Number of High-Wage Workers (Workplace Location)

This EnviroAtlas national demographics map estimates the number of workers earning more than $3333 per month summarized by workplace location within each U.S. Census block group.

Why are high-wage workers important?

High-wage or high-skill jobs are those that typically require a college degree or graduate school education. High-wage jobs generally require abstract thinking and analytical capability.[1] Typically, college graduates earn more, are more fully employed, and receive more fringe benefits than high school graduates.[2]

Studies in labor trends of the last 25 years show high-wage jobs increasing in the 1990s as middle-wage jobs began to decline. However, in the first decade of the 2000s, high-wage jobs stagnated while low-wage jobs grew in number and the negative trend in middle-wage jobs continued.[2] While employer demand for college graduates continues to increase, the numbers of graduates entering the workforce has not kept up with demand. The shortage of high-wage workers contributes to wage inequality by raising their wages relative to the other wage classes and further depressing the wages of middle-wage workers.[3]

During the recovery after the recession of 2008, job numbers gained in the various wage classes vary regionally across the U.S. Though low-wage jobs have dominated the recovery, some metropolitan centers have shown gains in all job categories.[4] Between 2009 and 2013, 9 U.S. cities experienced 7–8% increases in high-wage jobs, and Austin, Texas showed more than a 10% increase.[4] To better fill the demand for high-skill workers in the future, public policies might promote improved college preparation in primary and secondary school and new funding mechanisms to encourage a broader segment of the secondary student population to attend college.[2]

From a city planning perspective, knowing the distribution of various job classes in a metropolitan region is prerequisite to planning for affordable housing centers that are accessible to those jobs.[5] The distribution of affordable-accessible housing relative to jobs is a useful measure of equity in city planning. High-wage workers are more likely to afford housing closer to their workplaces and often receive incentives to participate in employer-sponsored, discounted commuting programs.[6] A common benchmark states that

Photo: Graduate students, Wikimedia Commons

housing and transport should together total less than 45% of income.[7] Transport costs alone can vary from about 10% of earnings in compact communities up to about 25% in automobile-dependent suburban communities.[7]

Over the last several decades, many communities across the U.S. have experienced a decline in traditional downtown employment centers in favor of office parks and retail in outer suburbs. Changing demographic patterns in suburbia suggest that more emphasis is needed on creating compact neighborhoods within suburban communities as well as in urban centers. Planning strategies for compact neighborhoods promote housing in job-rich areas and new employment centers in dense residential zones. These strategies can also produce more walkable and bike-able neighborhoods and increased access to public transportation. Land use diversity that mixes housing, jobs, and services within neighborhoods can reduce vehicle miles traveled by making walking, biking, and transit more appealing. Recent studies suggest that consistently reducing private auto usage through compact development design guidelines nationwide would help to improve air quality and public health through lower greenhouse gas emissions.[5]

How can I use this information?

This map, High-Wage Workers (Workplace Location), may be used with other EnviroAtlas demographic and Smart Location data layers to compare the proportions of residents, jobs, and services among community census block groups. Identifying neighborhoods with or without a high-wage worker to job balance can be useful in a number of different

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urban planning contexts. Planners can promote increased job diversity or increased housing in neighborhoods with a low number of high-wage workplaces. Overall employment may be compared to the diversity of various job types and wage classes among individual block groups. Transit planners may wish to identify neighborhoods and corridors that can support new or enhanced transit service. Ranges in density numbers for housing and jobs are used by local governments to justify cost-effective transit investment and to promote development in areas near potential transit stations to ensure maximum transit use.

The aerial-image base map (seen by increasing the transparency of the map layers) can be used to show the spatial distribution of the built environment within the census block groups. For select communities, users can overlay EnviroAtlas community land cover maps that show impervious surfaces, street trees, and other common land covers at 1-meter resolution.

How were the data for this map created?

The 2010 Census Longitudinal Employer Household Dynamics Work Area Characteristics tables (LEHD WAC) provided a count of the number of high-wage workers, that is, workers earning more than $3333 per month, summarized by their workplace location in each census block group. For more information, please see the variable E_HiWageWk in the Smart Location Database User Guide.

What are the limitations of these data?

Census block groups typically include a mixture of developed, undeveloped, residential, and business areas. A balance of high-wage workers and jobs across block groups does not necessarily indicate that the majority of high-wage residents avoids commuting and works locally. The metric highlights regional patterns or specific neighborhoods lacking high-wage workers with access to jobs that would benefit from further study.

How can I access these data?

EnviroAtlas data can be viewed in the interactive map, accessed through web services, or downloaded. This data layer is incorporated into a larger EPA data product called the Smart Location Database. The Smart Location Database is a nationwide geographic data resource for measuring location efficiency. Most attributes are available for every Census block group in the United States.

Where can I get more information?

A selection of resources on the relationships among high-wage workers, city planning, and environmental quality is listed below. More details about this metric are available in the Smart Location Database User Guide. In addition, EPA's Smart Growth Program provides tools, resources, and technical assistance to communities seeking to pursue compact and mixed-use development strategies to create vibrant neighborhoods while protecting public health and the environment. For information on how city planning strategies may affect human health, visit the Eco-Health Relationship Browser. For additional information on the data creation process, 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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