

# Information on Wage Estimates

Wage data is intended to answer 2 questions:

1) What are the potential wages of the careers that my graduates are in?

Potential Annual Wage answers this by using the average wage for the graduate's most recent occupation and county.

2) How much do my graduates earn now?

Estimated Annual Wage estimates current annual earnings using the median wage for the graduate's most recent occupation and county and adjusting for age and degree level using the Mincer function, described below.

All wage data is taken from Emsi's county-level occupation earnings, which is built from the BLS's OES dataset, adjusted to take into account QCEW, ACS, and data from state labor departments.

## Potential Annual Wage (emp\_wageAvg)

The emp\_wageAvg column shows the average wage for each profile's SOC code in the county that best describes the profile's location.

In the Data file, the three columns to the left of emp\_wageAvg (emp\_wage10p, emp\_wage50p, and emp\_wage90p) give the 10th, 50th, and 90th percentile wages respectively for the related SOC in the county of residence.

## Estimated Annual Wage (emp\_wageAgeAdjMax)

The emp\_wageAgeAdjMax column shows the median wage for each profile's SOC code in the county that best describes the profile's location, adjusted for the individual's age and highest level of education completed at your institution (see below).

## Your Project Parameters

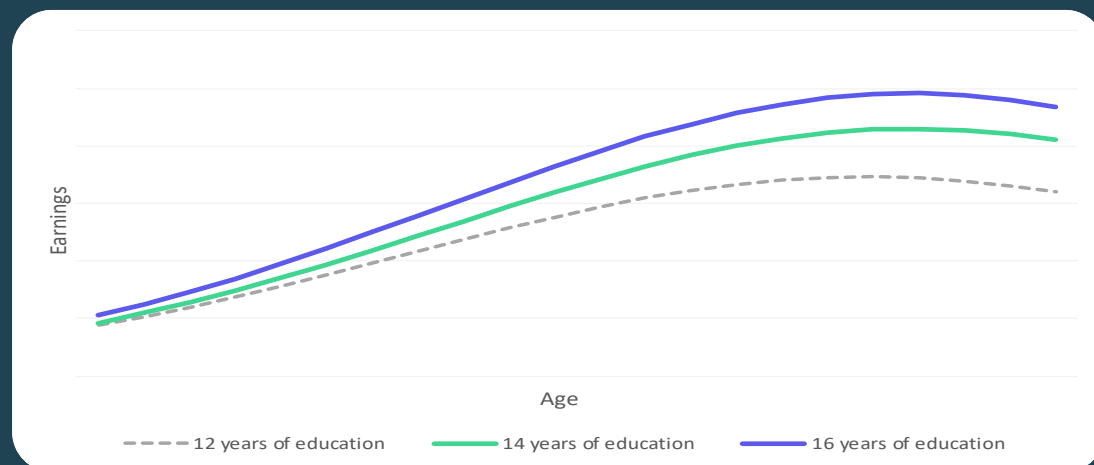
### Timeframe

Occupational wages are estimated for 2020, based on federal and state data sources.

### Datarun

2020.3 – QCEW Employees, Non-QCEW Employees, and Self-Employed

## Estimated Annual Wage Sources



Emsi uses the Mincer function to predict the change in earnings at each point in an individual's working career. The Mincer function originated from Mincer's seminal work on human capital (1958).

Human capital theory holds that earnings levels do not remain constant; rather, they start relatively low and gradually increase as the worker gains more experience. Research also shows that the earnings increment between educated and non-educated workers grows through time. These basic patterns in earnings over time were originally identified by Jacob Mincer, who viewed the lifecycle earnings distribution as a function with the key elements being earnings, years of education, and work experience, with age serving as a proxy for experience. We use state-specific, 2-digit program-specific, and education level-specific Mincer coefficients.

The figure above illustrates several important points about the Mincer function. First, as demonstrated by the shape of the curves, an individual's earnings initially increase at an increasing rate, then increase at a decreasing rate, reach a maximum somewhere well after the midpoint of the working career, and then decline in later years. Second, individuals with higher levels of education reach their maximum earnings at an older age compared to individuals with lower levels of education (recall that age serves as a proxy for years of experience). And third, the benefits of education, as measured by the difference in earnings between education levels, increase with age.

*Mincer, Jacob. "Investment in Human Capital and Personal Income Distribution." Journal of Political Economy 66, no. 4 (August 1958): 281-302.*

*Mincer, Jacob. Schooling, Experience and Earnings. New York: National Bureau of Economic Research, 1974.*

*Polachek, Solomon W. "Earnings Over the Lifecycle: The Mincer Earnings Function and its Applications." Foundations and Trends in Microeconomics 4, no. 3 (2008): 165-272.*

*Polachek, Solomon W. "Mincer's Overtaking Point and the Lifecycle Earnings Distribution." Review of the Economics of the Household 1, no. 4 (December 2003): 273-304.*

*Data to calculate the Mincer was pulled from ACS 2011 to 2015.*

## Wage Estimate Data Sources and Calculations

### Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

### State Data Sources

This report uses state data from the following agencies: Alabama Department of Industrial Relations; Alaska Department of Labor and Workforce Development; Arizona Department of Administration, Office of Employment and Population Statistics; Arkansas Department of Workforce Services; California Labor Market Information Department; Colorado Department of Labor and Employment; Connecticut did not provide us with a data source; Delaware Office of Occupational and Labor Market Information, Delaware Wages 2004; District of Columbia Department of Employment Services; Florida Department of Economic Opportunity; Georgia Department of Labor, Workforce Information and Analysis, Occupational Information Services Unit; Hawaii Department of Labor and Industrial Relations, Research and Statistics Office; Idaho Department of Labor; Illinois Department of Employment Security, Employment Projections; Indiana Department of Workforce Development; Iowa Workforce Development; Kansas Department of Labor, Labor Market Information Services, Kansas Wage Survey; Kentucky Office of Employment and Training; Louisiana Department of Labor; Maine did not provide us with a data source; Maryland Department of Labor, Licensing and Regulation, Office of Labor Market Analysis and Information; Massachusetts Executive Office of Labor and Workforce Development; Michigan Department of Labor and Economic Growth, Bureau of Labor Market Information and Strategic Initiatives; Minnesota Department of Employment and Economic Development; Mississippi Department of Employment Security; Missouri Department of Economic Development; Montana Department of Labor and Industry, Research and Analysis Bureau; Nebraska Workforce Development; Nevada Department of Employment, Training and Rehabilitation, Information Development and Processing Division, Research and Analysis Bureau; New Hampshire Department of Employment Security; New Jersey Department of Labor and Workforce Development; New Mexico Department of Labor, Bureau of Economic Research and Analysis; New York Department of Labor, Division of Research and Statistics; North Carolina Department of Commerce, Labor and Economic Analysis Division; North Dakota Job Service, Labor Market Information Center; Ohio Department of Job and Family Services, Labor Market Information Division; Oklahoma Employment Security Commission; Oregon Employment Department, Oregon Labor Market Information System; Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis; Rhode Island did not provide us with a data source; South Carolina Employment Security Commission, Labor Market Information Department; South Dakota Department of Labor, Labor Market Information Division; Tennessee Department of Labor and Workforce Development, Research and Statistics Division; Texas Workforce Commission; Utah Department of Workforce Services; Vermont did not provide us with a data source; Virginia Employment Commission, Economic Information Services; Washington State Employment Security Department, Labor Market and Economic Analysis Branch; West Virginia Bureau of Employment Programs, Research Information & Analysis Division; Wisconsin Department of Workforce Development, Bureau of Workforce Information; Wyoming Department of Employment, Research and Planning

