

Causal Inference and Mobility

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Workshop on Strengthening the Evidence Base to Improve
Economic and Social Mobility in the United States
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Causal Inference and Mobility

- Basic mobility framework and causal inference
- Causal mediation analysis
- Heterogeneous causal effects
- Sensitivity analyses



Figure 1. Effects of Social Origins (O) on Social Destinations (D)



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Income treatment

Complex potential outcomes

- Categorical income measure
- Continuous income measure

Complex positivity

- Subsamples for whom treatment values are realistic

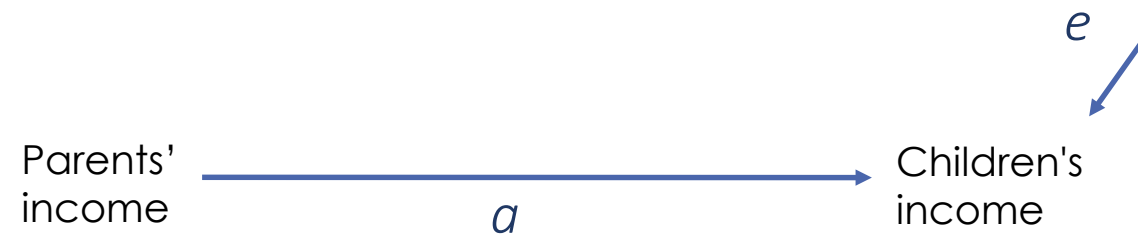


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- Categorical income measure
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Complex positivity

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Selection into treatment

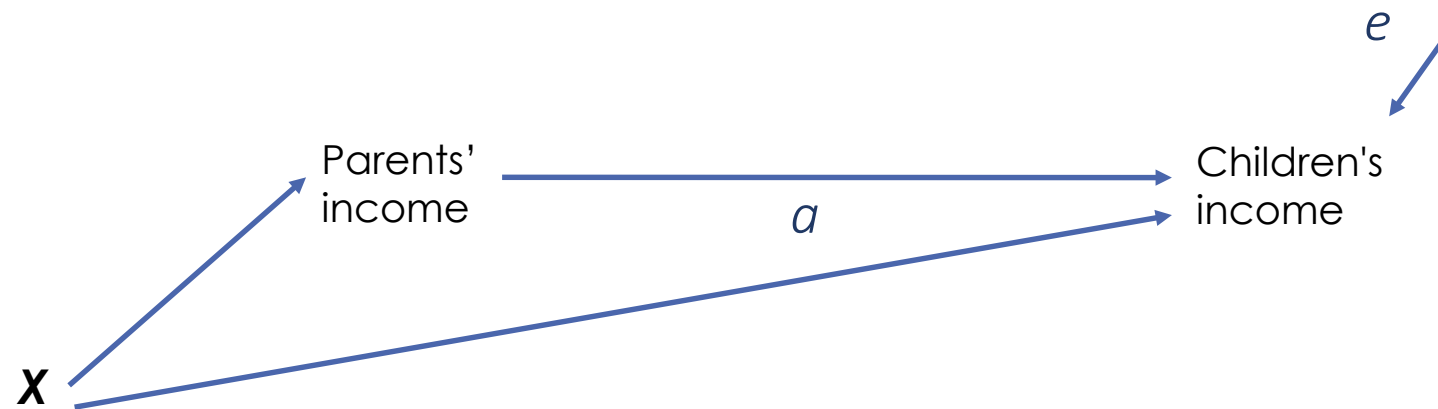


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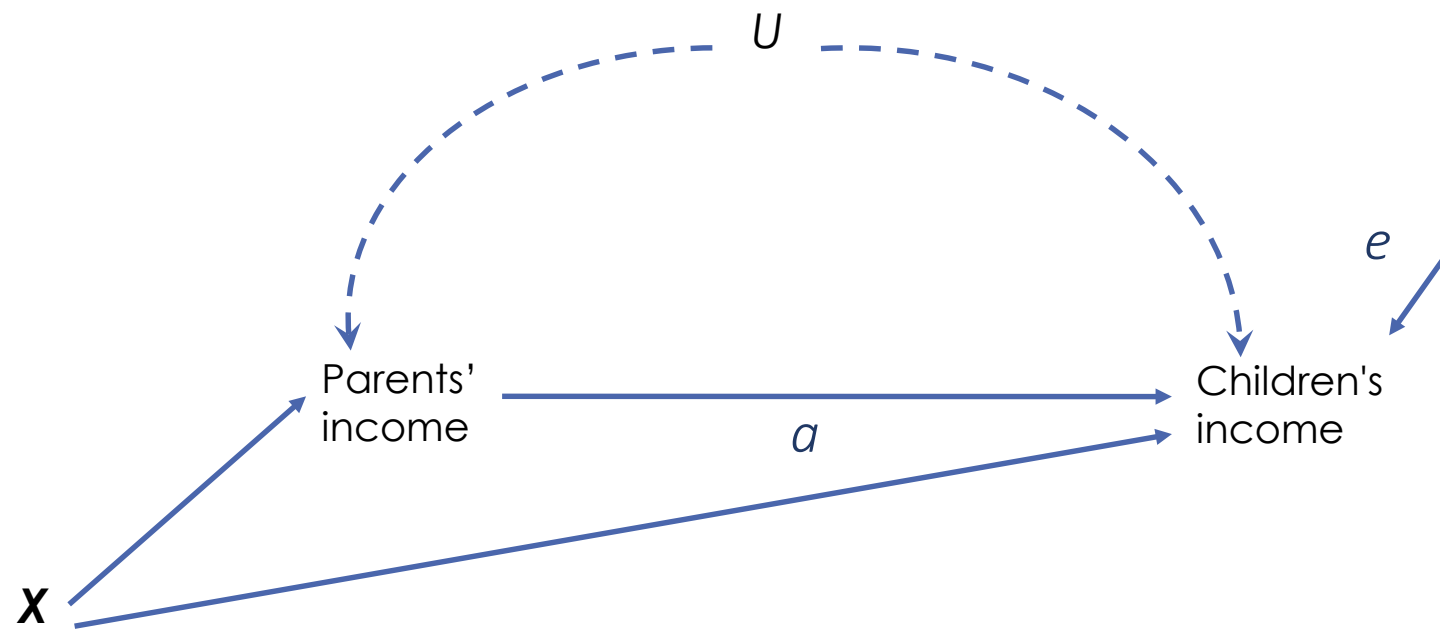


