Policy Analysis

it’s the institutions that need adjusting

What’s a good change?

☐ If the change is for a single period, \( \Delta NB > 0 \) is good (static improvement)

☐ If the change is for a multiple periods, \( NPV > 0 \) is good (dynamic improvement)

“surplus” terminology

☐ Consumer & producer surpluses are alternative terms for identifying net benefits

☐ we will merely use “net benefits” to capture both consumer-side and producer-side net effects
NPV = \sum_{t=0}^{T} \frac{NB_t}{(1+d)^t}

often written as \Delta NB_t, since..

So, it boils down to being able to compute \Delta NB,
possibly for many periods.

“conceptually simple”

Policy Types

- price changes
- quantity changes
- demand shifting
- supply shifting

Often occurring together.
example: **Price shifting**

![Price shifting diagram]

example: **Supply shifting**

![Supply shifting diagram]

from the sausage factory?*

Annual economic losses from not meeting water supply needs could result in a reduction in income of approximately $11.9 billion annually if current drought conditions approach the drought of record, and as much as $115.7 billion annually by 2060, with over a million lost jobs.

* things you might not eat if you saw them being manufactured
Direct Benefits:

\[ y = f(w, x_1, x_2, ..., x_n) \]
\[ U = U(w, x_1, x_2, ..., x_n) \]

Secondary Benefits:

- A dam goes in, more water gets used, $\$\$
  - more widget-making workers are hired
    - they buy homes and hamburgers
      - more roofers and fry cooks get hired and ...
  - more widgets get made
    - widget makers sell to wholesalers
      - more truck drivers and accountants get work and ...

Secondary Benefits:
Secondary Benefits:

- A dam goes in, the water is enticing, &
- more recreationists show up
  - they buy bait and lodging
  - more worm farms and sales tax revenue and ...

Do Secondary Effects Count?

Would more water development enable more output, input employment, building, visitors, or such?

If no
- Then there are no 2ndry benefits.

If yes
- Are uncounted "nonwater" benefits received by anyone as a result?
  - YES!
  - It is notable that multiplier-type analyses designed to measure the sum of these effects over all sectors are commonly estimating gross economic activity, not net gains (similar to sales vs. profits).

for ex.: owners of labor, land, equipment; output processors & marketers; & businesses that are economically linked with these other 2ndry interests

This is the correct answer for a typical full employment economy.

Is any of this added activity merely relocated from elsewhere?

- Yes
- Does the decision maker care about the other locations?
  - if yes
  - There may be 2ndry benefits within the region of emphasis, but ...
  - an issue of "accounting stance"

- if no
  - Then there are no 2ndry benefits as they are offset.

continued
a helpful classification

1. commensurables - impacts that can be valued (as ΔNBs for example)
2. incommensurables - impacts that can be counted but not valued
3. intangibles - impacts that cannot be counted or valued