

## Lecture 13

### Fiscal Policy

(Based on Chapter 12 of Perkins et al.)

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# Recap

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- Government budget
  - Expenditure
  - Revenue
  
- Public goods
  - Nonrival consumption and nonexcludability
  - Cost sharing by consumers
    - User fees
  
- Project appraisal
  - Decision
    - NPV, Internal rate of return, Benefit-Cost ratio
  - Shadow pricing

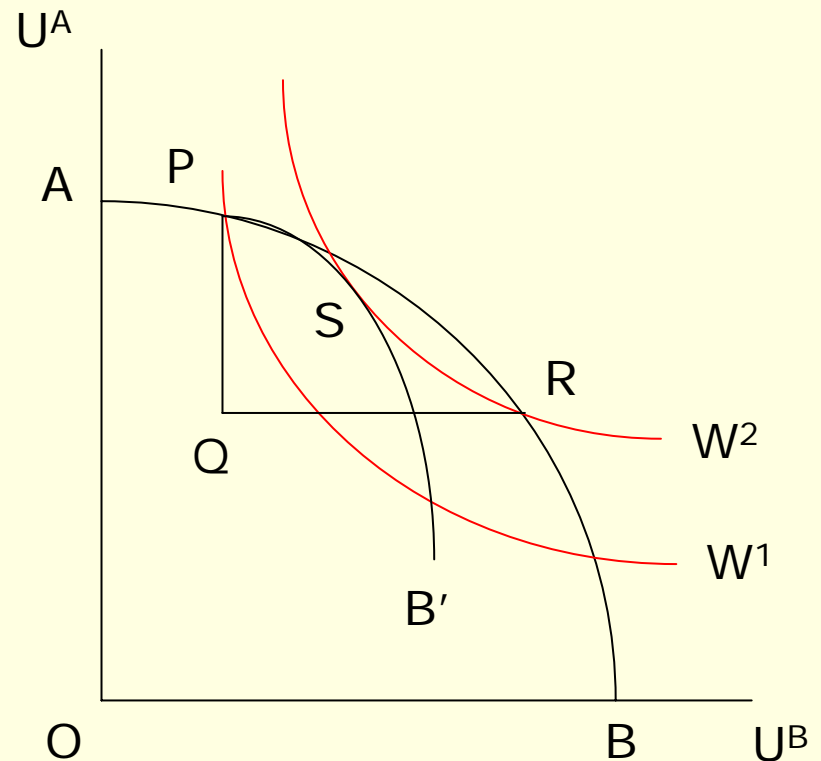
# Taxes .... 1

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- Types
  - Direct
    - Personal income tax
      - Redistribution
    - Corporate income tax
  - Indirect
    - Sales tax
      - Value added tax
    - Excise tax
    - Tariffs

# Taxes .... 2

- Efficiency versus equity
  - Starting point = Q
  - Market outcome = P
    - Redistribution Pareto optimal
  - Socially better outcome = S
  - Utility frontier  $ASB'$  instead of  $ARB$ 
    - Efficiency loss
    - Redistribution not Pareto optimal



# Taxes .... 3

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- Observation
  - Government increases expenditure by \$x and raises taxes totalling \$x
  
- Macroeconomic impact
  - Net income of private sector
    - = earning from government expenditure – tax = 0
  - Net income of government
    - = expenditure – tax revenue = 0
  - Other benefits
    - = additional public services – loss of private services = 0

# Taxes .... 4

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- Invisible impact
  - Labour-leisure choice
  - Relative price change in the factor market
  - Relative price change in the product market
  
- Excess burden
  - Loss in private welfare – Government revenue collected from a tax
  
- Impact versus incidence
  - Corporate income tax and shareholders
  - Corporate income tax and labourers

# Taxes .... 5

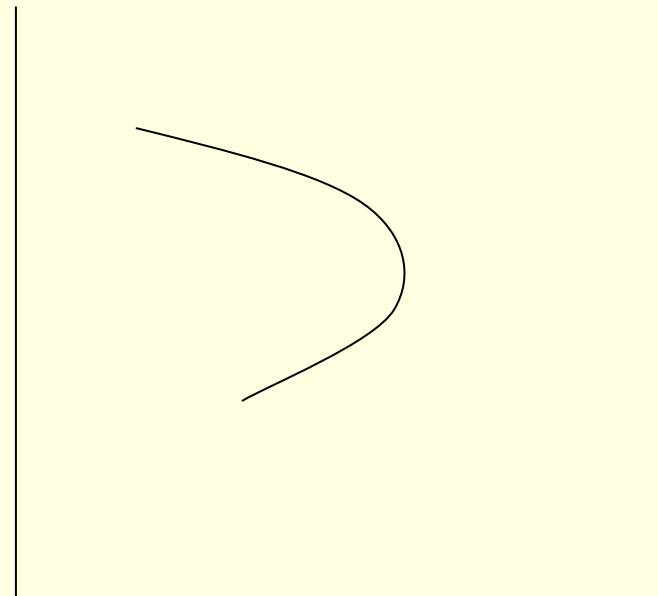
- Income tax

- Substitution effect
  - Opportunity cost of leisure decreases
- Income effect
  - Lower income
    - Spread cost between leisure and consumption

- Evasion

- Laffer curve

Tax rate



Tax revenue

# Taxes and Savings

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- Capacity to save
  - Declines with income tax
    - Indirect effect: Labour-leisure trade off
  - Declines with sales tax on goods and services with inelastic demand
  
- Incentives to save
  - Consumption tax
    - Inter-household transfers
  - Tax on capital gains and interest income
  - Social security
    - Bequests and inter-generational transfers



# Ricardian Equivalence

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- Ways to meet higher government expenditure in the current period
  - Raise taxes in the future
    - Inter-temporal budget constraint
  - Print money in the future
    - Inflation *tax*
  - Borrow and roll over debt
    - Sustainability