NOVEMBER 2020

Occupational Employment And Wages In Metro And Nonmetro Areas
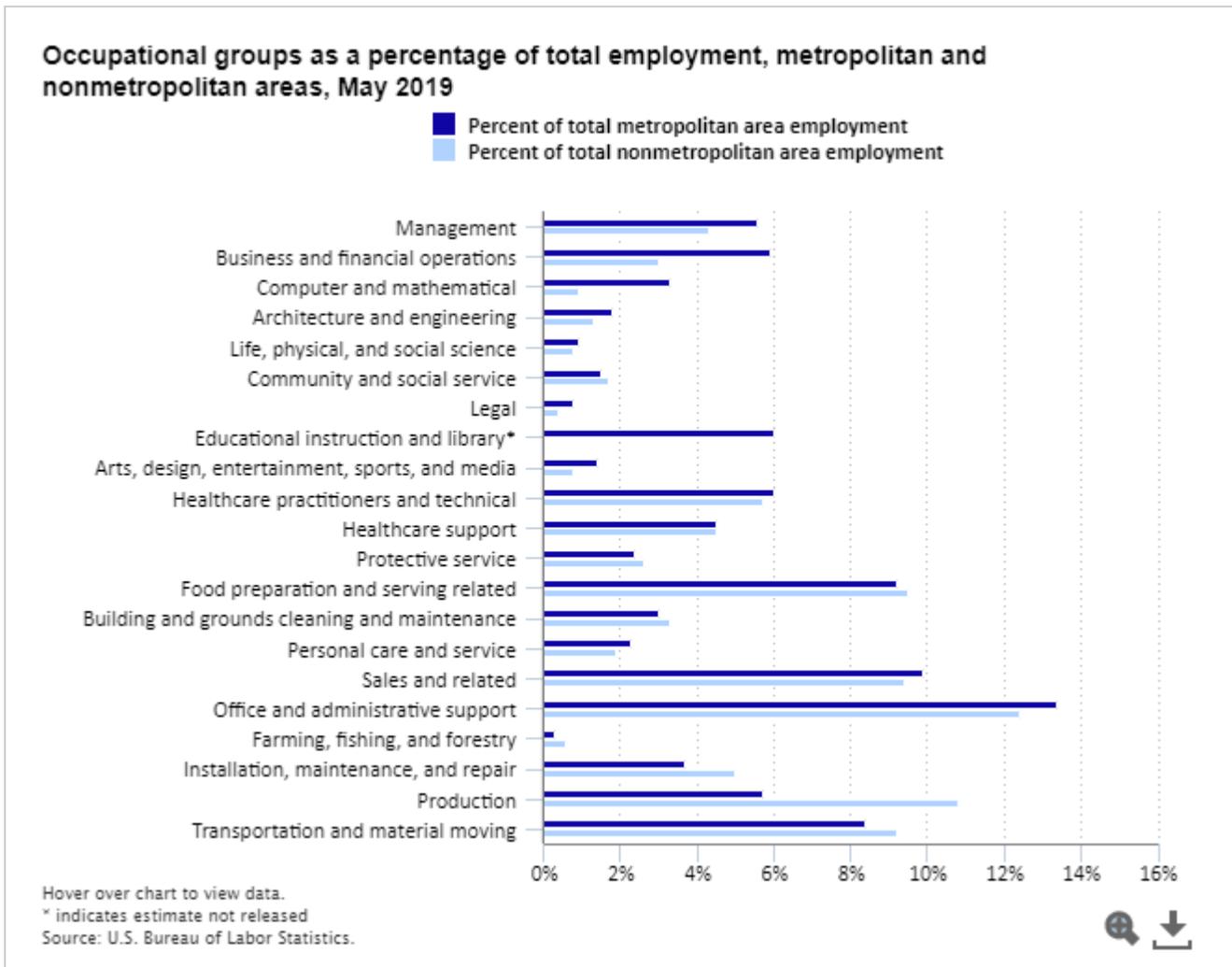
Stella Fayer and Audrey Watson

The United States is a country of great opportunities. When we think of opportunities, large metropolitan areas like Los Angeles, New York, or Chicago naturally come to mind. But did you know that some occupations are more concentrated in nonmetropolitan areas, and some of them are well-paid occupations?

Nonmetro areas had an overall annual mean wage of $42,490, compared with $54,820 in metro areas. Total employment in nonmetro areas was 16.4 million in May 2019, representing 11.1 percent of national employment. However, some occupations had higher shares of employment or higher wages in nonmetro areas. This Spotlight on Statistics explores similarities and differences between metro and nonmetro areas.

Production occupations made up a higher share of employment in nonmetro areas
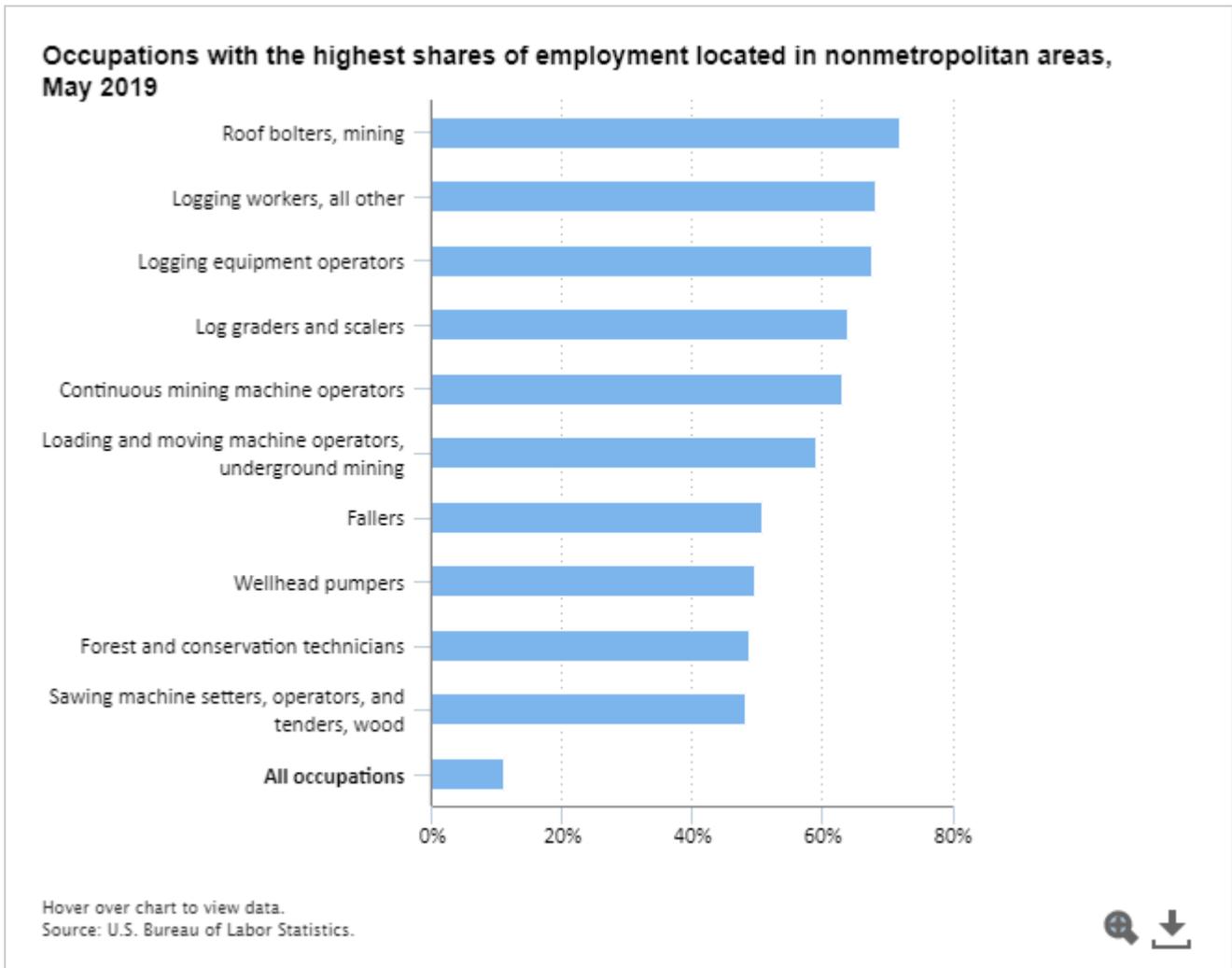
Production occupations made up 10.8 percent of employment in nonmetro areas, compared with 5.7 percent of employment in metro areas. Installation, maintenance, and repair occupations and transportation and material moving occupations also made up higher percentages of employment in nonmetro areas.

Several other occupational groups had relatively few jobs in nonmetro areas. Business and financial operations occupations made up 5.9 percent of metro employment, versus 3.0 percent of nonmetro employment. Computer and mathematical; management; legal; and arts, design, entertainment, sports, and media occupations also had lower employment shares in nonmetro areas.
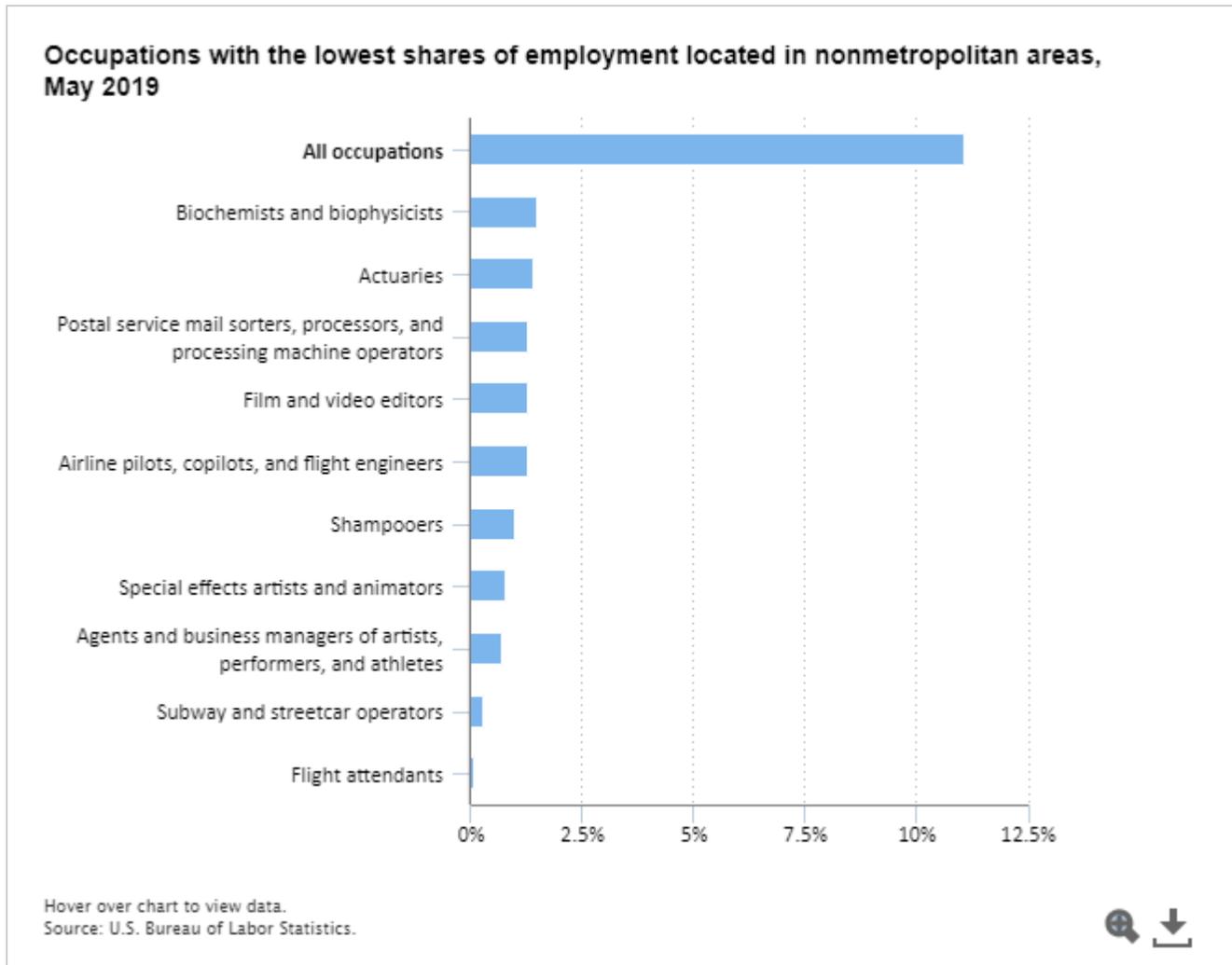

