Post-Secondary Employment Outcomes (PSEO) Q&A

Conference Room 4

Thursday, September 5th, 2019
Welcome!

Hosts:

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Economist  
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Ask about all things data

&

Jody Hoon-Starr  
Geographer  
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Ask about all things app
What is included in the PSEO data

**Earnings**

<table>
<thead>
<tr>
<th>Category</th>
<th>25th Percentile</th>
<th>50th Percentile</th>
<th>75th Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology, General</td>
<td>$43,279</td>
<td>$54,642</td>
<td>$71,485</td>
</tr>
</tbody>
</table>

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

Texas 3,459

Biological and Biomedical Science... 4,771
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
Privacy Protection System

... ask Andrew

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

<table>
<thead>
<tr>
<th></th>
<th>25th</th>
<th>50th</th>
<th>75th</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-year</td>
<td>$21,775</td>
<td>$31,767</td>
<td>$45,882</td>
</tr>
<tr>
<td>5-years</td>
<td>$34,494</td>
<td>$50,179</td>
<td>$71,127</td>
</tr>
<tr>
<td>10-years</td>
<td>$45,277</td>
<td>$67,146</td>
<td>$101,713</td>
</tr>
</tbody>
</table>
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
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
The App Components

### High Level

<table>
<thead>
<tr>
<th>DB</th>
<th>PostgreSQL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backend</td>
<td>Nodejs</td>
</tr>
<tr>
<td>Frontend</td>
<td>JavaScript/HTML</td>
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</table>

### Mid Level

<table>
<thead>
<tr>
<th>Backend</th>
<th>express</th>
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<tbody>
<tr>
<td></td>
<td>graphql</td>
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<tr>
<td>Frontend</td>
<td>d3</td>
</tr>
<tr>
<td></td>
<td>bootstrap</td>
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<tr>
<td></td>
<td>jquery</td>
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</table>

### Low-ish level

<table>
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<tr>
<td></td>
<td>babel</td>
</tr>
<tr>
<td></td>
<td>d3v4/d3-sankey</td>
</tr>
<tr>
<td></td>
<td>axios</td>
</tr>
<tr>
<td></td>
<td>fontawesome</td>
</tr>
</tbody>
</table>
Now what?

A few examples to get started.

Demo/Open mic - feel free to interrupt
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
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: **Unemployed**
(Flow from **Math/Stats** ⇔ no/very low observed earnings)

5-years post grad: **Working part time for a hospital in Baltimore, pt as a student for a govt contractor**
(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: **Working here at the Census**
(Flow from **Math/Stats** ⇔ **Public Administration** ⇔ **South Atlantic Division**)