Getting Started with Labor Market Data: From Vision to Reality

Prepared by Paul Rusinko, MBA and Laura Wittel, MA

June 8th, 2022; 2:15-3:00pm
## Session Objectives

<table>
<thead>
<tr>
<th>Identify</th>
<th>Identify a process for developing a research agenda around student labor market outcomes.</th>
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<tbody>
<tr>
<td>Learn</td>
<td>Learn some of the challenges and strengths of using labor market data.</td>
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<tr>
<td>Discover</td>
<td>Discover techniques and nuances in analyzing labor market data.</td>
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<tr>
<td>Understand</td>
<td>Understand how labor market data can be leveraged for data-based decision making.</td>
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</table>
• Serving over 40,000 student annually
• Located in Central Ohio
• Campuses in downtown Columbus and Delaware
• 5 Regional Learning Centers
• Offering affordable, quality education and transferable credit
Our Mission: To educate and inspire, providing our students with the opportunity to achieve their goals

- 69% attend part time
- 39% older than 25
- ~37% members of minoritized racial groups
- ~34% receive Pell aid
- ~28% first generation
- Most place into at least one developmental subject
- 60% work over twenty hours per week; 47% provide care to parents, children, or a spouse living with them (CCSSE 2017).

Data as of census date, Autumn 2021. Not including Dual Enrollment students.
Three Largest Ohio Institutions by Enrollment

- Ohio State University: 66,444
- Columbus State Community College: 45,332
- Cuyahoga Community College: 39,832
The Education to Workforce Pipeline

Early Childhood

Elementary School

Middle School

High School

College/University

Good Jobs and Economic Mobility
Labor Market Information (LMI)

Includes

- Quantitative & qualitative data
- Analysis related to employment and the workforce (LMI Institute)
  - Unemployment rates
  - Earnings
  - Demographics
  - Job Postings
  - Occupations
  - Labor supply and demand
# Research Agenda

## Research Questions
- Are graduates employed?
- How much do graduates earn?
- Are graduates working in their field?
- What impact are we having on the region?

## Target Populations
- Graduates
- Program Graduates
- FTIC Entering Cohort

## Data Points
- Employer
- Wages
- Occupation
- Industry
- Location
Data Types

Unemployment Insurance (UI) Wage Record Data
- Employment data
- Submitted by employers every quarter
- Collected by the Ohio Department of Job and Family Services (ODJFS)

Resume Data
- Work and education history
- Posted by individuals on the internet
- Collected by Emsi in the Alumni Outcomes Profiles
UI Wage Record Data Process

1. Employer reports to ODJFS
2. Columbus State requests from ODJFS
3. OIE/IT format data
4. OIE analyzes data
Process Questions

• How will my institution transform the data into a useable format?
• Where will my institution store the data?
• What does the data sharing agreement require for data storage, access, security, use, and destruction?
• How will my institution join this data to other institutional data?
• How often will my institution request this data?
• How will previously requested data be updated with new data?
ODJFS: Unemployment Insurance Wage Record Data

**Includes**
- Weeks Worked
- Wages
- Employer
- Industry

**Does not Include**
- Unemployed
- Self Employed
- Federal Employees
- Out of State Employees
UI Wage Record Data Requests

- CSCC requested data for:
  - 2017-18 graduates
  - 2018-19 graduates
  - 2013 AACC Pathways entering cohort
Economic Quarters Included

Year 1 – Q1

Year 1 – Q2

Year 1 – Q3

Year 1 – Q4

Year 2 – Q1

Year 2 – Q2

Year 2 – Q3

Year 2 – Q4
Basics about the 2017-18 Graduates

4,975 degrees and certificates awarded to 4,078 unique graduates

Reflect the diversity of the College
How many graduates are employed?

About 80% of graduates per quarter work for employers who report to ODJFS.

Graduates were employed while they were enrolled.

Decrease in Q3 of 2019 is the result of missing data for an employer of CSCC grads.

