



Office of Research & Analysis
National Endowment for the Arts
April 2016

Arts Data Profile: State-Level Estimates of Arts and Cultural Employment: 2001-2014

Research Brief #1: State Highlights of Arts and Cultural Employment and Compensation, 2014

The narrative below summarizes results from the first release of state-level employment and compensation estimates from the Arts and Cultural Production Satellite Account (ACPSA), produced jointly by the U.S. Bureau of Economic Analysis and the National Endowment for the Arts.¹

The analysis shows that states such as New York, Wyoming, and Utah have high concentrations of arts and cultural workers. **Wyoming's** high rank in cultural employment is due in part to its sizable arts-related government industry, which includes the state's celebrated nature parks.

New York and Utah, the ACPSA shows, exhibit large concentrations of workers in a number of arts and cultural industries, including the manufacture of jewelry and silverware. New York, as one might expect, also has large concentrations of workers in performing arts companies, museums, sound recording, and architectural and design firms.

Further, when we look at specific arts and cultural industries, **Nevada and Tennessee** rank highly in employment and compensation at performing arts companies; and Hawaii and Delaware rank highest in employment concentration in private, non-government museums.

Within another arts-related industry—that of industrial design services— **Michigan and Ohio** have the highest share of workers.

Not surprisingly, **California** ranks highest in motion picture and video industry employment. Less known, however, is that **Louisiana's** employment in the motion picture industry is well above the overall national concentration.

Software publishing establishments in the Greater Seattle area contribute to **Washington's** top rank in employment and compensation in ACPSA publishing, which includes arts-related gaming software.

Regarding its total workforce, Tennessee has the greatest concentration of workers in the sound recording industry, as well as in the manufacture of musical instruments, though **Indiana** also employs a large share of workers who manufacture musical instruments.

Understanding ACPSA Industries and Location Quotients

Analysis of state-level ACPSA estimates uses (1) ACPSA industries; and (2) location quotients.

The ACPSA features 35 distinct industries that produce arts and cultural goods and services.² As a satellite account, the ACPSA identifies the share of an industry's total employment that is associated with arts production. That share ranges from nearly 100 percent of employment in industries such as performing arts companies and motion picture production, to just 2 percent of employment in the computer systems design industry. (The ACPSA includes computer systems designs that support motion picture and sound recording.)

Consider, for example, Kentucky's construction industry. In 2014, it employed 5,910 workers as a whole. Kentucky's ACPSA construction—which refers to the construction of new cultural structures such as museums and libraries—was 1,034 workers, or about 17 percent of the state's total construction employment.

In addition, state workforces vary greatly in size. The ACPSA shows, for example, that 40 percent of all U.S. workers employed to produce arts and cultural goods and services are located in just five states: California; New York; Texas; Florida; and Illinois. On the other hand, Delaware, Vermont, Wyoming, Alaska, and North Dakota, combined, account for 1 percent of U.S. arts and cultural workers.

Therefore, a state-level analysis of arts and cultural employment requires a method of standardization—the location quotient (LQ). Similar to a per capita adjustment, the LQ measures the number of workers in an industry as a share of the state's wage and salary workforce, relative to the U.S. concentration.

For example, the 2014 employment LQ for Texas' ACPSA interior design industry was 1.43, meaning that employment in that industry, relative to total wage and salary employment in Texas, was 43 percent greater than the overall national share.

The employment LQ for Texas' architectural services industry was 0.97, meaning that it was similar to (only slightly lower) than the national index of 1.0.

Total Arts and Cultural Employment

Top-ranking states in employment: District of Columbia; New York; Wyoming; Washington; California; and Utah.

Top-ranking states in compensation: District of Columbia; Washington; California; New York; and Wyoming.

In addition to the District of Columbia, 10 states have location quotients of 1.17 or greater. In New York, for instance, arts and cultural employment, as a share of the state's total employment, is 47 percent greater than the national concentration. And location quotients for both Wyoming and Washington are roughly 1.3.

New York has large concentrations of workers in "other design services," which includes fashion and jewelry design, and in jewelry manufacturing. Workers in sound recording and advertising also contribute greatly to New York's overall high arts and cultural employment location quotient.

