

# Office of Health Equity

## Healthy Communities Data and Indicators Project

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**Short Title:** Jobs-to-employed-residents ratio.

**Full Title:** Jobs-to-employed-residents ratio.

### 1. **Healthy Community Framework:**

Meets basic needs of all.

### 2. **What is our aspirational goal?**

Affordable, high-quality, socially integrated, an location-efficient housing.

### 3. **Why is this important to health?**

#### a. **Description of significance and health connection.**

The jobs-to-employed-residents ratio measures the balance between where people work and where people live. A balance closer to parity suggests that most people work close to where they live, which could result in reduced traffic congestion, vehicle miles traveled (VMT), and air pollution emissions. Additionally, individuals could experience lower commuting time and costs, and a higher quality of life. In 2009, when U.S. workers lived and worked in the same metropolitan area, 10.6% used public transportation and 4.4% walked to work, compared to 3.9% and 2.6% respectively, among workers that lived and worked in different areas.

#### b. **Summary of evidence.**

The evidence that relates health and the jobs-to-employed-residents ratio is indirect. Cross-sectional surveys of workers have shown adverse effects of commuting on health. Workers in Atlanta experienced a 12% increase in the likelihood of obesity for every additional hour spent in a car. Spending an additional 60 minutes of daily commuting above average is associated with a 6% decrease in health-promoting behaviors (exercising, cooking and eating meals at home) among U.S. workers. A survey conducted in the United Kingdom showed that long commute times had worst effects on the psychological health of women than men.

#### c. **References.**

1. California Planning Roundtable. [Deconstructing housing to jobs balance](http://www.cproundtable.org/publications/deconstructing-jobs-housing-balance/) (<http://www.cproundtable.org/publications/deconstructing-jobs-housing-balance/>). 2008. Accessed Dec. 8<sup>th</sup>, 2014.
2. Boarnet MG, Hsu HP, Handy S. [Impact of Jobs-Housing Balance on Passenger Vehicle Use and Greenhouse Gas Emissions](http://arb.ca.gov/cc/sb375/policies/jhbalance/jhbalance_brief.pdf) ([http://arb.ca.gov/cc/sb375/policies/jhbalance/jhbalance\\_brief.pdf](http://arb.ca.gov/cc/sb375/policies/jhbalance/jhbalance_brief.pdf)). Accessed Dec. 8<sup>th</sup> 2014.
3. McKenzie B, Rapino M. 2011. [Commuting in the United States: 2009](#)

(<http://www.census.gov/prod/2011pubs/acs-15.pdf>). American Community Survey Reports. Accessed Dec. 8<sup>th</sup>, 2009.

4. Frank LD, Andresen MA, Schmid TL. Obesity relationships with community design, physical activity, and time spent in cars. *Am J Prev Med* 2004; 27(2): 87-96.
5. Christian T. Trade-offs between commuting time and health-related activities. *J Urban Health* 2012; 89(5): 746-757.
6. Roberts J, Hodgson R, Dolan P. "It's driving her mad": Gender differences in the effects of commuting on psychological health. *J Health Econ* 2011; 30(5): 1064-1076.

#### 4. What is the indicator?

##### a. Detailed Definition.

$$\text{Jobs-to-Employed-Residents Ratio} = \frac{\text{Number of Jobs}}{\text{Number of employed residents}}$$

##### b. Stratification.

Type of industry sector: (1) Agriculture, Forestry, Fishing and Hunting; (2) Mining, Quarrying, and Oil and Gas Extraction; (3) Utilities; (4) Construction; (5) Manufacturing; (6) Wholesale Trade; (7) Retail Trade; (8) Transportation and Warehousing; (9) Information Finance and Insurance; (10) Real Estate and Rental and Leasing; (11) Professional, Scientific, and Technical Services; (12) Management of Companies and Enterprises; (13) Administrative and Support and Waste Management and Remediation Services; (14) Educational Services, Health Care, and Social Assistance; (15) Arts, Entertainment, and Recreation; (16) Accommodation and Food Services; (17) Other Services (except Public Administration); and (18) Public Administration. Race/ethnicity not available.

##### c. Data Description.

- i. Data sources: Longitudinal Employer-Household Dynamics (LEHD), Origin Destination Employment Statistics (LODES), [Resident and Workplace Area Characteristic data \(RAC and WAC, respectively\)](#), (<http://lehd.ces.census.gov/data/#qwi>).
- ii. Years available: 2011.
- iii. Updated: annually.
- iv. Geographies available: cities/towns, core based statistical areas (metropolitan and micropolitan statistical areas), counties.

Counts of the total workers by residence (employed residents) and the total workers by location (jobs) by industry in a Census block were obtained from LODES. Counts were aggregated to the city/town, statistical area, and county level and the ratio was calculated. Worker counts by block did not have standard error. Confidence intervals and relative standard error were not calculated. Place deciles and relative risk with respect to the core

based statistical area were calculated. A ratio of 1 is considered a good fit: one local job per one local worker. According to the U.S. Census Bureau the [Core Based Statistical Areas \(CBSAs\)](http://www.census.gov/geo/reference/gtc/gtc_cbsa.html) ([http://www.census.gov/geo/reference/gtc/gtc\\_cbsa.html](http://www.census.gov/geo/reference/gtc/gtc_cbsa.html)) consist of the county or counties associated with at least one core (urbanized area or urban cluster) of at least 10,000 population, plus adjacent counties having a high degree of social and economic integration with the core as measured through commuting ties with the counties associated with the core.

## 5. Limitations.

This ratio does not correct for workers that hold multiple jobs. Even if the ratio is close to 1, residents might not work within the jurisdiction limits due to multiple factors such as workers education, skills match, personal preferences, or salary expectations.

## 6. Projects using similar indicators.

California Planning Roundtable. [Deconstructing housing to jobs balance](http://www.cproundtable.org/publications/deconstructing-jobs-housing-balance/) (<http://www.cproundtable.org/publications/deconstructing-jobs-housing-balance/>). 2008. Accessed Dec. 8<sup>th</sup>, 2014.