

PSEO
COALITION

Understanding Employment Outcomes for New Jersey Students

Benchmarking Employment and Earning Outcomes Using National PSEO and New Jersey State Data

Josefina M. Ewins, Chad May, Justin Schaffer, Vance T. Stephens,
Mark Walzer, Thomas Zimmerman



NEW JERSEY OFFICE OF THE SECRETARY OF

**HIGHER
EDUCATION**

This project was funded by a grant from the Postsecondary Employment Outcomes (PSEO) Coalition, made possible with support from Strada Education Foundation. The [PSEO Coalition](#) generates, analyzes, and shares employment data that demonstrates the value of higher education. The data are publicly available through a [dashboard](#) and [downloadable dataset](#) on the U.S. Census Bureau's website.

Introduction

OSHE Statement

Marking New Jersey's addition to the Post-Secondary Employment Outcomes (PSEO) initiative, the Office of the Secretary of Higher Education (OSHE) conducted an analysis of institutional employment outcomes. To ensure students and their families can discern the benefits of attending a New Jersey institution through employment attainment, OSHE aims to demonstrate how the state's institutions of higher education compare to out-of-state institutions. Additionally, education and workforce partners can utilize this data to complement their respective work. Academic departments may use the data to assess curricula. Administrators may draw insights from the trends to inform high-quality, proactive student advising. Employers can use the data to support employee skill-building and to promote partnerships with institutions.

Executive Summary

The data is presented as benchmarks one and five years post-graduation. Variables include institutional control, degree program major, industry, and Carnegie Classification to provide robust comparisons between New Jersey higher education institutions and the PSEO sample at the state and national scales. To facilitate comparison between New Jersey and PSEO data, graduates are identified by graduation year and subsequently grouped into multi-year cohorts. Associate degree graduates are grouped into five-year cohorts. This study includes two cohorts: 2011-2015 and 2016-2020. Bachelor's degree graduates are grouped into three-year cohorts. This study includes two cohorts: 2013-2015 and 2016-2018. The full list of comparison variables and their definitions can be found in the data dictionaries for the dashboards.

Generally, patterns in New Jersey graduate employment matched the overall patterns of PSEO data across these variables. Further details of these findings are outlined later in this paper.

Background

About PSEO and New Jersey Participation

The Post-Secondary Employment Outcomes (PSEO) initiative is an "experimental" initiative in the [Longitudinal Employer-Household Dynamics \(LEHD\) program](#) within the

federal U.S. Census. Since 2018, PSEO staff have used data from LEHD and partner states, university systems, and individual higher education institutions to produce datasets on the earnings and employment outcomes of recent graduates. Providing data one, five, and ten years after graduation, the PSEO initiative reports graduates' earnings by institution, degree field, degree level, and graduation cohort. Similarly, [Employment Flows tabulations](#) provide the industry and geography of employment for graduates of an institution by degree level, degree field, and graduation cohort in the same cadence. PSEO data can also be accessed via the [PSEO Explorer visualization tool](#). This interactive tool allows for comparisons of employment outcomes through dynamic grouped bar charts and diagrams. Approximately 34 states, including New Jersey, and 954 institutions submit and share data as of 2025.

By joining the PSEO initiative in 2025, OSHE is also a member of the PSEO Coalition, a network of representatives from the institutions, college and university systems, and state agencies that partner with the U.S. Census to provide data for the PSEO initiative. Coalition members engage virtually and in person to network and share ideas about methods to measure and share the outcomes of postsecondary education with decision-makers.

New Jersey's first dataset will be included in the forthcoming Summer 2026 update. OSHE representatives attend monthly coalition meetings and expect that membership and engagement in the PSEO initiative will provide greater insight into employment outcomes on the approximately 30% of graduates who at one time or another may have been employed outside of New Jersey.

Data Currently Being Collected

For New Jersey higher education institutions, current post-secondary employment outcomes data is organized and presented by the New Jersey Statewide Data System (NJSDS), the state's official centralized longitudinal system. This system relies on state agency data such as OSHE degree completion information and unemployment insurance wage records (UI) from the New Jersey Department of Labor and Workforce Development. As such, NJSDS contains only in-state employment information for graduates of New Jersey colleges and universities, which reliably includes 60% to 70% of New Jersey institutions' total associate and bachelor's degree recipients. Before accessing information about the other 30% to 40% of graduates through the PSEO initiative, this research project provides preliminary insights into interpreting employment outcome data for graduates not previously studied.

Problem Statement & Methodology

As New Jersey prepares to join the PSEO initiative, we plan to use the new employment and earnings dashboards on a national scale for policy decisions within our state. To do so, we have begun to research how to establish employment and earnings outcome benchmarks derived from PSEO data that are applicable to New Jersey data. This effort involves identifying two sets of measures. The first set is which summary statistics of employment outcome data should be used. For example, PSEO reports show annual earnings data at the 25th, 50th, and 75th percentiles.

The second set of variables is the relevant characteristics by which institutions can be grouped. These variables concern institutional qualities such as location, research activity, and ease of access for prospective students. Other variables include degree level (defined here as associate or bachelor's degrees), Classification of Instructional Program code (CIP of major program), graduation cohort (a selected group of years when alumni graduated) and year(s) after graduation as measured in the cohort.

