

Public Economics

Lec 5: Privatization & cost-benefit analysis

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AM's reminders

- [Link to group schedule](#)
- Retake micro exam on the 12th
- Live@Lund → discussion board to schedule groups

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)

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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Incentives/monitoring

- **Private ownership**
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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 1st FTWE)
- **Regulations**, regulatory commissions
- **But** ↗ rules, ↘ transparency, ↘ monitoring

3 Competition, no market failure

- Look at UK examples
- **Private ownership to be preferred**

4 Franchising and contracting out

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

3 Competition, no market failure

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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

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

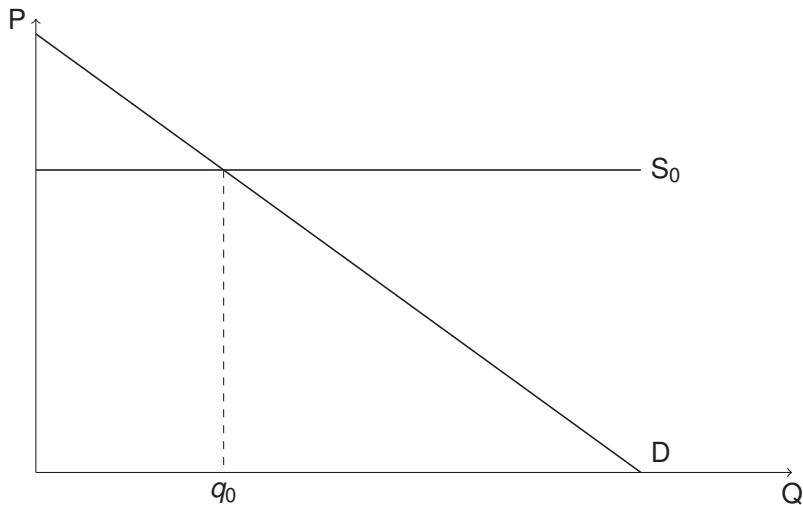
- **Returns to the private sector**
 - Foregone **investments**: *before-tax* rate (7%)
 - Foregone **consumption**: *after-tax* rate (3%)
- **Paternalism**
 - Myopia: government has foresight (1%)
 - Environmental policies
- **Inference of discount rates from individual behavior**
 - Giglio et al (2014)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

Crucial issues: Valuing costs and benefits

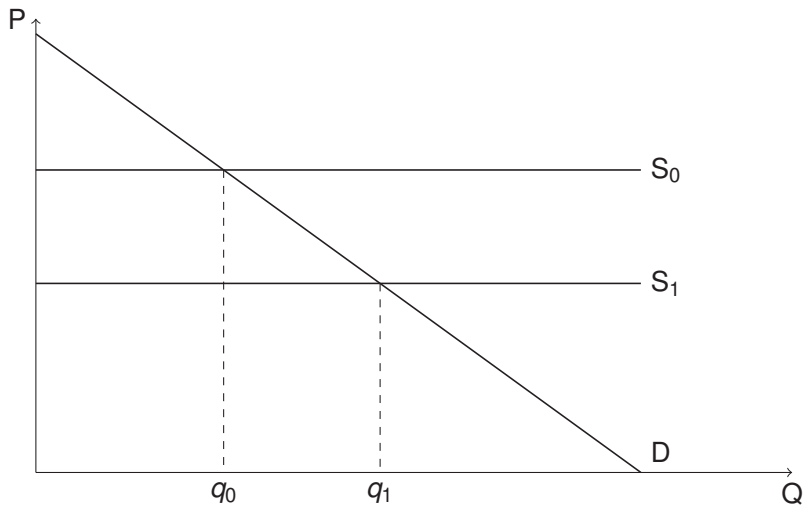
Need to account also for social costs

- **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**

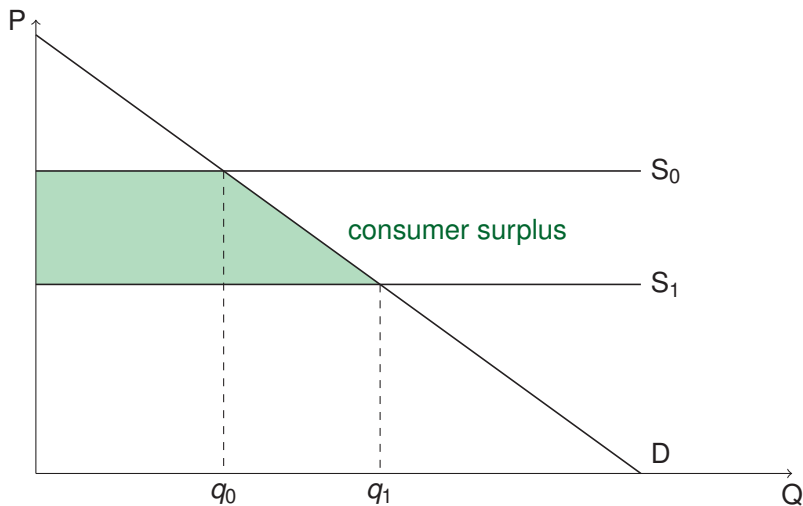
Consumer surplus



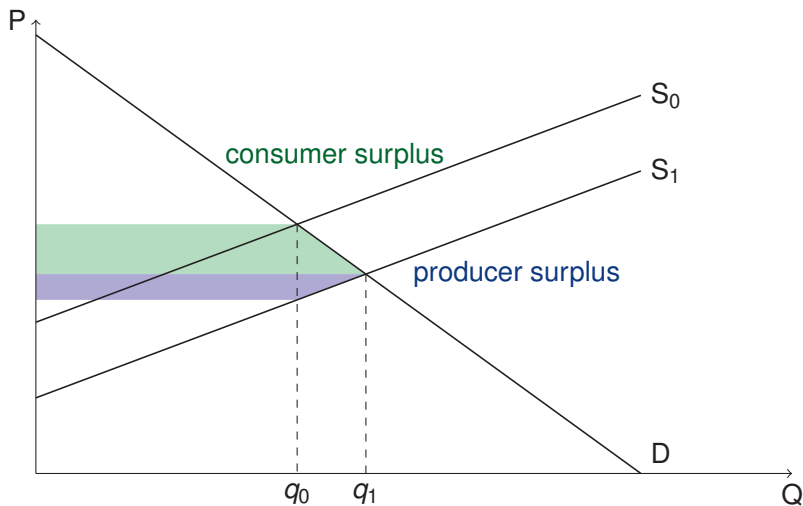
Consumer surplus



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
- If important, costs accounted for as well (Fadalto)

2 We put people back to work!

- Labor is cost, not benefit
- Might be ≈ 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**