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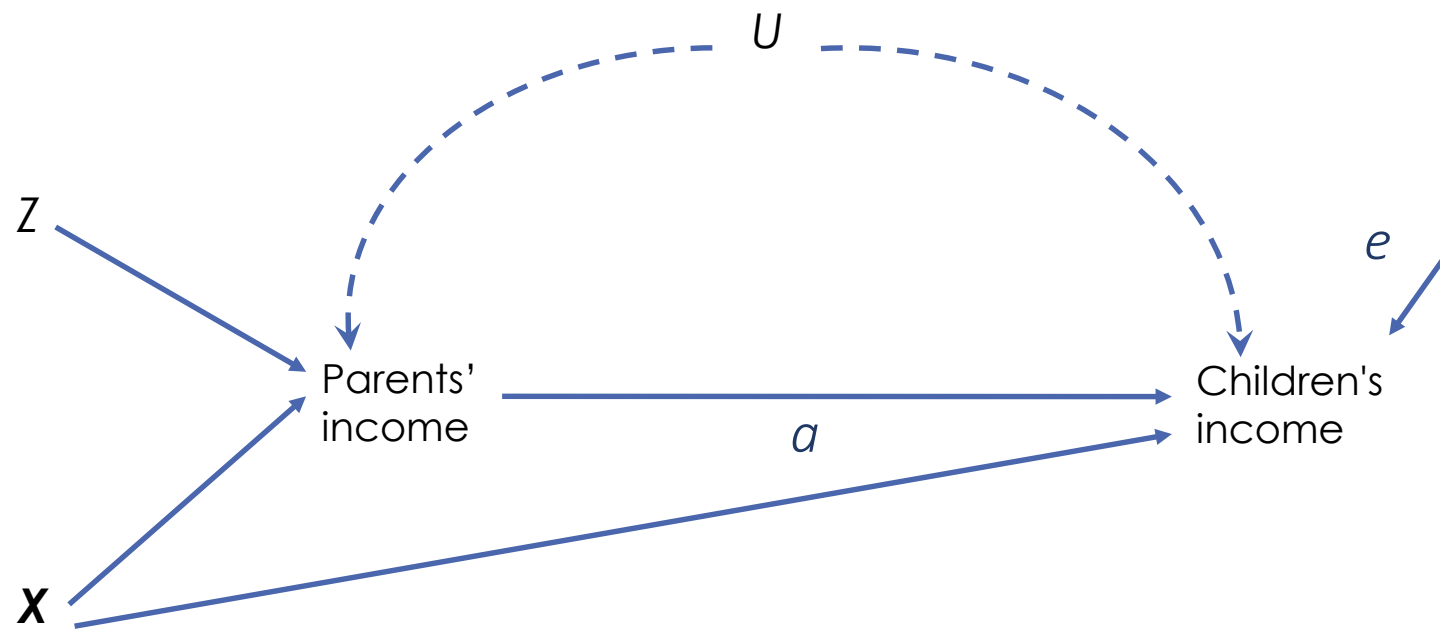


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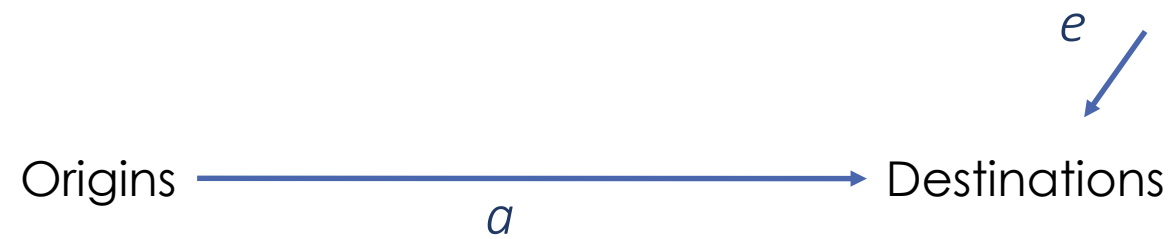


