



## Employment Rate

This EnviroAtlas map estimates the percentage of the working age population that is employed within each U.S. Census block group. Working age population refers to people older than 16 years or younger than 64 years during a particular calendar year. The employed population is defined as people who have worked for 1 to 52 weeks during each 12-month interval over the 5-year period from 2008–2012.

### Why is percentage of employment important?

The metric estimating the employed percentage of the working age population (also called the employment-population ratio) is one of many measures or variables used by city planners to examine the proportions of residents, jobs, and services in urban areas and to guide development planning for efficient city design and transit networks. Besides indicating the percentage of the working age population within a census block group that is actually employed, the metric also suggests a level of economic activity in the block group. Percentage of working age population that is employed may also be used as a component in other metrics such as labor force or labor force participation rate (the sum of employed plus unemployed persons divided by working age population). Labor force is a subset of the working age population; members of the labor force are either employed or unemployed and seeking work. The remaining portion of the working age population remains outside the labor force if those individuals are voluntarily not seeking work.

This metric is not used as often as the unemployment rate or the labor force participation rate, but it has its own particular benefits and uses. Changes in employment/unemployment rate reflect direct changes in the number of jobholders whereas differences in the employed percentage of the working age population indicate changes in the number of jobholders relative to the size of the population. Trends in this metric tell whether the economy is generating jobs fast enough to keep up with the growth in population.<sup>1</sup> The metric may be used on portions of the population to examine gender and age classes. Use of the ratio also allows direct comparison between metric values in two different time frames, which is not possible using employment or unemployment figures alone.<sup>1</sup>

Employment/unemployment metrics are used to compare administrative units (e.g., states, metropolitan districts, census tracts, or census block groups) to assess the units'



Photo: Bike commuters, U.S. DOT

economic health relative to the nation as a whole. For example, if economic indicators for one or more contiguous census block groups show higher unemployment rates relative to the rest of the nation, that area may apply for economic assistance or grants from the Federal Housing Administration or Economic Development Administration.<sup>2</sup>

From a city planning perspective, it is most efficient to have concentrations of jobs near a large working age population. A regional balance of jobs and housing not only reduces fuel consumption and congestion but it also benefits the local economy and standard of living.<sup>3,4</sup> A U.S. research study found that doubling the number of jobs accessible to workers within 20 minutes driving time led to a 6.5% increase in real average wages.<sup>3</sup> Workplaces that are centrally located and accessible to more households can reduce vehicle miles traveled, energy use, and [greenhouse gas emissions](#) (GHGs) associated with employee commuting trips.

Communities that pursue compact growth patterns and mixed use development facilitate workplace accessibility by automobile, transit, biking, and walking. Research indicates that people who live in compact neighborhoods walk more, use transit more, and drive less than people living in lower density neighborhoods.<sup>5</sup>

### How can I use this information?

This map allows users to evaluate various census block groups by the percent employment of the working age population. Comparing areas of relatively high and low employment rates may indicate the effectiveness of community design and road networks to link potential

workers with job opportunities. Contiguous block groups with low rates of employed working age inhabitants may be candidates for federal loans or grants to boost employment. Communities seeking to decrease vehicle miles traveled may encourage new employment in areas already supporting a large working age population. Economic development agencies in regions with limited transit service may use this map to encourage the siting of new workplaces and housing.

This information may also be useful when marketing the availability of areas for development. Planners can use the information to help evaluate whether proposed commercial development may improve or exacerbate regional imbalances in employment among census block groups. New residences in areas of high accessibility to jobs can provide more residents with opportunities to live closer to jobs, shopping, and services. This map may be compared with any of the other community data layers relative to demographics or employment. An EnviroAtlas aerial-image base map can be used to show the spatial distribution of the built environment within the census block groups.

### How were the data for this map created?

The metric, Employment Rate, or percentage of working age population that is employed, was compiled from U.S. Census [American Community Survey \(ACS\) 5-year Summary Data for 2008–2012](#). Table B23022 provided data at the census block group scale. ACS obtained the data through survey questions related to employment. The data covers workers over 16 years and younger than 64 years during a particular calendar year. The employed population is defined as people who have worked for 1 to 52 weeks during each 12-month interval over the 5-year period from 2008–2012. The symbol NA was assigned to census block groups with no ACS records.

### Selected Publications

1. Leon, C.B. 1981. [The employment-population ratio: Its value in labor force analysis](#). *Monthly Labor Review* (February 1981):36–45.
2. U.S. Economic Development Administration. 2014. [StatsAmerica: Distress tool](#). Accessed August, 2015.
3. Melo, P.C., D.J. Graham, D. Levinson, and S. Aarabi. 2012. [Agglomeration, accessibility, and productivity: Evidence for urbanized areas in the U.S.](#) Paper submitted to the Transportation Research Board 92<sup>nd</sup> Annual Meeting, January 13–17, 2013, Washington, D.C. 20 p.
4. Ewing, R., M. Greenwald, M. Zhang, J. Walters, M. Feldman, R. Cervero, L. Frank, and J. Thomas. 2011. [Traffic generated by mixed-use developments: Six-region study using consistent built environmental measures](#). *Journal of Urban Planning and Development* (September): 248–261.
5. National Research Council. 2009. [Driving and the built environment: The effects of compact development on motorized travel, energy use, and CO<sub>2</sub> emissions](#). Special Report 298, The National Academies Press, Washington, D.C. 240 p.
6. Kromer, B.K., and D.J. Howard. 2010. [Comparison of ACS and CPS data on employment status](#). U.S. Census Bureau, Washington, D.C.

### What are the limitations of these data?

The accuracy of this data layer is limited by the accuracy of the ACS Survey, which could be limited by its multiple data collection agencies, means, and calculations. Accuracy of ACS data increases with the use of multiple-year summary data and the use of *percentages* of household characteristics rather than *numbers*. ACS questions are not as detailed as those of the Current Population Survey (CPS) that is designed specifically to produce monthly unemployment figures. As a result, ACS and CPS employment percentages may not agree.<sup>6</sup>

### How can I access these data?

EnviroAtlas data can be viewed in the interactive map, accessed through web services, or downloaded. American Community Survey [annual](#) and [summary file](#) data may be downloaded from the ACS websites.

### Where can I get more information?

A selection of resources on the relationships among employment, city planning, and environmental quality is listed below. For information on how city planning strategies may affect human health, visit the [Eco-Health Relationship Browser](#). For additional information on data creation, access the metadata for the data layer from the drop down menu on the interactive map table of contents and click again on metadata at the bottom of the metadata summary page for more details. To ask specific questions about this data layer, please contact the [EnviroAtlas Team](#).

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