## Kean University Graduates Cohort 1998 1999 2000



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#### **Post-Graduate Labor Market Outcomes of New Jersey County College and University Students**

Amid calls for greater accountability and transparency in student outcomes, higher education institutions are increasingly asked to collect and distribute information about the labor market outcomes of their graduates. Reliable and comprehensive data on graduates, however, is difficult to obtain. In this study, Heldrich Center researchers match two State of New Jersey individual-level, administrative datasets—the Student Unit Record Enrollment System (SURE) and the Unemployment Insurance (UI) Wage Records—to analyze the labor market outcomes of New Jersey associate and bachelor degree recipients. By using student-level administrative records, this study provides comprehensive information on the labor market outcomes of both county college and university graduates.

### **Data Sources**

*Student Unit Record Enrollment System (SURE):* The New Jersey Office of the Secretary of Higher Education maintains the SURE data system, which warehouses detailed information from colleges and universities in the state on students who enroll in and complete degree programs. All nineteen of New Jersey's county colleges, all 14 of the senior public institutions, and ten independent institutions report their enrollees and graduates to the SURE system. The SURE data file includes the following fields: social security number of student, basic demographic information, date and program of enrollment, date of completion, degree or certificate awarded, and program of study.

*Unemployment Insurance (UI) Wage Records:* Nearly all employers in the state report the wages of their employees on a quarterly basis to the State of New Jersey when they pay their UI payroll taxes. UI wage records include the following information for individuals who are employed: the social security number of the employee, the quarterly earnings paid, the number of weeks worked during the quarter, the individual's employer, and the industry of employment.

#### **Primary Outcomes Calculated**

One of the most widely used measures of student labor market outcomes is post-graduate wages. We calculate the median annual wage, and the first and third quartile of annual wages, for three graduate cohorts: 1998 through 2000, 2001 through 2003, 2004 through 2006, 2007 through 2009, and 2010 through 2012. These three-year groupings are chosen only to allow us to capture more graduates per major, which improves the accuracy of the statistics and eliminates confidentially concerns related to small cell numbers. To calculate annual wages, we sum four quarters of the quarterly UI wages of each graduate. All wages are inflation-adjusted to second quarter 2014 dollars. We use the second year after graduation rather than the first year in order to allow time for graduates to find employment. In addition, we present the fifth and tenth year after graduation as long-term outcomes for cohorts for which the data are available. We calculate



outcomes for each New Jersey higher education institution, presenting the outcomes by the 2010 two- and six- digit Classification of Instructional Program (CIP) codes.

The wage outcome calculations include graduates who are working full time and those who are enrolled in school and working. Since the graduates who return to school may not work full time or work only in order to finance graduate school, post-graduate wages may be lowered. To provide some insight into these graduates, we calculate the proportion of graduates enrolled in New Jersey higher education institutions after graduation, by CIP code, during the period for which the wage outcomes are calculated. We cannot at this time account for graduates who are attending school out of state and work in state.

#### **Understanding the Visual Presentation of Results: The Boxplot**

The boxplot is a convenient way to present the distribution of post-graduate wages. The modified version of the boxplot we show includes the first quartile, the median, and the third quartile of the data, which captures both the central tendency (the median) and the spread of the data (the distance between the first and third quartile). The median wage is the wage in the exact middle of the wage distribution. In other words, half of all graduates earned more than the median wage and half earned less. The wage at the first quartile (the left edge of the "box") indicates the amount that 75 percent of graduates earned *more* than, and the wage at the third quartile (the right edge of the "box") is the amount that 75 percent of graduates earned *more* than. We also display the sample size (n) used to calculate the summary statistics.

#### **Methodology**

We follow several steps to prepare the data before analysis. We remove all individuals with zero wages in each quarter during the period under study (e.g., the second year after graduation). This removes individuals who likely moved out of New Jersey or who are unemployed. We top code wages at \$250,000 to remove the influence of high-earner outliers, though this decision does not affect the analysis we present in this study. Finally, to present more reliable summary statistics and to simplify the presentation of results by omitting majors with very few graduates, we remove two and six digit CIP codes that contain fewer than 30 total graduates.

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