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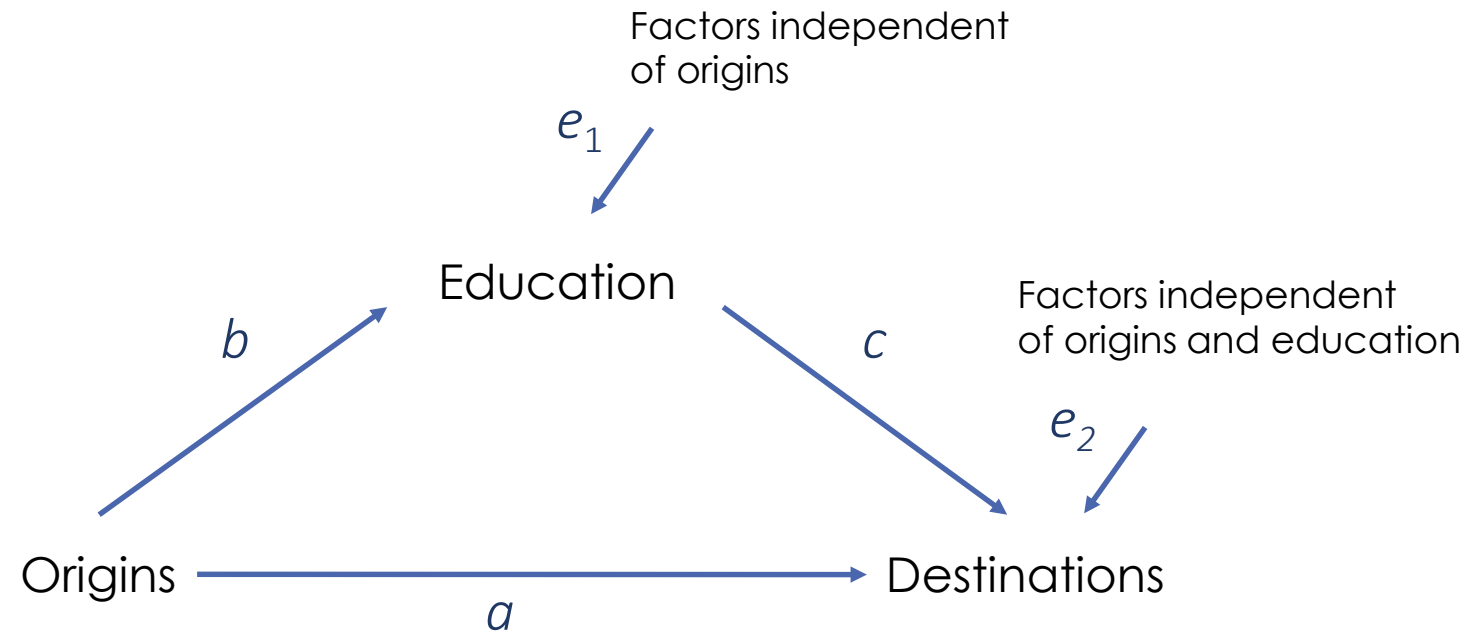


Figure 2. O-E-D Triangle: Effects of Social Origins (O) and Education (E) on Social Destinations (D)

Education treatment

- College attendance vs. no attendance
- College completion vs. no completion
- Two-year vs. four-year attendance
- Four-year institutional selectivity

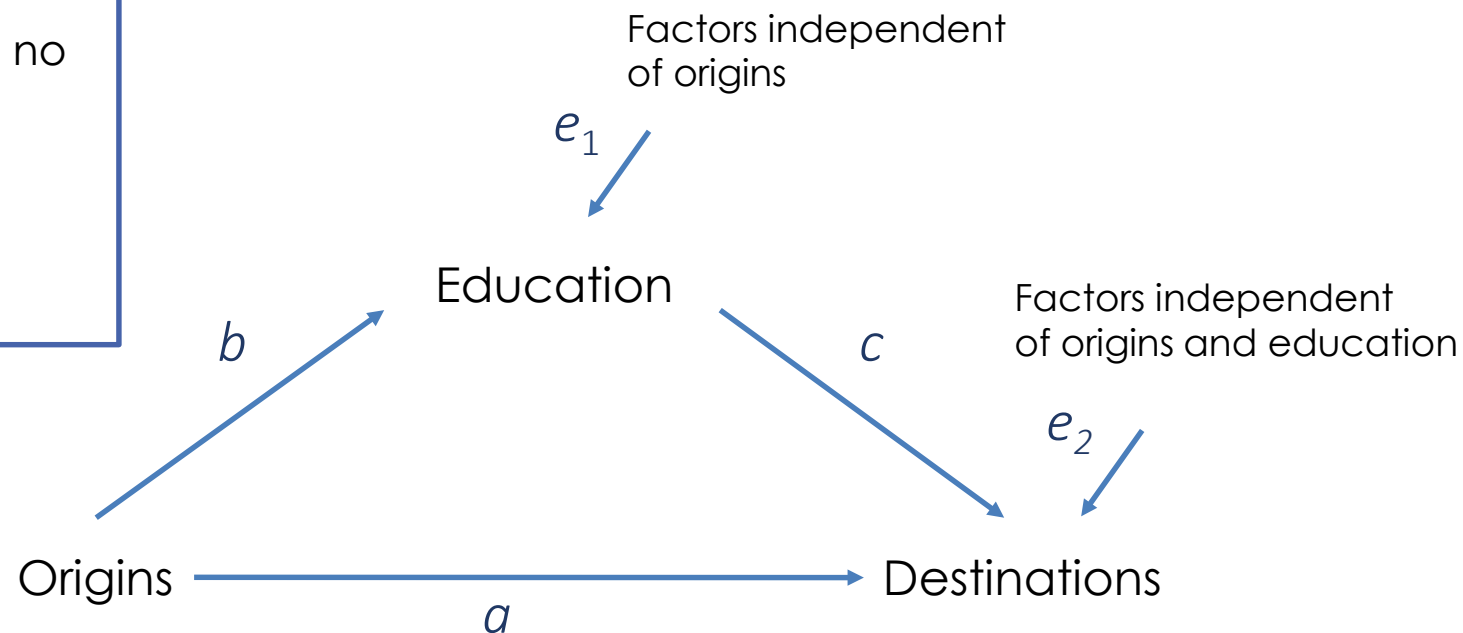


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Causal mediation analysis

- Decompose total effect into direct and indirect effects
- Sequential unconfoundedness assumption