With these factors in mind, we have defined the following research questions:

1. What are the average 25th, 50th, and 75th earnings percentiles for the different populations of graduates in the PSEO sample, one and five years post-graduation?
2. Populations are defined by Carnegie Foundation and institutional variables. How do individual New Jersey institutions' graduate employment data compare to the summary statistics of their Carnegie and sector peers?
3. Are there observable differences between the proportions of graduates who remain in the same state in which they earned their degree among other PSEO member-states and the proportions who remain in New Jersey for employment post-graduation from a New Jersey institution?

Data Findings

The dashboards compare data from NJSDS to the PSEO earnings and employment flow data. Users can filter information by state, institution, degree level, and graduation cohort. The data can also be adjusted to include one or more-degree major programs by CIP code. Earnings are displayed by time and percentile. Time concerns the number of years after graduation year when the earning data was collected. Percentile is

defined as the 25th, 50th, or 75th percentile out of all relevant earning data. The 50th percentile is the median annual earnings, or the reported earnings in the middle of all listed earnings totals, not the average or mean earnings. The PSEO database includes these percentile values for every higher education institution, graduating cohort, and CIP major program, so these values are summarized by the median of all values at the same percentile. Flow shows the industries or geographic regions where alumni work after a given number of years post-graduation.

This information has been compared by factors such as institutional control (public/private nonprofit/private for-profit) and institutional factors such as award level and size, as defined by Carnegie Classification. All earnings values, unless indicated otherwise, are adjusted to reflect differences in cost of living according to the institution's state location.

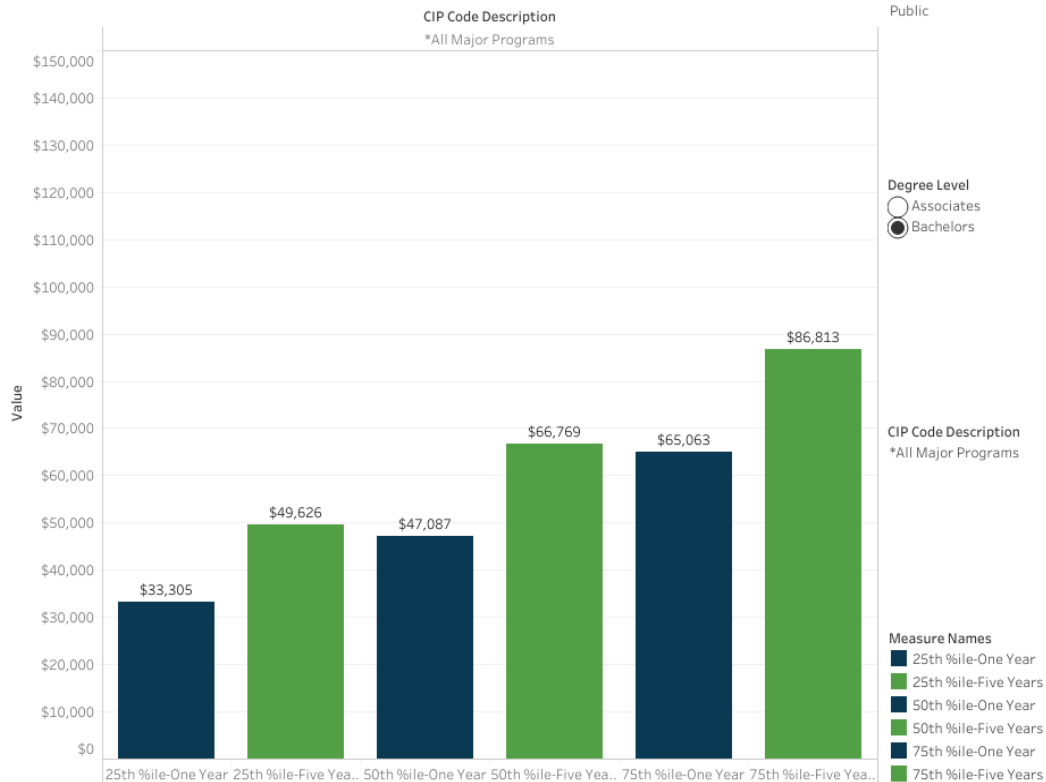
Average Earnings Percentiles Post-Graduation

Regarding the first research question on earnings, the quartile earnings values consistently increased from one to five years after graduation. This trend is apparent across institutional state and CIP code; the earnings ranges, however, vary across these variables.

PSEO Median Earnings at Public Institutions
Degree Level: Bachelors
CIP Code Major: *All Major Programs



