

Voters ↔ Politicians
Budget → Gov't Services
→ Taxes

Evaluate programs → political market
↳ complex

← screen to get viable

Welfare Economics → Efficiency (Pareto)

could.
If gainers compensate losers
& still be better off

Benefit - Cost Analysis

Steps

1 - identify objective

2 - inputs + outputs

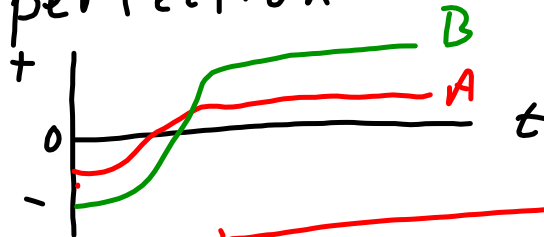
3 - value inputs + outputs

- non-market goods
- imperfection

Shadow price.

4 - time period.

time = 0 Decision point A vs B



Discount → Present Value

discount rate

5 Decision Rule

Internal Rate Return - \$ stay in house
 Reject IRR

Net Present Value (NPV)

Present Value B - C

$$NPV = \sum_{t=0}^T \frac{(B_t - C_t)}{(1+r)^t}$$

T - end of my period

B_t - Benefits in t

C_t - Cost in t

r - discount rate

B_t - value

C_t - "

r.

<p>NPV > 0 - viable</p> <hr/> <p>Rank NPV - highest</p>

Benefits & Cost when market prices
do not reflect value

- method measure
- ensure don't double count

↳ Dam → flood control.
& irrigation

Irrigation → crop ↑ → value of crops

Flood control → risk ↓ → ins premiums

Corps of Engineers - $\frac{\Delta \text{crops} + \text{land} \uparrow}{\text{total}}$

→ ignore costs

<u>Tellico Dam 1968</u>		1978
	1968 TVA	ESC
Power	\$ 0.9	2.7
Navig.	\$ 0.9	0.1
Flood Control	\$ 1.1	1.0
Recreation	\$ 3.7	2.5 * <u>under</u>
Ag Irrig.	\$ 0.2	0.15
<u>Jobs</u>	\$ 8.1	0 *
Enhanced Land Value	\$ 1.6	0 * Corps Mistake
Dam Cost	\$ 5.0	3.2
Op Cost of Flooded Land	\$ 0.0	4
NPV	11.5	<u>-0.75</u>

Value Benefits - examples shadow prices

- travel time ↓

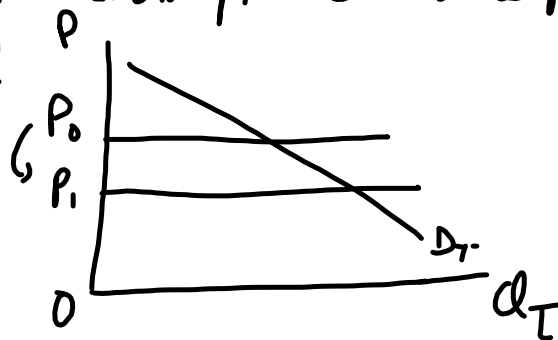
modal choices

- modes of travel cost

× time -

tease value of reduced travel time

$$\text{Time} = 0.3 \cdot W$$

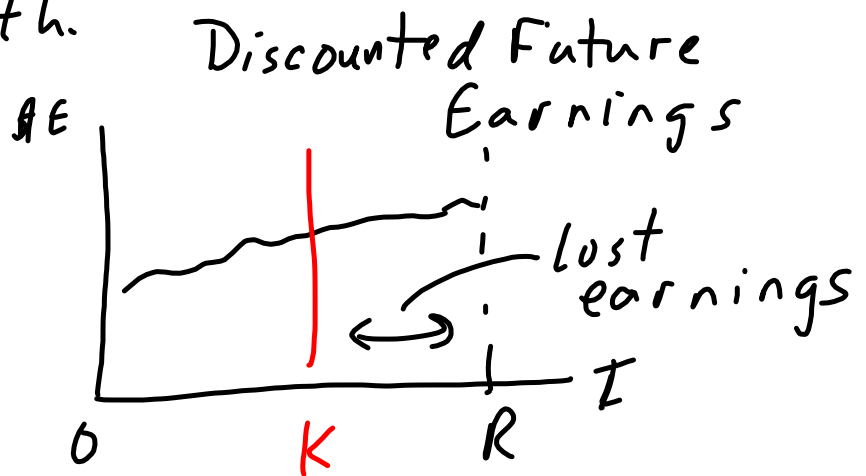


Safety - deaths avoided

Value of a life (VSL)

Δ Prob Death

$$DFE = \sum_{t=K}^R \frac{W_t}{(1+r)^t}$$



→ Averting Behavior