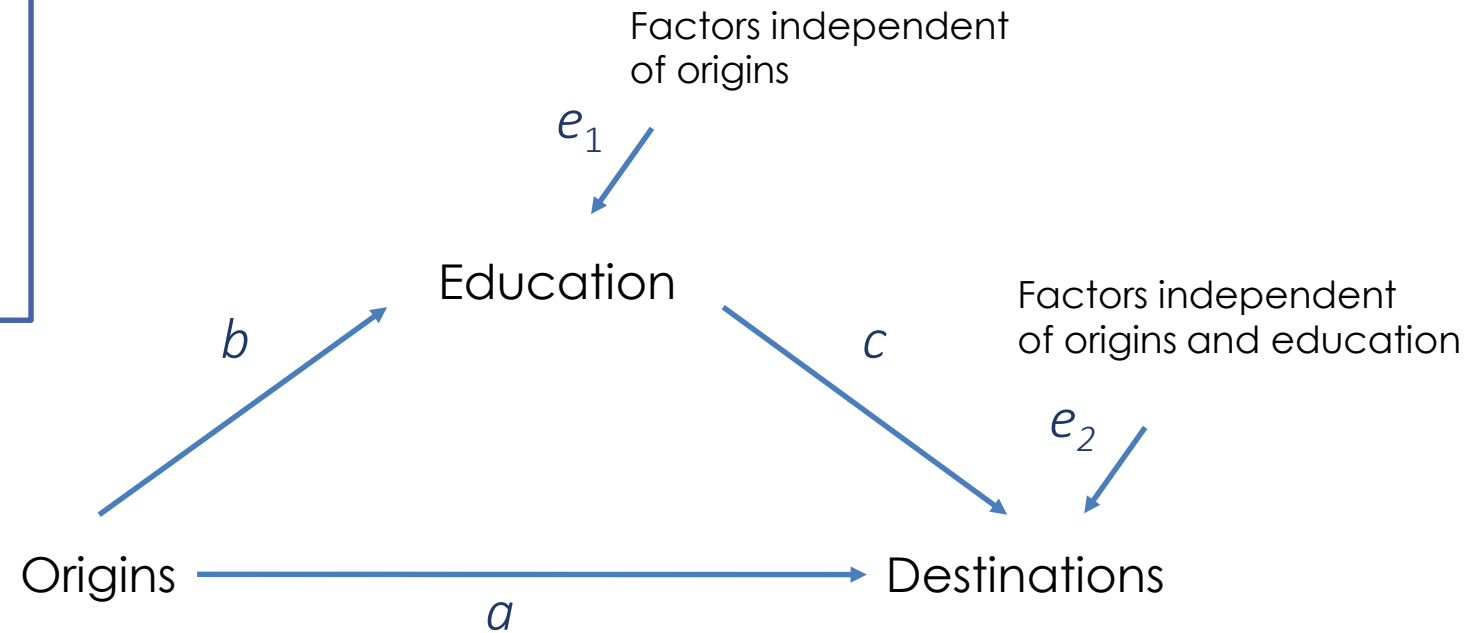


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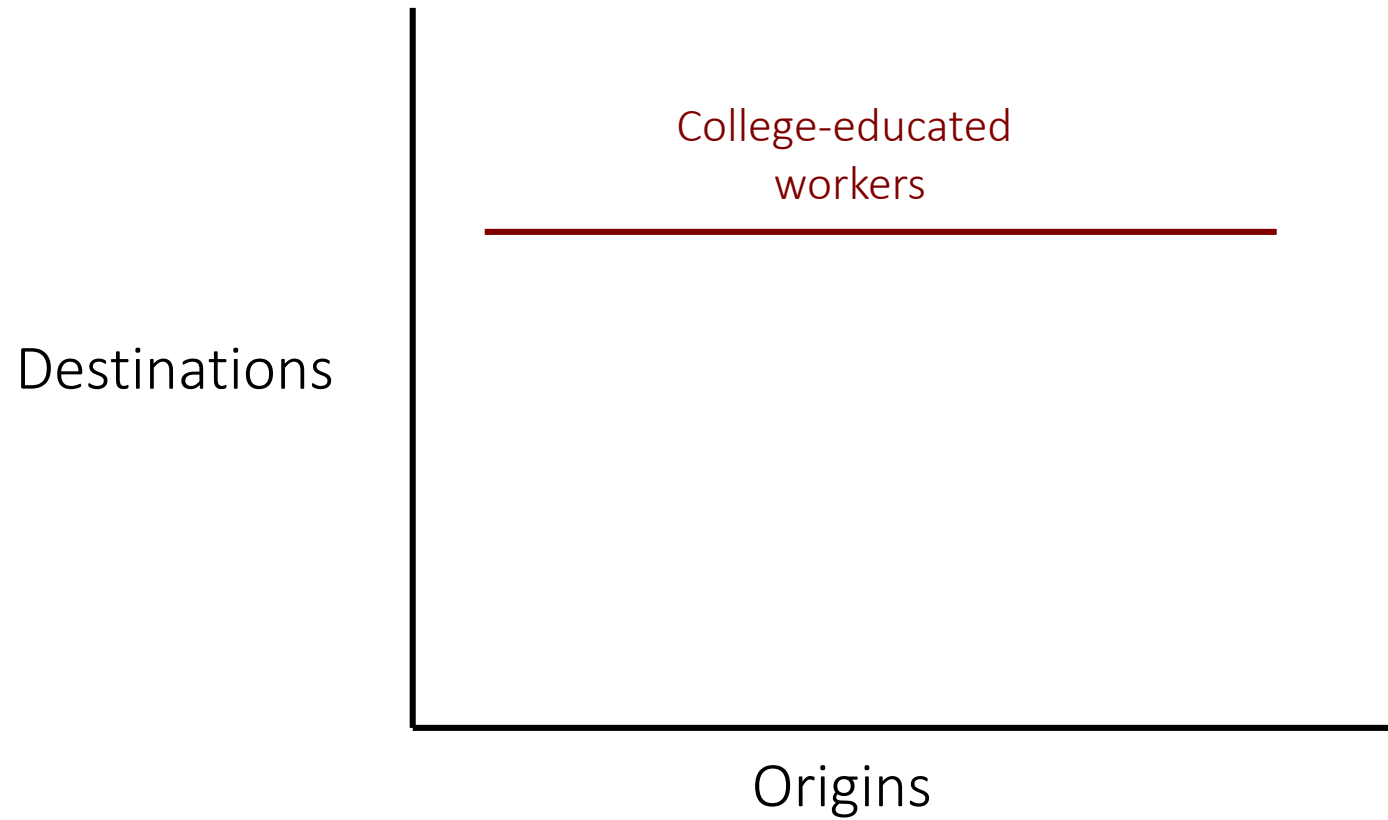