Wyoming has a concentration of workers in construction (i.e., construction of new cultural structures), and particularly in government. As discussed below, U.S. governments (federal, state, and local) produce a number of arts and cultural goods and services, including nature parks such as Yellowstone.

Contributing to California's arts and cultural employment LQ of 1.17 are motion picture and video production and "other information services," an industry that comprises non-government libraries, photo archives, news syndicates, and Internet publishing and broadcasting.³

The ACPSA employment LQ is also 1.17 in Utah, where there are employment concentrations in jewelry and silverware manufacturing, other design services (including jewelry design), theatrical ticket services, and presenters of performing arts events.

The District of Columbia, Washington, California, New York, and Wyoming each have ACPSA compensation LQs of at least 1.2. Total ACPSA compensation in Utah is 1.02, or close to the national index.

The Special Case of the District of Columbia

For statistical purposes, the District of Columbia is treated as a state within the ACPSA. However, because the District is a city, and because the arts tend to concentrate in urban areas, arts and cultural employment concentration in D.C. is well above national concentrations in many of the industries captured by the ACPSA.

In the District's architectural services industry, for example, arts and cultural employment is 4.6 times greater than the national concentration, and the LQ is nearly as high in the advertising industry—4.0.

The District of Columbia also ranks the highest in concentration of workers employed by performing arts presenters—it was more than 3 times greater than the national concentration in 2014.

Top states in concentration of arts and cultural employment: 2014

Location quotient (indexed to the U.S.)

U.S. = 1.0



Note: Excludes the LQ of 2.51 for Washington, D.C.

Data source: Arts and Cultural Production Satellite Account (ACPSA), U.S. Bureau of Economic Analysis.

Performing Arts Companies

Example establishments: Theaters; dance companies; symphony orchestras; jazz bands; circuses.

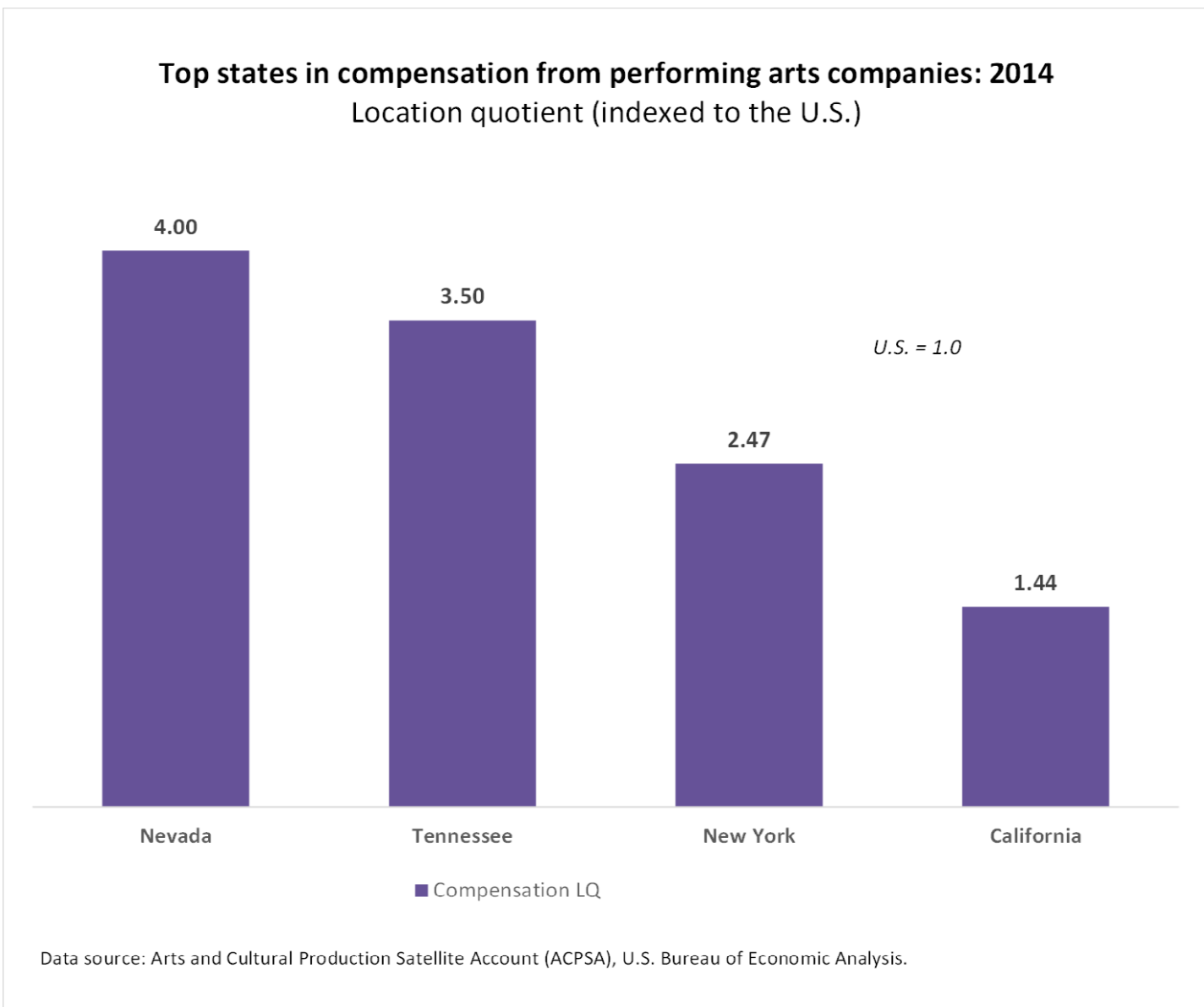
Top-ranking states in employment: New York; Nevada; District of Columbia; Hawaii; Rhode Island.