Control Text
Public



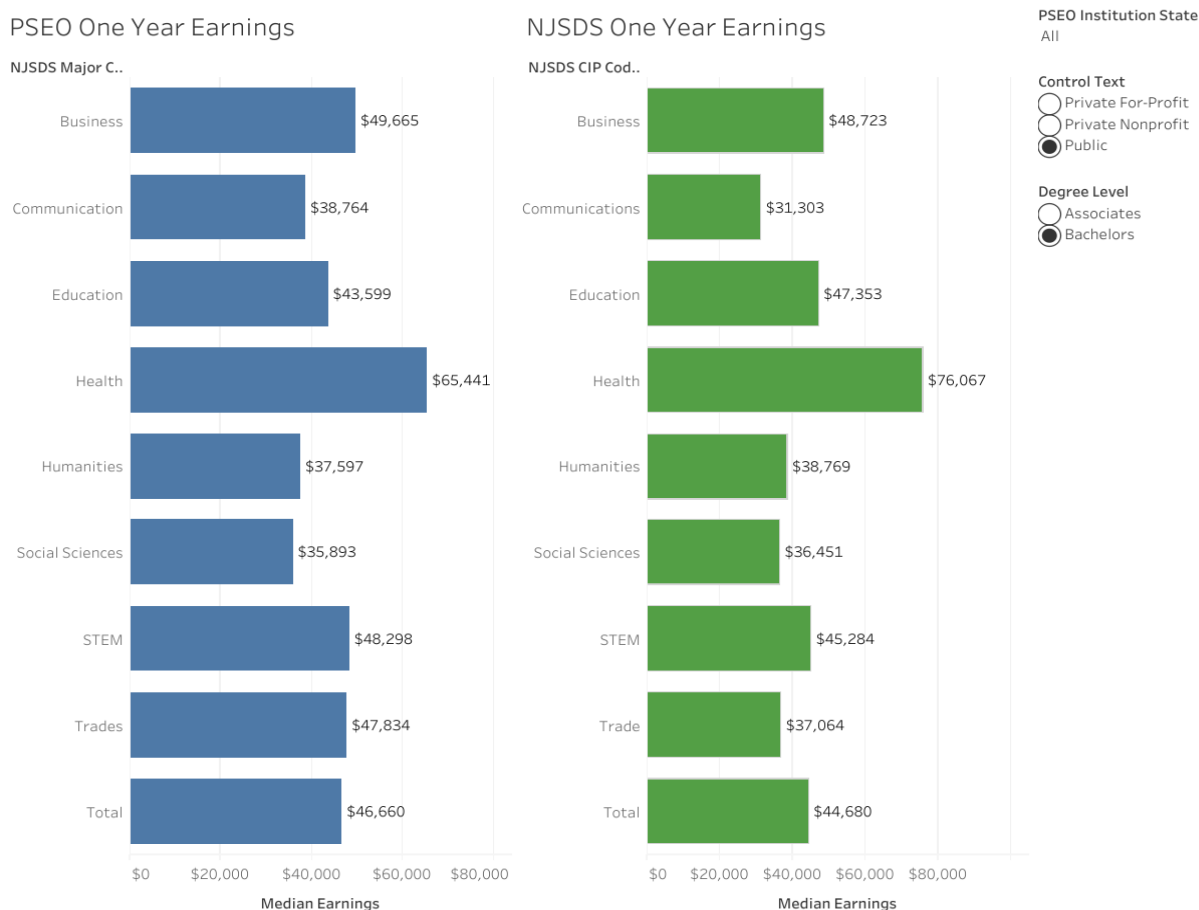
Several other trends can be tracked across institutional classifications. Institutions classified as “high earnings” in the Student Access and Earnings Classification (SAEC) system or classified as sponsoring high research activity generally reported higher median earnings for their graduates. SAEC codes also classify institutions according to their level of access to prospective students. Generally, institutions classified as lower access had higher median earnings compared with higher access institutions. Among degree programs, graduates of degree programs related to health, business, or science, technology, engineering, and mathematics (STEM) had higher recorded median earnings. This difference explains why institutions with 2025 Carnegie Classification

codes of “special focus” in these subjects also had higher median earnings, especially for bachelor’s degree graduates. Overall, all graduates reported higher earnings five years after graduation compared with one year, showing that the benefits of postsecondary education increase over time.

Graduate Employment Data by Carnegie Classification

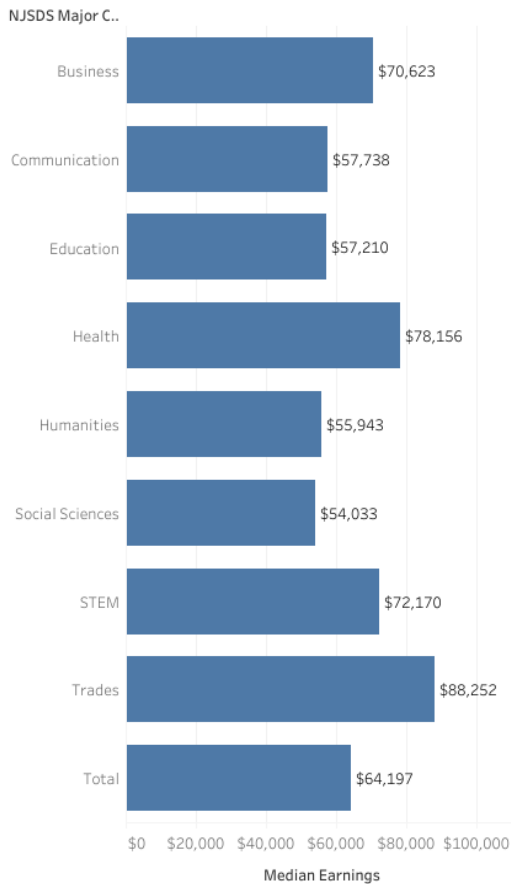
To ensure valid comparisons between New Jersey colleges and universities and the PSEO national sample, NJSDS employment outcomes are grouped by the same institutional and Carnegie Foundation variables. While NJSDS data includes many higher education institutions, these variable combinations may result in a small number of institutions classified among different groups.