Sources: Ohio Department of Job and Family Services Unemployment Insurance Wage Records; Columbus State Community College Office of Institutional Effectiveness, Enrollment Data.
How many jobs do graduates have?

- **1 job**
  - Between 61% and 67% of grads
- **2 jobs**
  - 25%-29% of grads
- **3 jobs**
  - 5% - 7% of grads

Sources: Ohio Department of Job and Family Services Unemployment Insurance Wage Records; Columbus State Community College Office of Institutional Effectiveness, Enrollment Data
Columbus MSA Living Wage

- Living wage
  - Hourly rate individuals must earn to support themselves/family
- Poverty threshold
  - Defined by the US Department of Health and Human Services
- Assumptions
  - Adults working full-time
- Benchmarking
  - This doesn’t reflect every student’s reality

Source: Glasmeier, Amy K. Living Wage Calculator. 2020. Massachusetts Institute of Technology. livingwage.mit.edu
Graduates’ earnings increase in every quarter after spring graduation

Sources: Ohio Department of Job and Family Services Unemployment Insurance Wage Records; Columbus State Community College Office of Institutional Effectiveness, Enrollment Data; Glasmeier, Amy K. Living Wage Calculator (2020) Massachusetts Institute of Technology, livingwage.mit.edu
Median Quarterly Wages increased 30.7% from Q2 2018 to Q3 2019

<table>
<thead>
<tr>
<th>Year - Quarter</th>
<th>Median Quarterly Wages per Employed Graduate</th>
<th>Percent Change from Previous Quarter</th>
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<tbody>
<tr>
<td>2018 – Quarter 2</td>
<td>$6,216</td>
<td></td>
</tr>
<tr>
<td>2018 – Quarter 3</td>
<td>$7,177</td>
<td>15.5%</td>
</tr>
<tr>
<td>2018 – Quarter 4</td>
<td>$7,751</td>
<td>8.0%</td>
</tr>
<tr>
<td>2019 – Quarter 1</td>
<td>$7,876</td>
<td>1.6%</td>
</tr>
<tr>
<td>2019 – Quarter 2</td>
<td>$7,983</td>
<td>1.4%</td>
</tr>
<tr>
<td>2019 – Quarter 3</td>
<td>$8,122</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Sources: Ohio Department of Job and Family Services Unemployment Insurance Wage Records; Columbus State Community College Office of Institutional Effectiveness, Enrollment Data
What industries are supported by 2017-18 grads?

Top 5 Industries by 2017-18 Employed Graduates

- General Medical and Surgical Hospitals
- Full-Service Restaurants
- Temporary Help Services
- Limited-Service Restaurants
- Child Day Care Services

Sources: Ohio Department of Job and Family Services Unemployment Insurance Wage Records; Columbus State Community College Office of Institutional Effectiveness, Enrollment Data

*This decrease is the result of missing data for an employer of Columbus State graduates in this industry in Quarter 3 of 2019. This is likely underreporting employment in that quarter.
UI Wage Record Strengths

- Includes real wages, not estimates
- Includes the employer
- Includes the industry
- Regularly collected and updated
- Ability to examine cohorts
- Verified CSCC students
- Cost efficient
UI Wage Record Challenges

- Does not include unemployed, self-employed, federal employees, out of state employees
- May systematically underrepresent occupations that lend themselves to self employment
- Is only as accurate as the records the employers provide
- Does not include under the table wages
- Does not include occupations or job titles or hours worked
- Only includes addresses for employer headquarters
- Restrictions on how data may be shared
- Time Intensive
Emsi: Alumni Outcomes Report

CSCC Graduates

- Autumn 2005 to Autumn 2019
- Matched to Emsi’s Online Graduate Profiles
- Profiles use resume data scraped from public websites
Questions Addressed

- Where do graduates live?
- How much do they earn?
- Are grads working in their field?

