



MEASURING CHICAGO'S (ARTISTICALLY) CREATIVE ECONOMY

Jennifer Novak-Leonard

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The Cultural Policy Center at the University of Chicago is a nationally recognized interdisciplinary research center dedicated to informing policies that affect the arts, humanities, and cultural heritage. It is a joint initiative of the Harris School of Public Policy and NORC at the University of Chicago.



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OVERVIEW

Creativity is evident in healthy and vibrant economies, manifested in problem-solving skills, innovative leadership, and through the embrace of artistic processes and products. The notion of the “[creative economy](#)”¹ — an economy underpinned by innovation and creativity — has been part of the public dialogue for over a decade. However, throughout that time researchers and policy agencies have been exploring and debating how exactly the creative economy should be defined and measured, and many questions continue to linger today. Over time, the concepts and terms *creative economy*, *creative industries*, and *cultural industries* have become intermingled and are often used interchangeably in public discourse.

This report reviews these terms, takes stock of their referents, and then concerns itself more specifically with artistic creativity. The goal of this report is to investigate Chicago’s creative economy in comparative perspective, using the most reliable, publicly available data to operationalize measures of a creative economy. The report provides a detailed analysis of Chicago’s artist labor force as a case study of a current creative economy.

CONCEPTUAL DEFINITIONS

The Department of Culture, Media and Sport (DCMS) in the United Kingdom published an early theoretical definition of the creative industries in 1998, which has been at the forefront of research, policy, and debate about creative industries:

“those activities which have their origin in individual creativity, skill and talent and which have the potential for wealth and job creation through the generation and exploitation of intellectual property”²

The DCMS’s definition sparked much debate,³ including the question “as to whether it was primarily an economic policy associated with promoting [or] generating successful industries and new forms of IP, or primarily a policy to support the arts and cultural sectors, particularly those reliant upon public sector funding.”⁴

¹ Howkins 2001

² DCMS 1998. Mapping documents were updated in 2001 and are currently undergoing a review process, which is being faced with debate.

³ Flew 2011 and Bakhshi 2013

⁴ Flew 2011, 27-28

The creative industries are not specific to arts and cultural endeavors and the DCMS's definition and others do not include cultural heritage and tourism, museums, archives, or libraries.⁵ A related but different concept is used to capture artistic and cultural activity⁶ whether it happens in or outside of the creative industries. [UNESCO defines *cultural industries*](#) as:

“a set of activities that produce and distribute cultural goods or services, which at the time they are considered as a specific attribute, use or purpose, embody or convey cultural expressions irrespective of the commercial value they may have.”⁷

In November 2013, the United Nation's Development Programme and UNESCO released jointly *Creative Economy Report: 2013 Special Edition*, which emphasizes the monetary and nonmonetary benefits of both cultural and creative industries for development, and reviews the many and evolving ways these concepts and terms are utilized.

The National Endowment for the Arts (NEA), in collaboration with the US Bureau of Economic Analysis (BEA), just released its own definition of arts and cultural production as part of its efforts to develop the first federal measure of the arts and cultural sector's contribution to the US Gross Domestic Product:

[The NEA] “defined arts and cultural production to be largely consistent with definitions used by the United Nations and the European Union. By following these guidelines our definition of arts and culture is narrowly tailored to include creative artistic activity, the goods and services produced by it, the goods and services produced in the support of it, and finally the construction of buildings in which it is taking place.”⁸

The DCMS and other agencies develop their definitions by starting from a theoretical point of view and then work to operationalize the theoretical concepts in terms of which industries and occupations should be considered. By contrast, the NEA and BEA first examine what arts- and culture-related measures contribute economically and then develop a conceptual definition to describe the group of market activities.⁹

⁵ Flew 2011, 19

⁶ Other conceptual models have been proposed that define cultural industries as a complete subset within creative industries; see Throsby (2008) for a review of models.

⁷ UNESCO 2005

⁸ NEA 2013

⁹ Personal communication with Director, Office of Research and Analysis, NEA, July 26, 2013

APPLIED/ANALYTIC DEFINITIONS

There is no standard definition for what industries are to be counted and analyzed as “creative” or “cultural.” While there are conceptual differences that underlie this lack of standardization, there is also the emerging and important recognition that what comprises creative or cultural industries should also reflect local priorities. For example, definitions typically do not include culinary arts, but the city of Chicago [identifies the culinary arts](#) as a key component of the City’s own creative industries.¹⁰

Despite the lack of a standard definition in practice, “[A consensus seems to be emerging](#) for a working definition of the “core” creative or cultural industries, while there is still confusion surrounding non-core and supporting activities.”¹¹

Most often, according to [national level studies](#)¹² the core cultural industries include:

- audio-visual (film, TV, radio)
- performing arts
- visual arts
- galleries and sales of visual arts
- publishing
- music

Other industries sometimes found as part of a definition include:

- Architecture
- Libraries
- Design
- Fashion
- Software/media
- Museums/cultural heritage
- Crafts
- Advertising

¹⁰ “Chicago’s Creative Industries,” accessed July 31, 2013.

