

Technical Notes: Online Job Posting's Report

Ohio's Online Job Posting's Reports are produced and published online monthly. The reports utilize TalentNeuron™'s electronic job postings data¹. TalentNeuron™ collects job posting's data from more than 65,000 global sources, on a daily basis and in real-time. The data collected are continuously tested for quality, accuracy, and consistency. Job posting snapshot reports are available for each JobsOhio Network Area as well as the state of Ohio. The reports provide the user community with a practical and cost-effective resource that support both strategic and operational decision making. The following technical notes are provided in support of all current and future subscribers of the Online Job Postings Report. The technical notes introduce and explain several key concepts to keep in mind when utilizing these reports:

1. *The Online Job Postings database is not comprehensive.* Job advertising is primarily done by posting open positions via online job boards. However, not all jobs are advertised online and not all geographic areas or industries utilize electronic job boards as their singular advertising platform.
2. *Job ads don't always equal job vacancies.* By way of example, some job ad's objectives are to build a pool of resumes and as such, may not represent actual job vacancies. Also, some ads may be duplicated. While TalentNeuron™ removes a high percentage of duplicate ads across job boards, it may not always be possible to determine whether two ads are for the same position. For example, an ad for a job in one city may be posted in several other cities.
3. *The Online Job Postings database, in and of itself, does not measure the health of the economy.* The economic summaries provided in the associated snapshot reports only measure job advertisements or labor demand, not all aspects of economic health. It does not measure job loss that may be occurring at the same time nor an estimate of net gains in employment over time.
4. *Reports are only snapshots of labor market change.* Real-time data collection means estimates of labor market demand can change quickly. Job postings may expire or be filled at the same time that new jobs are cueing for inclusion in the database. Given the nature of this real-time data collection environment, trends may be limited to short-term time frames and may also exaggerate seasonal hiring patterns. There are currently no controls or algorithms built in to TalentNeuron™ to account for seasonal labor demand or smooth fluctuations.
5. *The Online Job Postings database was originally intended for business use and not research.* Therefore, there are no precise statistical measures of noise in the data nor are there any rigorous measures of variance or error. The data must be used with a measure of analytical judgment/caution and in conjunction with other data.

¹ TalentNeuron™ Gartner was formerly known as Wanted Analytics.

6. *Many job ads do not include wage/salary information and/or educational requirements.* The primary source used for wage/salary is found in the ad posting. If job posting salary information is not included, it is estimated using predictive models relying on historic information. In such instances where there is not enough historic data to estimate salary, U.S. Bureau of Labor Statistics (BLS) labor market data is substituted.

Likewise, the primary source used for educational requirements is found in the ad posting. If the ad has no published educational requirements, the BLS education level assignment by Standard Occupational Classification (SOC) is used.

For these reasons, TalentNeuron™ should not be the singular source of information about the labor market.

Monthly reports are generated for each of JobsOhio Network Areas and the state of Ohio. Snapshot data for different geographical locations or areas can be made available upon request. However, please note each JobsOhio Network Area contains one or more MSA's (Metropolitan Statistical Areas), one or more Micro Statistical Areas, and some smaller counties. Reporting on small areas (for example, a report confined to few rural counties instead of an MSA) usually does not make the report more informative. Data for an MSA overwhelms that of a small neighboring county. As a result, if Computer Analyst is the most advertised position in a heavily populated county or MSA, then it will likely also be the most or second most advertised position in the JobsOhio Network Area report. The main difference will be that the totals in the JobsOhio Network Area report will be larger than for an MSA or county report. Most JobsOhio Network Areas contain multiple large areas, each of which contains an MSA.

Comparison to Other Sources of LMI: This monthly report series is generated to help describe labor demand during a specific time frames utilizing data obtained from TalentNeuron™. This data source represents what can be referred to as real-time labor market information (LMI). To further clarify the uses and applications of real-time LMI, it is helpful to contrast it with labor market information derived from primary research. Primary research requires labor market concepts to be clearly defined and measured. Primary research methodology couples social science research methods and statistical analysis in support of data collection, interpretation, and presentation of research findings. This approach provides the advantages of rigorous and robust concepts and measurement, application of established social research methodology, and is designed to allow for precise statistical analysis and testing. This approach has the advantages of being highly reliable and often allows for inferences or forecasts beyond the face value of the data.

The major disadvantages are:

1. Primary research takes time resulting in both time lags as well as delayed publication of findings. As such, primary research findings may not have the currency required to satisfy the requirements of policy-makers and other labor market data consumers.

2. Costs may be prohibitive to collect and measure the level of detail or geographic granularity desired. In survey research, sample sizes required for statistical validity rise exponentially as we add sub-categories or cells for which we desire to collect data.
3. From a day-to-day programmatic point of view, program decisions may not have the luxury of waiting for the most precise, scientific or reliable measures.

In contrast to data derived from primary research methodologies, real-time LMI relies on secondary research. Secondary research leverages data collected or maintained for purposes other than a specific and rigorously defined research interest. Often the data is collected in support of a business or administrative need. Electronic job board data collection is a case in point. Ohio's Online Job Posting Report takes advantage of electronic tools to adapt and align information from electronic job ads with labor market concepts and coding systems. Electronic coding systems assign businesses to industry classifications and job titles to standard occupational codes, and electronic content analysis is applied to remove duplicate job listings and various listings that are not pertinent or legitimate as an indicator of the current job market.

Please contact Ohio Job and Family Services Office of Workforce Development, Labor Market Information at ContactLMI@jfs.ohio.gov if you have questions.