

Efficiency and Equity 101

Lecture 7

- Efficiency vs. Equity
 - The Big Trade Off
 - Project may be efficient (gainers can compensate losers) but inefficient
 - SO₂ Story
 - Scrubbers, clean coal, and tall stacks
 - Local miners
 - Pie Talk

- Consider an example: Gov't wants to build a dam

- Only two people affected: Alice and Zack

- Alice has \$65, Zack has \$35 (monetary wealth)
- Dam cost \$30 to build
 - \$30 worth of Zack's labor, \$0 of Alice's
- Creates benefit of \$40
 - \$40 goes to Alice, \$0 to Zack
 - Dam is on Alice's property

- Dam is efficient

- $\$40 > \30
- Alice could compensate Zack and everybody is better off → Pareto improving

- But is it equitable?

- Before dam is built → Alice \$65/Zack \$35
- After dam is built → Alice \$105/Zack \$5 → Zack starts occupy wall street movement!

- What if it is costless to redistribute income?

- We might build the dam and have Alice pay Zack \$35.
- This gives and outcome which is efficient and does not worsen equity
 - Before dam is built → Alice \$65/Zack \$35
 - After dam is built → Alice \$70/Zack \$40 → Zack does not start occupy wall street movement
- Can think of this as compensation
- Can also think of this as what markets do for private goods

- If income cannot be costly redistributed

- Can be a conflict between equity and efficiency
- If there is a conflict depends on outcome and what is meant by equitable

- Comments on redistribution
 - Generally costly
 - Using government programs and legal rules whose purpose is to achieve desirable environmental goals as a income redistribution tool is an inaccurate/imprecise means of dealing with income inequality
 - Yields a patchwork of policies which may seriously compromised efficiency
 - Better to use taxes/training polices for to deal with inequality → two instruments to deal with two issues

- Stories
 - SO₂ Again
 - Hazardous waste sites
 - Paternalism
 - Green jobs
 - Labor is a cost!
 - Equity and Efficiency Tradeoff
 - Environmental justice
 - Hard to be effective
 - Rent example

- Incidence of policy is not always obvious
 - Gas tax (regressive)
 - Congestion tax

– Incidence of Regulations (Who Bears the Burden?)

- Highway tax



