



In-Demand Methodology

FOR FURTHER INFORMATION:

Doug Walls, Labor Market Information Director, 602.771.1258

Sam Briggs, Economist, 602.364.0430

www.laborstats.az.gov

In-Demand Industry Rankings

Approach

In-demand industries and occupations were identified using a range of employment and wage variables. This approach was adopted to ensure industries and occupations with favorable attributes across multiple indicators were selected. The performance variables chosen for this analysis include:

- Projected employment change, (numeric),
- Projected employment change, (percentage),
- Historic employment change (percentage),
- Historic wage change (percentage),
- Current employment level,
- Current wage level,
- Employment location quotient, and
- Wage location quotient

Industries were ranked across each performance variable and given an overall score. All performance variables, with the exception of the location quotient variables, were assigned equal weighting. The employment and wage location quotient variables were combined into one variable, reducing the significance of each by half. The industries that received the best overall scores were identified as in demand. Further details on the performance variables are available in Tables 1-3.

Projected Employment Change (numeric and percentage)

Projection estimates are produced by the Arizona Office of Economic Opportunity (OEO) for industry sector (two-digit NAICS) and detailed industry (three-digit NAICS) categories. Projection estimates are available for the state and 11 of the 12 Local Workforce Development Areas (Nineteen Tribal Nations excluded). The estimates include employment change from 2018-2020. In this analysis, an industry sector was excluded from consideration as an in-demand industry if projected employment growth was less than 0.0% over the two-year period.

Historic Employment Change (percentage)

Historical employment data from Q4 2015-Q4 2018 were used for the industry rankings. Employment estimates were produced by the U.S. Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW) program.

Historic Wage Change (percentage)

Historical average weekly wage data from Q4 2015-Q4 2018 were used for the industry rankings. Wage estimates were produced by the U.S. BLS QCEW program.

Current Employment Level

Employment estimates for Q4 2018 were used for the industry rankings. Employment estimates were produced by the U.S. BLS QCEW program.

Current Wage Level

Average weekly wage estimates for Q4 2018 were used for the industry rankings. An industry with an average wage in the bottom 10th percentile on an area was excluded from in-demand consideration. Employment estimates were produced by the U.S. BLS QCEW program.

Employment Location Quotient

An employment location quotient (LQ) are powerful indicators which allow a local region to identify which industries they hold a competitive advantage in. An employment LQ compares the industry employment concentration of a region with the employment density of that industry nationwide. This estimate helps identify which industries have a large or small presence within a state or local area.

Location quotient estimates for Q4 2018 produced by the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages program were used in this analysis.

Wage Location Quotient

Similar to an employment LQ, a wage LQ allows for wages within one industry to be compared across different geographic areas. An industry with an above-average wage LQ is an indication that industry employees in that area receive higher wages than employees working in the same industry elsewhere.

Location quotient estimates for Q4 2018 produced by the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages program were used in this analysis.

In-demand Occupations

In-demand Occupations were selected based on projected employment percentage growth, projected employment numeric growth, and average wage levels. Each variable was ranked separately and individual rankings were averaged together to create an overall occupational ranking. Equal weighting was given to each variable.

For an occupation to qualify as "in-demand" the occupation had to be present in one or more of the in-demand industries. This requirement was imposed to ensure consistency between industry and occupational priorities. In-demand occupations were generated for both two and three digit in-demand industries. Many occupational categories are present within more than one industry sector.

Another requirement for an occupation to be considered for in-demand status was that an occupation had to represent a significant percentage of an industry's total employment. This ensured that relevant occupations representing in-demand industries were selected. For 2-digit NAICS industries, an occupation was required to represent at least 0.2% of an in-demand industry's total employment. For a 3-digit NAICS industry, an occupation had to represent at least 0.5%.

A significant share of an occupation's total employment must also be present in an in-demand industry for the occupation to qualify as an in-demand occupation. For 2-digit NAICS industries, at least 2.0% of an occupation's total employment had to be present in an in-demand industry. For 3-digit NAICS industries, at least 1.0% of an occupation's total employment had to be present in an in-demand industry.

If an occupation met the requirements outlined above, it was designated as an in-demand occupation. In-demand occupations were given an overall rating from 1 to 5 (5 being the best) based on educational requirements, wage, employment level and projected employment growth rankings. Occupations were rated by educational attainment to prevent occupations requiring a Bachelor's or Doctoral Degree from dominating the 5 star ratings. As an example, this means that 1/5 of all occupations requiring a H.S. diploma will be rated as 5 star, 1/5 of all occupations requiring a H.S. diploma will be rated as a 4 star, etc. This logic applies across all education levels.

ARIZONA

OFFICE OF ECONOMIC OPPORTUNITY

118 North 7th Avenue | Suite 400
Phoenix, Arizona 85007

Phone: 602.771.2222

Email: Laborinfo@oeo.az.gov

Arizona Office of Economic Opportunity