Despite this difference, the overall results show similar patterns between New Jersey higher education institutions and their peers in the PSEO sample. The statewide New Jersey sample reported median earnings below most of the PSEO states, after adjusting for cost-of-living differences. For both groups, the degrees with the highest median earnings involved business, health, or STEM programs of study. New Jersey graduates with health degrees reported higher median earnings compared with the total PSEO sample and many of the constituent states.

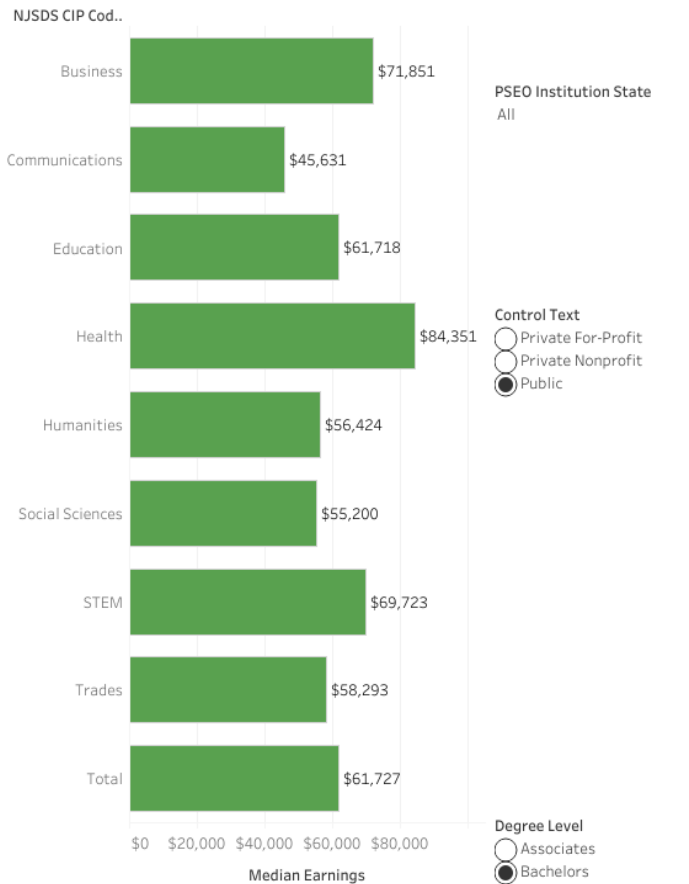


For Carnegie Classification data, similar trends were observed between NJSDS and PSEO data. For SAEC descriptions, New Jersey graduates from “low access, higher earnings” institutions reported slightly higher earnings compared with their peers from “high access, higher earnings” institutions. This pattern matches the PSEO trend, but with a much smaller sample of institutions. Similarly, baccalaureate graduates in New Jersey generally reported higher earnings if they attended institutions with higher research activity or that were classified as “Special Focus: Technology, Engineering, and Sciences” by the Carnegie Foundation.

PSEO Five Year Earnings for Bachelors Graduates from Public Institutions



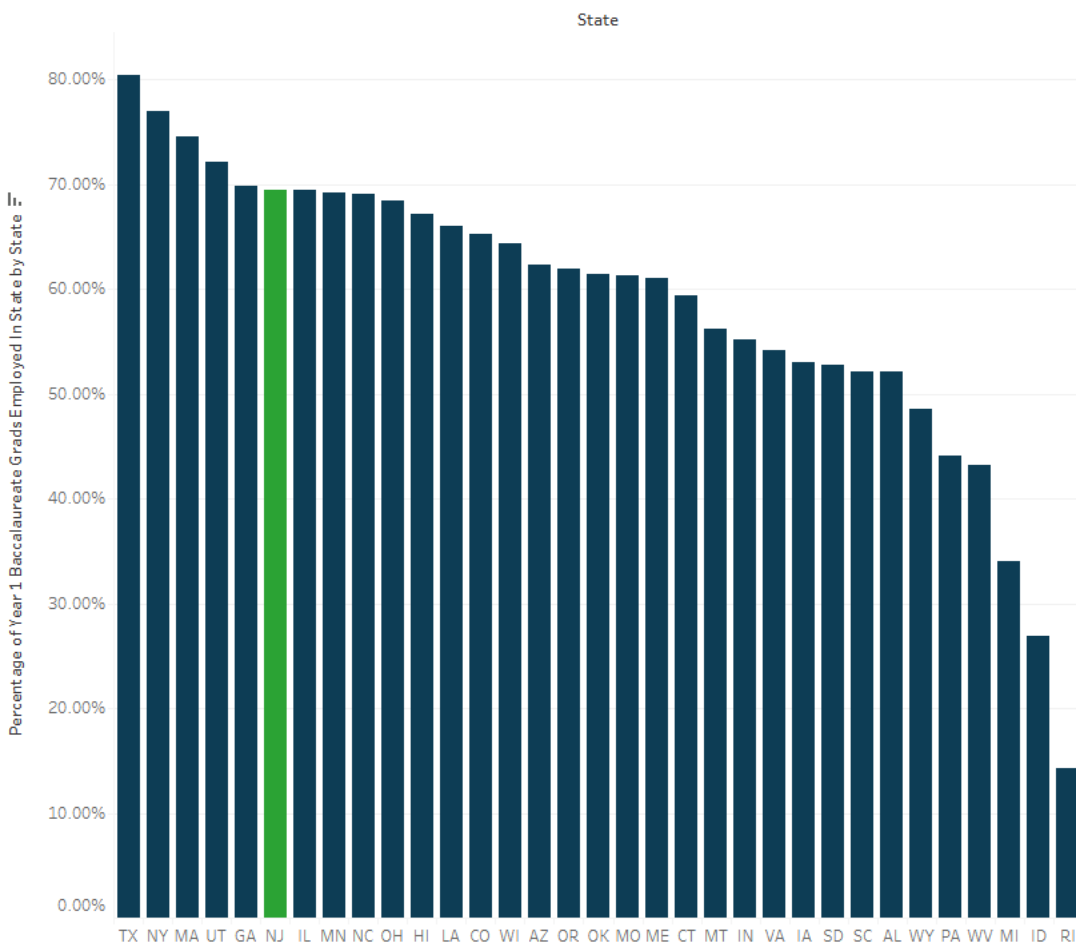
NJSDS Five Year Earnings for Bachelors Graduates from Public Institutions



