Post-Secondary Employment Outcomes (PSEO) Q&A

Conference Room 4

Thursday, September 5th, 2019

United States Census Bureau

Welcome!

Hosts:

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Economist   Geographer

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Ask about all things data   Ask about all things app
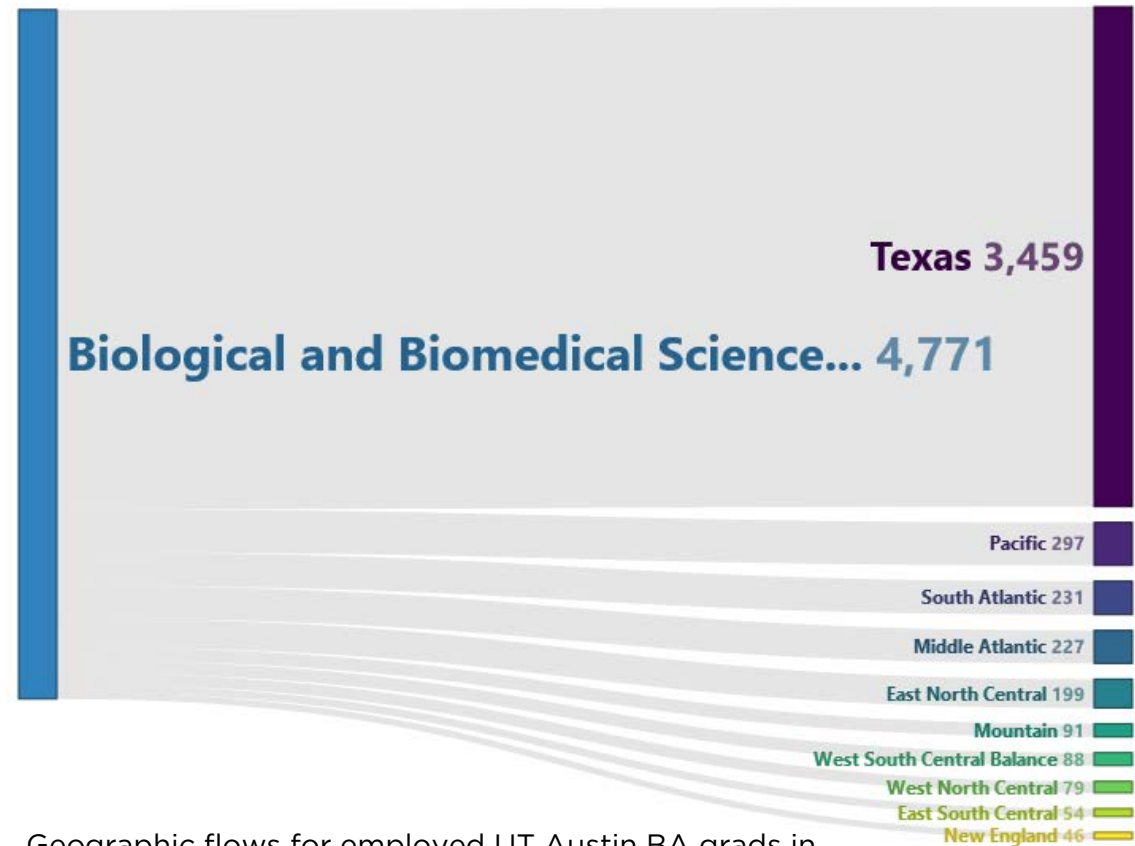
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What is included in the PSEO data