Top-ranking states in compensation: Nevada; Tennessee; New York; California.

As a share of all workers in the state, New York's employment in performing arts companies is 2.5 times greater than the national concentration. And the performing arts LQ is also high in: Nevada and the District of Columbia (2.4); Hawaii (2.2); and Rhode Island (1.9).

Although New York has the greatest *concentration* of workers in performing arts companies, it does not rank first in compensation. Nevada holds that rank instead, followed closely by Tennessee. As a share of all compensation in Nevada, compensation from performing arts companies is 4 times greater than the national index; in Tennessee, compensation is 3.5 times greater.

Performing arts compensation is nonetheless high in New York—2.5 times greater than the national index. And in California, where employment concentration in performing arts companies is similar to the overall U.S. share, compensation is 44 percent above the national index.



Museums and Similar Institutions

Example establishments: Museums; planetariums; sports halls of fame; historical sites; zoos; botanical gardens; nature sanctuaries.

Top ranking states in employment: Hawaii; Delaware; New York; Massachusetts; Vermont.

Top ranking states in compensation: Hawaii; New York; Delaware; Vermont; Massachusetts.

Within the ACPSA, the “museums and related institutions” industry includes a variety of museums (e.g., art museums, natural history museums), as well as historical sites, botanical gardens, zoos, and nature parks and similar institutions such as waterfalls.

It is important to note, however, that ACPSA museums refer to private, non-government institutions. Within the ACPSA, government museums (and related institutions) are captured by the “government” industry (*see below*).

The inclusion of museums and similar institutions is common to international accounts and frameworks on arts and culture. Such establishments represent a country’s natural heritage.⁴

In the United States, museum (and similar institution) employment is most heavily concentrated in Hawaii. In 2014, the state’s ACPSA museum industry employed more than 2,500 workers. As a share of Hawaii’s workforce, that was four times greater than the national concentration.

Delaware is also home to a large concentration of workers in this industry. In 2014, the share of the state’s workforce employed in the museum (and related institutions) industry was twice the U.S. concentration.

Although ACPSA industries are not detailed enough to determine the types of institutions contributing to Hawaii’s and Delaware’s high rank, data from the Quarterly Census of Employment and Wages suggest that both states tally larger numbers of museums than botanical gardens, nature parks, etc. In 2014, Hawaii had 23 museums and Delaware had 11.⁵

Hawaii was also home to 17 institutions classified as zoos and botanical gardens.