College-to-Employment Flow Patterns

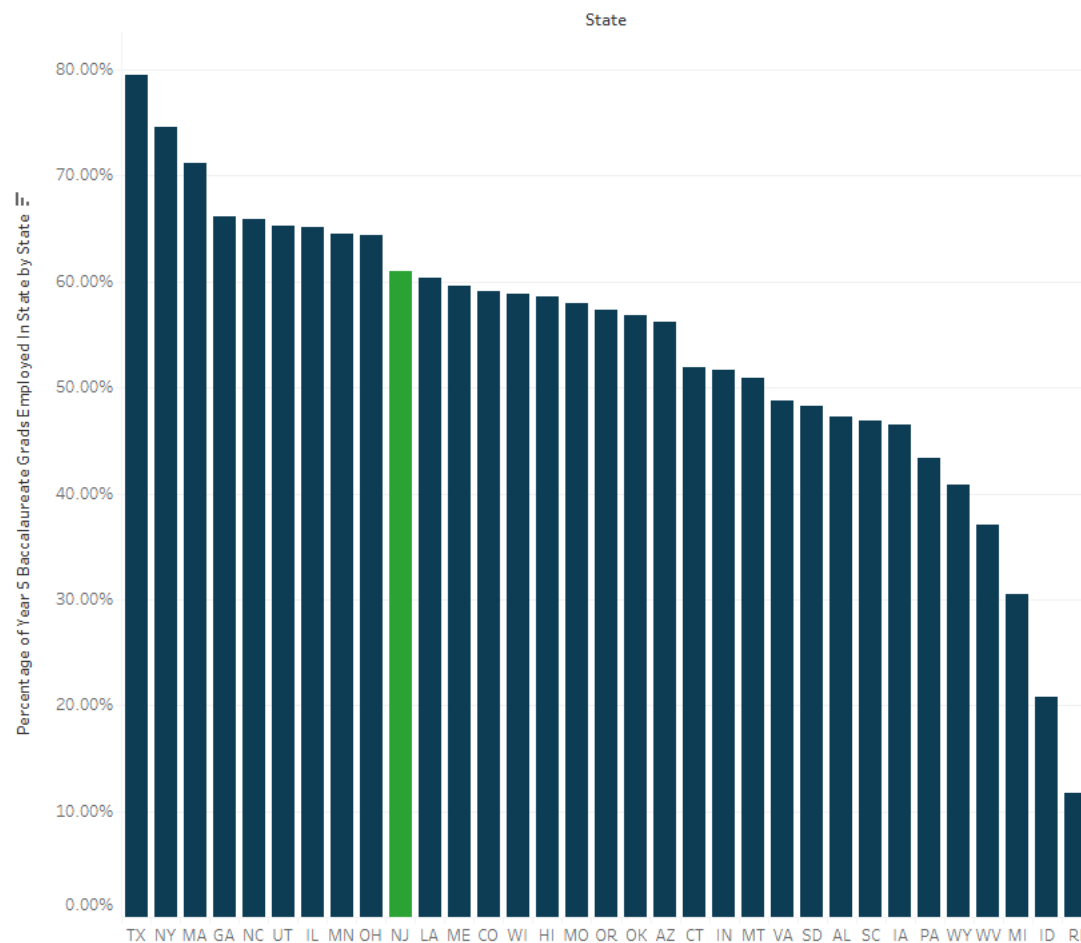
While New Jersey graduates' employment patterns are currently limited to in-state data, these college-to-employment retention rates can be compared with other states' rates using PSEO employment flow data. For the most recent (2016-2018) baccalaureate graduate cohorts from New Jersey institutions, almost 70 percent of employed alumni were working in New Jersey within one year after graduation. This proportion ranks New Jersey 6th for in-state employment among all states included in the PSEO sample.