Earnings
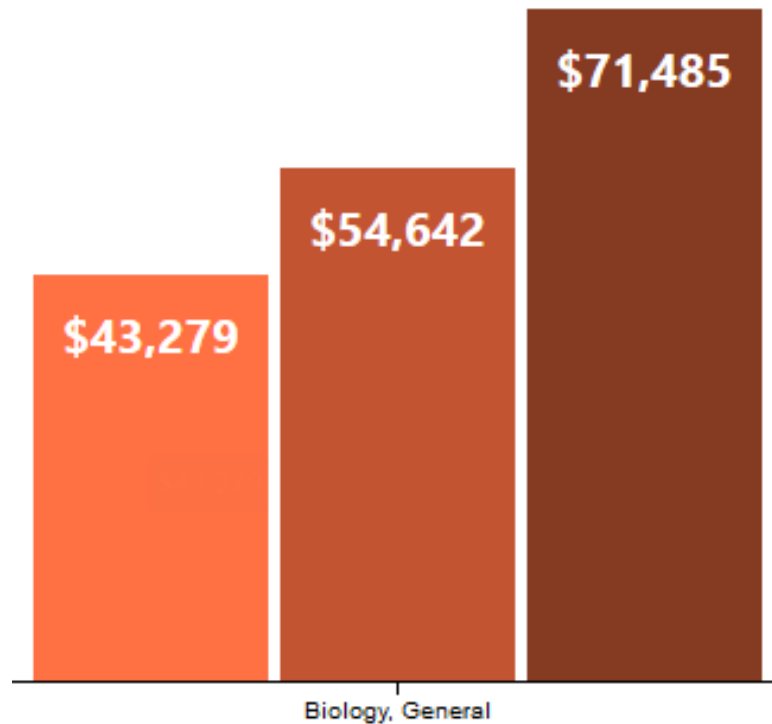
25, 50, and 75 percentile for a UT Austin BA grad in Biology 5 years after graduation

Flows

Geographic flows for employed UT Austin BA grads in Biological and Biomedical Sciences 5 years after graduation

PSEO Process

1. LED partner states submit earnings data quarterly

2. Earnings data creates longitudinal jobs database

3. Partner institutions submit graduate transcript data

4. Protected PSEO data = transcript data ⇔ jobs database

5. Convert earnings to 2016 dollars via consumer price index (CPI-U)

6. Omit grads w/ no or very low earnings
   - Two or more quarters without earnings in a given year
   - Less than the annual federal minimum wage ($15,080/yr, $7.25/hr)

7. Run differential privacy protection mechanism to create public PSEO data

Example of geometric noise in privacy protection

■ TRUE ■ PROTECTED
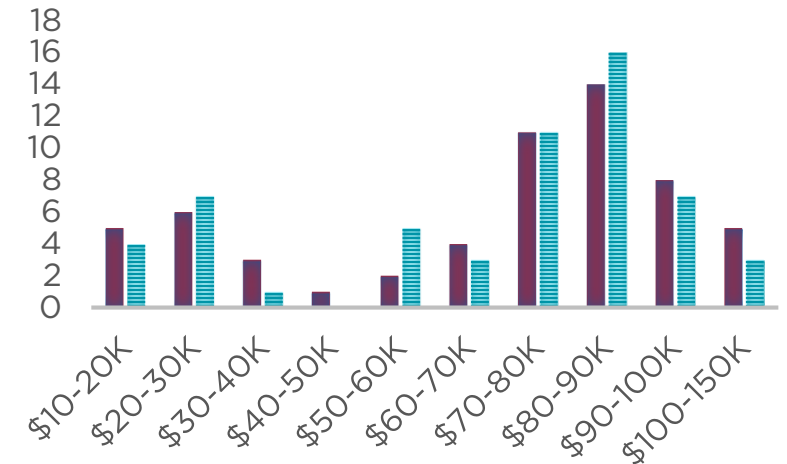
Privacy Protection System

... ask Andrew

Or read the [Technical Appendix for Protection System Post-Secondary Employment Outcomes (PSEO) (Beta)](#).

Earnings

How much $$ does a grad from SOME INSTITUTION with a CERT/BA/MA/PHD in SOME DEGREE make?