Neither state, however, contained significant numbers of historical sites or nature parks, non-government.

Other states with above-average employment in the museum (and similar institutions) industry include New York, Massachusetts, and Vermont, where employment in nongovernment institutions was 54 percent above the national index.

Each state (Hawaii, Delaware, New York, Massachusetts; and Vermont) was also above the national index in compensation.

Top states in employment in museums and similar institutions: 2014

Location quotient (indexed to the U.S.)



Data source: Arts and Cultural Production Satellite Account (ACPSA), U.S. Bureau of Economic Analysis.

Architectural and Industrial Design Services

Architectural services

Example establishments: Architectural services.

Top-ranking states in employment: District of Columbia; New York; Massachusetts; Hawaii; Montana.

Top-ranking states in compensation: District of Columbia; Hawaii; Massachusetts; New York; Montana.

Industrial Design Services

Example establishments: Industrial design services; automobile design services; furniture design services.

Top-ranking states in employment: Michigan; Ohio; Vermont; Oregon.

Top-ranking states in compensation: Michigan; Ohio; Vermont; Oregon.

The District of Columbia far surpasses all 50 states in concentration of workers employed by architectural services firms. In 2014, D.C.'s arts and cultural employment LQ for this industry was 4.6. Compensation from D.C.'s architectural service firms was also far above the national concentration—3.7 times higher.

Other states with both high employment concentration and compensation from architectural services include: New York; Massachusetts; Hawaii; and Montana.

In Hawaii, for example, the share of workers employed by the state's architectural services firms was 52 percent above the U.S. index, and Hawaii's compensation by that industry was 84 percent above the mean. Montana's arts and cultural employment and compensation LQs for architectural services were 1.36 and 1.47, respectively.

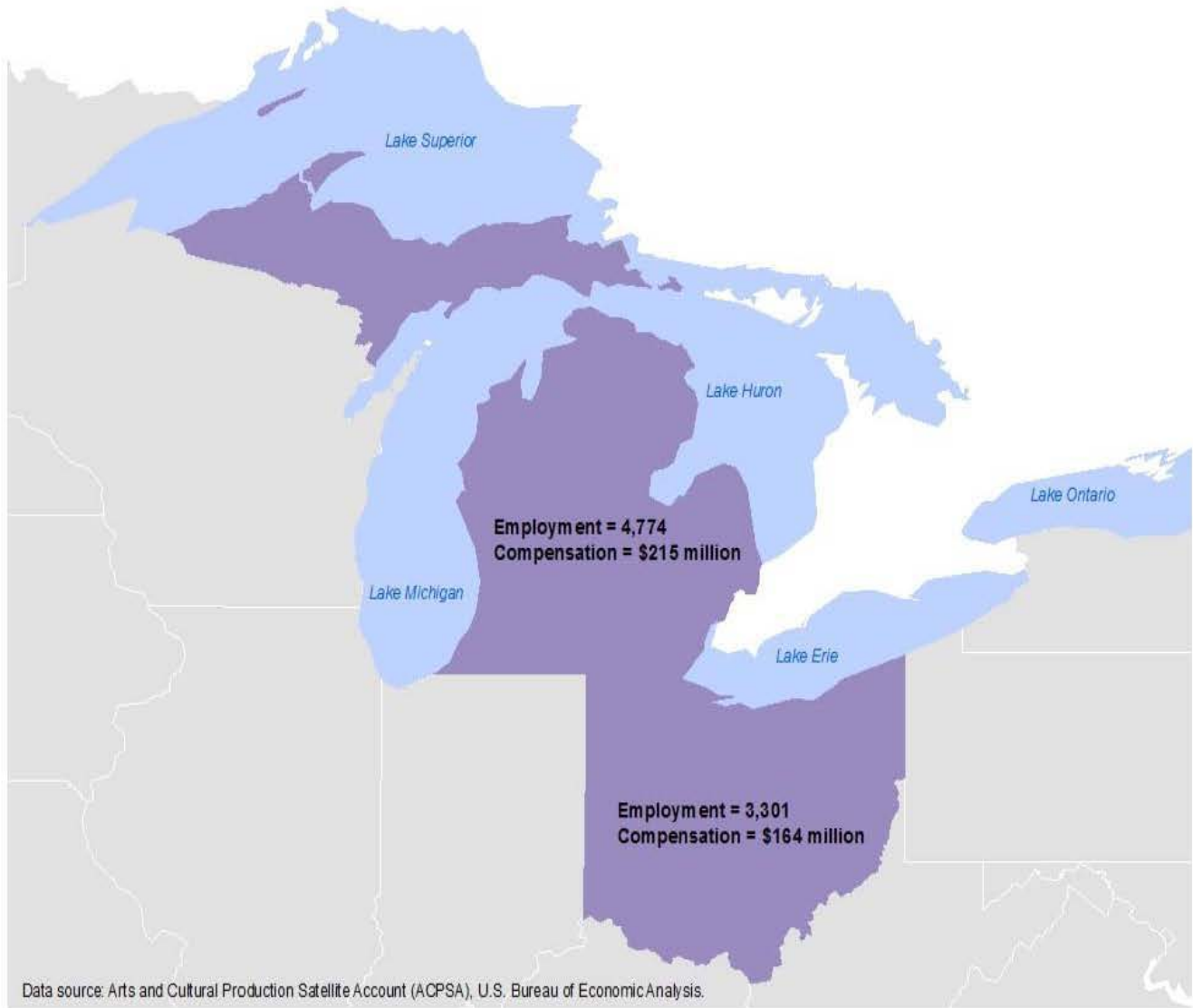
Employment in industrial design services—defined broadly by the North American Industrial Classification System as establishments primarily engaged in creating and developing designs that optimize the use, value, and appearance of products—is heavily concentrated in the industrial Midwestern states of Michigan and Ohio.

