

# Public Economics

## Lec 8: Privatization & cost-benefit analysis

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# AM's reminders

- [Link to group schedule](#)
- Commitment on the seminar day

# Today's reading list

- **Yarrow (1986)**, sections 1-5, 9-11
- **RG ch. 8**
- **Recommended readings**
  - Yarrow (1986) section 6-8 onwards and discussions
  - Giglio et al. (2014)
  - Dewenter & Malatesta (2011)

# Privatization

- **Trend started in the 80s**
  - Reagan, Thatcher
  - Supply-side economics
- **L1-2:** Governments should do only what the market cannot
- Private, profit-oriented companies **more efficient**

*In every great monarchy in Europe the sale of the crown lands would produce a very large sum of money, which, if applied to the payment of the public debts, would deliver from mortgage a much greater revenue than any which those lands have ever afforded to the crown [ . . . ]*

*When the crown lands had become private property, they would, in the course of a few years, become well improved and well cultivated*

## Public debates

- **Pro privatization:**
  - Public managers incompetent
  - More powerful incentives in the private sector
  - Public companies often have low productivity
- **Against privatization**
  - Equity
  - Good “X” is public and should be free for all

**Economists:** we care about the maximum **achievable** pie size, then eventually redistribute

## Public debates

- **Pro privatization:**
  - Public managers incompetent (**Monitoring**)
  - More powerful incentives in the private sector (**Incentives**)
  - Public companies often have low productivity (**Performance**)
- **Against privatization**
  - Equity
  - Good “X” is public and should be free for all

**Economists:** we care about the maximum **achievable** pie size, then eventually redistribute

## Unclear theoretical foundations for lower public performance:

### Incentives/monitoring

- **Private ownership**

- Still principal-agent problems
- Shareholder control and monitoring?
- **Corporate governance**

- **Public ownership**

- No market for corporate control
- Can still apply incentive schemes to managers
- **Politicians' agenda**



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### Empirically: wide range of findings

- **Privatization** not always dominating
- **Competition** is key

## Extent to which privatization feasible depends on competition

### 1 Market failures

- **Externalities, public goods**
- Reason for nationalization in the first place
  - Does ↗ shareholder monitoring increase efficiency so much?
- **Profitability** cannot be the only criterion (oil, airports. . .)

### 2 Natural monopolies

- Are inefficient anyway (break conditions for 1<sup>st</sup> FTWE)
- **Regulations**, regulatory commissions
- **But** ↗ rules, ↘ transparency, ↘ monitoring

## 3 Competition, no market failure

- Look at UK examples
- **Private ownership to be preferred**
  - **DM (2011):** Efficiency ↗ in 3 yrs **before** privatization

## 4 Franchising and contracting out

- Compete to serve a market previously **protected**
- **Conditions:** Contract specification & renewal simple
  - No incumbent power/rent-extraction

# Yarrow (1986) (III)

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## Ease of contracting out is crucial

- Contract needs to be both **detailed and clear**
- **Government activities** should stay so if
  - **Quality** hard to measure
  - **Long-run** investments
  - **Natural monopolies or market failures**

# Yarrow (1986) (IV)

- **Public finances** (Smith's first point)
  - Value of a firm today = **present value** of future cash flow
  - **No free lunches**
  - Equivalent to emitting debt?
    - But it does not look as bad (Maastricht)
    - Does not damage credibility  $\implies$   $\searrow$  interests
- **Transaction costs** often not negligible
  - **Cost-benefit analysis**: depends on types of costs

# To recap

- **Competition rather than ownership**
  - **Monopoly/market failures**
  - **Competitive markets**
  - **Franchising, easy contracting/quality monitoring**
- **Debts/assets**: can be just a balance-sheet transfer

## Social costs - social benefits

- Government intervenes as long as costs < benefits
- ① Costs & benefits over **long period of time**
- ② Costs & benefits **uncertain**

# Present values

Assume we know **flow of CB**  $\implies$  **positive analysis**

$Y_1, Y_2, Y_3, Y_4, Y_5 \dots$

## 1 Single dividend/return/cost

$$Y_0 \xrightarrow{1y} Y_0(1+r). \quad Y_0 \xrightarrow{2y} Y_0(1+r)^2 \dots$$

$$\frac{Y_1}{1+r} \xleftarrow{1y} Y_1. \quad \frac{Y_2}{1+r} \xleftarrow{2y} Y_2 \dots$$

## 2 Present value of a flow of returns $R_t$

$$PV_0 = R_0 + \frac{R_1}{1+r} + \frac{R_2}{(1+r)^2} + \frac{R_3}{(1+r)^3} + \dots + \frac{R_T}{(1+r)^T}$$