Occupational groups as a percentage of total employment, metropolitan and nonmetropolitan areas, May 2019

Hover over chart to view data.
* indicates estimate not released
Source: U.S. Bureau of Labor Statistics.

Several mining and logging occupations were found mainly in nonmetro areas

Although nonmetro areas made up 11.1 percent of overall employment, several mining and logging occupations were found primarily in these areas. Seventy-two percent of mining roof bolters were employed in nonmetro areas, along with 63.1 percent of continuous mining machine operators and 59.1 percent of underground mining loading and moving machine operators. Nonmetro areas also accounted for most logging workers, all other (68.2 percent); logging equipment operators (67.8 percent); and log graders and scalers (63.9 percent).

Occupations with the highest shares of employment located in nonmetropolitan areas, May 2019

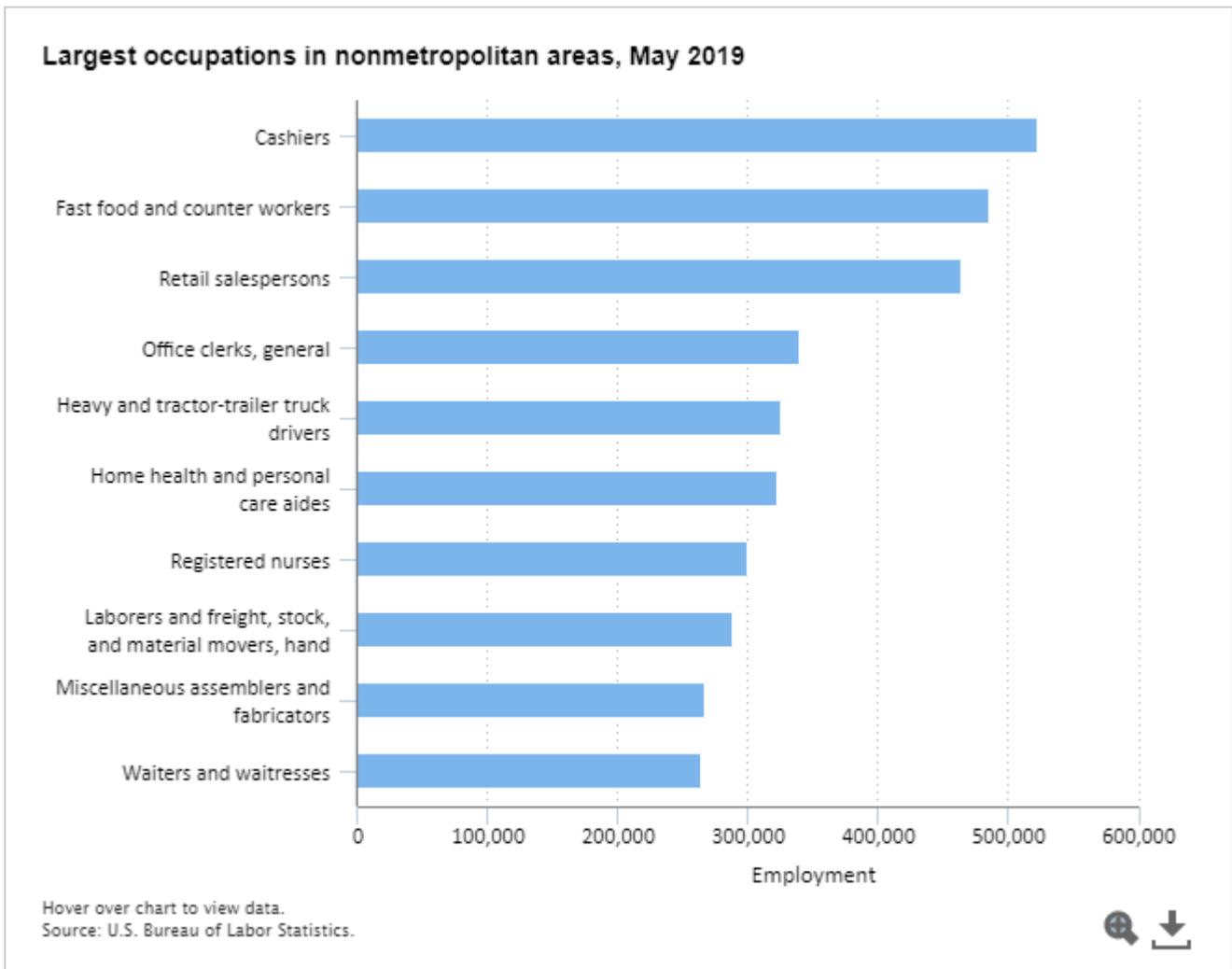Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Several arts and entertainment occupations had low concentrations in nonmetro areas

Nonmetro areas accounted for 1.5 percent of employment or less in several occupations related to arts, design, and entertainment: film and video editors, special effects artists and animators, and agents and business managers of artists, performers, and athletes. Subway and streetcar operators, shampooers, and flight attendants were also among the occupations least concentrated in nonmetro areas.
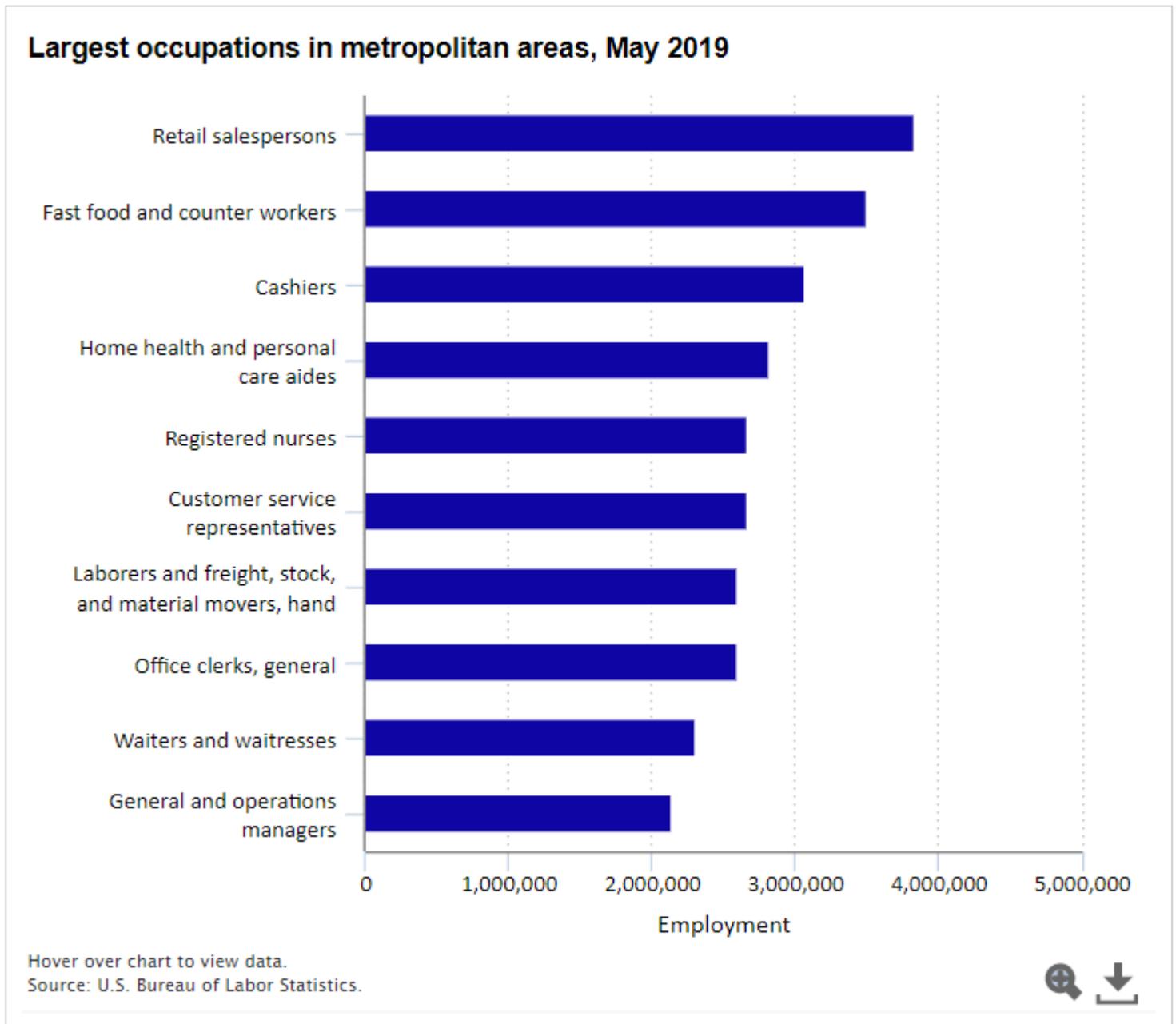
Occupations with the lowest shares of employment located in nonmetropolitan areas, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Heavy and tractor-trailer truck drivers was one of the largest occupations in nonmetro areas