In 2014, Michigan's industrial design services firms employed 4,774 workers; Ohio's employed 3,301. As a share of each state's total workforce, arts and cultural employment in industrial design services was, respectively, 5.6 times and 3.1 times greater than the national index.

Compensation paid by industrial design services industries is also highest in Michigan and Ohio—in Michigan it is 6.8 times greater than the national index, and in Ohio it is 4.4 times greater.

In Vermont, industrial design services employed just 132 workers. However, as a share of Vermont's workforce (which totaled fewer than 319,000 in 2014), workers in the state's industrial design services industry measure twice that of the national index. (Industrial design services compensation in Vermont is 2.5 times greater than the national index.) Oregon, too, is above average in both industrial design employment and compensation—with LQs of 1.81 and 1.59, respectively.

Industrial Design Services in Michigan and Ohio: 2014



Publishing

Example establishments: book publishers; periodical publishers; art print publishers; computer software publishers.

Top-ranking states in employment: Washington; Massachusetts; Oregon; Colorado; Utah.

Top-ranking states in compensation: Washington; Massachusetts; Utah; Oregon; Colorado.

Arts and cultural publishing includes books, magazines, art prints, and arts-related software such as computer games. Gaming software produced in the greater Seattle and Boston areas, in particular, helps propel Washington and Massachusetts to the top ranks in arts and cultural publishing employment and compensation.

In 2014, arts and cultural publishing employment in Washington, as a share of the state's workforce, was 3.5 times greater than the national index; compensation was 5.4 times above the U.S. index. In Massachusetts, ACPSA employment and compensation were more than twice that of the U.S. concentrations.

Additionally, arts and cultural publishing employment and compensation ran about 50 to 60 percent above the national index in Oregon, Colorado, and Utah.

Motion Picture and Video Industries

Example establishments: Motion picture production and distribution; motion picture studios; television commercial production; animated cartoon production; cinemas; film festivals; movie theaters.

Top-ranking states in employment: California; New York; Louisiana; New Mexico; Utah

Top-ranking states in compensation: California; New York.

For motion picture industries, California is perhaps the first state that comes to mind, and for good reason. As a share of total state employment, California's motion picture and video industries employment is 3.2 times greater than the national index. And compensation in the state's movie business is nearly four times greater than the U.S. index.