Estimated Wages

- Graduates from 2005-2019
- Estimated based on market value, not actual wage data

Match Summary

- Matched Alumni: 16,858
- Employed in Field: 45%
- Reside in Region: 81%

Earnings

Based on their occupations and where they live, these are estimates of what your alumni could be making at their current ages, and a potential wage based on the average wage for their occupations.

- $49.9K Estimated Wage
- $63.2K Potential Wage

Source: All Certificate and Degree Programs report, Emsi Alumni Outcomes Project
Common Language and Understanding?

- HIGHER ED (PROGRAMS – CIP CODES)
- EMPLOYEES (OCCUPATIONS – SOC CODES)
- BUSINESSES (INDUSTRIES – NAICS CODES)
## Top Companies

This table shows the top companies where your alumni work based on their most current job.

<table>
<thead>
<tr>
<th>Company</th>
<th>Alumni Profiles</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Ohio State University</td>
<td>357</td>
<td>2.12%</td>
</tr>
<tr>
<td>JPMorgan Chase &amp; Co.</td>
<td>245</td>
<td>1.45%</td>
</tr>
<tr>
<td>Columbus State Community College</td>
<td>232</td>
<td>1.38%</td>
</tr>
<tr>
<td>Ohiohealth Corporation</td>
<td>196</td>
<td>1.16%</td>
</tr>
<tr>
<td>Nationwide Mutual Insurance Company</td>
<td>161</td>
<td>0.96%</td>
</tr>
<tr>
<td>Nationwide Children's Hospital</td>
<td>154</td>
<td>0.91%</td>
</tr>
<tr>
<td>State of Ohio</td>
<td>90</td>
<td>0.53%</td>
</tr>
<tr>
<td>Huntington Bancshares Incorporated</td>
<td>89</td>
<td>0.53%</td>
</tr>
<tr>
<td>The Kroger Co</td>
<td>84</td>
<td>0.50%</td>
</tr>
<tr>
<td>Mount Carmel Health (inc)</td>
<td>74</td>
<td>0.44%</td>
</tr>
</tbody>
</table>

Source: All Certificate and Degree Programs report, Emsi Alumni Outcomes Project
What skills do graduates say they have?

Source: All Certificate and Degree Programs report, Emsi Alumni Outcomes Project
Where do graduates live?

- 89.34% of graduates (15,061) live in state
- 52.52% live in Columbus (8,854)
- Top ten cities were in the Central Ohio region

Ohio

We are a COMMUNITY College: People who go here, stay here

Source: All Certificate and Degree Programs report, Emsi Alumni Outcomes Project
Resume
Data
Strengths

Includes Job Title
Includes Occupation
Includes Location
Includes Skills
Easily Shared
Time Efficient
Resume Data Challenges

- Does not include real wage data
- Only includes graduates with online resume information
- May systematically underrepresent occupations that are less likely to use online recruitment, such as the skilled trades
- Is only as updated and accurate as the information posted online
- One point in time data; Not looking at a cohort
Review

2 Data Types: UI Wage Record Data and Resume Data

2 Approaches: Longitudinal and Cross-Sectional

2 Target Populations: 2017-18 Grads, 2005-2019 Grads

2 Data Providers: ODJFS and Emsi
What can we know?

- Industries
- Employers
- Occupations
- Employed or not (to a degree)
- Employed in Field
- Reported wages
- Locations
What We Can’t Know

Full-time/part-time status

Hourly wage/salary

Whether students are working 2+ jobs simultaneously
How do we evaluate our contribution?

**Into high wage jobs?**
- Can compare students’ wages over time
- Can’t detail by occupation/job title

**Programs?**
- Can parse by academic program and credentials
- Can’t divulge individual-level data

**Underrepresented populations?**
- Can explore overall demographics
- Can’t disaggregate too far
Project Considerations

Financial Costs

Availability of IR resources

Privacy Concerns

Data Limitations
Thank you for your participation!

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