Using the Hawai‘i DXP to Examine Student Workforce Outcomes

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Summary of Presentation

Use University of Hawai‘i degree data and state unemployment insurance data to explore:

- The types of degrees and areas of study that produce the highest paid employees one to three years after graduation
- The kinds of industries graduates work in and how it changes over time
- Whether graduates work in industries related to their area of study
Data Available

Unemployment Insurance Data
  • Annual wages matched to student record, academic years 2007-08, 2008-09, and 2009-2010
  • Industry code by NAICs
  • Does not include those not working, self-employed, federal employees, out-of-state, and those with no SSN match

University Data
  • Degree earned
  • Major by CIP codes
Major Assumptions

- Select all UH graduates in AY 2008 – AY 2010 who earned a Certificate of Achievement or higher
- Select only students who worked in all four quarters of any year after graduation
- Examine wages up to three years after graduation (Year 2 includes AY 2008 and 2009 graduates only, Year 3 includes AY 2008 graduates only)
- Eliminate all industries with five or less graduates from charts showing median earnings by industry
- Use highest degree that a graduate earned in a given year; previous higher degrees are possible
Percentage of Graduates in UI Database, By Residency (residency status as of entry to UH)

- **Resident**: 64.4%
- **Non-Resident**: 20.5%
Where are our degree earners and how much do they earn?

Summary of data used

- Total number of graduates AY 2008 – AY 2010: 23,114
- Total number found in workforce anytime in years 1 through 3 after graduation using unemployment insurance data: 12,225 (52.9%)
- Total number worked in every quarter in a given year, and % of total graduates:

<table>
<thead>
<tr>
<th>AY</th>
<th>No. Worked in Year 1</th>
<th>% of Total Grads</th>
<th>No. Still Enrolled in Year 1</th>
<th>% of Workers Still Enrolled in Year 1</th>
<th>No. Worked in Year 2</th>
<th>% of Total Grads</th>
<th>No. Still Enrolled in Year 2</th>
<th>% of Workers Still Enrolled in Year 2</th>
<th>No. Worked in Year 3</th>
<th>% of Total Grads</th>
<th>No. Still Enrolled in Year 3</th>
<th>% of Workers Still Enrolled in Year 3</th>
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<tbody>
<tr>
<td>2008</td>
<td>3,606</td>
<td>48.0</td>
<td>914</td>
<td>25.3</td>
<td>3,612</td>
<td>48.0</td>
<td>793</td>
<td>22.0</td>
<td>3,564</td>
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<tr>
<td>2009</td>
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<td>945</td>
<td>26.6</td>
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<tr>
<td>2010</td>
<td>3,609</td>
<td>46.0</td>
<td>954</td>
<td>26.4</td>
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</tr>
</tbody>
</table>
Median Annual Earnings
AY 2008 - AY 2010 Degree Earners 1/

1/ Year 2 includes AY 2008 and AY 2009 graduates only. Year 3 includes AY 2008 graduates only.
Median Earnings/Change from Year 1 to Year 3, By CIP Program Area
AY 2008 - AY 2010 All Degree Types 1/
(the point where the quadrants meet is the median earnings and median % change)

1/ Year 3 includes AY 2008 graduates only.
Median Earnings/Change from Year 1 to Year 3, By CIP Program Area
AY 2008 - AY 2010 Certificates 1/
(the point where the quadrants meet is the median earnings and median % change)

1/ Year 3 includes AY 2008 graduates only.
Median Earnings/Change from Year 1 to Year 3, By CIP Program Area

AY 2008 - AY 2010 Associate's 1/

(the point where the quadrants meet is the median earnings and median % change)

1/ Year 3 includes AY 2008 graduates only.
Median Earnings/Change from Year 1 to Year 3, By CIP Program Area
AY 2008 to AY 2010 Bachelor’s 1/
(the point where the quadrants meet is the median earnings and median % change)

1/ Year 3 includes AY 2008 graduates only.
Median Earnings/Change from Year 1 to Year 3, By CIP Program Area

AY 2008 - AY 2010 Graduate Degrees 1/

(the point where the quadrants meet is the median earnings and median % change)

1/ Year 3 includes AY 2008 graduates only.
Median Annual Earnings, By Selected CIP Program Area
AY 2008 to AY 2010 Degree Earners 1/

Bubble size - relative number of graduates in program.
Red labels - programs with Y3 earnings and Y1 to Y3 increase below median.
Black labels - programs with Y3 earnings and Y1 to Y3 increase above median.

1/ Year 3 includes AY 2008 graduates only.

Median Annual Earnings ($)
Median Annual Earnings, By CIP Program Area
AY 2008 - AY 2010 Certificates 1/
Bubble size represents relative number of graduates in program

1/ Year 3 includes AY 2008 graduates only.
Median Annual Earnings, By CIP Program Area
AY 2008 - AY 2010 Bachelor's 1/

Bubble size represents relative number of graduates in program

1/ Year 3 includes AY 2008 graduates only.
Selected Industries in Which Graduates Are Employed (NAICS)
Before Graduation Through 3rd Year After Graduation

- Education
- Accommodation and Food Svc
- Retail Trade
- Health Care and Social Assistance
Median Wages by Selected NAICS Industry

AY 2008 - AY 2010 Degree Earners 1/

Median Wages Year 1

Median Wages Year 3

1/ Year 3 includes AY 2008 graduates only.
Median Wages by NAICS Industry
AY 2008 - AY 2010 Certificates 1/

Median Wages Year 1
Median Wages Year 3

1/ Year 3 includes AY 2008 graduates only.

Median Wages Year 1  Median Wages Year 3
Median Wages by Selected NAICS Industry
AY 2008 - AY 2010 Associate’s 1/

1/ Year 3 includes AY 2008 graduates only.

Median Wages Year 1  Median Wages Year 3
Median Wages by Selected NAICS Industry

AY 2008 - AY 2010 Bachelor's 1/

1/ Year 3 includes AY 2008 graduates only.

- Median Wages Year 1
- Median Wages Year 3
Median Wages by Selected NAICS Industry

AY 2008 - AY 2010 Graduate Degrees 1/

1/ Year 3 includes AY 2008 graduates only.

Median Wages Year 1  Median Wages Year 3
No. Employed by Area of Study and Industry Employed
Year Two

Chart includes programs with 100 or more graduates in AY 2008 through AY 2010 and industries with 100 or more employed in Year 2.
No. Employed by Selected Areas of Study and Industry Employed

Year Two

CIP Program Area

NAICS Industry
- Unknown
- Wholesale Trade
- Utilities
- Transportation and Warehousing
- Retail Trade
- Real Estate and Rental and Leasing
- Public Administration
- Professional, Scientific, and Technical Services
- Other Services (except Public Admin)
- Manufacturing
- Management of Companies and Enterprises
- Information
- Health Care and Social Assistance
- Finance and Insurance
- Educational Services
- Construction
- Arts, Entertainment, and Recreation
- Agriculture, Forestry, Fishing and Hunting
- Admin and Sup and Waste Mgmt and Remediation Svs
- Accommodation and Food Services
Next Steps

1. Gather more years in order to have more consistent data for each graduation cohort

2. Fill in some gaps
   - Incorporate federal employment data to the DLIR Unemployment Insurance data
   - Incorporate Multi-State data to find out if our students are working in other states

3. More granular analysis of the data
   - More detailed analysis of majors
   - Examine those that continue to be enrolled after graduation
   - Examine the existence of previous degrees
Questions