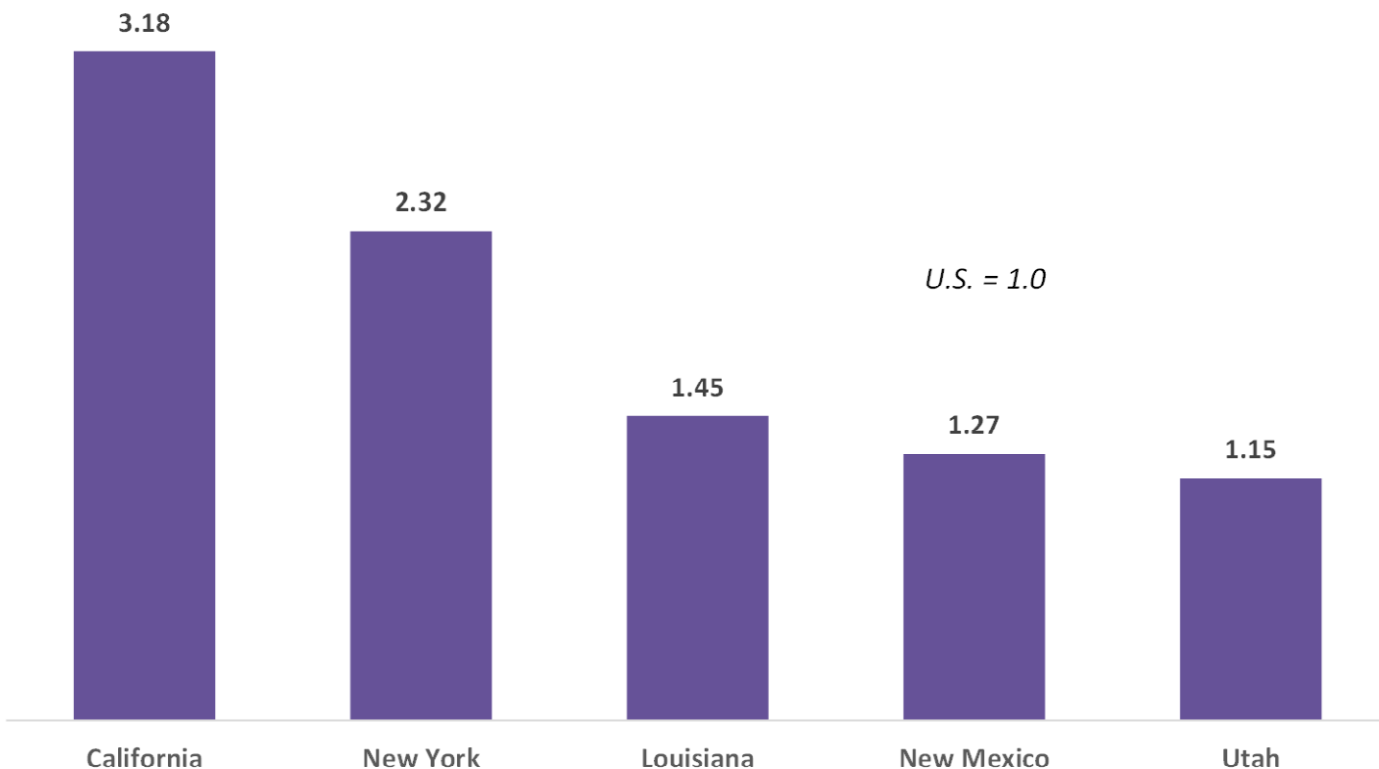
Following California in rank is New York, which, in 2014, had employment and compensation LQs of 2.3 and 2.6, respectively.

In addition to California and New York, there are three other states with above-average employment in the motion picture industry: Louisiana, New Mexico, and Utah.⁶

At 1.45, Louisiana's motion picture employment LQ was the highest of any state, save California and New York, and New Mexico's and Utah's employment LQs were 1.27 and 1.15, respectively.