Eight of the ten largest occupations were the same in both metro and nonmetro areas. Retail salespersons, fast food and counter workers, and cashiers were the three largest occupations in both types of areas. However, there were also some differences among the largest occupations. Heavy and tractor-trailer truck drivers (325,080) and miscellaneous assemblers and fabricators (267,190) were among the 10 largest occupations in nonmetro areas, but not in metro areas.
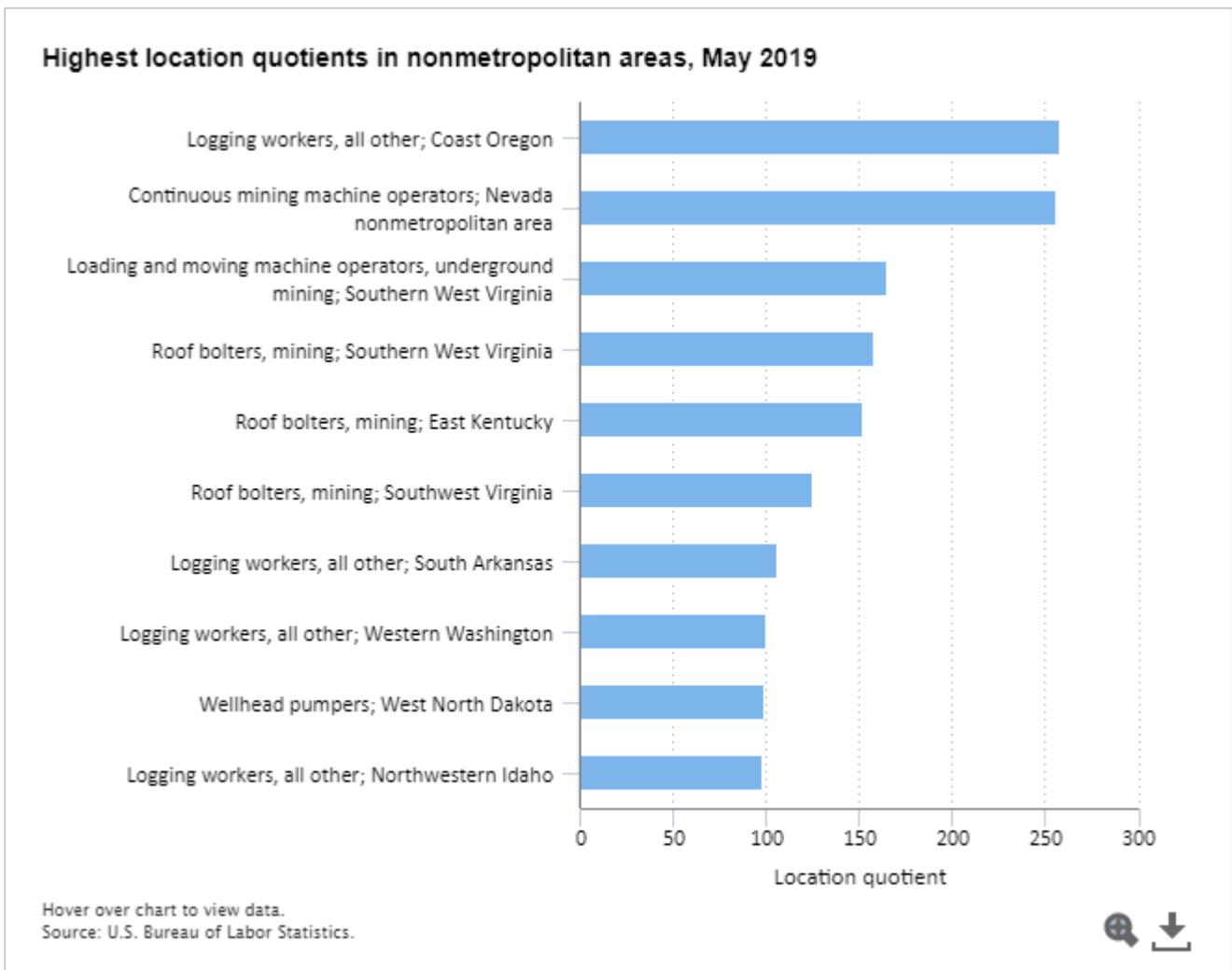
Largest occupations in nonmetropolitan areas, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

General and operations managers and customer services reps among largest occupations in metro areas

Home health and personal care aides, registered nurses, and general office clerks were also among the largest occupations in both metro and nonmetro areas. General and operations managers (2.1 million) and customer service representatives (2.7 million) were among the 10 largest occupations in metro areas, but not in nonmetro areas.

Largest occupations in metropolitan areas, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

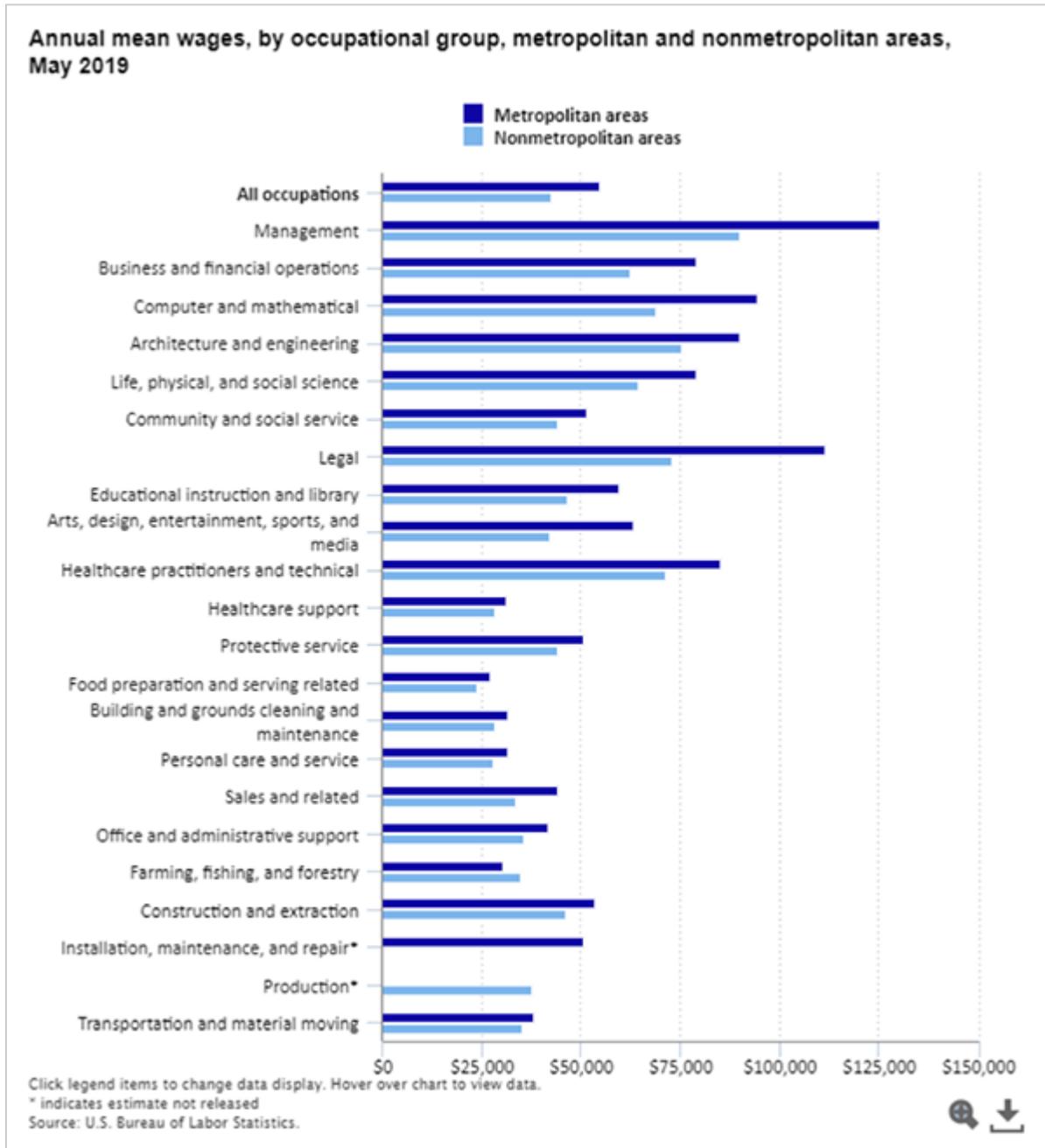# Mining roof bolters had high concentrations in several nonmetro areas

Some nonmetro areas had extremely high concentrations of individual occupations. For example, logging workers, all other was nearly 260 times more concentrated in the Coast Oregon nonmetro area than in the country overall. The share of continuous mining machine operators in the Nevada nonmetro area was nearly 256 times the national average. The share of underground mining loading and moving machine operators in the Southern West Virginia nonmetro area was nearly 165 times the national average. Mining roof bolters had very high concentrations in the Southern West Virginia (158.5), East Kentucky (152.0), and Southwest Virginia (125.5) nonmetro areas.

Highest location quotients in nonmetropolitan areas, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

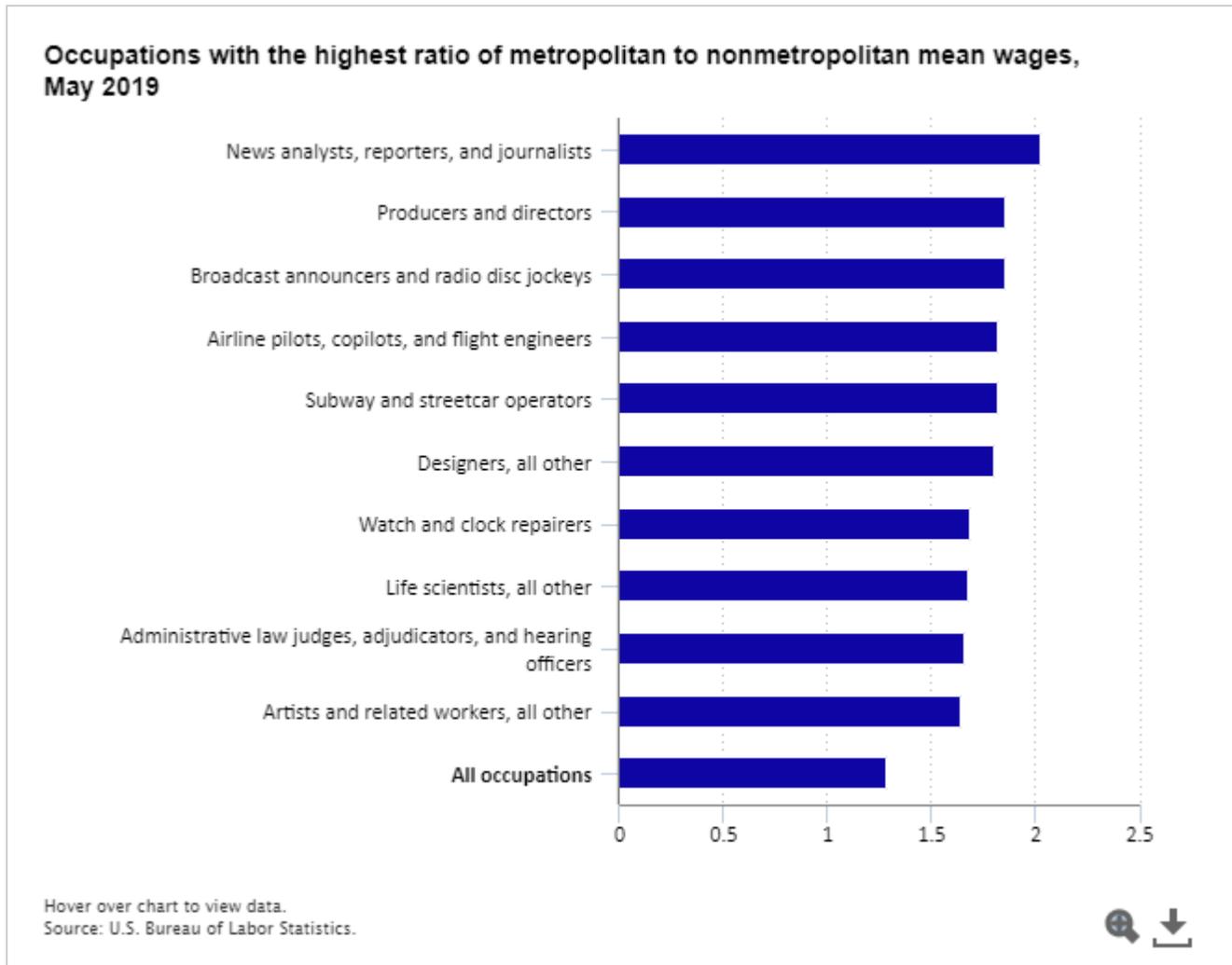## Metro areas had higher wages for most occupational groups