Figure 3. Relationship between Social Origins (O) and Social Destinations (D) by Education (E)

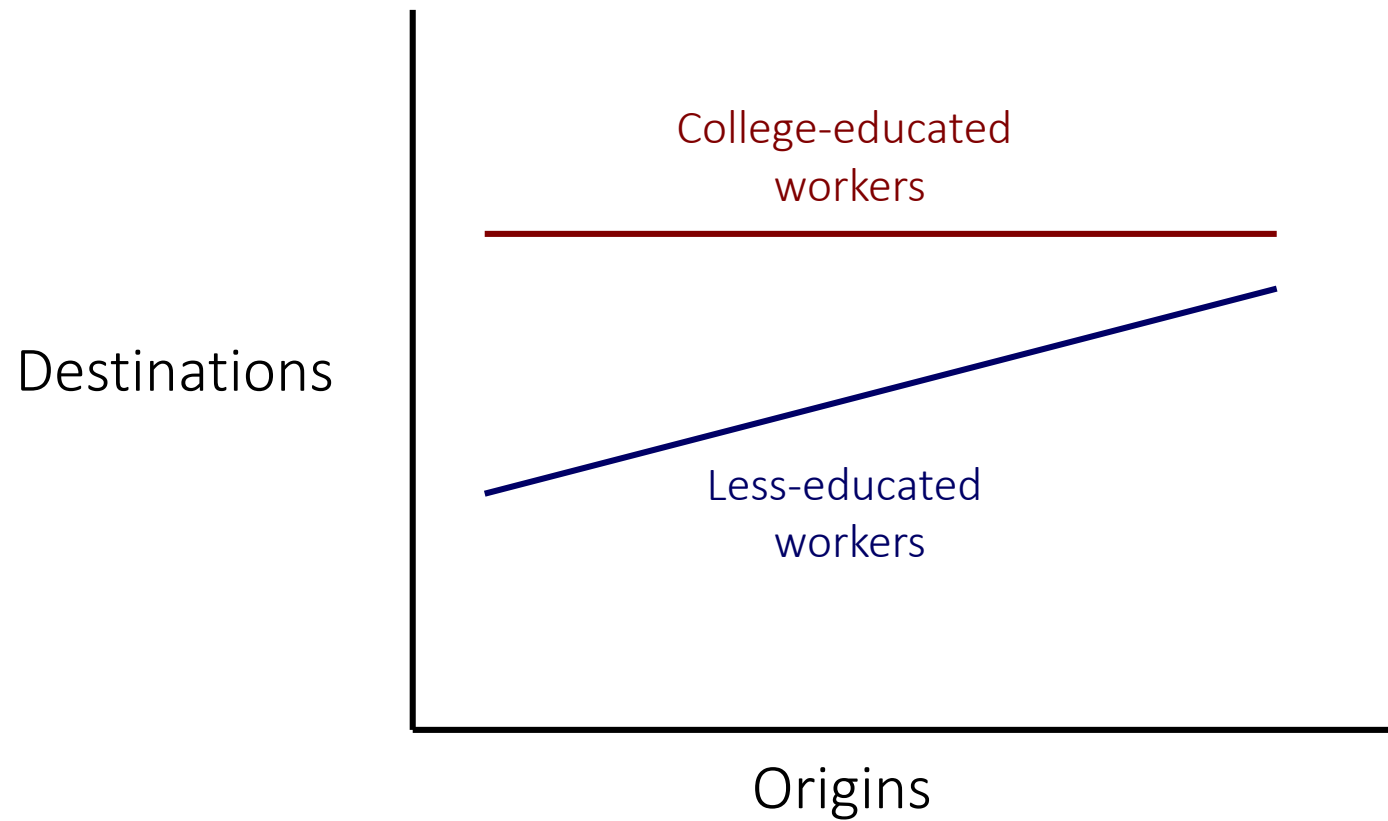


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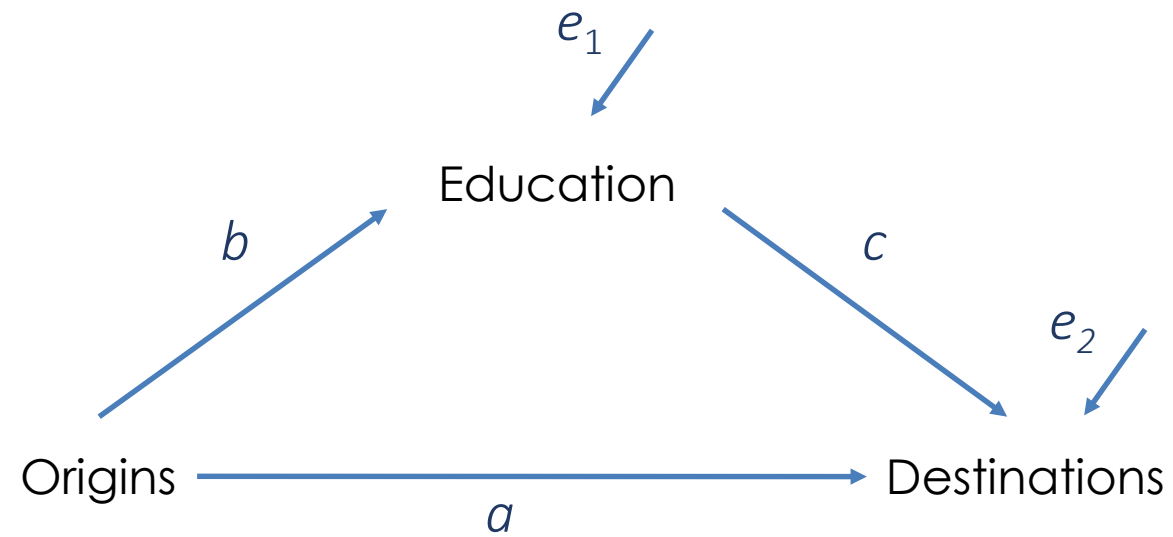