¹¹ UNESCO-UIS 2009, 17

¹² BOP Consulting 2010, 39

In the US, [Americans for the Arts employed their own definition and measure of *creative industries*](#)¹³.

AFTA provides a detailed list of what is included in their measure, which has a greater focus on measures of the nonprofit arts and culture sector than what is typically included under the creative industries umbrella definition (UNESCO-UIS 2009, 63). In addition, multiple state-level and regional analyses, each with a variation on the analytic definition of creative industries, have been conducted in the US. A sample of references is included in the Technical Appendix.

In sum, the terms “creative industries” and “cultural industries” have varied definitions and means of measuring the creative economy, which continue to [emerge](#)¹⁴ and [evolve](#)¹⁵.

APPROACHES TO MEASUREMENT

Two key approaches are used to measure the size and describe the components of the creative economy. One approach is to measure the number of people employed by creative or cultural **industries**, regardless of the specific skills required in their job. Which industries should be included is the primary challenge. Recent research has advanced the notion of identifying relevant industries by measuring “creative intensity”, defined as the proportion of total employment within an industry that is engaged in creative occupations.¹⁶ This approach attempts to bridge a second measurement approach for the creative economy, which is to measure the number of people employed in **occupations** that require them to apply creative skills, regardless of industry. This report includes both measurement approaches – employment within select industries, and select occupations regardless of industry – in its effort to describe aspects of Chicago’s creative economy and compare those to select peer cities across the US.

The goal of this report is to acknowledge the nuances in the evolving theoretical issues around measuring the creative economy generally, while making a best pragmatic attempt to identify reliable, replicable indicators that can inform an understanding of, and conversations about, Chicago’s creative economy more specifically.

¹³ Americans for the Arts 2012

¹⁴ NEA 2012

¹⁵ Bennett 2013, “Craft as a creative industry: what doesn’t get counted, doesn’t count.”

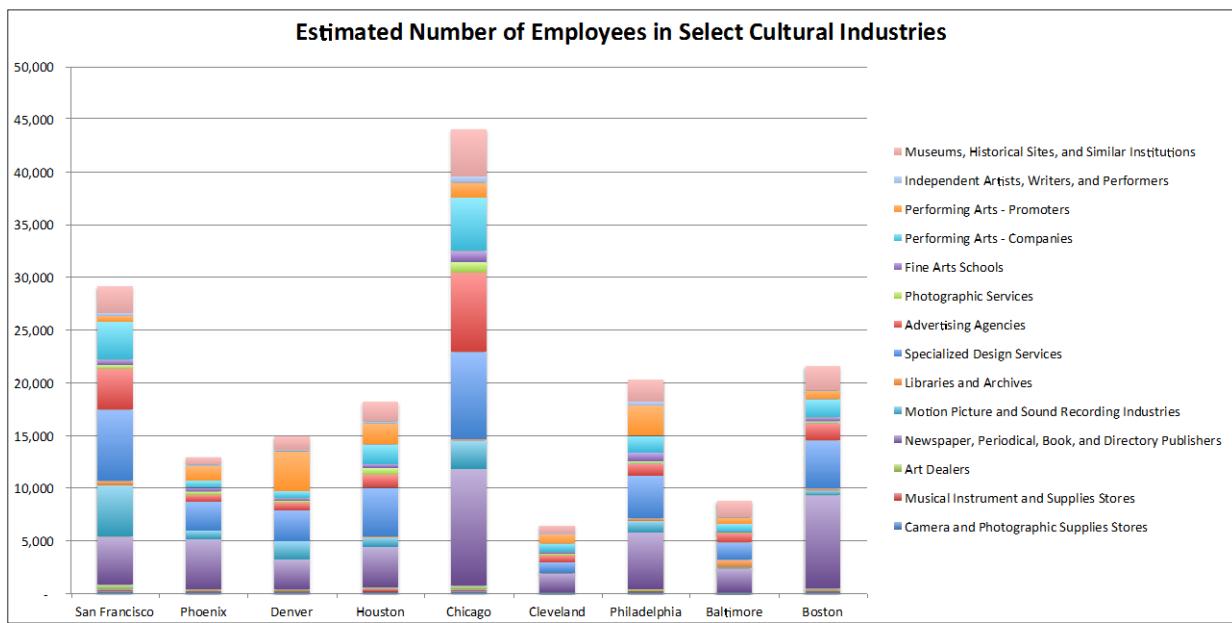
¹⁶ Bakhshi, Freeman and Higgs 2013

CULTURAL INDUSTRIES IN NINE US CITIES

To develop indicators of the size of the cultural industries, measured by the number of employees, the following analyses use a select set of core industries that have been commonly used in studies of creative and cultural industries.¹⁷ For the purpose of this report, the analyses include all reported employment within these industries.¹⁸ A detailed list of included NAICS codes are in the Technical Appendix. I do not propose that these industries fully define Chicago's industries, but that they can serve as indicators for investigating aspects of Chicago's creative economy.

