

Process to determine Employment in 2005

Below is the process involved in determining the amount and allocation of employment within the Transportation Management Area (TMA) for the year 2005.

1. Received ES-202 Access Database from Oklahoma Employment Security Commission (OESC).
 - a. Identified records in the ES-202 database from the second quarter (April, May, June) of 2006 that were in the Tulsa region based on one or more of the following criteria being in the TMA: city, zip code, latitude/longitude coordinate, and in some instances area code. This resulted in 22,161 records being identified amounting to 392,140 employees in the TMA, which comprises wage and salary employment. (Note: used second quarter 2006 employment data to account for 2005 employment because the 2nd Quarter data is the least likely to be affected by seasonal employment of summer and Christmas and accounts for the economic events that occurred throughout 2005).
 - b. Went through several iterations of Geocoding resulting in 19,569 records of the 22,161 being located, which account for 384,096 employees, or 97.95% of the overall total.
2. Compared results of geocoded ES-202 data against Bureau of Labor Statistic (BLS) Quarterly Census of Employment and Wages (QCEW) data for the second quarter of 2006 to determine appropriate allocation of employment to the TMA.
 - a. Downloaded 2006 employment by month by county from the BLS website.
 - b. Calculated second quarter employment for each county.
 - c. Used BLS employment totals and the geocoded ES-202 employment data to determine the proportion of employment that should be allocated to those portions of Creek, Osage, Rogers and Wagoner Counties that are in the TMA. Based on this strategy, the following percentage of employment in each respective county was presumed to be within the TMA:
 - i. Creek – 76.82%
 - ii. Osage – 52.65%
 - iii. Rogers – 96.63%
 - iv. Wagoner – 69.48%
 - d. Summed the TMA portions of the BLS data for the second quarter 2006 resulting in approximately 386,001 employees, which compares well with the geocoded ES-202 data at 384,096 and is reasonably close to total wage and salary employment found to be in the TMA – 392,140.
3. Used Bureau of Economic Analysis (BEA) *Total full-time and part-time employment by NAICS industry* data to determine military jobs, since the ES-202 data does not account for military employment. (Note: BEA data counts number of jobs, not number of workers. It was assumed that military personnel identified in the TMA hold only one military job).

- a. Obtained BEA data for 2005 at the county level from the BEA website. Data from 2005 was used instead of 2006 because BEA data is an annual count of jobs, thus it accounts for the events of 2005, much like the 2nd quarter 2006 data used for the ES-202 data and the BLS data. Although using the annualized job count may result in a slightly higher number than using a quarterly number, since it also includes seasonal highs in employment, it was determined that those seasonal highs do not affect military jobs. Also, BEA data is the only easily accessible source of military employment data known to be available.
- b. Allocated the military jobs to Creek, Osage, Rogers, and Wagoner Counties using the same methodology described above and arrived at a military job count of 3,332.
4. Used American Community Survey (ACS) data to establish self-employment in the TMA, as self-employment is also not accounted for in the ES-202 data.
 - a. Selected the 2005-2007 ACS 3-year estimates data set and identified *Self-employed workers in own not incorporated business* from the economic section of the data set.
 - b. Allocated the ACS data to the TMA and estimated there to be 25,917 self-employed workers within the TMA.
5. Summed the ES-202 wage and salary employment (392,140), the BEA military job count (3,332), and the ACS self-employed workers (25,917) to arrive at the base year employment for the 2035 long range plan.

392,140	- OESC wage and salary employment
3,332	- BEA military jobs
<u>+25,917</u>	- ACS self-employed workers
421,389	

6. The base year employment was then allocated to the transportation analysis zones (TAZs) based on their share of the wage and salary employment – as was determined from the geocoded ES-202 data, so that a TAZ encompassing 5% of the geocoded employment (5% of the 384,096) would thus contain 5% of the total employment of 421,389, or 21,069 as an example. Note: temporary help service employment and job placement agency employment was distributed across all of the TAZs based on this methodology since it was assumed the employees do not actually work at the site of the temp/placement agency.