New Jersey Ranks 6th in 2016-2018 Cohort of Baccalaureate Graduates Employed In State One Year Post-Graduation



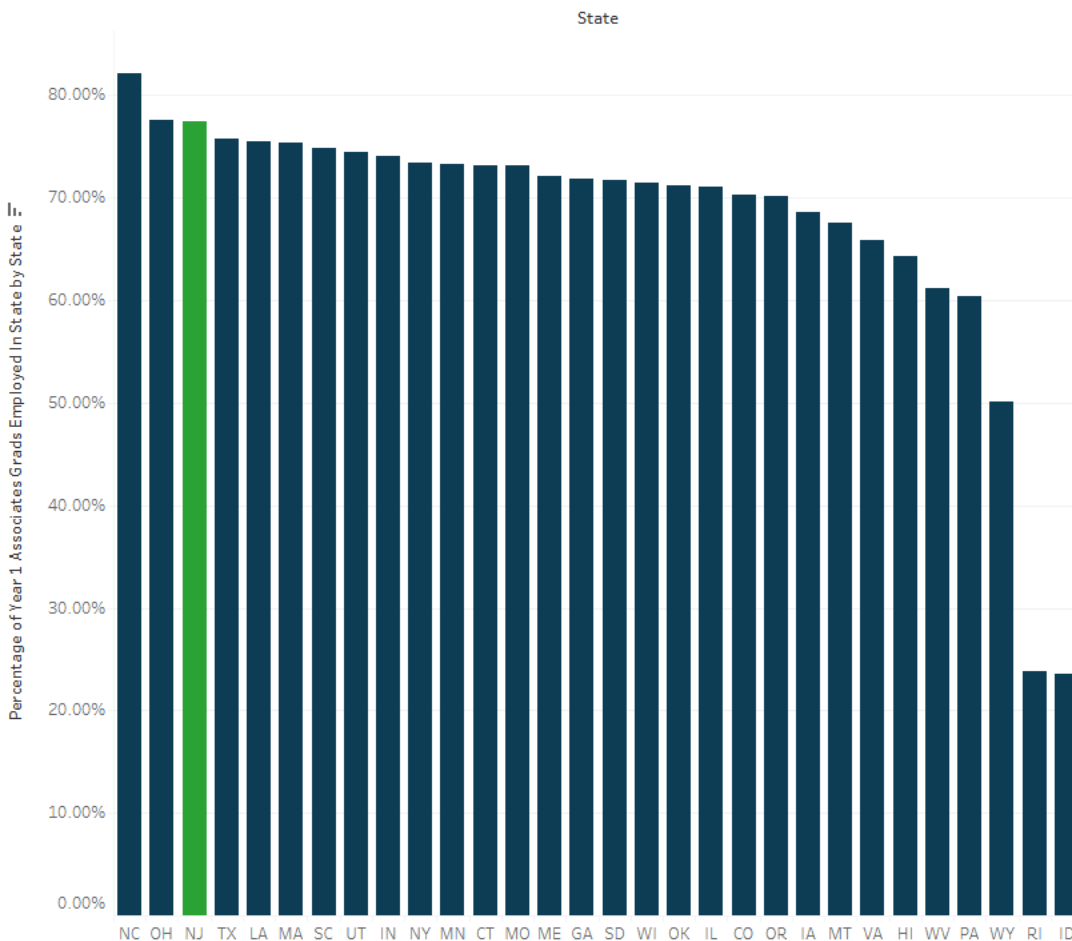
When comparing employment patterns five years after these graduates earned their baccalaureate degrees, 61% of employed alumni of New Jersey institutions are employed in-state. The figure below shows that when compared to PSEO state-level data, New Jersey is in the top one-third of in-state employment flows five years after graduation. This position is two spots down from the one-year out measure, which still suggests that most graduates are employed in-state. The bottom third of states within the PSEO dataset reflect less than half of baccalaureate graduates being employed in-state.

New Jersey Ranks 10th in 2016-2018 Cohort of Baccalaureate Graduates Employed In State Five Years Post-Graduation



When looking at associate degree graduates of New Jersey institutions, 77% of employed alumni also work in New Jersey one year after graduation. This rate places New Jersey third among the states in this analysis.

New Jersey Ranks 3rd in 2016-2018 Cohort of Associates Graduates Employed In State One Year Post-Graduation



According to the US Census Bureau's [American Community Survey](#), nearly 14% of New Jersey workers commute out of state for employment, ranking the state fifth highest in the nation, totaling over 700,000 New Jersey residents. Joining the PSEO initiative provides a more complete picture of employment outcomes for associate and bachelor's degree earners working across state lines.

It should be noted that associate degree earners, as a group, often include students who transfer to a four-year institution to pursue a bachelor's degree while also working

part-time, this likely contributes to associate degree earners have higher in-state employment rates than bachelor's degree earners.

Dashboard Language

The language used on the dashboards depends largely on which individual datasets are being visualized. Tableau data visualization products consist of multiple levels: *stories*, which are listed via tabs on a given website displaying dashboards; *dashboards*, which is the technical term for the individual visualizations housed on a story point; and *worksheets*, which are generally used behind the scenes to create dashboards that are then in turn used to create stories. Language used on story tabs typically provide quick statements either describing what data are being visualized on that given story point/dashboard or what conclusion can be drawn from the story point/dashboard.

Data dictionaries accompany the dashboards to ensure that each stakeholder group can utilize the data and apply to their use case. The dashboards' variables' language is largely sourced from PSEO data and reflect the standard Carnegie Classification use; the data dictionaries include both definitions of these variables and links to the original data sources where applicable.

View the current PSEO/NJSDS earnings data comparisons dashboards [here](#).

View the current PSEO/NJSDS flows data comparisons dashboards [here](#).

