

## Occupational Employment Statistics (OES) Program Technical Notes

Operating under a Cooperative Agreement with the U.S. Department of Labor, Bureau of Labor Statistics (BLS), the Occupational Employment Statistics (OES) program in Kentucky conducts a semi-annual survey of employers to collect employment and wage rates by occupation for wage and salary workers in non-farm establishments. The resulting data are used to generate annual occupational employment and wage estimates for the state and sub-state areas.

The OES survey is funded through BLS, which provides detailed program procedures and technical support, while the state collects the bulk of the data from employers. Data are collected during two panels each year, one in May and one in November. The resulting estimates are based on data collected in six consecutive panels over a three-year period.

Because wages may shift over the course of the three-year period, wages for the first five panels are adjusted using BLS Employment Cost Index (ECI) factors *prior* to combining with the current panel data. ECI adjustments are not applied to the most recent (current) panel data. The ECI is a measure of the change of the cost of labor over time. More information on ECI is available at <https://www.bls.gov/eci/>.

The estimates released in 2020 (also referred to as May 2019 estimates) were generated from data collected from the panels referencing November 2016 to May 2019. BLS produces occupational employment and wage estimates for the nation, states, Metropolitan Statistical Areas (MSA), and balance-of-state areas. To further meet the needs of local data users, Kentucky Center for Statistics (KYSTATS) utilizes OES data and BLS methodology to calculate sub-state level estimates for the ten Local Workforce Areas (LWAs).

OES does not produce occupational wage projections, benefits estimates, estimates of unemployment by occupation, or occupational estimates by demographic characteristics.

The OES survey is designed to create detailed, cross-sectional, employment and wage estimates, providing a “snapshot” of occupational employment and wages for a particular area and time. Estimates are not intended to be used as a time series. Challenges in using occupational estimates as a time series include changes in occupational, industry, and geographical classification systems; changes in data collection methodology and procedures; changes in the survey reference periods; changes in mean wage estimation methodology; and other features of the OES methodology.

In addition, users of the 2020 Kentucky and Local Workforce Area Employment and Wage Estimates may encounter differences in the number of occupations for which estimates are available. Such variations may be due to a number of factors: the occupation may not be common in the area; the occupation may have failed to pass confidentiality guidelines; the primary employers of an occupation may not have been in the sample, or failed to respond to the survey; or the occupation may not have passed statistical reliability criteria.

Users should also note that, although most occupations have estimates of both hourly and annual wages, some occupations, such as teachers, pilots, and flight attendants, only report annual wages due to variations in the number of hours worked for these occupations. Similarly, occupations that generally work less than 40 hours per week (e.g. some entertainment workers) report only hourly wages.

### Occupational Classification

The OES survey categorizes workers into nearly 800 detailed occupations based on the Office of Management and Budget’s (OMB) Standard Occupational Classification (SOC) System. These detailed occupations encompass 22 of the 23 major occupational groups as defined by OMB. Major Occupational Group 55 (Military Specific Occupations) is not included. Detailed information on the SOC system can be found at <https://www.bls.gov/soc/>.



## Implementation of the 2018 SOC

Beginning with data collection in the November 2018 survey panel, the OES program utilized the 2018 SOC system. Prior data collection coded occupations based on the 2010 SOC. Because OES estimates are generated using data collected from six surveys over a three-year period, the estimates released during the next two years (calendar years 2020 and 2021) will rely on data collected and coded under two different classification systems (2010 SOC and 2018 SOC). As a result, the estimates for these two years will be based on a hybrid of the two classification systems. The estimates published in 2022 will be the first based solely on the new 2018 SOC.

Details on the hybrid occupations and the implementation of the 2018 SOC, including a list of the hybrid occupations, can be found at [https://www.bls.gov/oes/soc\\_2018.htm](https://www.bls.gov/oes/soc_2018.htm)

## Industry Classification

OES estimates utilize the OMB's 2017 North American Industry Classification System (NAICS). National industry-specific occupational employment and wage estimates are available at the 2-digit sector level, 3-digit subsector level, and 4-digit industry group level. Select 5 and 6-digit industry level estimates are also available at the national level. Additional information on the NAICS can be found at <https://www.bls.gov/bls/naics.htm>.

As with the estimates released last year, 2019 estimates are based on 2017 NAICS. OES survey panels prior to May 2017 were collected utilizing the 2012 NAICS. These earlier data have been cross-walked to the new NAICS 2017.

## Sample Coverage

The OES survey sample is drawn from employers covered by the state unemployment insurance (UI) program. Non-covered employers in NAICS 4821, *Rail Transportation*, are also included.

State and local government are included in the sample. Federal coverage is limited to the Federal Executive Branch and the U.S. Postal Service and is collected annually in June by the U.S. Office of Personnel Management.

Excluded from the survey are employers in NAICS 814, *Private Households*, and most employers in the Agriculture Sector (NAICS 11) with the exception of NAICS 113310, *Logging*; NAICS 1151, *Support Activities for Crop Production*; and NAICS 1152, *Support Activities for Animal Production*.

## Employment

Employment is defined as the number of full-time and part-time employees, workers on paid vacation or other types of paid leave; workers on unpaid, short-term absence; workers assigned temporarily to other units, and paid owners, officers, and staff of incorporated firms. Excluded are self-employed, proprietors, owners, and partners of unincorporated firms, and unpaid family workers.

The sum of sub-state area employment figures may not total to statewide employment for several reasons including: rounding; suppression of employment in areas where the estimates do not meet criteria for publication because of reliability or confidentiality; employment from cross-state metropolitan areas that are not included in the statewide total; and establishments whose employees are located within the state, and counted in the statewide total, but not assigned to a particular sub-state area.

## Wages and Earnings

Wages are defined as straight time, gross pay, exclusive of premium pay. Base rate, cost-of-living allowances, tips, guaranteed pay, hazardous-duty pay, incentive pay, commissions, production bonuses, and on-call pay are included. Excluded are back pay, jury duty pay, overtime pay, severance pay, shift differentials, non-production bonuses, and tuition reimbursements.

Earnings data are collected in 12 wage intervals. Employers report the number of employees in an occupation by these intervals. Wage intervals are defined both as hourly rates and the corresponding annual rates (where annual rate = hourly rate x 2,080 hours). Establishments are instructed to provide hourly rates for part-time



workers and annual rates for occupations that are typically paid an annual salary, but do not work 2,080 hours per year (i.e., teachers). With the exception of the upper, open-ended wage interval, a mean wage value is calculated for each wage interval based on the most recent data collected by the National Compensation Survey (NCS). The current year's mean from NCS is used for these closed intervals. For the upper, open-ended interval, a weighted average of the last three years' mean is utilized.

OES receives actual wage rates, rather than wage intervals, for federal executive branch government, U.S. Postal Service, and most state governments.

Kentucky employs the 10<sup>th</sup> percentile and 90<sup>th</sup> percentile, respectively, for entry and experience level wage estimates.

### **Confidentiality**

BLS has a strict confidentiality policy to ensure that the survey sample composition, reporters, and names of respondents are kept confidential. Additionally, the policy assures respondents that published estimates will not reveal the identity of any specific respondent or allow the data of a specific respondent to be inferred. The most relevant statute which governs BLS confidentiality is the Confidential Information Protection and Statistical Efficiency Act (CIPSEA). Published estimates are screened to ensure that these confidentiality requirements are met. For additional information regarding confidentiality, please visit the BLS website at <https://www.bls.gov/bls/confidentiality.htm>.

Additional information on the OES Program can be found at <https://www.bls.gov/oes/home.htm>.