Metro areas had an average annual wage of $54,820 in May 2019, 29.0 percent higher than the average wage of $42,490 in nonmetro areas. Metro areas also had higher wages for 19 of the 20 occupational groups for which wage estimates were available for both area types. The exception was farming, fishing, and forestry occupations. (Note that the survey excludes most of the agricultural sector, except for logging and support activities for crop and animal production.)

Some occupational groups had large wage differences between metro and nonmetro areas. Legal occupations paid an average of 52.6 percent more in metro areas. Average wages in metro areas were 51.1 percent higher for arts, design, entertainment, sports, and media occupations and 39.6 percent higher for management occupations.

Annual mean wages, by occupational group, metropolitan and nonmetropolitan areas, May 2019

Legend:
- Metropolitan areas
- Nonmetropolitan areas

Click legend items to change data display. Hover over chart to view data.
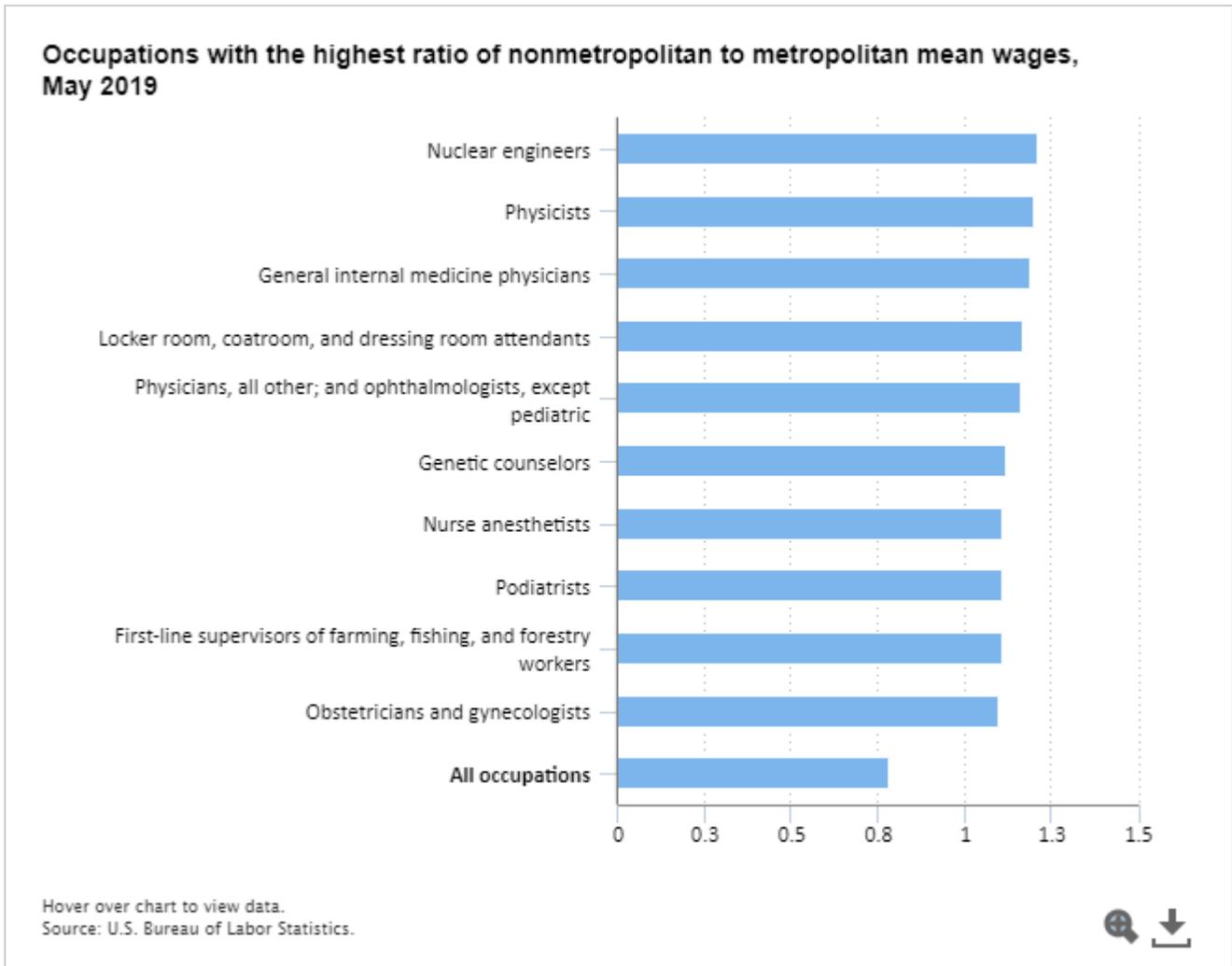* indicates estimate not released
Source: U.S. Bureau of Labor Statistics.

News analysts, reporters, and journalists earned twice as much in metro areas

Although the overall mean wage was 29 percent higher in metro areas, some occupations had much higher wage premiums. These included several arts and media occupations, such as news analysts, reporters, and journalists, for which wages were twice as high in metro areas compared with nonmetro areas. Wages for both producers and directors and broadcast announcers and radio disc jockeys were 86 percent higher in metro areas.

Occupations with the highest ratio of metropolitan to nonmetropolitan mean wages, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Nuclear engineers and physicists earned more in nonmetro areas

Other occupations had higher wages in nonmetro areas, including nuclear engineers (21 percent higher) and physicists (20 percent higher). Nurse anesthetists and several types of physicians also had higher wages in nonmetro areas. Because workers who are training for an occupation are classified in that occupation, one possible explanation for this pattern is that teaching hospitals are more likely to be located in metro areas.

Occupations with the highest ratio of nonmetropolitan to metropolitan mean wages, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Employment share of STEM occupations more than double in metro areas compared with nonmetro

Science, technology, engineering, and mathematics (STEM) occupations made up 6.7 percent of employment in all metro areas combined, more than double the nonmetro STEM employment share of 3.2 percent. In the United States overall, STEM occupations represented 6.4 percent of employment.

STEM employment as a percentage of total employment, metropolitan areas, nonmetropolitan areas, and United States, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

U.S. BUREAU OF LABOR STATISTICS

Spotlight on Statistics
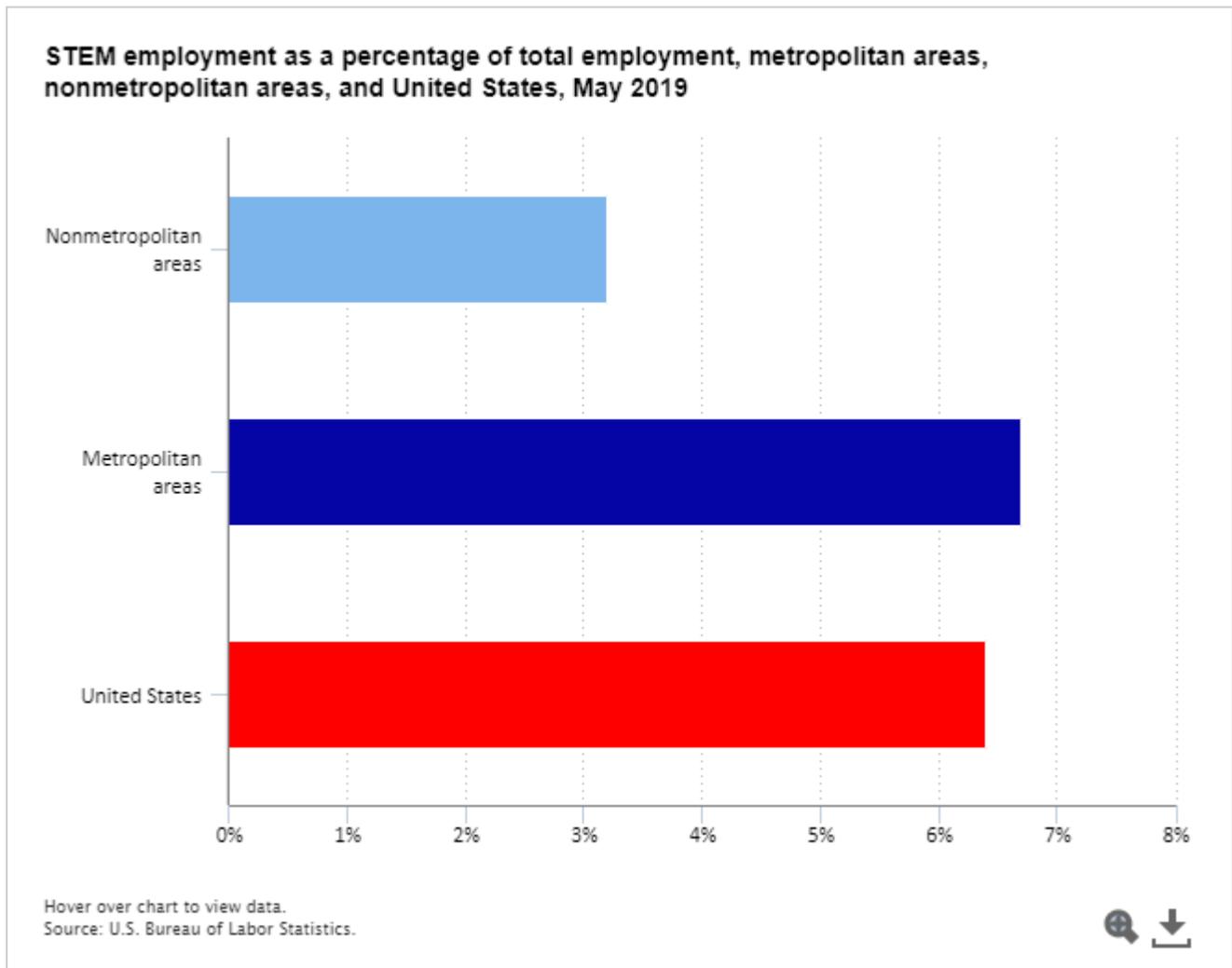
STEM occupations had higher wages than non-STEM occupations in both area types

STEM occupations had a mean wage of $96,580 in metro areas and $73,820 in nonmetro areas. The average wage for non-STEM occupations was $51,760 in metro areas and $41,430 in nonmetro areas.