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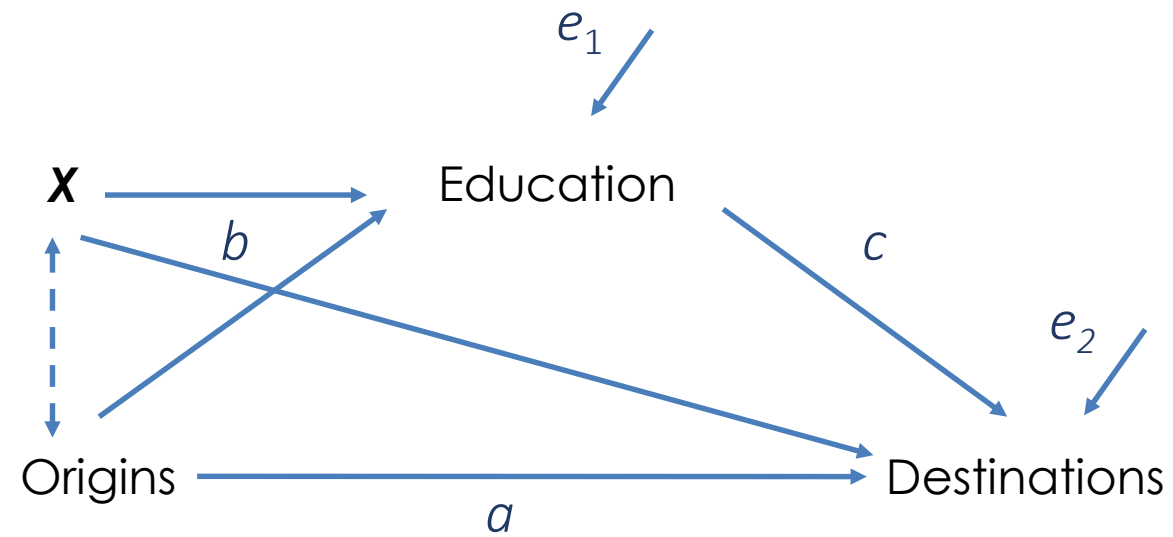


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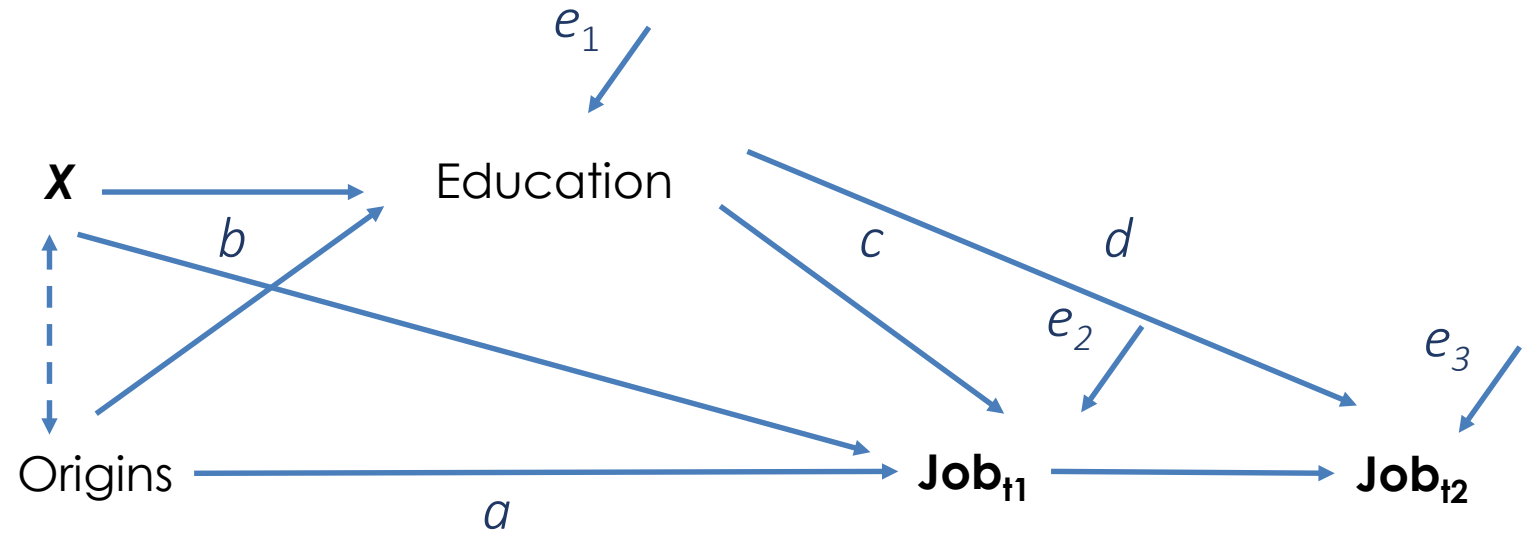