Based on the 2007 Economic Census,¹⁹ 44,029 people are employed in select Chicago-based cultural industries. Of those, the largest portion (25 percent) is employed in periodical, book and other forms of publishing.

Figure 1: Estimated Number of Employees in Select Cultural Industries, by city



Source data: U.S. Census Bureau, 2007 Economic Census, 2007 Economic, EC0700A1²⁰

¹⁷ While the selection of NAICS codes presented here was determined prior to the publication of Harris, Collins and Cheek in August 2013, the selection closely reflects their findings.

¹⁸ Other research considers portions of employment within the relevant industries, see Bakhshi, Freeman and Higgs 2013; BOP Consulting 2010; UNESCO-UIS 2009.

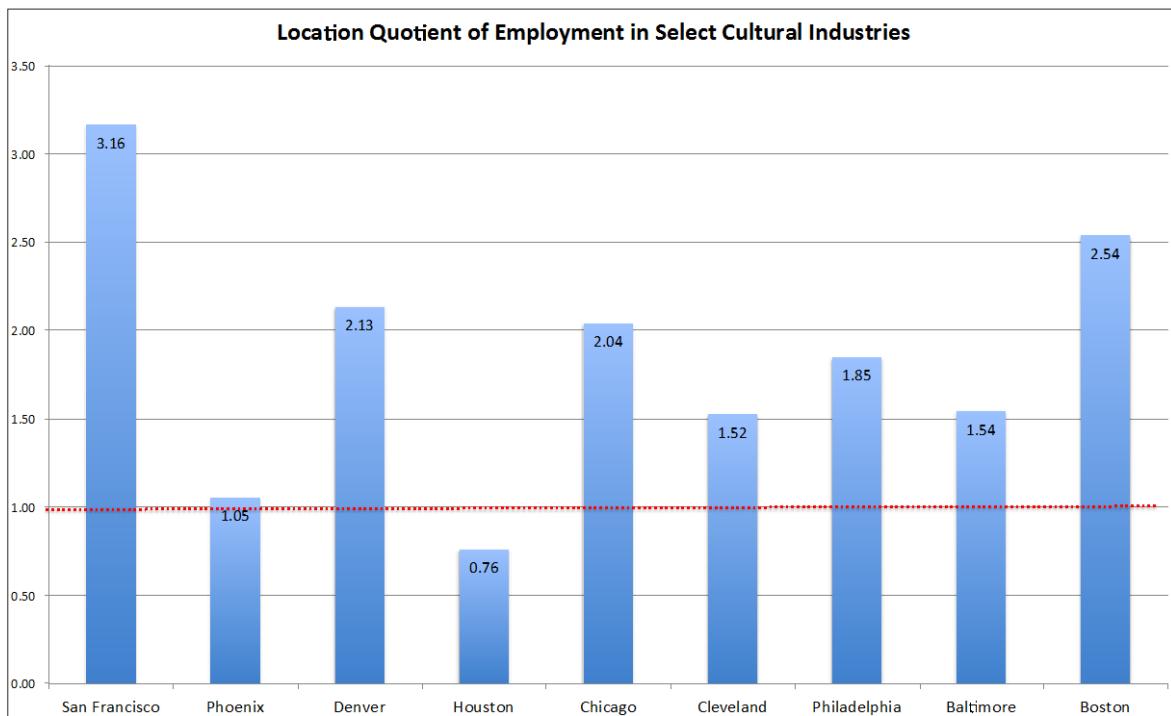
¹⁹ Other studies have used US Census County Business Patterns data for which detailed industry data is available at the MSA- and county-level; detailed data at the city-level is not available from this data source. The Economic Census, despite the data being slightly older than what is available through other sources, offers the level of detail for smaller geographic areas. Additionally, these analyses can be updated for trend analyses with the forthcoming release of the 2012 Economic Census data.

²⁰ The Economic Census masks data by reporting ranges of employees, when doing otherwise would reveal too much detail about a given entity. In the instances where only ranges were provided for the number of employees, the average of the range.