Annual mean wages for STEM and Non-STEM occupations, metropolitan and nonmetropolitan areas, May 2019

Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.
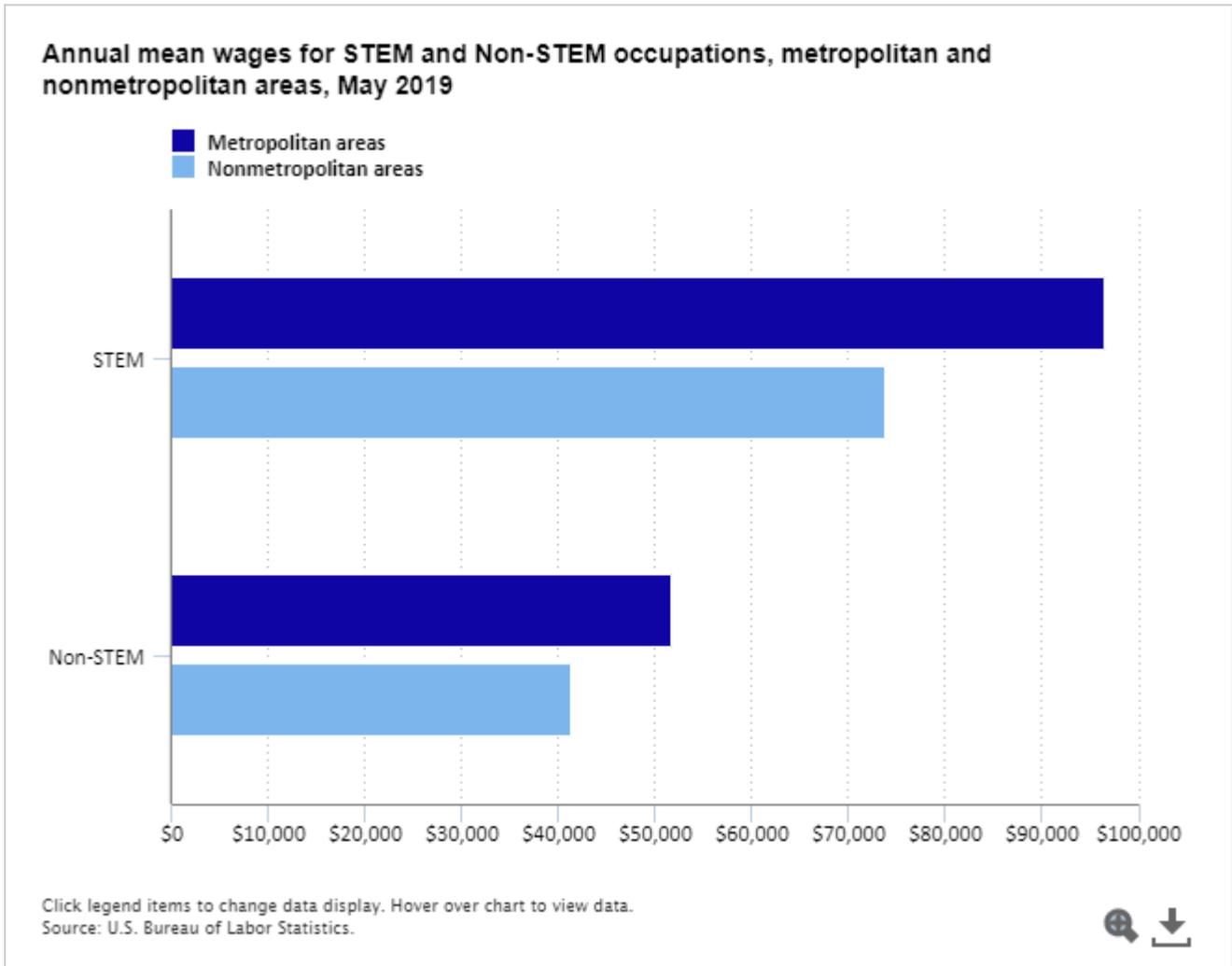
Two areas in Montana were among the nonmetro areas with high STEM concentrations

Even though the overall share of STEM employment in nonmetro areas was a little over 3 percent, several nonmetro areas had higher shares of STEM employment. For example, STEM jobs made up 14.2 percent of employment in the Northeast Virginia nonmetro area and 10.5 percent of employment in the Northern New Mexico nonmetro area.

Nonmetropolitan areas with the highest employment shares of STEM occupations, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.
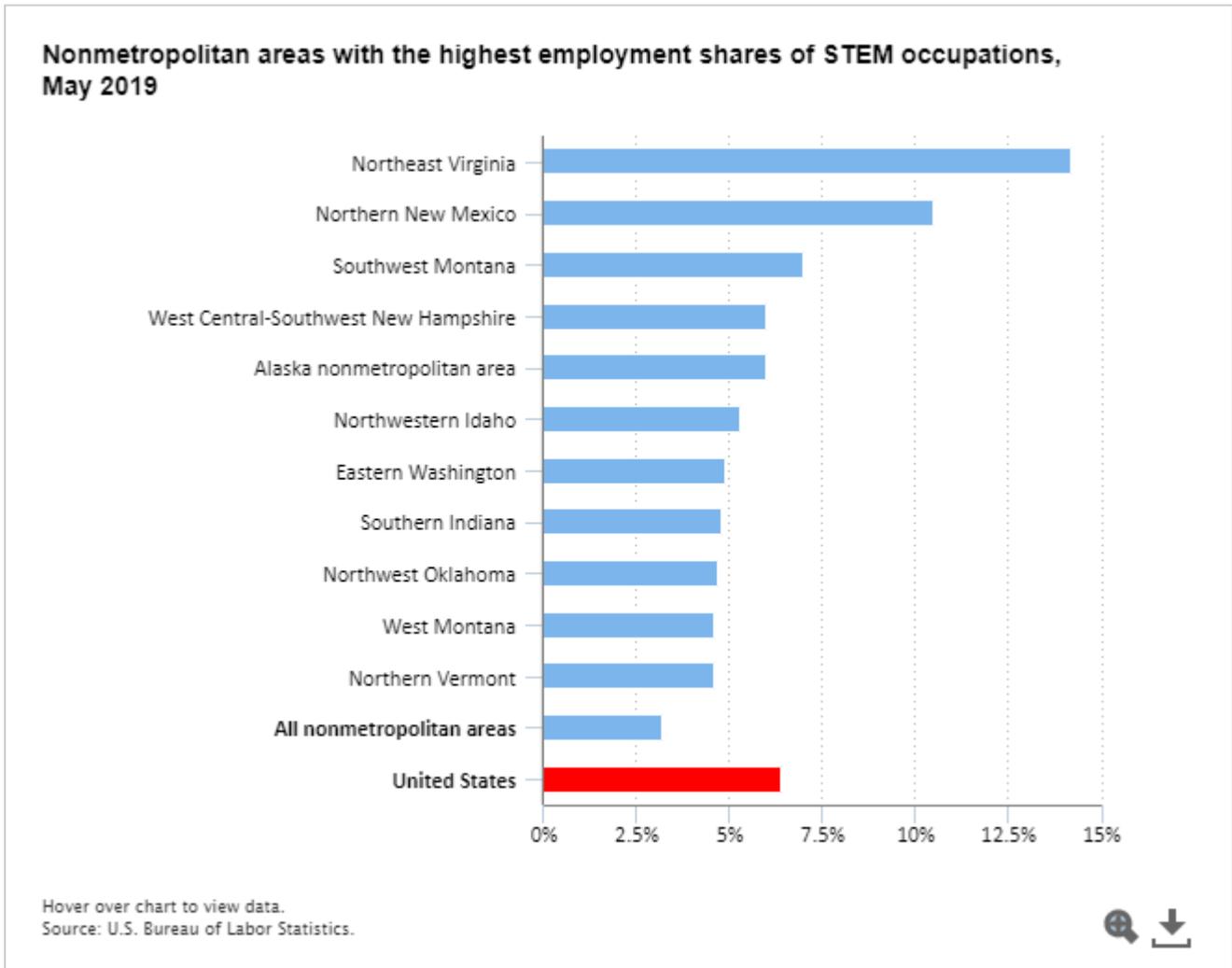
California-Lexington Park, Maryland, had highest share of STEM occupations among metro areas

In contrast, the metro areas with the highest employment shares of STEM occupations were California-Lexington Park, Maryland (28.1 percent), and San Jose-Sunnyvale-Santa Clara, California (21.0 percent). Several other metro areas had STEM employment shares of 12.0 percent or higher, including Washington-Arlington-Alexandria, DC-VA-MD-WV; Durham-Chapel Hill, North Carolina; and Boulder, Colorado.