Earnings are an annual total across ALL JOBS

> e.g. If a graduate has three part time jobs then all three are used to calculate earnings

Available at the 25th, 50th, and 75th percentile

- 1 year after graduation
- 5 years after graduation
- 10 years after graduation

Example: CU Graduate Earnings for the average grad from any graduating class

	25th	50th	75th
1-year	$21,775	$31,767	$45,882
5-years	$34,494	$50,179	$71,127
10-years	$45,277	$67,146	$101,713

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Flows

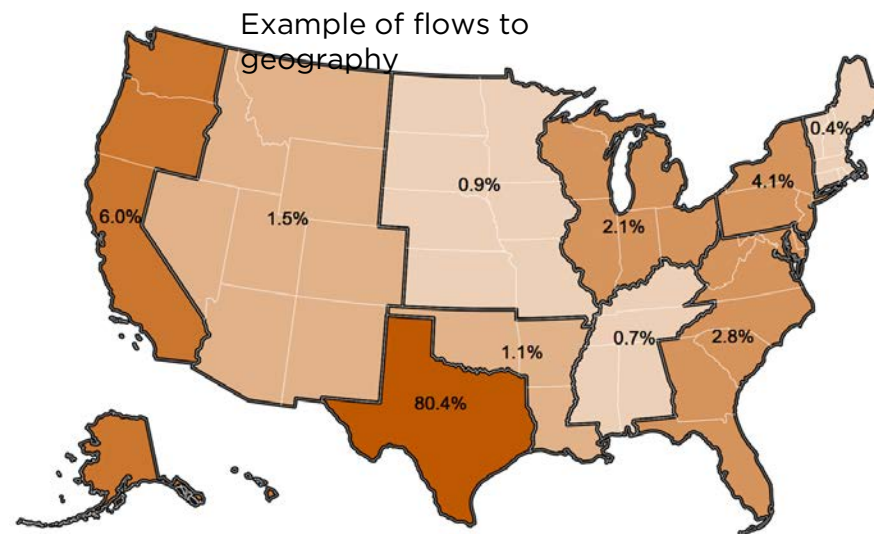**Where** does a grad from SOME INSTITUTION with a CERT/BA/MA/PHD in SOME DEGREE work?

Flows use a SINGLE JOB per graduate – the one that earned them the most money

e.g. if a grad works as an investment banker but moonlights as an uber driver, they're probably a banker in the PSEO flows data

Available by GEOGRAPHY or INDUSTRY

- 1 year after graduation
- 5 years after graduation
- 10 years after graduation

Example of flows to geography

Data Access

APP

When to use:

Quick/Exploratory Access

Trade-offs:

Can't answer in-depth questions that start with institutions/industry/geo

e.g. which institutions have the most grads (proportionately) working in finance/insurance?

CSV

When to use:

In depth analysis, especially on flows

Trade-offs:

No text labels, only data

Must join schema information to use

Schema Files URL

Schema Doc URL

EXCEL

When to use:

You know what question you're asking

Trade-offs:

Flows to industry OR geography available

but not both due to file size limitations

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The App Components

High Level

DB: PostgreSQL

Backend: Nodejs

Frontend: Javascript/HTML

Mid Level

Backend:

    express

    graphql

Frontend:

    d3

    bootstrap

    jquery

Low-ish level

Frontend:

    webpack

    babel

    d3v4/d3-sankey

    axios

    fontawesome

Now what?

A few examples to get started.

Demo/Open mic – feel free to interrupt

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DEMO: Earnings!
CU Boulder 2007-2009

Which degree would have netted more $$ on balance?

Math in Arts & Sciences

Applied Math in Engineering

Computer Science in Engineering

Vs making that philosophy minor into a major!

Vs going to the business school

Vs the average major

Vs going to a different state school

Vs going to UT and becoming an Engineer

Vs going to UT and becoming a high earning Engineer

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DEMO: Earnings makes sense …
but what is a flow?

Let's take a real world example: A CU boulder grad, Baccalaureate, 2007-2009, Mathematics and Statistics

1-year post grad: <u>Unemployed</u>

(Flow from Math/Stats ⇔ no/very low observed earnings)

5-years post grad: <u>Working part time for a hospital in Baltimore, pt as a student for a govt contractor</u>

(Flow from Math/Stats ⇔ Health Care & Social Assistance ⇔ South Atlantic Division)

      OR

(Flow from Math/Stats ⇔ Professional, Scientific, and Technical Services ⇔ South Atlantic Division)

10-years postgrad: <u>Working here at the Census</u>

(Flow from Math/Stats ⇔ Public Administration ⇔ South Atlantic Division)

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