Discussion of "MisMatch in Human Capital Accumulation"

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Mismatch

Order individuals according to their individual specific return to college, θ.

No mismatch: perfect sorting by θ

- Set a cutoff $\bar{\theta}$
- All persons with $\theta \geq \bar{\theta}$ go to college.
- All others do not.

Deviation from perfect sorting is "mismatch."

Why is this hard?

For each person, we need to compare

- $Y_{HS,i}$: (lifetime) earnings as a high school graduate
- $Y_{coll,i}$: (lifetime) earnings as a college educated worker
- $\theta_i \propto Y_{coll,i} - Y_{HS,i}$

Observable:

- Y_{coll} for those who choose college
- Y_{HS} for those who don't

Need to impute:

- Y_{HS} for those who choose college
- Y_{coll} for those who don't

Does this look familiar?

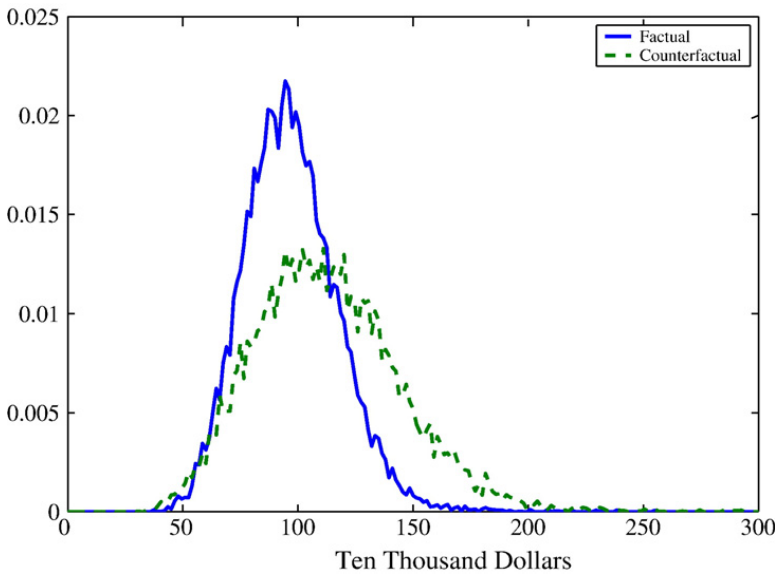
The literature on **selection bias** in the return to college tackles the same problem.

An old literature with mixed results (Willis and Rosen, 1979; Carneiro et al., 2003; Cunha and Heckman, 2007)

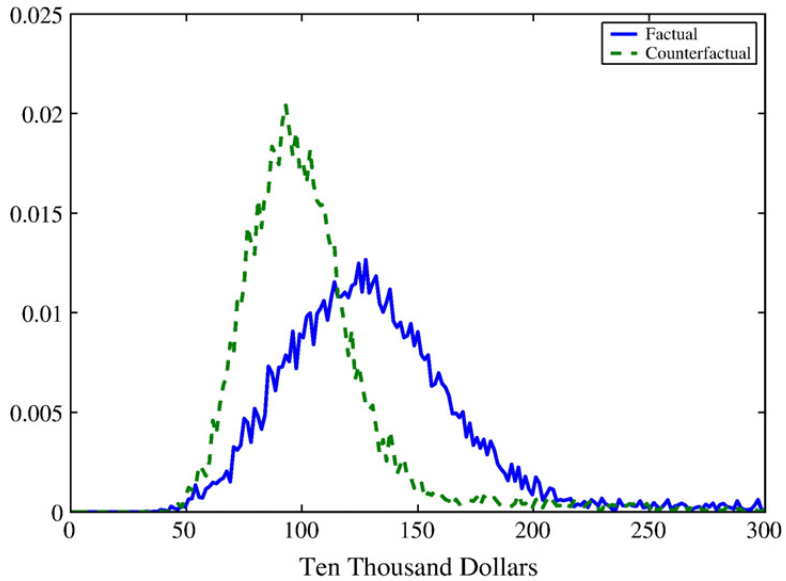
What is different here?

1. **Less data** available.
   The literature has data on family background, pre-college test scores, in college performance, college graduation or dropout status, earnings histories, ...
   Here, we only have post-college test scores, college entry decisions, and a regression coefficient (wage on test scores).
2. **Stronger assumptions** and functional forms.

Cunha and Heckman (2007)



High school graduates



College graduates

Mismatch in Hendricks and Leukhina (2017)

One result from the literature on selection.

Key features:

1. College transcripts: additional information on abilities and incentives to persist in college.
   (from High School & Beyond PETS)
2. Dropout decisions: important for incentives.

Result:

- over-match: 4%
- under-match: 0.3%

How many low ability students do graduate: 0.0%

How many high ability students fail to graduate: 3.5%

References I

Carneiro, P., K. T. Hansen, and J. J. Heckman (2003): "2001 Lawrence R. Klein Lecture: Estimating Distributions of Treatment Effects with an Application to the Returns to Schooling and Measurement of the Effects of Uncertainty on College Choice," *International Economic Review*, 44, 361–422.

Cunha, F. and J. J. Heckman (2007): "Identifying and estimating the distributions of ex post and ex ante returns to schooling," *Labour Economics*, 14, 870–893.

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Willis, R. J. and S. Rosen (1979): "Education and Self-Selection," *Journal of Political Economy*, 87, pp. S7–S36.