Metropolitan areas with the highest employment shares of STEM occupations, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.
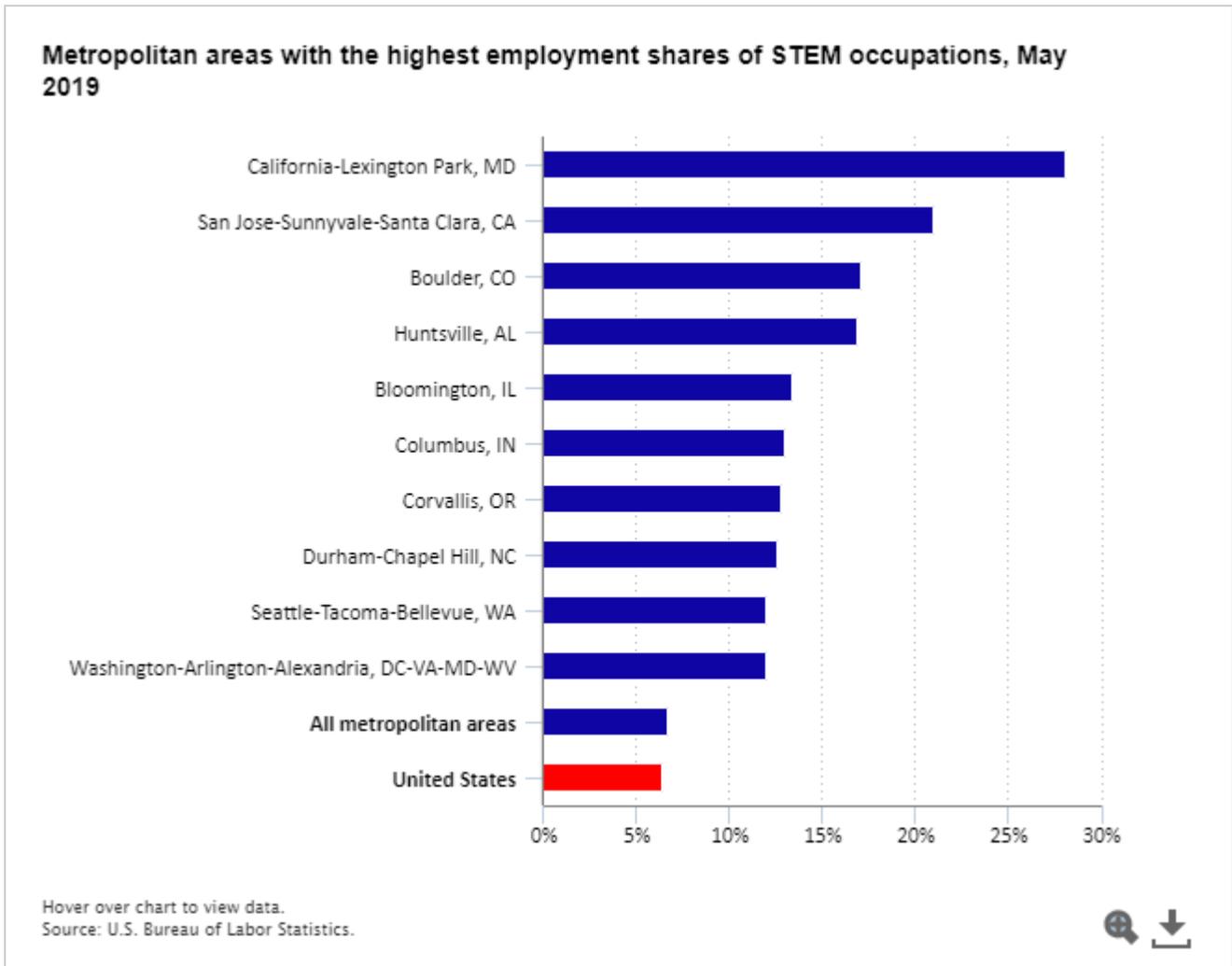
Computer occupations made up nearly half of STEM employment in metro areas
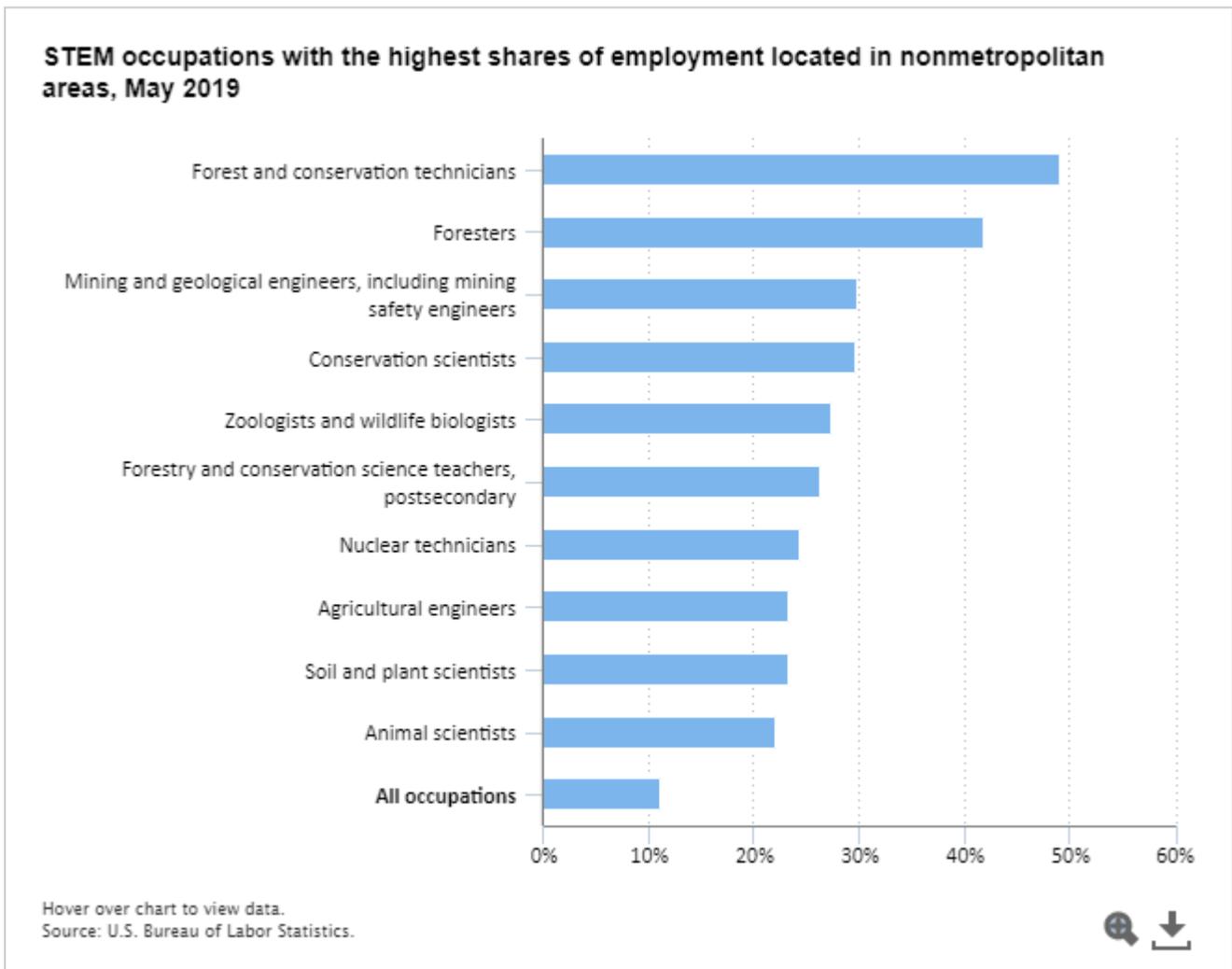
Metro and nonmetro areas had a different mix of STEM jobs. Computer occupations made up 47.6 percent of STEM employment in metro areas but only 28.4 percent of STEM employment in nonmetro areas. Engineers, drafters, engineering technicians, and mapping technicians combined made up 38.0 percent of STEM employment in nonmetro areas, compared with 25.2 percent of STEM employment in metro areas. Life and physical scientists and science technicians made up 17.2 percent of nonmetro STEM employment and 9.2 percent of metro STEM employment.

STEM employment by type of STEM occupation, metropolitan and nonmetropolitan areas, May 2019

Legend:
- Computer occupations
- Engineers
- STEM-related management
- Drafters, engineering technicians, and mapping technicians
- STEM-related sales
- Life and physical science technicians
- Life scientists
- Physical scientists
- STEM-related postsecondary teachers
- Mathematical science occupations
- Architects, surveyors, and cartographers

Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Nearly half of forest and conservation technicians employed in nonmetro areas
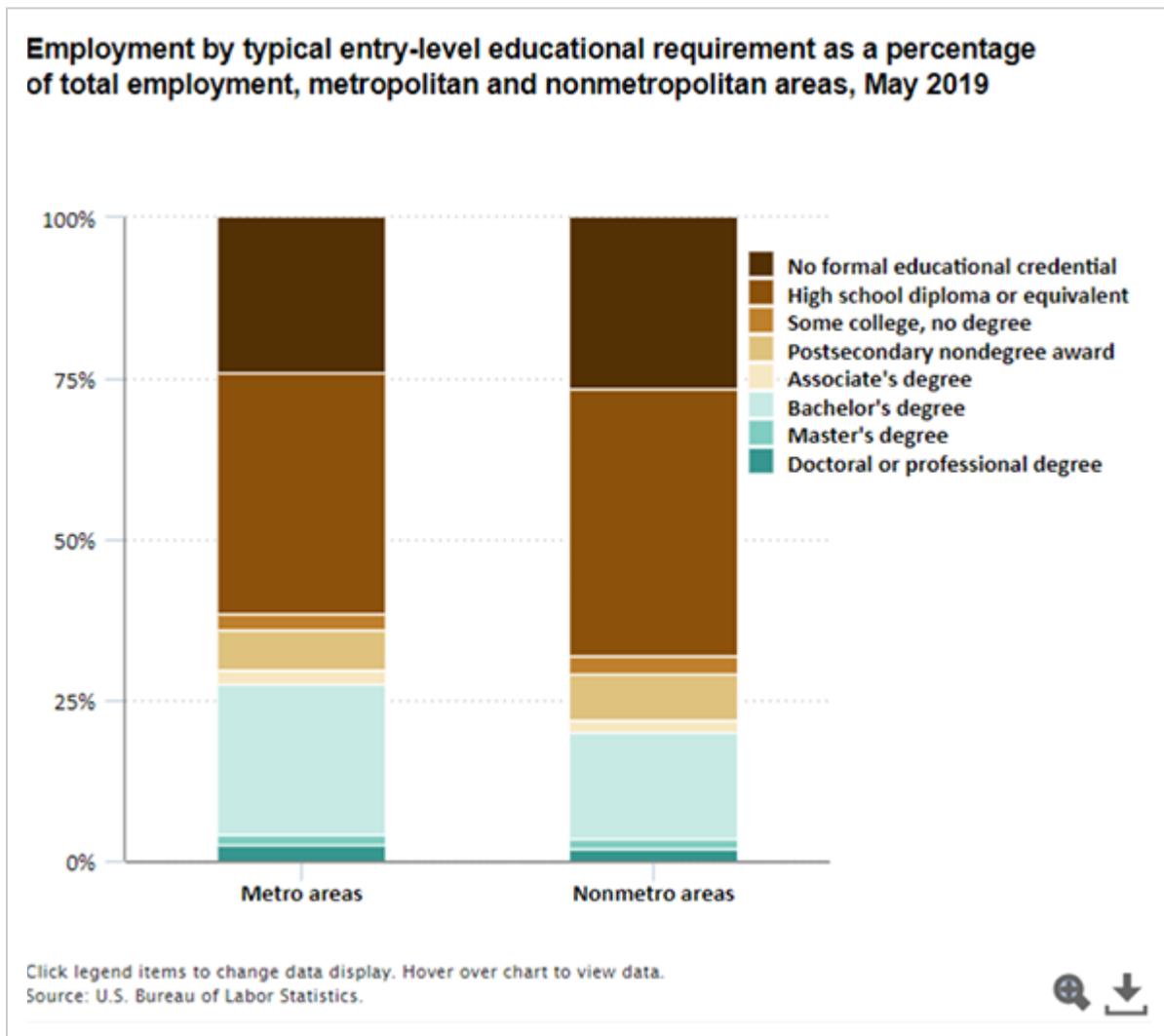
Several STEM occupations that were most concentrated in nonmetro areas were related to agriculture or natural resource conservation. Forty-nine percent of forest and conservation technicians and 41.9 percent of foresters were employed in nonmetro areas, compared with 11.1 percent of employment in all occupations combined. Nonmetro areas also had above-average shares of mining and geological engineers (29.9 percent), conservation scientists (29.7 percent), zoologists and wildlife biologists (27.4 percent), and postsecondary teachers of forestry and conservation science (26.3 percent).