Approximately 19 percent of the people are employed in select Chicago-based cultural industries are in design services, 17 percent in advertising, 11 percent in performing arts companies, 10 percent in museums and historical sites, and 6 percent in select aspects of motion picture and sound recording. All other industries included in this core sample comprise less than 3 percent each of the estimated employee pool in the select cultural industries.

An important measure for geographic comparison is the **location quotient**, which compares the concentration of an asset at a local geographic level to that at a larger geographic level. Figure 2 compares the share of each city's labor force employed in select cultural industries with the share at the national level. Any city above 1.0 exceeds the national level and shows a concentration of the asset at the local level, in this case, referring to employment in select cultural industries.

Figure 2: Location Quotient for Select Cultural Industries, by city



Source data: U.S. Census Bureau, 2007 Economic Census, 2007 Economic, EC0700A1 and U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01W

LIMITATIONS OF “CULTURAL INDUSTRIES” AS A MEASUREMENT TOOL

Important questions arise when using industry-wide employment as an indicator of creative activity:

- *What portions of industry-specific employees are “creative”?*

Across the range of industries used to measure the creative economy in different regions, there are employees who are essential to the creative work of that industry. There are also workers employed in the industry who fulfill support services that can be considered auxiliary, but not core, creative work. Outside of the identified creative industries, there are other employees whose work also contributes to the creative economy. This worker segmentation model is known as the “[creative trident](#)” model²¹ and suggests the importance of an alternative approach—that creative workers, regardless of industry, be measured to complement the industry-based indicators.

- *Creative and artist work is often project-based and sporadic. What are the limitations of using employer-based data?*

Almost one-third of the artist labor force in the US is self-employed, a rate approximately [three times the national average](#).²² Hence, using only employer-based data provides a limited measure of creative workers, particularly when considering artistic market-based activity, which is often project-based, entrepreneurial and sporadic.

Because of the ambiguity around the proportion of creative workers within industries and the number of creative workers outside of select creative industries, as well as concerns about capturing the number of self-employed people who contribute to the creative economy, **this report focuses primarily on creative workers as opposed to an industrial analysis.**

²¹ Higgs, Cunningham, and Bakhshi 2008

²² NEA 2011

CREATIVE WORKERS IN NINE US CITIES

Research has increasingly focused on developing transparent and replicable means for identifying the level and type of creativity that individuals may apply in their job.

In *The Rise of the Creative Class* (2002), Richard Florida put forth a broad set of occupations that he suggested comprise the “creative class” of workers. The details of Florida’s definition and accompanying regional economic growth theory catalyzed much debate, yet Florida’s work brought significant attention to the central role that innovative individuals and artists play in the creative economy. Florida defines the super-creative core²³ as those occupations that enable people to “fully engage in the creative process,”²⁴ and he positioned the artistic labor force at the center of this. Recently, researchers in the UK posited a new definition and rubric to identify creative occupations as those that play “a role within the creative process that brings cognitive skills to bear to bring about differentiation to yield either novel, or significantly enhanced products whose final form is not fully specified in advance.”²⁵

In the US, the [Occupational Information Network \(O*NET\) Resource Center](#) is the primary source for occupation-specific information, and includes typical responsibilities, skill and knowledge sets deployed; work styles, values and contexts; as well as wage and employment trends. For example, ONET identified [originality](#) — the ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem— as an ability that is most integral to the work of creative writers, physicists, fine artists and architects, interior designers and choreographers, as well as other occupations.²⁶

Building from the O*NET occupation descriptions, researchers [Tim Wojan and David McGranahan](#) at the USDA Economic Research Service developed a narrower set of occupations than those used by Florida that utilize creativity. Artists are again identified as key creative workers in their definition. This report utilizes Wojan and McGranahan’s framework to identify those occupations that have creative workers at their core in the analyses that follow. A complete list of occupation codes is included in the Technical Appendix.

²³ The super-creative “core of this new class includes scientists and engineers, university professors, poets and novelists, artists, entertainers, actors, designers, and architects, as well as the thought leadership of modern society: nonfiction writers, editors, cultural figures, think-tank researchers, analysts, and other opinion-makers.” Members of this super-creative core “produce new forms or designs that are readily transferable and broadly useful—such as designing a product that can be widely made, sold and used; coming up with a theorem or strategy that can be applied in many cases; or composing music that can be performed again and again.” (Florida 2002, 69)

²⁴ Florida 2002, 69

²⁵ Bakhshi, Freeman and Higgs 2013, 24

²⁶ <http://www.onetonline.org/find/descriptor/result/1.A.1.b.2> (accessed July 17, 2013)

All of the studies reviewed for this report consider the artist labor force as a core subset of creative workers. The National Endowment for the Arts (NEA) uses eleven standard occupation codes (SOC) for its working definition of the artist labor force – actors; announcers; architects; fine artists, art directors and animators; dancers and choreographers; designers; other entertainers; musicians, singers and related workers; photographers; producers and directors; writers and authors.²⁷ While the use of these eleven SOCs invites discussion, for consistency I use this definition to examine artists in Chicago and comparison cities.

