

Occupational Employment Statistics (OES) Program Methodology

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 prior five panels are adjusted using BLS Employment Cost Index (ECI) factors *prior* to combining with 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 2018 were generated from data collected from the panels referencing November 2014 to May 2017. BLS produces occupational employment and wage estimates for the nation, states, Metropolitan Statistical Areas (MSA), and Balance-of-State areas. To meet the needs of local data users, the Kentucky OES program, operated by the Kentucky Center for Statistics (KYSTATS), utilizes OES data and BLS approved methodology to calculate sub-state level estimates for Local Workforce Areas (LWA).

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

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. It is not designed to be used as a time series. Challenges in using OES data 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 2018 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 will also note that most occupations have estimates of both hourly and annual wages. However, some occupations, such as teachers and pilots, only report annual wages due to variations in the number of hours worked for these occupations.

Occupational Classification

The OES survey categorizes workers into 810 detailed occupations based on the Office of Management and Budget’s (OMB) 2010 Standard Occupational Classification (SOC) System. These detailed occupations encompass 22 of the 23 major occupational groups as defined by the Office of Management and Budget (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/>.

The OES estimates released in 2018 (the May 2017 estimates), replaced 21 detailed occupations with 10 aggregations of these occupations. The ten aggregations, and the detailed occupations they replace, are listed below.



13-1020	Buyers and purchasing agents (SOC broad occupation)
	13-1021 Buyers and purchasing agents, farm products
	13-1022 Wholesale and retail buyers, except farm products
	13-1023 Purchasing agents, except wholesale, retail, and farm products
15-2090	Miscellaneous mathematical science occupations (SOC broad occupation)
	15-2091 Mathematical technicians
	15-2099 Mathematical science occupations, all other
21-1018	Substance abuse, behavioral disorder, and mental health counselors (OES-specific code and title)
	21-1011 Substance abuse and behavioral disorder counselors
	21-1014 Mental health counselors
29-2010	Clinical laboratory technologists and technicians (SOC broad occupation)
	29-2011 Medical and clinical laboratory technologists
	29-2012 Medical and clinical laboratory technicians
39-1010	First-line supervisors of gaming workers (SOC broad occupation)
	39-1011 Gaming supervisors
	39-1012 Slot supervisors
39-7010	Tour and travel guides (SOC broad occupation)
	39-7011 Tour guides and escorts
	39-7012 Travel guides
47-4090	Miscellaneous construction and related workers (SOC broad occupation)
	47-4091 Segmental pavers
	47-4099 Construction and related workers, all other
51-2028	Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers (OES-specific code and title)
	51-2022 Electrical and electronic equipment assemblers
	51-2023 Electromechanical equipment assemblers
51-2098	Assemblers and fabricators, all other, including team assemblers (OES-specific code and title)
	51-2092 Team assemblers
	51-2099 Assemblers and fabricators, all other



53-1048	First-line supervisors of transportation and material moving workers, except aircraft cargo handling supervisors (OES-specific code and title)
	53-1021 First-line supervisors of helpers, laborers, and material movers, hand
	53-1031 First-line supervisors of transportation and material-moving machine and vehicle operators

Additional information on the new aggregations can be found at https://www.bls.gov/oes/changes_2017.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> .

The May 2017 estimates are the first based on 2017 NAICS. OES panels prior to May 2017 were collected utilizing the 2012 NAICS. These earlier data have been crosswalked 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.

Excluded are 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*. NAICS 814, *Private Households*, is also excluded.

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 assigned temporarily to other units and paid owners, officers, and staff of incorporated firms. Excluded are proprietors, owners, and partners of unincorporated firms, unpaid family workers, workers on unpaid leave, and contractors and temporary agency employees not on the surveyed company’s payroll.

The sum of area level 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 2080 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 uses the 10th percentile and 90th 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 figures 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 www.bls.gov/bls/confidentiality.

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