STEM occupations with the highest shares of employment located in nonmetropolitan areas, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Metro areas had higher shares of occupations typically requiring postsecondary education

Occupations that typically require postsecondary education for entry made up 38.4 percent of metro employment, compared with 31.9 percent of nonmetro employment. This difference was due mainly to a higher share in metro areas of occupations that typically require a bachelor's degree for entry. Occupations that typically require a bachelor's degree for entry made up 23.2 percent of metro employment but 16.5 percent of nonmetro employment.
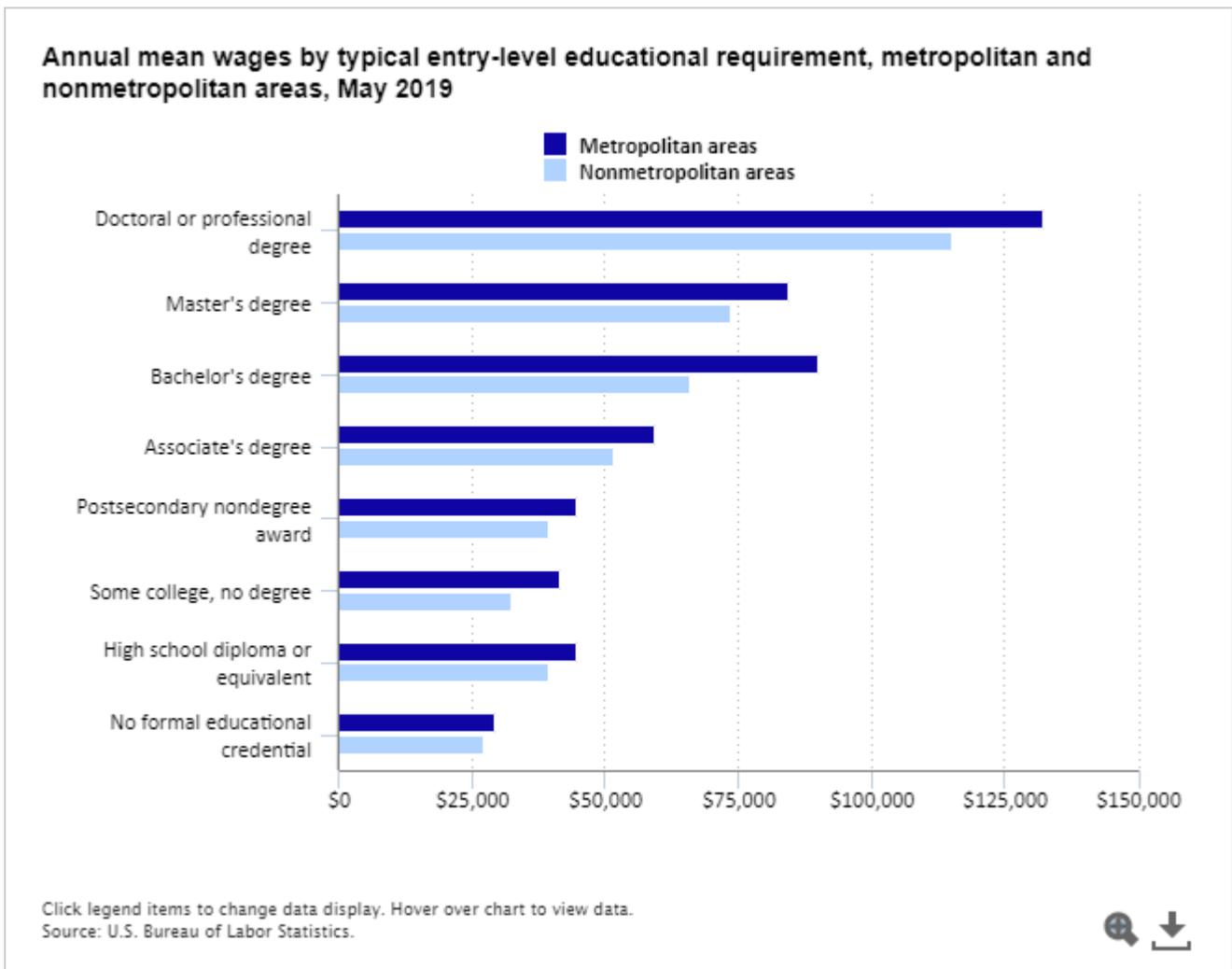
Occupations that typically require a high school diploma for entry made up 41.6 percent of nonmetro employment, compared with 37.6 percent of metro employment. This education category includes many production and construction and extraction occupations. Occupations that typically require no formal educational credential for entry made up 26.5 percent of nonmetro employment and 24.0 percent of metro employment.

Employment by typical entry-level educational requirement as a percentage of total employment, metropolitan and nonmetropolitan areas, May 2019

Legend:
- No formal educational credential
- High school diploma or equivalent
- Some college, no degree
- Postsecondary nondegree award
- Associate's degree
- Bachelor's degree
- Master's degree
- Doctoral or professional degree

Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Occupations requiring a bachelor's degree paid an average of $24,060 more in metro areas

Metro areas had on average higher wages than nonmetro areas, regardless of typical entry-level education requirements. For example, occupations typically requiring a bachelor's degree for entry had an annual mean wage of $90,160 in metro areas and $66,100 in nonmetro areas, a difference of $24,060 or 36.4 percent. Average wages for the doctoral and professional degree, master's degree, and associate's degree categories were each about 15 percent higher in metro areas.
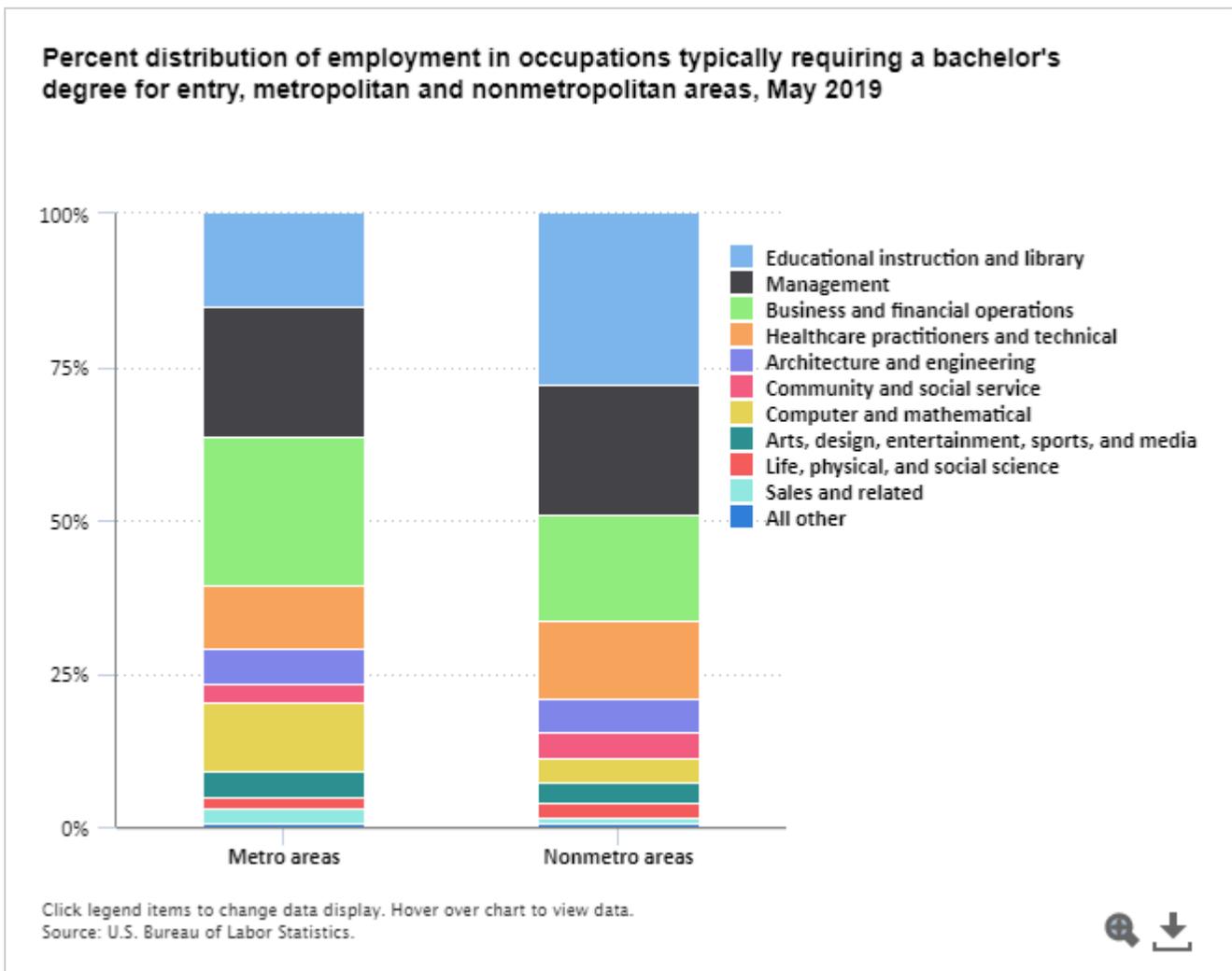
In some education categories, the difference in wages was small. For example, the average wage for occupations typically requiring no formal education credential for entry was slightly higher in metro areas ($29,470) than in nonmetro areas ($27,120).