The [American Community Survey](#)²⁸ (ACS) offers highly detailed and reliable estimates on occupations and employment, and is the primary data source for the following analyses. Specifically, I used the ACS's recently released 5-year estimates to produce the following analyses, which present data on the total artist workforce employed in Chicago and the peer cities, as well as on the resident artist labor force for each city, where data are available. The **artist labor force** is comprised of employed and unemployed workers and reflects where the workers reside. Information about the labor force is collected for individuals' current primary job or, for those who are unemployed at the time of data collection, the most recent job for those who have worked within the last 5 years. The **artist workforce** is comprised of artists employed in the city, regardless of whether they reside in the city.

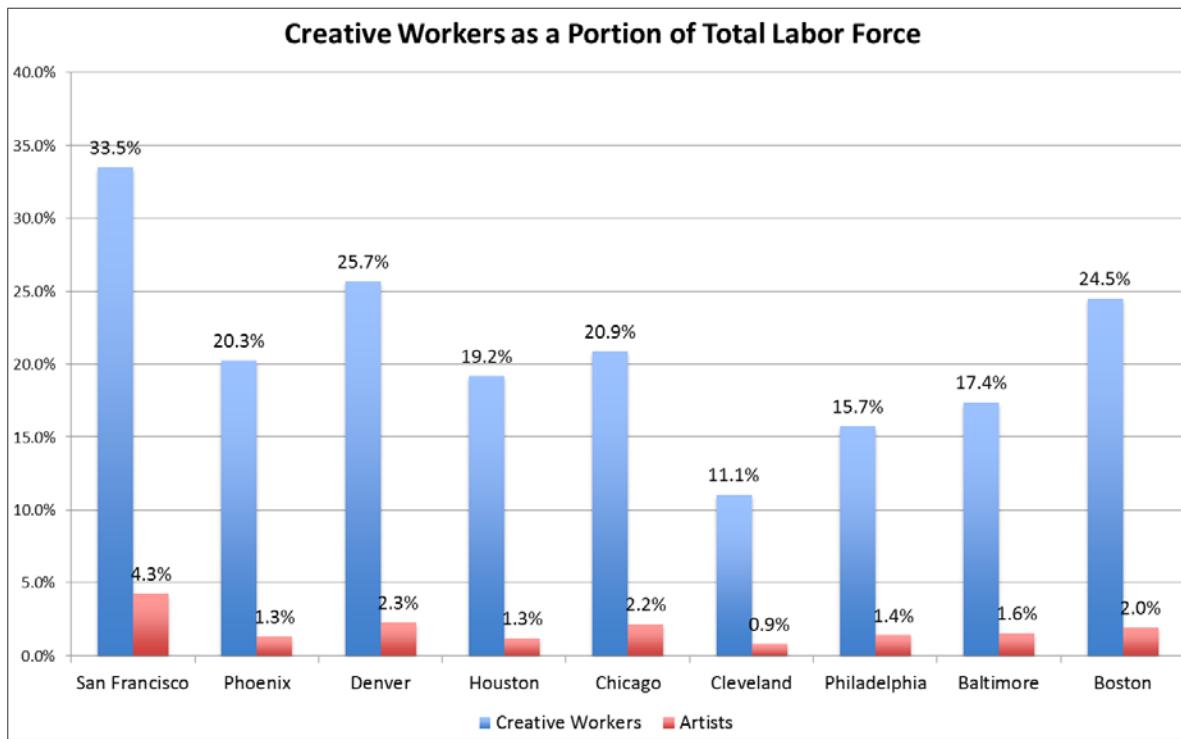
²⁷ <http://arts.gov/artistic-fields/research-analysis/data-profiles/data-profile-1/artist-occupations> (accessed November 19, 2013)

²⁸ See the [Technical Notes](#) in NEA (2011) for a succinct description of how the ACS measures artist occupations.

