

Employment Centers

Methodology, data sources, and other things to consider

Methodology

SANDAG used a collaborative empirical approach to identifying employment centers across the San Diego region. Building-level SANDAG Employment Estimates (2016) were summarized by ¼ mile radius hexagons. Local-maxima were identified as starting points, and regions were grown to include neighboring hexagons meeting a minimum employment density threshold within an approximate 2-mile radius. The resulting boundaries were generalized (taking into account major barrier features such as topography and freeways) and used to select SANDAG Master Geographic Reference Areas (MGRAs) by activity-weighted (population and employment) centroid. Through this process, over 70 initial employment centers were identified. These centers provided the geographies to evaluate travel patterns, employment information, and resident information. Additional technical information regarding this methodology is available by contacting the Data, Analytics, and Modeling Department at SANDAG.

Data sources and other things to consider

Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) 7.3 (2015)

The Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statics (LODES) data are a publicly available product of the U.S. Census Bureau. The LODES data are an extract of the LEHD infrastructure which is composed of administrative records, census, and survey data. The LODES data provide counts of unemployment insurance-covered wage and salary jobs, including private sector and state, local and federal government jobs. Workplace location and residential location of an employee is measured at the census block-level (2010). The 2015 data that are used here reflect the latest available data (version 7.3) at the time of this analysis and included two primary tables: Original-Destinations (OD) (used in Table 2 and Figures 1 and 4), and Workplace Area Characteristics (WAC) (used in Figure 1). It should be noted that these data (1) contain wage and salary jobs (and exclude self-employed individuals); (2) do not include military and other security-related federal agencies, postal workers, some employees at nonprofits and religious institutions, and informal workers; and (3) only includes an individual's primary job if an individual has more than one. These analyses reflect preliminary results and are pending final verification. Additional information is available at <https://lehd.ces.census.gov/data/>.

SANDAG Employment Estimates (2016)

On a regular basis, SANDAG produces estimates of employment and individual earnings for the San Diego region. These estimates were used in Table 1 and Figures 1 and 2. These estimates utilize California Employment Development Department (EDD) data, the Quarterly Census of Employment and Wages (QCEW) data, and the LEHD LODES data from the U.S. Census Bureau. among other sources. The employment estimates include wage and salary for private sector and government workers, as well as the self-employed. Uniformed military are not included. Additional information regarding these estimates is available by contacting the Economic and Demographic Analysis Modeling team at SANDAG.

SANDAG Population and Housing Estimates (2016)

Each year SANDAG produces estimates of population and housing for the San Diego region. These estimates utilize several data sources including the California Department of Finance, the U.S. Census Bureau, and a variety of other publicly available datasets. These small-area estimates contain information on the characteristics of the population (ethnicity, age, sex) and housing units (occupied, vacant, unoccupiable) in the region. The population living in military barracks, college dorms and other institutional facilities are included in the population and are counted in housing referred to as Group Quarters. The active military population and their dependents who live in households are included in the household population counts. The population and housing estimates are created in a process similar to the Regional Growth Forecast and contain similar information, however the Population and Housing estimates reflect current conditions. These data are presented in Figure 3. Additional information regarding these estimates is available by contacting the Economic and Demographic Analysis team at SANDAG.

SANDAG Activity Based Transportation Model (2016)

In order to plan and complete regional transportation projects, SANDAG creates and maintains a transportation model which uses a variety of regional transportation survey and socioeconomic and demographic data (e.g., count of trips from home to work, how people carpool, what bus routes are most frequented, and which highways are used and when). These data are then utilized in the Activity Based Model (ABM) to simulate individual and household transportation choices. These choices include how individuals travel around the region (the mode), why people travel around the region (the trip purpose), and when they travel (time of day). The ABM model is refined based on transportation data and expert feedback on methodology and data sources. For this analysis, SANDAG utilized release version 14.0.1 of ABM to estimate travel for the year 2016 (reference scenario #232). Data in Figures 5, 6, and 7 are restricted only to transportation trips in the model in which (1) the trip begins at home and ends at work and does not have any intermediary stops (e.g., dropping a child at school); and (2) the trip's purpose is work. Transit travel time includes initial wait time, walk time to transit stop, transfer time between stops, in vehicle time, and walk time to the destination. Data in Figures 5 and 7 are based on peak periods which are as 6:00 am to 8:59 am and 3:30 pm to 6:59 pm. It should be noted that estimated auto trip path and VMT data from the model to create Map 4 and Figure 8 include vehicle travel across all trip purposes that either start or end in the study area. Additional information about the ABM is available here: sandag.org/index.asp?subclassid=120&fuseaction=home.subclasshome