Annual mean wages by typical entry-level educational requirement, metropolitan and nonmetropolitan areas, May 2019

Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Nonmetro areas had a different mix of occupations typically requiring a bachelor's degree
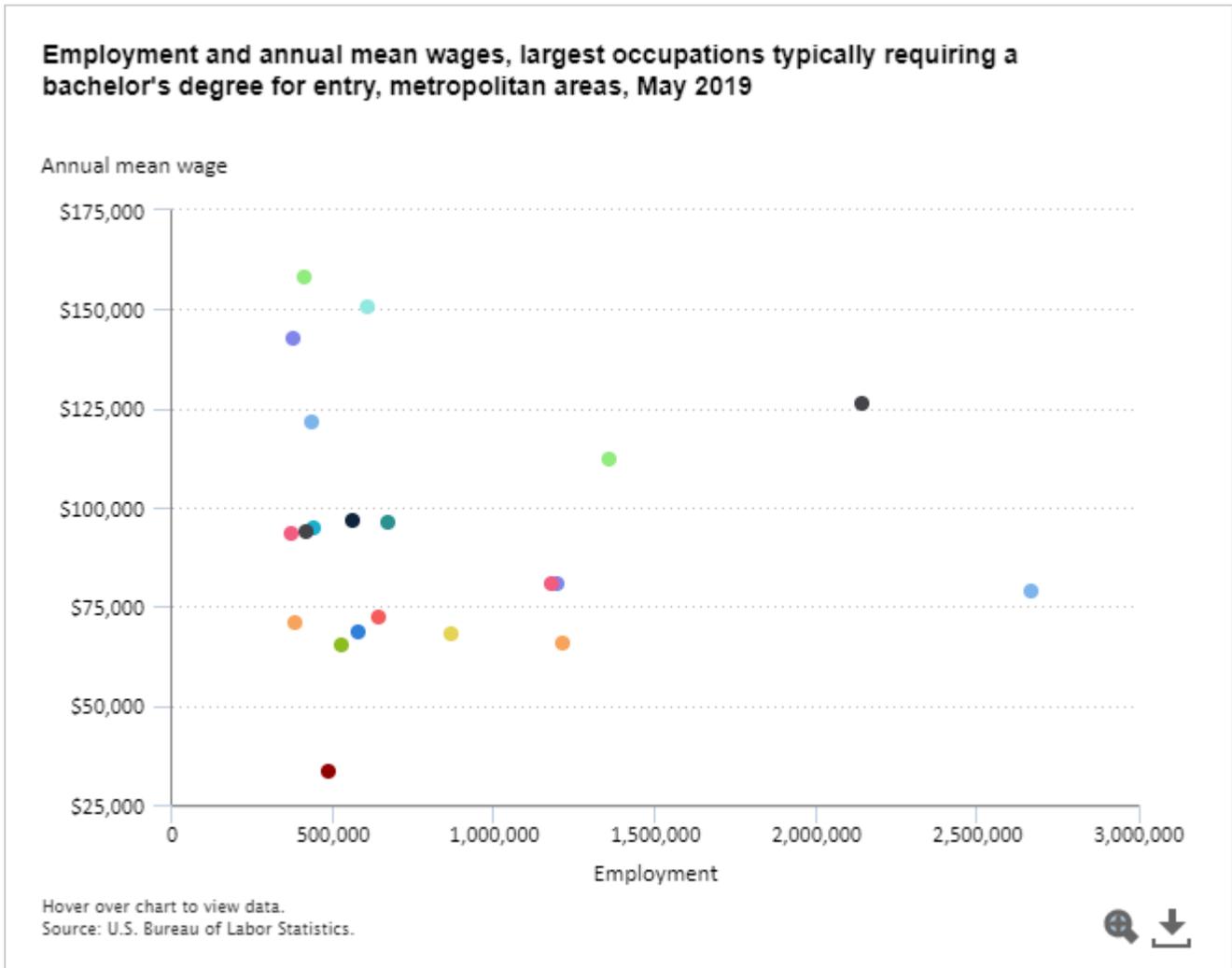
In addition to having a lower share of occupations typically requiring a bachelor's degree for entry, nonmetro areas had a different mix of occupations in this education category. Among occupations requiring a bachelor's degree for entry, educational instruction and library occupations made up 27.9 percent of nonmetro employment, compared with 15.0 percent of metro employment. Because these occupations tend to be lower paying than the computer, management, and engineering occupations in this education category, this different occupational mix helps explain the much lower nonmetro wage for occupations typically requiring a bachelor's degree for entry.

Business and financial operations occupations made up 24.3 percent of metro employment in this education category, versus 17.3 percent of nonmetro employment. Computer and mathematical occupations made up 11.1 percent of employment in this education category in metro areas and 3.7 percent in nonmetro areas.
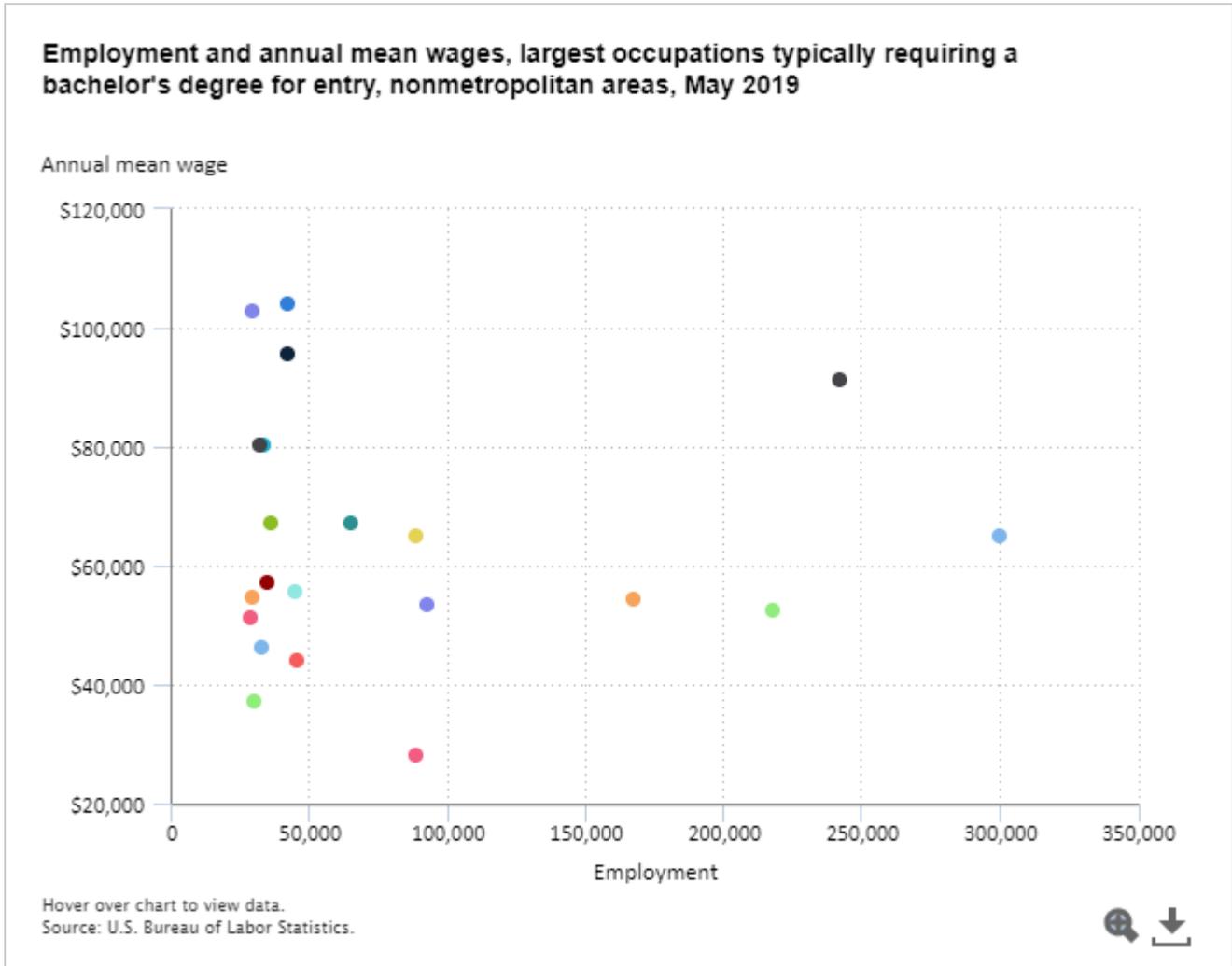

Percent distribution of employment in occupations typically requiring a bachelor's degree for entry, metropolitan and nonmetropolitan areas, May 2019

Legend:
- Educational instruction and library
- Management
- Business and financial operations
- Healthcare practitioners and technical
- Architecture and engineering
- Community and social service
- Computer and mathematical
- Arts, design, entertainment, sports, and media
- Life, physical, and social science
- Sales and related
- All other

Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Registered nurses were the largest occupation typically requiring a bachelor's degree in metro areas

With metro employment of nearly 2.7 million, registered nurses were the largest occupation typically requiring a bachelor's degree for entry in metro areas. The average wage for this occupation was $78,890 in metro areas. Among the occupations shown, computer and information systems managers ($157,930) earned the most in metro areas.

Employment and annual mean wages, largest occupations typically requiring a bachelor's degree for entry, metropolitan areas, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Financial managers highest paying among largest bachelor's degree occupations in nonmetro areas

Among the largest occupations typically requiring a bachelor's degree for entry, in nonmetro areas, financial managers ($103,990) had the highest wage. Registered nurses were also the largest occupation typically requiring a bachelor's degree for entry in nonmetro areas, with nonmetro employment of nearly 300,000. The average wage for this occupation was $64,850 in nonmetro areas.

Employment and annual mean wages, largest occupations typically requiring a bachelor's degree for entry, nonmetropolitan areas, May 2019

Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

For more information

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This Spotlight on Statistics uses May 2019 estimates from the Occupational Employment Statistics (OES) program. OES estimates are published annually and measure occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The survey does not include the self-employed and owners, partners, and proprietors of unincorporated businesses. More information about the survey is available in the frequently asked questions, technical notes, and Handbook of Methods chapter.

With the release of the May 2019 estimates, the OES program began implementing the revised 2018 Standard Occupational Classification (SOC) system. Because each set of estimates is produced by combining three years of survey data, the May 2019 estimates are based on a combination of survey data collected using the 2010 SOC and the revised 2018 SOC. In order to combine survey data collected under both versions of the system, the May 2019 estimates use a hybrid of the 2010 and 2018 SOCs that includes some OES-specific combinations of occupations that are not found in either the 2010 or 2018 SOC structure. For more information, see the 2018 SOC implementation page and frequently asked question F.10.

This Spotlight uses an unpublished special tabulation of OES data consisting of all metro areas in the 50 states and the District of Columbia combined, and all nonmetro areas combined. The sum of metro and nonmetro employment for a given occupation may be less than total national employment for that occupation because the national totals may include employment for which the exact location within a state could not be determined. A small number of occupations for which the exact location was known for less than 85 percent of employment were excluded from the analysis. OES data for individual metro and nonmetro areas are available from the main OES data page.

The location quotient is the ratio of an occupation's employment concentration in a given area to that occupation's employment concentration in the United States as a whole. For example, an occupation that makes up 10 percent of employment in a specific metro area compared with 2 percent of U.S. employment would have a location quotient of 5 for that area.

This Spotlight uses one of many possible definitions of STEM occupations. "STEM" is defined in this Spotlight to consist of 98 occupations, including computer and mathematical, architecture and engineering, and life and physical science occupations; managerial and postsecondary teaching occupations related to these functional areas; and sales occupations requiring scientific or technical knowledge at the postsecondary level. A downloadable XLSX spreadsheet with May 2019 STEM data by metro and nonmetro area and a list of occupations included in the STEM definition is available from the additional OES data sets page. The Standard Occupational Classification Policy Committee has provided guidance on alternative ways of defining STEM under the 2018 SOC.

Data by typical entry-level educational requirement are based on education and training categories assigned to each occupation by the BLS Employment Projections program. A downloadable XLSX spreadsheet with May 2019 OES data by typical entry-level educational requirement and area, including a list of the typical entry-level educational requirements assigned to each occupation, is available from the additional OES data sets page.