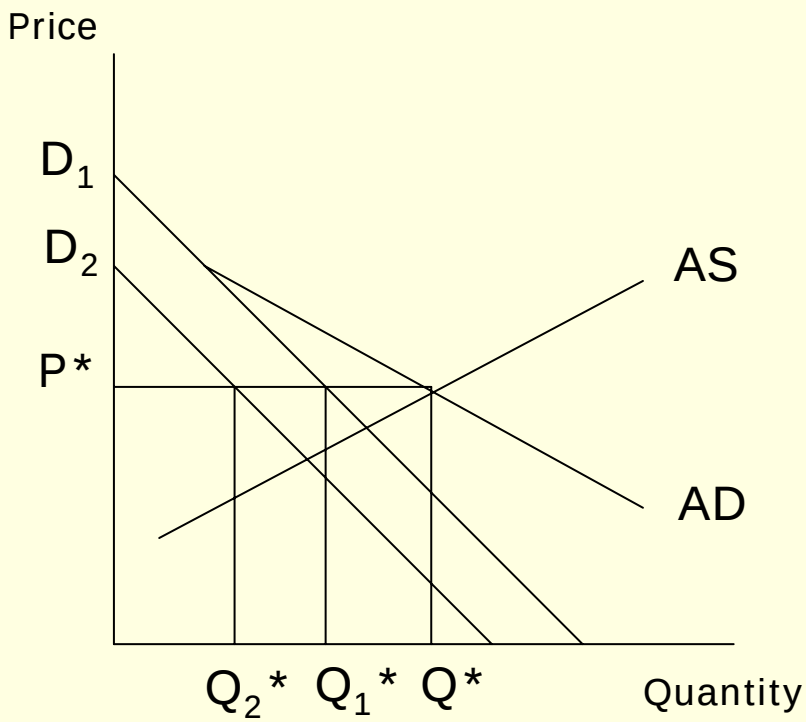
- Features
  - Non-rival consumption
  - Non-excludability



Public Goods …. 2

- Market for private good
  - Individual demand
    - D_1, D_2
  - Aggregate demand
    - AD
  - Aggregate supply
    - AS
  - Equilibrium
    - P*, Q*
    - $Q_1^* + Q_2^* = Q^*$

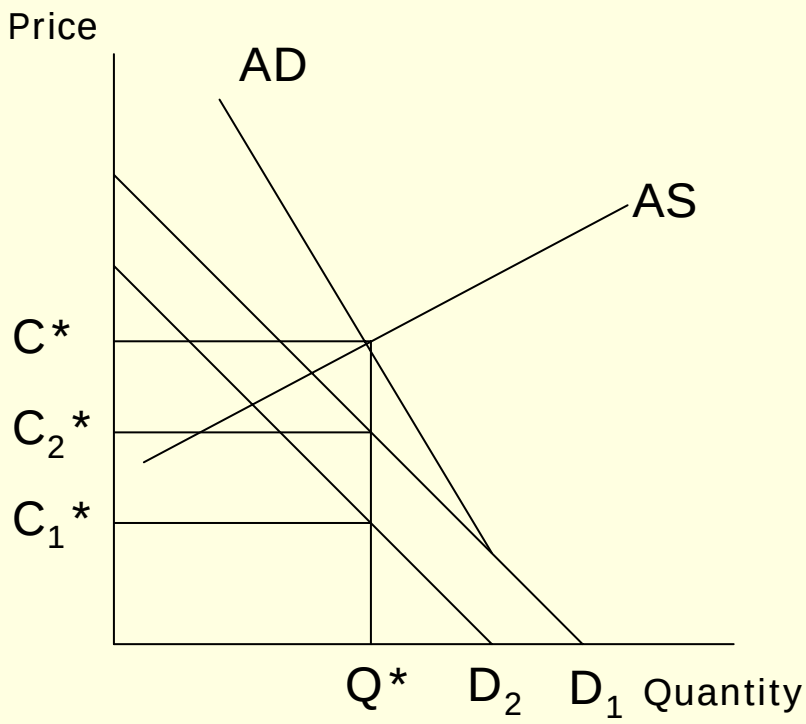
- Market for private good



Public Goods …. 3

- Market for public good
  - Individual demand
    - D_1, D_2
  - Aggregate demand
    - AD
  - Aggregate supply
    - AS
  - Equilibrium
    - Q*, C*
    - Cost sharing
      - $C_1^* + C_2^* = C^*$

- Market for public good



Public Goods …. 3

- Private good
  - Both consumers pay same price and consume different quantities.
  - In equilibrium, marginal cost equals marginal benefit of each consumer.

- Public good
  - Both consumers pay different prices and consume same quantity.
  - In equilibrium, marginal cost equals the sum of the benefit of the two consumers.

Project Appraisal …. 1

- Net present value
  - NPV = $\sum_{t=1}^{T} \frac{R_t}{(1+r)^t} - C$
- Internal rate of return
  - Value of *r* when NPV = 0
- Viability of project
  - High NPV
  - High internal rate of return

Project Appraisal …. 2

- Example
  - Data
    - C = 100, R_1 = 50, R_2 = 200, R_2' = 150, r = 0.1
  - NPV
    - Case 1: $[50/(1+0.1)] + [200/(1+0.1)^2] - 100$
    - Case 2: $[50/(1+0.1)] + [150/(1+0.1)^2) - 100$
  - Internal rate of return
    - Case 1: $[50/(1+r)] + [200/(1+r)^2] – 100 = 0$
    - Case 2: $[50/(1+r')] + [150/(1+r')^2) – 100 = 0$

Project Appraisal …. 3

- Benefit-Cost ratio
  - BCR = $$\frac{\sum_{t=1}^{T} B_t / (1+r)^t}{\sum_{t=i}^{T} C_t / (1+r)^t}$$
  - NPV = 0 implies BCR = 1

- Issues
  - Externalities
    - Costs and benefits
  - Opportunity costs
    - Shadow prices