**Nominal** or **real** values, as long as used consistently



# Evaluating projects

Given **flows of costs**  $C_t$  and **benefits**  $B_t$

## 1 Present value

$$PV = B_0 - C_0 + \frac{B_1 - C_1}{1+r} + \frac{B_2 - C_2}{(1+r)^2} + \dots + \frac{B_T - C_T}{(1+r)^T}$$

## 2 Internal rate of return

$$\rho \mid B_0 - C_0 + \frac{B_1 - C_1}{1+\rho} + \frac{B_2 - C_2}{(1+\rho)^2} + \dots + \frac{B_T - C_T}{(1+\rho)^T} = 0$$

## 3 Benefit-cost ratio

$$BCR = \frac{PV(B)}{PV(C)} = \frac{B_0 + \frac{B_1}{1+r} + \frac{B_2}{(1+r)^2} + \dots + \frac{B_T}{(1+r)^T}}{C_0 + \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + \dots + \frac{C_T}{(1+r)^T}}$$

# Crucial issues: Choosing a rate of return

- **Returns to the private sector**
  - Foregone **investments**: *before-tax* rate (7%)
  - Foregone **consumption**: *after-tax* rate (3%)
- **Inference of discount rates from individual behavior**
  - Giglio et al (2014)
- **Paternalism**
  - Myopia: government has foresight (1%)
  - Environmental policies
- **Sensitivity analysis**

# Would this pass a CBA?



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- Present value of 1B\$ in 254 years?
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  - 487yrs  $\implies \approx 0.5\$\$

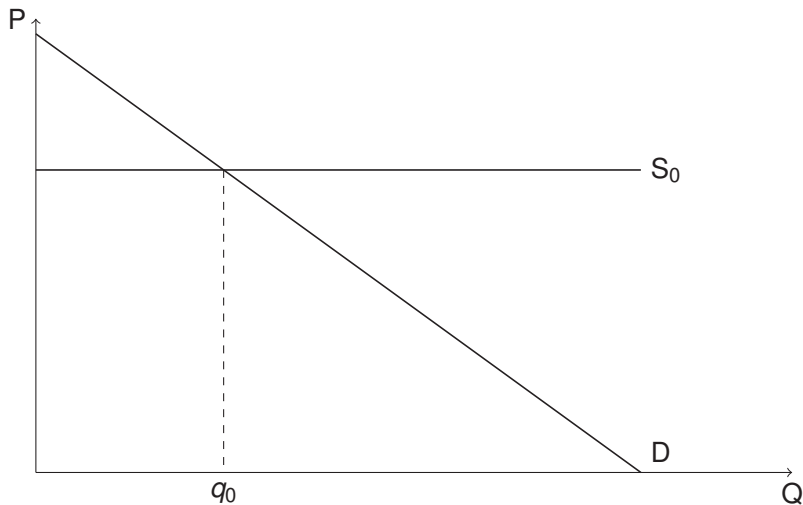


# Crucial issues: Valuing costs and benefits

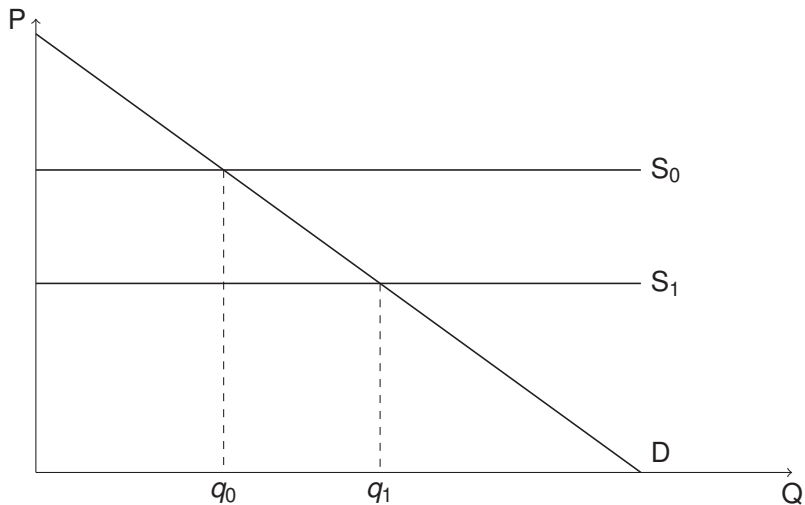
## Need to account also for social costs

- **Market prices**
  - **Not perfect** for public policy analysis, but still lots of info
  - Useful starting point
- **Shadow price:** underlying social marginal cost
  - Market price or marginal cost? (monopoly, taxes)  
Think: electricity
  - **Employment**  $\implies$  **costs**  $\in [0, w]$   
Depletes resources that could be used in the private sector
- **Consumer surplus**