Limitations

Four points should be considered when drawing conclusions from the PSEO and NJSDS data:

- **Graduating cohorts:** The reported data represent a specific period of the 2010s and may not reflect the experiences of all graduates. Also, due to differences in reporting periods, the PSEO and NJSDS records do not exactly match in the number of included years. For example, PSEO data for bachelor's degree recipients include 2013-2015 and 2016-2018 cohorts, while NJSDS data covers 2014-2018 graduates.
- **Included institutions:** PSEO receives data from different sources by state. In some cases, this information comes directly from one or more institutions instead of a comprehensive database covering institutions from all sectors. For

example, Michigan's PSEO reports only reflect the University of Michigan, overlooking other public and all private institutions. NJSDS employment records include public and private non-profit institutions, but do not represent some sectors such as private for-profit and religious institutions. To avoid misleading inferences, the dashboards with institutional comparisons by location include only states or territories for which PSEO submissions include at least 25% of that state or territory's total graduates.

- **Median values:** The single median earnings values in the dashboards are "medians of medians." PSEO records include the median earnings by institution, degree level, graduation cohort, and CIP code. These values are grouped by institutional control and any other filter variable(s) in each dashboard page (e.g., research activity, SAEC code). As a result, the aforementioned gaps in coverage also affect the earnings data used to determine these overall median values.
- **New Jersey UI Wage Records:** UI wage includes a large array of employers; however, some key constituencies are not in New Jersey UI wage records which include federal, military, agricultural, and self-employed workers who do not participate in the UI program.

Implications and Use Cases of Data by Sector

Higher education requires a multi-pronged approach to ensure students are successful to, through, and after completion. By engaging each stakeholder group, faculty and staff, students, and industry partners, can obtain robust professional development guidance as they go through their educational journey. Within this section, each group will be presented with use cases for the dashboard and the comparisons provided within the White Paper.

University Faculty and Staff

To provide students insight into potential career paths and encourage students to stay within New Jersey, institutions must have a holistic approach to workforce education alignment. As institutions are a key player in preparing the next workforce, having up-to-date information on employment outcomes to assess results is imperative. Faculty and staff can utilize the PSEO Earnings and PSEO/NJ Flow Dashboards in the following ways:

- Track career paths based on degree program for students.
- Assess employment trends against industry needs to align degree programs.

- Provide average career and salary outcomes within and across majors.
- Utilize data to provide more insights regarding salary and trends during career advising.

Students

Ensuring students can make informed decisions regarding their education, the PSEO data demonstrates how degree programs provide career opportunities otherwise overlooked. Comparing New Jersey salaries to national outcomes can provide leverage as students move from education into the workforce. Salary is one component of the educational journey, verifying the return on investment for a degree is one aspect for student recruitment and persistence.

- Within the PSEO/NJ Flow Comparison chart, students can note career pathways typically associated with their selected degree programs.
- Students may then leverage this understanding to shape coursework and other learning opportunities to develop the skillsets best suited for their desired roles.

Industry Stakeholders

Industry stakeholders can utilize the PSEO Earnings and PSEO/NJ Flow Dashboards in the following ways:

- Demonstrate their competitive advantages against the same industry in other states.
- Develop strategies to bolster salary rates to be more competitive with the market.

Conclusion/Look Ahead

This analysis is part of a multi-phased assessment that will continue to expand as additional New Jersey data is integrated into the PSEO dataset. This phased approach will allow institutions and the state to evaluate and measure institution- and program-level employment and earnings outcomes in concert with other assessment and evaluation data. This new data helps to fill gaps in outcomes information that institutions may otherwise struggle to collect in surveys or by other means.

Establishing a fuller picture of student outcomes allows the state's higher education and workforce partners to develop strategies for greatest alignment and impact.

The overall pattern of results in this initial analysis shows that NJSDS information is comparable to the national PSEO sample. Differences in earnings among New Jersey graduates by degree type and institutional variables match those of the PSEO sample, such as graduates in STEM and health fields or who attended high research institutions generally reporting higher earnings. While employment flow data for New Jersey institutions is limited to in-state employment, these trends place the state in a respectable position among the other states in the PSEO sample.

As the availability of data from both NJSDS and PSEO grows, New Jersey institutions can better utilize these comparisons to include graduates' employment and earnings data from analyses in other states. As New Jersey continues to promote postgraduate earnings data, the goal is that institutions will continue to expand the use of such data and leverage it to inform academic planning, strategy development, and resource allocation across their academic programs.

To further these efforts, OSHE will continue to engage with PSEO data and stakeholders, conduct analyses and draw insights, and share knowledge and best practices, including through the state's ongoing Higher Education Data Advisory Group, with institutional partners.

Appendix A: List of NJ Institutions with NJSDS Data*

County Colleges

Atlantic Cape Community College
Bergen Community College
Brookdale Community College
Camden County College
County College of Morris
Essex County College
Hudson County Community College
Mercer County Community College
Middlesex College
Ocean County College
Passaic County Community College
Raritan Valley Community College
Rowan College at Burlington County
Rowan College of South Jersey
Salem Community College
Sussex County Community College
Union College of Union County, New Jersey
Warren County Community College

Independent Public Mission

Bloomfield College**
Caldwell University
Drew University
Fairleigh Dickinson University-Florham Campus
Georgian Court University
Princeton University
Rider University
Saint Elizabeth University
Saint Peter's University
Stevens Institute of Technology

Independent-Proprietary

Eastwick College-Hackensack

Eastwick College-Nutley

Senior Public

Kean University**

Montclair State University**

New Jersey City University**

New Jersey Institute of Technology

Ramapo College of New Jersey

Rowan University

Rutgers University-Camden

Rutgers University-New Brunswick

Rutgers University-Newark

Stockton University

The College of New Jersey

Thomas Edison State University

William Paterson University of New Jersey

*The New Jersey institutions included in the NJSDS data are limited to those that submit student unit record (SURE) files to OSHE identifying individual graduates for different cohorts.

