You're Going to Miss Me When I'm Gone: How Mobility Affects Earnings Measurement in States

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Any opinions and conclusions expressed herein are those of the authors and do not necessarily represent the views of the U.S. Census Bureau. These results have been reviewed to protect confidentiality. (DRB Requests #DRB-B0007-CED-20181029, DRB-B0033-CED-20190318, and DRB-B0064-CED-20190703)

In the last ten years, a number of states have begun using administrative earnings data to evaluate earnings outcomes of their post-secondary graduates. However, that data is almost always sub-national.

A number of research papers in higher education use sub-national earnings data to measure the effects of higher-education treatments: Andrews, Li and Lovenheim (2016); Minaya and Scott-Clayton (2018); Engbom and Moser (2017); Denning, Marx and Turner (2018) Stevens, Kurleander and Grosz (2018); Altonji and Zimmerman (2018)

There is not good measurement of the bias from only using in-state earnings data, which is particularly crucial for policy-makers implementing performance-based funding based on earnings outcomes. In the last ten years, a number of states have begun using administrative earnings data to evaluate earnings outcomes of their post-secondary graduates. However, that data is almost always sub-national.

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Contributions

- ▶ We have access to national earnings data, and can measure the bias from only using in-state data.
- ▶ We show that out-of-state attrition is large, and may violate the assumptions of popular correction methods.
- We are developing a method to correct for this bias.

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Data

- ► Administrative records of bachelors recipients from University of Texas Systems (2001-2015)
- ▶ LEHD earnings data, which is sourced from 50 states and the District of Columbia; includes all employment covered by unemployment insurance (2001-2016)
- ▶ In the following graphs, we restrict to observations with national earnings above \$10,000 and at least three quarters of employment in the calendar year.

Share of Employed Graduates In-State



Mobility by Year Post-Graduation



Mobility by Institution, 1 Year Post-Grad



Mobility by STEM





Engineering

Psychology

Business



Psychology

Business





Business





Andrews, Li and Lovenheim (2016) want to measure how college quality affects earnings. Basic regression:

 $\text{Earnings}_{\text{it}} = \beta \text{Flagship}_{\text{i}} + \Theta X_{\text{it}} + \epsilon_{\text{it}}$

Their paper only has access to Texas UI wage data, drops anyone who doesn't have sufficient earnings in-state.

	F In-State	ixed Effects National	Bias	De In-State	emographic National	s Bias
Full Sample						
Earn > 0						
Log(Earnings)						
P25 Log						
P50 Log						
P75 Log						

	Fixed Effects In-State National Bias			Demographics In-State National Bias		
Full Sample	-719.3 (102.2)	$2070 \\ (128.7)$	2790	-938.8 (103.6)	1619 (128.9)	2557
Earn > 0	$2746 \\ (137.6)$	$3465 \\ (147.0)$	719			
Log(Earnings)	$\begin{array}{c} 0.0867\\ (0.0074) \end{array}$	$\begin{array}{c} 0.110 \\ (0.247) \end{array}$	0.0236			
P25 Log						
P50 Log						
P75 Log						

	Fixed Effects			Demographics		
	In-State	National	Bias	In-State	National	Bias
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Earn > 0	$2746 \\ (137.6)$	$3465 \\ (147.0)$	719	$2058 \\ (136.2)$	$2795 \\ (149.0)$	737
Log(Earnings)	$\begin{array}{c} 0.0867\\ (0.0074) \end{array}$	$\begin{array}{c} 0.110 \\ (0.247) \end{array}$	0.0236	$\begin{array}{c} 0.0526\\ (0.0074) \end{array}$	$\begin{array}{c} 0.0776 \\ (0.0066) \end{array}$	0.0250
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P25 Log	$0.0568 \\ (0.0022)$	$\begin{array}{c} 0.0737 \\ (0.0019) \end{array}$	0.0169	$\begin{array}{c} 0.0325 \\ (0.0022) \end{array}$	$\begin{array}{c} 0.0491 \\ (0.0020) \end{array}$	0.0166
P50 Log	$\begin{array}{c} 0.1043 \\ (0.0014) \end{array}$	$\begin{array}{c} 0.1246 \\ (0.0012) \end{array}$	0.0203	$\begin{array}{c} 0.0689\\ (0.0014) \end{array}$	$\begin{array}{c} 0.0917 \\ (0.0012) \end{array}$	0.0228
P75 Log	$\begin{array}{c} 0.1432 \\ (0.0015) \end{array}$	$\begin{array}{c} 0.1653 \\ (0.00135) \end{array}$	0.0220	$\begin{array}{c} 0.0934 \\ (0.0015) \end{array}$	$\begin{array}{c} 0.1181 \\ (0.0013) \end{array}$	0.0247