However, while compensation from motion picture industry employment was very high in California and New York, it was roughly average in Louisiana and New Mexico. In Utah, motion picture compensation was 50 percent below the U.S. index.

States with high employment concentration in motion picture and video industries: 2014
 Location quotient (indexed to the U.S.)



Data source: Arts and Cultural Production Satellite Account (ACPSA), U.S. Bureau of Economic Analysis.

Sound Recording and Musical Instrument Manufacturing

Sound Recording

Example establishments: Recording studios; music publishers; record producers; stock music services.

Top-ranking states in employment: Tennessee; New York; California; New Mexico; Nevada.

Top-ranking states in compensation: Tennessee; New York; California; Nevada; New Mexico.

Musical Instrument Manufacturing

Example establishments: Guitars and parts, electric and non-electric, manufacturing; drums (musical instruments), parts, and accessories manufacturing; mouth pieces for musical instruments manufacturing.

Top-ranking states in employment: Tennessee; California; Indiana; New York.

Top-ranking states in compensation: Tennessee; Indiana; Pennsylvania; California.

Although employment in the New York and California sound recording industries (as a share of total employment in each state) is two-to-three times greater than the national index, neither state comes close to Tennessee's primacy in this industry.

In 2014, Tennessee's arts and cultural sound recording employment, as a share of the state's workforce, was 6.5 times greater than the national concentration. And Tennessee's compensation was even greater—7.8 times greater than the U.S. index.

Sound recording employment is also concentrated in New Mexico and Nevada—LQ's of 1.77 and 1.68, respectively. Of these two states, Nevada's compensation from sound recording is greater—49 percent above the U.S. index versus 29 percent above in New Mexico, in 2014.

Employment concentrations in musical instrument manufacturing tend to parallel that of sound recording.

In 2014, for example, Tennessee's employment in musical instrument manufacturing, relative to all workers in the state, was 4.6 times greater than the national index. California's employment LQ ranked second—2.3 times greater.

In 2014, just 427 workers were employed to manufacture musical instruments in Indiana. However, given the state's workforce size and composition, those 427 workers gave Indiana a high rank in musical instrument manufacturing—an LQ of 2.26, which was similar to California's LQ, and slightly greater than New York's quotient of 2.1.

Compensation was also high in Indiana's musical instrument manufacturing industry. Relative to all compensation earned in the state, remuneration

from musical instrument manufacturing was almost three times greater than the national index.

Pennsylvania, too, had comparatively large concentrations of employment and compensation from musical instrument manufacturing—LQs of 2.0 and 2.7, respectively.

Government

Example industries: Public K-12 and postsecondary schools that provide arts education; state arts agencies; government museums; public nature parks.

Top-ranking states in employment: District of Columbia; Wyoming; Alaska.

Top-ranking states in compensation: District of Columbia; Wyoming; Alaska.

As an industry, government (federal, state, and local) is the single largest employer of workers producing arts and cultural goods and services. In 2014, roughly one in five arts and cultural worker was employed by government.

Governments produce arts education (in public K-12 and postsecondary schools), museums, libraries, and services provided by arts and cultural agencies such as the National Endowment for the Arts and state and local arts agencies.

Governments also provide nature parks, which, like museums, are included in the ACPSA as part of the nation's national heritage.

Because the District of Columbia is home to many government museums and federal cultural agencies, it is perhaps not surprising that arts-related government is concentrated in the District. As a share of all workers in D.C., arts and cultural government employment was 5.5 times the national share in 2014.

Second only to D.C. in arts and cultural government employment is Wyoming. Contributing to the state's high rank is its endowment of national parks, including Yellowstone, Grand Teton, Fossil Butte, and Fort Laramie.