**For the graduation cohorts included here, several institutions that have since merged (e.g., Kean University/NJCU, Montclair State University/Bloomfield College) were listed separately in the available NJSDS data. They are kept as is, with corresponding institutional definitions, for the purpose of this analysis.

Appendix B: NJSDS Major Categories by CIP Code

NJSDS Major Group	CIP Code	CIP Code Description
Business	52	Business, Management, Marketing, and Related Support Services
Communication	09	Communication, Journalism, and Related Programs
	10	Communications Technologies/Technicians and Support Services
Education	13	Education
Health	51	Health Professions and Related Clinical Services
Humanities	05	Area, Ethnic, Cultural, and Gender Studies
	12	Personal and Culinary Services
	16	Foreign Languages, Literatures, and Linguistics
	22	Legal Professions and Services
	23	English Language and Literature/Letters
	24	Liberal Arts and Sciences, General Studies and Humanities
	30	Multi/Interdisciplinary Studies
	31	Parks, Recreation, Leisure, and Fitness Studies
	36	Leisure and Recreational Activities
	38	Philosophy and Religious Studies
	39	Theology and Related Vocations
	43	Security and Protective Services
	44	Public Administration and Social Service Professions
	50	Visual and Performing Arts
	54	History
Social Sciences	19	Family and Consumer Sciences/Human Services
	42	Psychology
	45	Social Sciences
STEM	01	Agriculture, Agriculture Operations, and Related Sciences
	03	Natural Resources and Conservation
	04	Architecture and Related Services
	11	Computer and Information Sciences and Support Services
	14	Engineering
	15	Engineering Technologies/Technicians
	26	Biological and Biomedical Sciences
	27	Mathematics and Statistics

Trades	29	Military Technologies
	40	Physical Sciences
	41	Science Technologies/Technicians
	46	Construction Trades
	47	Mechanic and Repair Technologies/Technicians
	48	Precision Production
	49	Transportation and Materials Moving

Appendix C: Glossary of Terms

Award Level Focus:

These categories are determined by the number and relative proportion of first-major degrees awarded by the institution. Here is a full description of each category from the Carnegie Classification manual

(<https://carnegieclassifications.acenet.edu/wp-content/uploads/2025/04/Institutional-Classification-Technical-Manual.pdf>):

- Graduate-focused institutions:
 - At least 90% of an institution's degrees are doctorates or master's degrees OR
 - More than 50% of an institution's degrees are doctorates or master's degrees if the institution awards fewer than 50 undergraduate degrees
- Undergraduate/Graduate-Doctorate institutions:
 - An institution awards at least 20 doctorates AND at least 25% of the total degrees awarded are graduate degrees OR
 - An institution awards 100 or more doctorate degrees
- Undergraduate/Graduate-Master's institutions:
 - An institution awards at least 50 master's degrees and doctorate degrees AND at least 25% of the total degrees awarded are graduate degrees OR
 - An institution awards 200 or more master's degrees and doctorate degrees
- Associate/Baccalaureate colleges:
 - An institution awards between 50-90% of its degrees as associates AND awards between 1-50% of its degrees at the baccalaureate level or higher
- Baccalaureate colleges:
 - Of the remaining institutions, 50% or more of its degrees are awarded at the baccalaureate level
- Associate colleges:
 - Of the remaining colleges, 50% or more of its degrees are awarded as associates

CIP Code:

Classification of Instructional Program (CIP) codes are designed to summarize all higher education major programs to a series of uniform codes. These codes are up to six digits long, with the first two digits signifying a broad subject area and additional digits specifying secondary areas and degree focus. For example, degrees in

psychology have the starting two-digit CIP code of 42. If we look at the first four digits of the CIP code, we can compare different programs within psychology, such as research and experimental psychology (42.27) and clinical and counseling psychology (42.28). The full six-digit CIP code shows programs within these two broader categories. For example, 42.2701 is for programs in cognitive psychology and psycholinguistics, 42.2707 is for social psychology, and 42.2709 is for psychopharmacology. PSEO records include CIP codes at multiple levels; the two-digit codes are used in the current earnings dashboards.

Further information about CIP codes can be found at <https://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55>.

Student Access and Earnings Classification (SAEC):

Both factors (admission rate and earnings after graduation) are summarized as high, medium, or low. For example, a “High Access, High Earnings” institution has a high admission rate and relatively high earnings among all its graduates.

Further information on this category can be found at <https://carnegieclassifications.acenet.edu/carnegie-classification/classification-methodology/2025-student-access-and-earnings-classification>.

Research Activity:

- Research Colleges and Universities: Institutions that are not classified as R1 or R2 research universities but spend at least \$2.5 million on research.
- High Spending/Doctorate Production: Institutions that on average spend at least \$5 million on research and award at least 20 research doctorate degrees.
- Very High Spending/Doctorate Production: Institutions that on average spend at least \$50 million on research and award at least 70 research doctorate degrees.

Further information on this category can be found at <https://carnegieclassifications.acenet.edu/carnegie-classification/classification-methodology/2025-research-activity-designations>.