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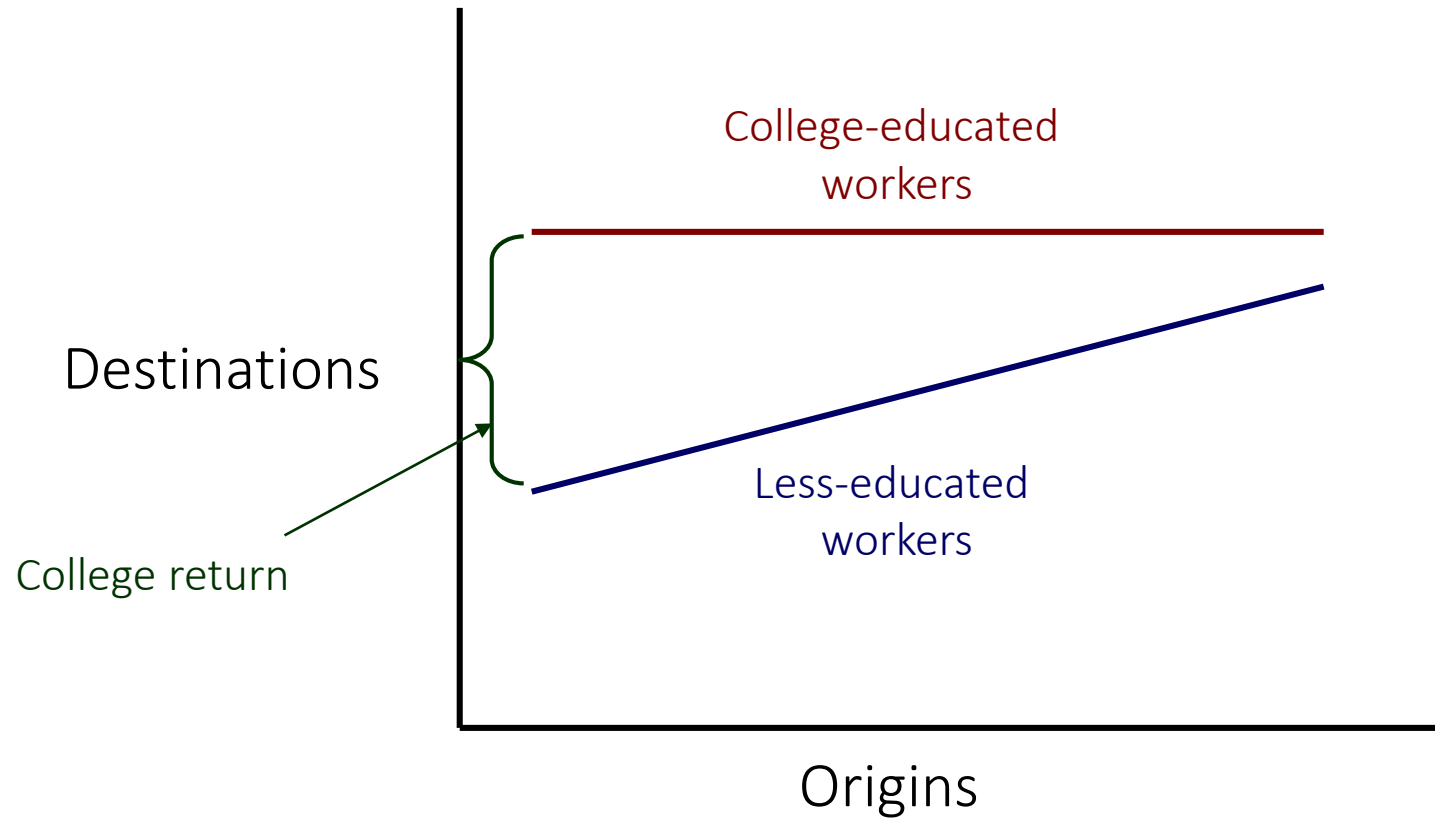


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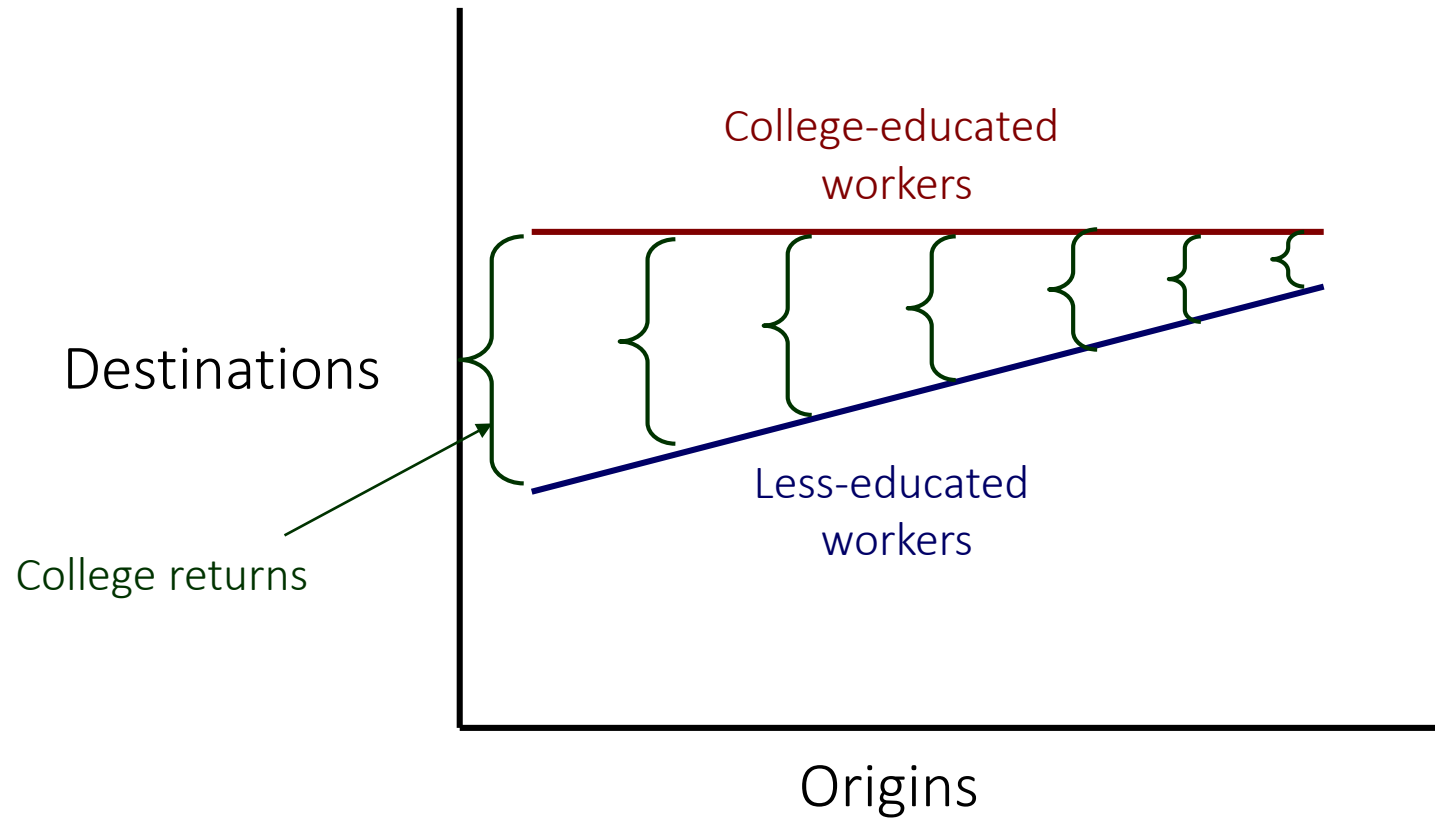


