

## Data Sources and Calculations

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### Input-Output Data

The input-output model in this report is created using the national Input-Output matrix provided by the federal Bureau of Economic Analysis. This is combined with the national Total Gross Output, the regional Total Gross Output, the land area of the subject region, regional DIRT data and regional in/out commuter patterns in order to calculate regional requirements, imports and exports. After using matrix algebra to calculate the regional multiplier, the resulting matrix is multiplied by the sales vector and converted back to jobs or earnings. Specifically, this data comes from the U.S. Department of Commerce, Bureau of Economic Analysis, Industry Economic Accounts: Benchmark & Annual Input-Output (I-O) Accounts.

### Demographic Data

The demographic data in this report is compiled from several sources using a specialized process. Sources include US Census Bureau annual estimates, birth and mortality rates from the US Health Department, and projected regional job growth.

### Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

### Unemployment Data

The unemployment data in this report comes from the Bureau of Labor Statistics' Local Area Unemployment Statistics and is updated every two months.

### Educational Attainment Data

EMSI's educational attainment numbers are based on Census 1990, Census 2000, the Current Population Survey, and EMSI's demographic data. By combining these sources, EMSI interpolates for missing years and projects data at the county level. Educational attainment data cover only the population aged 25 years or more and indicate the highest level achieved.

### Nielsen Claritas Business-Facts®

EMSI business-level data is a subset of the Nielsen Claritas Business-Facts database, which in turn is derived from infoUSA. This dataset includes the names, NAICS codes, local employees, and locations of more than 13 million US businesses. The following text from Nielsen Claritas explains how the data are collected: "Over 13 million business and professional records are available in Business-Facts, which can be used for a broad range of sales and marketing applications. To ensure accuracy, this database is refreshed monthly and delivered quarterly as part of the standard license agreement. Telephone verification of each business by infoUSA, Inc. assures the accuracy of such vital business data elements as Standard Industrial Classification (SIC) Codes/North American Industry Classification System (NAICS) Codes, ownership, location and employment. . . The Business-Facts database begins with a collection of data from infoUSA. Once data is received, Nielsen Claritas performs several data cleansing routines, such as name standardization, address standardization, and removing duplicate or erroneous records. Nielsen Claritas then geo-codes the entire database to ensure latitude and longitude coordinates are available for each business."

### State Data Sources

This report uses state data from the following agencies: Oklahoma Employment Security Commission.