

Ralph
Turvey
 $\pi = TR - TC$

$MB = MC$

- social cost
- spillover cost

- externality \rightarrow property right to exclude absent

No property right \rightarrow max Q_A
 $MB_A = 0$

Analytical Net Present Value

$$\underline{BCA} - \max \underline{NPV} = \sum_{t=0}^T \frac{(B-C)_t}{(1+r)^t}$$

Benefits ?

Costs ?

r ? discount

Freeman. → Efficiency of Env.
Policy (Regulation)

CWA - water } EPA
CAA - air }

Valuing Benefits
Funding Regulations +
→ B < C

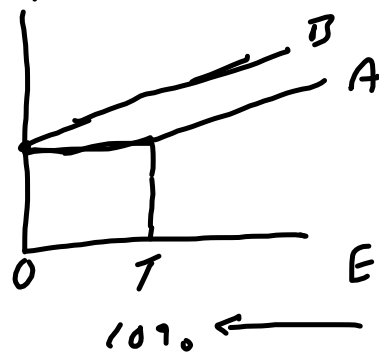
Points

① Standard setting - command & control type of reg.

Rule →

- know impacts of pollutant
dose-response function

as if^D



cost of reducing
pollutant
increasing
non-linearly

over-regulate → under-regulation

↓

list - Toxics
exposure level
set at 0
asbestos

→ list incomplete

benzene
radon

Policy → political environment

- legal system - tort law

- legislative system - diverse preferences

public choice

Voters

Max U

Politicians

Max Votes

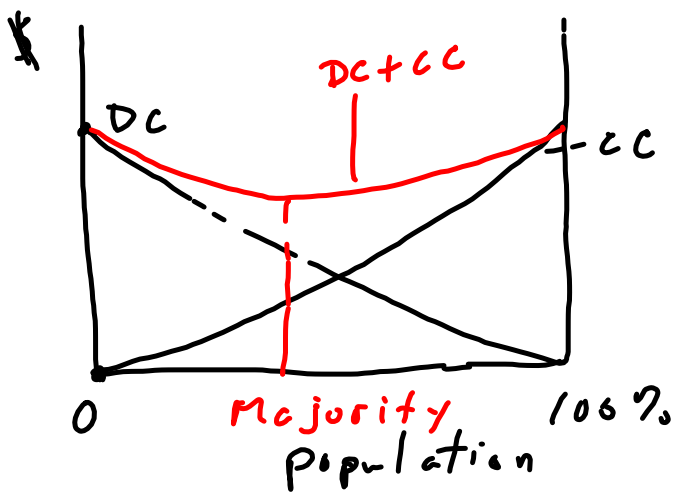
EKC effect

voter pref → env. quality

↑
↓

no preferences over policies

voting rule (majority)
 optimal majority?



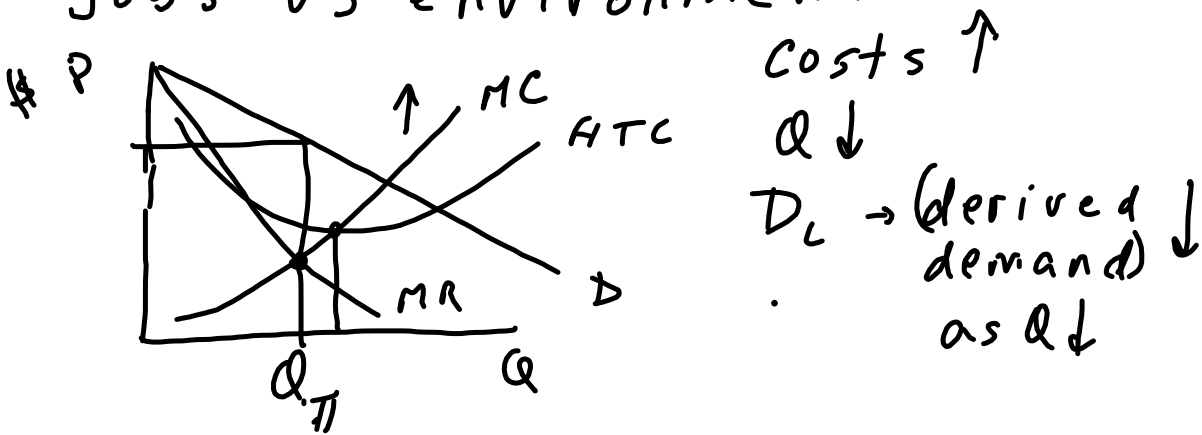
CC - coercion cost
 DC - disagreement cost

Majority $\rightarrow 50\% + \epsilon$

Mine regulation.

WV → employment vs
 env quality
 ↓ damages → local? → Freedom
 Ind.

jobs vs environment



- partial equilibrium
 - one firm

- ignores - offsets - other industries
 - health effects
 etc

- fracking debates

jobs vs clean environment
 jobs sector F \rightarrow prob (leak)
 vs jobs sector X \rightarrow input clean water
 NY State banned fracking