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Heterogeneous causal effects

- Variation by social origins
- Variation by propensity
- IV models
- Causal trees

Differential selection

Internal / external validity

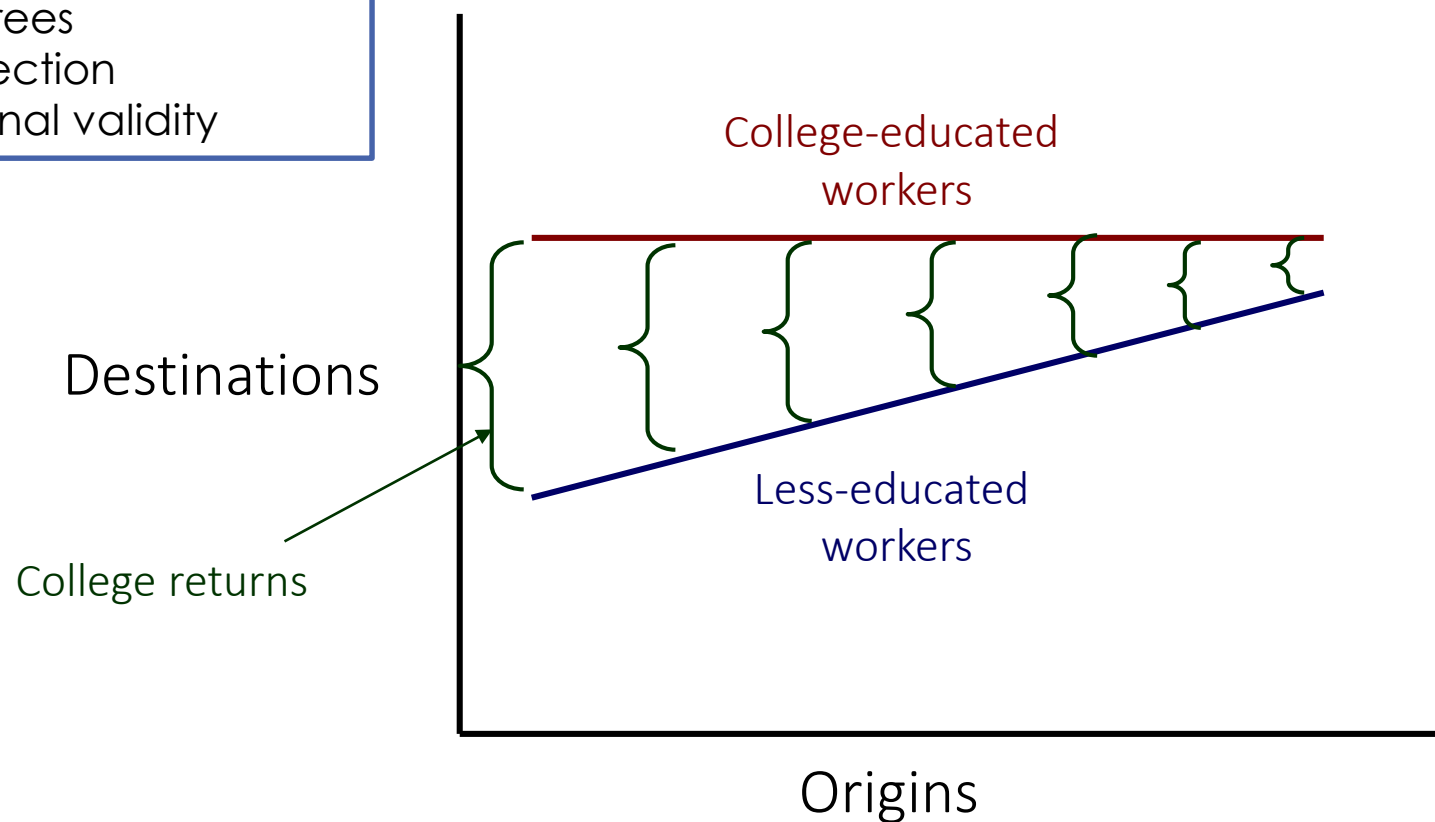


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Causal Inference and Mobility

- Basic mobility framework and causal inference
 - Carefully consider potential outcomes and selection into treatment
- Causal mediation analysis
 - Useful for assessing the mediating role of education and intergenerational mobility
- Heterogeneous causal effects
 - Useful for assessing how mobility processes vary across the population and for attending to external validity
- Sensitivity analyses
 - Useful for assessing how large unobserved selection would need to be to invalidate estimated effects