

Welfare or Well-Unfair: Incorporating Heterogeneous Income Into Normative Analysis

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2019

Outline

1. Show (or remind) us why typical welfare estimations are a flawed tool for normative economics
2. Outline the general idea of what I hope to do
3. Show the shell of a method

Motivating Example



(a) A Banana



(b) Jeff Bezos



(c) Me

Motivating Example

- ▶ Who should get the banana?
- ▶ Economists often use “How much are you willing to pay?”
- ▶ Jeff - “I mean it’s one banana Nathan. What could it cost, \$10? look I’d pay \$100”¹
- ▶ Nate - “I missed lunch and am really hungry, I would pay \$5”²
- ▶ Who get’s more welfare from the banana?

¹Not an actual quote

²Also not an actual quote. \$5 for a banana?

Justification For Willingness to Pay

- ▶ We are Maximizing the size of the “pie” and we can redistribute later
 - ▶ While this may be true in some sense the pie is typically not redistributed
- ▶ We are getting a sense of the “cost” of a policy and then the reader can decide which is better based on equity concerns
 - ▶ The equity trade off is pretty clear in the banana example
 - ▶ What about more complicated policies impacting various groups?

More Complicated Examples

- ▶ Deciding between a tax on rice and caviar
- ▶ Allowing a merger that raises the price of low quality goods but lowers price and cost of high quality goods
- ▶ Deciding on health-care mandates, subsidies or restrictions
- ▶ Replacing old technology with new
- ▶ In these examples the normative equity trade-offs are harder to wrap our heads around

Main Goal

- ▶ Reduce the number of comparisons we leave to the reader
- ▶ i.e. reduce the dimensionality of the problem
- ▶ Make these policy trade-offs more comparable to the banana problem
- ▶ Create Normative parameter to capture the Equity Trade-off

Basic Example

Let CS = Consumer Surplus, $D(i)$ = demand for consumer i , P = Price, K = Number of consumers, \bar{M} = mean income, I_i = Income, W = Welfare

Discrete consumer surplus could be calculated like so:

$$CS = \sum_{Q=1}^K (D(i) - P)$$

But, from the answer to our above question we can derive a willingness to pay to “welfare” weights

$$N(i) = \frac{\bar{M}}{I_i^2}$$

Now we can derive a truly normative metric for welfare in the market

$$W = \sum_{Q=1}^K (D(i) - P) \cdot \frac{\bar{M}}{I_i^2}$$

BLP Example

Informing a Normative Choice

- ▶ Use something like the following:
 - ▶ For which X would the following make roughly the same difference? One thousand dollars to a family with an income like yours, or X dollars to a family with half your family's income?
- ▶ Provides us with a way to translate surplus from a given individual into a subjective welfare measure incorporating income
- ▶ Outcome is normative (as it should be)
- ▶ We can provide welfare analysis for a menu of different responses and report them back

The End

Thank You