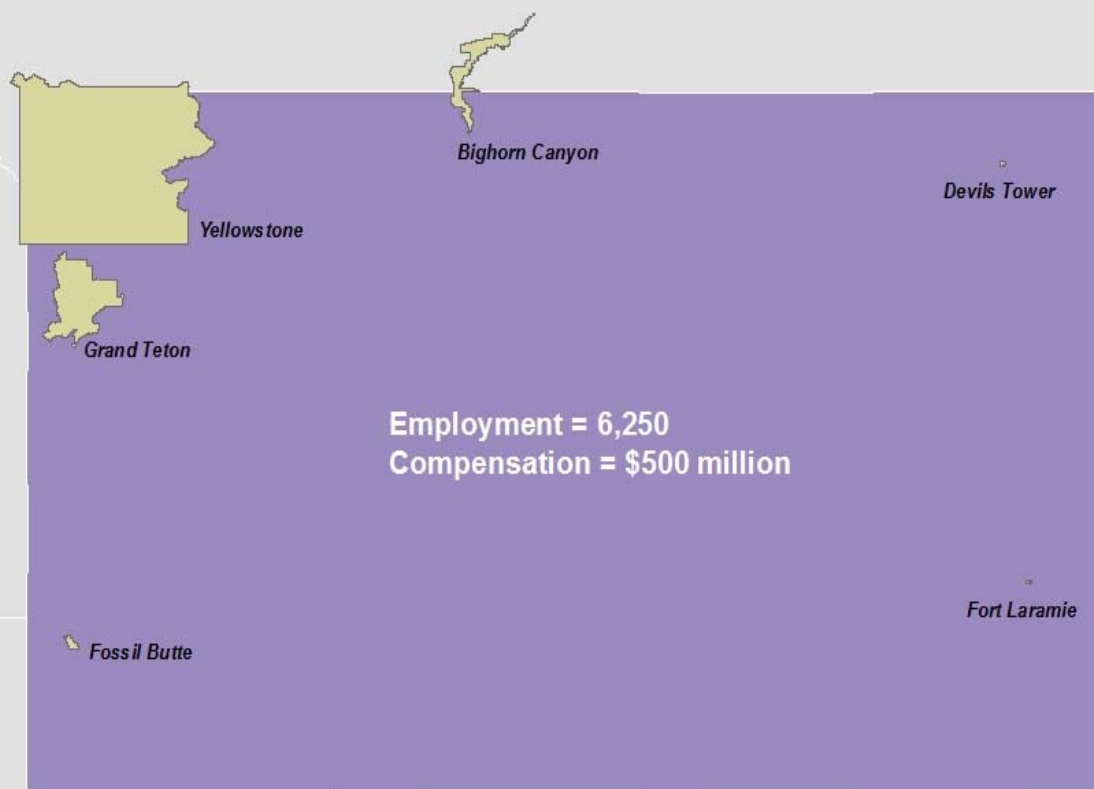
In 2014, Wyoming's arts and cultural government employment LQ was 3.0. As a share of the state's workforce, workers in Wyoming's arts and cultural government industries numbered three times the national index.

Alaska, which is also home to prominent national parks, ranked third on this list—the LQ for arts and cultural government employment in Alaska was 2.1.

In addition to nature parks, Indian Tribal Councils also contribute to the relatively high concentration of arts employment within government, in both Wyoming and Alaska. We know this because the ACPSA figure for government, as an industry, includes an estimate of arts-related activities conducted by these tribal organizations.

Arts and cultural government compensation LQs were correspondingly high in each of the three states: District of Columbia (7.6); Wyoming (3.6); and Alaska (2.8).

Arts and Cultural Government Employment in Wyoming: 2014



Data source: Arts and Cultural Production Satellite Account (ACPSA), U.S. Bureau of Economic Analysis.

Endnotes

¹Compensation includes wages and salaries, as well as supplements such as pension funds and health insurance.

²Arts and cultural services produced by non-ACPSA industries are identified as “non-ACPSA-related production.”

³Based on data from the 2012 Economic Census, Internet publishing and broadcasting, including web-search portals, account for nearly 80 percent of all employment by “other information services.”

⁴For more information, see [The 2009 UNESCO Framework for Cultural Statistics \(FCS\)](#).

⁵The [Quarterly Census of Employment and Wages](#) is produced by the U.S. Bureau of Labor Statistics and serves as source data for the ACPSA.

⁶For more information, please see: [Film New Orleans, Mayor’s Office on Cultural Economy](#); [New Mexico Film Office](#); and the [Utah Film Commission](#).