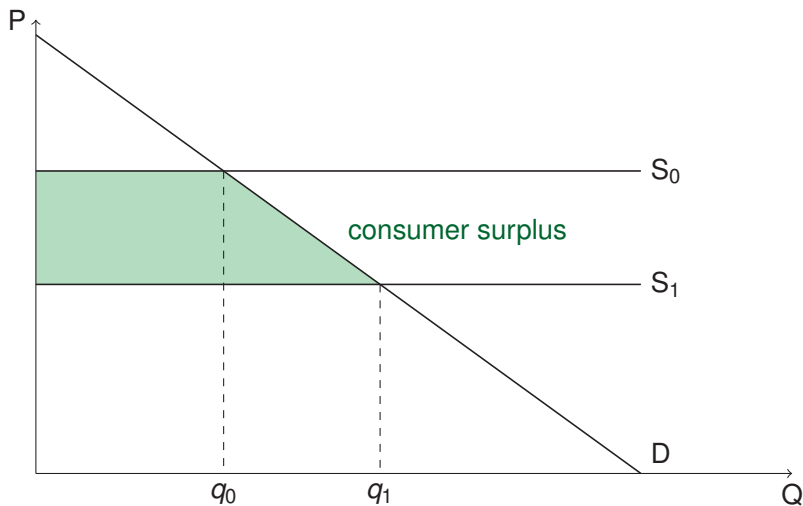
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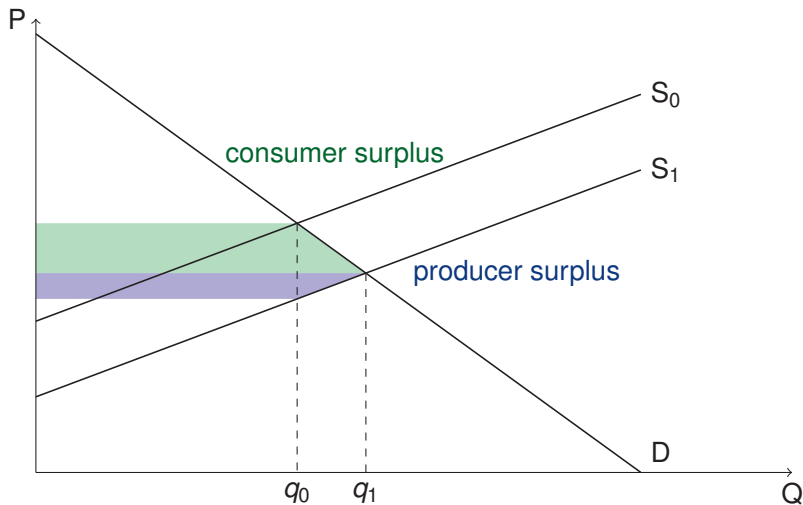
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# Consumer surplus



# Consumer and producer surplus



# Costs and benefits that are hard to quantify

## Value of time

- Wage (median?)
- Depends on loss of utility

## Value of life

- Lost earnings
- Inference from **changes in probability of death**  
≈ \$4-10 million

# Common “Mistakes”

## 1 Chain-reactions

- Secondary benefits not part of analysis
- There are also costs (E.g. Fadalto) → transfers
- **Primary VS secondary benefits clearly defined**

## 2 We put people back to work!

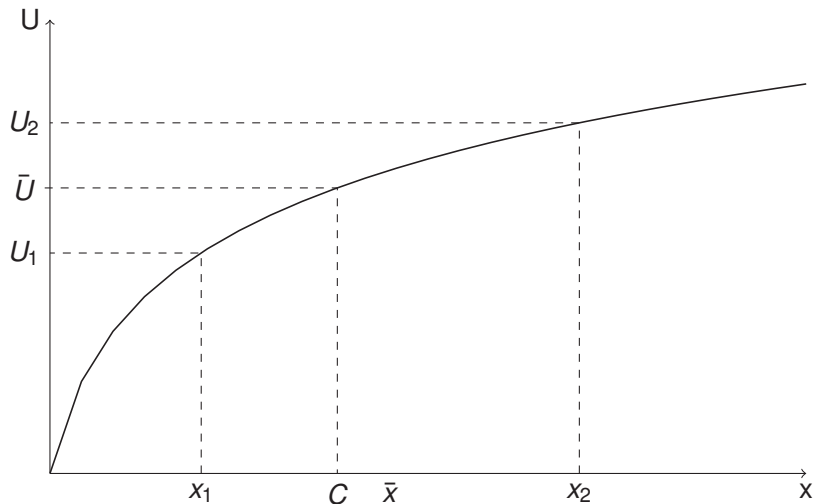
- Labor is **cost**, not **benefit**
- Might be  $\approx 0$ , still it's a cost

## 3 Double-counting benefits

- E.g. land irrigation, train tracks (+ privatization)

# Redistribution and uncertainty

- **Hicks-Kaldor criterion** (compensation)
- **Certainty equivalent**





# For next time

- **RG, ch.8, ex 6**
- **RG, ch.8, ex 9**