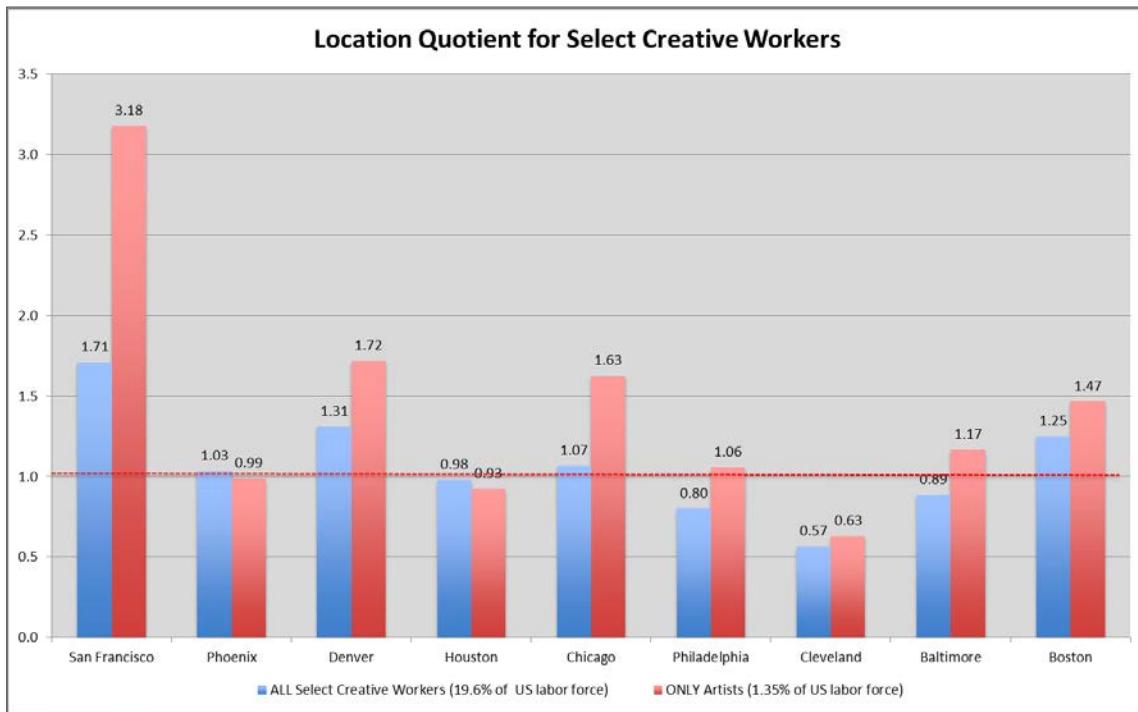
RESULTS

Almost 21 percent of Chicago's civilian labor force is comprised of creative workers, which approximates the portion of creative workers in the US labor force (1.07 location quotient, which compares the share of artists in each city's labor force to the share of artists in the US labor force). San Francisco, Denver and Boston have higher concentrations of creative workers than Chicago, with location quotients of 1.70, 1.30 and 1.24, respectively.

Figure 3: Select Creative Workers as a Portion of the Civilian Labor Force, by city



Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01R and 2006-2010 ACS estimates of civilian workforce

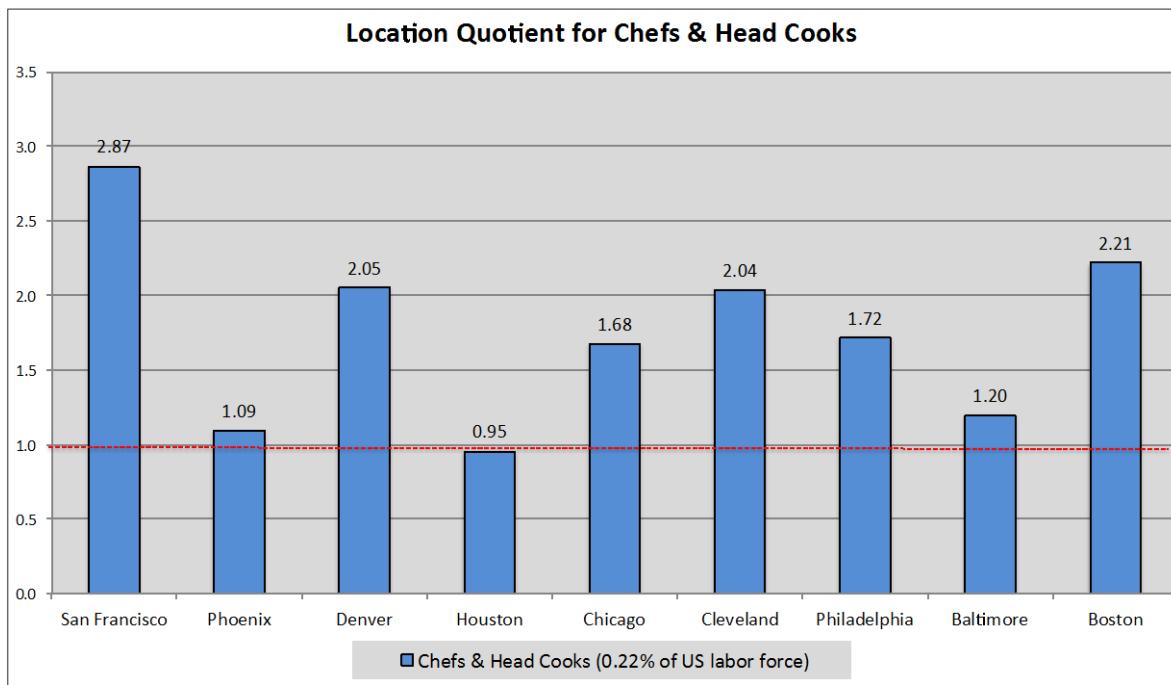
Figure 4: Location Quotient for Select Creative Workers, by city

Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01R and 2006-2010 ACS estimates of civilian workforce

Chicago, along with Denver and Boston, has a high concentration of employed artists compared to the US (location quotient 1.63; Figure 4). San Francisco has the highest concentration of artists, at 3.18 times the portion of artists in the US labor force. San Francisco, New York City, and Los Angeles have been known as Arts Super Cities over the past decade due to their high concentration of artists [well above the national average](#).²⁹

Given Chicago's particular interest in culinary arts, this report also looks at the location quotient for chefs and head cooks, arguably the key creative force within the culinary industry. Chicago's location quotient is above the national average and on par with Philadelphia; however San Francisco, Denver, Cleveland, and Boston are home to proportionately larger concentrations of chefs and head cooks.

²⁹ Markusen, Schrock and Cameron, 2004.

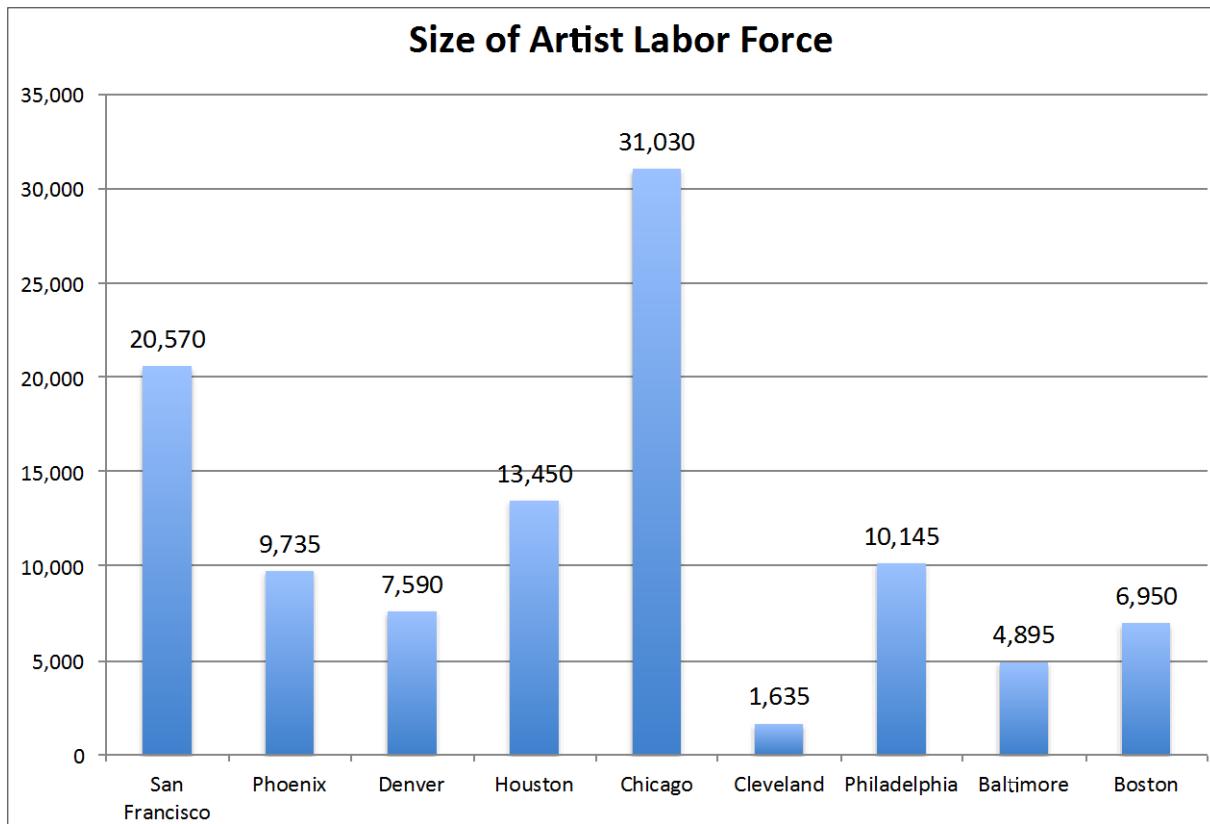
Figure 5: Location Quotient for Chefs & Head Cooks, by city

Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01R and 2006-2010 ACS estimates of civilian workforce

MORE ON THE ARTIST LABOR FORCE

Commensurate with total population sizes, Chicago has the nation's third largest artist labor force, behind New York City and Los Angeles, with an estimated 31,030 artists residing in Chicago. Artists comprise 2.2 percent of Chicago's labor force (previously noted in Figure 3); almost double the portion of artists in the national labor force (1.35 percent). Among our comparison cities, San Francisco has the next largest artist labor force, in terms of absolute size — 20,570 — but a larger share (4.3 percent) of San Francisco's labor force is comprised of artists, compared to Chicago.

Figure 6: Estimated Size of Artist Labor Force, by city

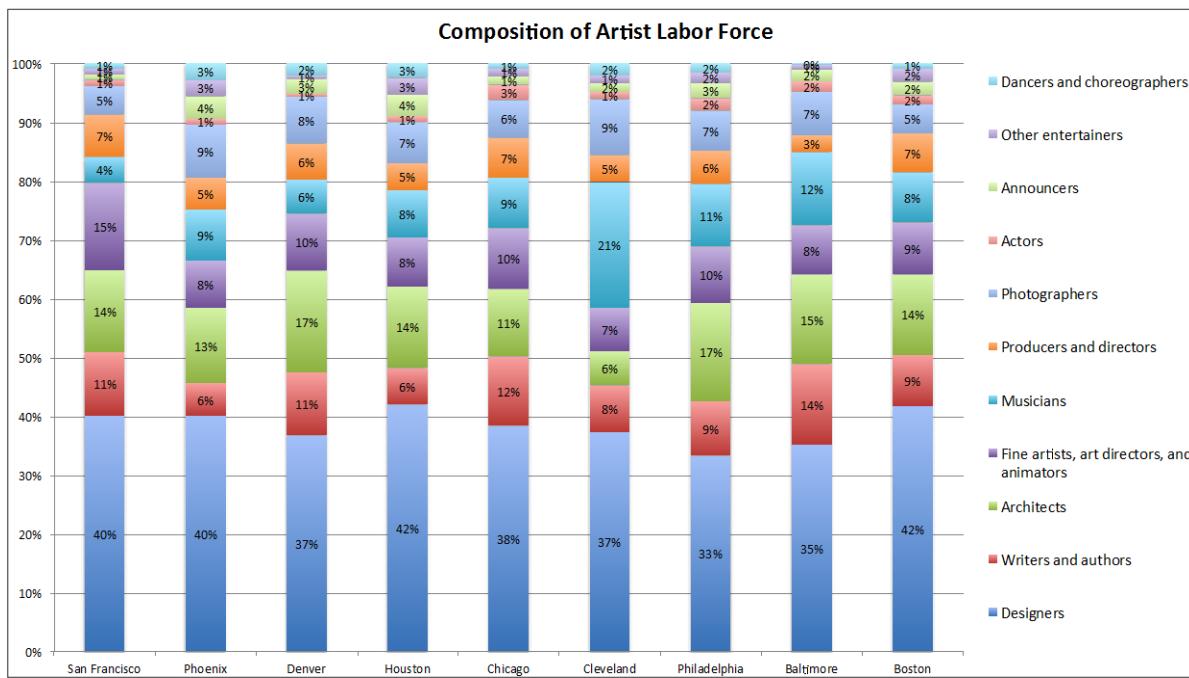


Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01R

COMPOSITION OF THE ARTIST LABOR FORCE & CONCENTRATIONS OF ARTIST OCCUPATIONS

The extent of public support, commercial opportunities, amenities, and strength of informal networks and profiles have all been identified as factors that explain why different types of artists concentrate in different metropolitan regions.³⁰ Figure 7 illustrates each city's distribution of artists across the eleven artist occupations.

Figure 7: Composition of Artist Labor Force, by city



Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01R

Some cities have higher than the national average portions of all or almost all artist occupations – San Francisco, Denver, Chicago, and Boston.

- As has been true in the past, San Francisco has well above the national average concentration of artists across *all* artist occupations.
- Denver is notable for its high concentration of Architects and Dancers/Choreographers.
- Chicago has relatively higher concentrations of Writers/Authors and Architects compared to other artist occupations, although it also has slightly below the national average presence of fine artists in its artist labor force.
- Boston has a notably higher concentration of architects and is on par with the national average of photographers.

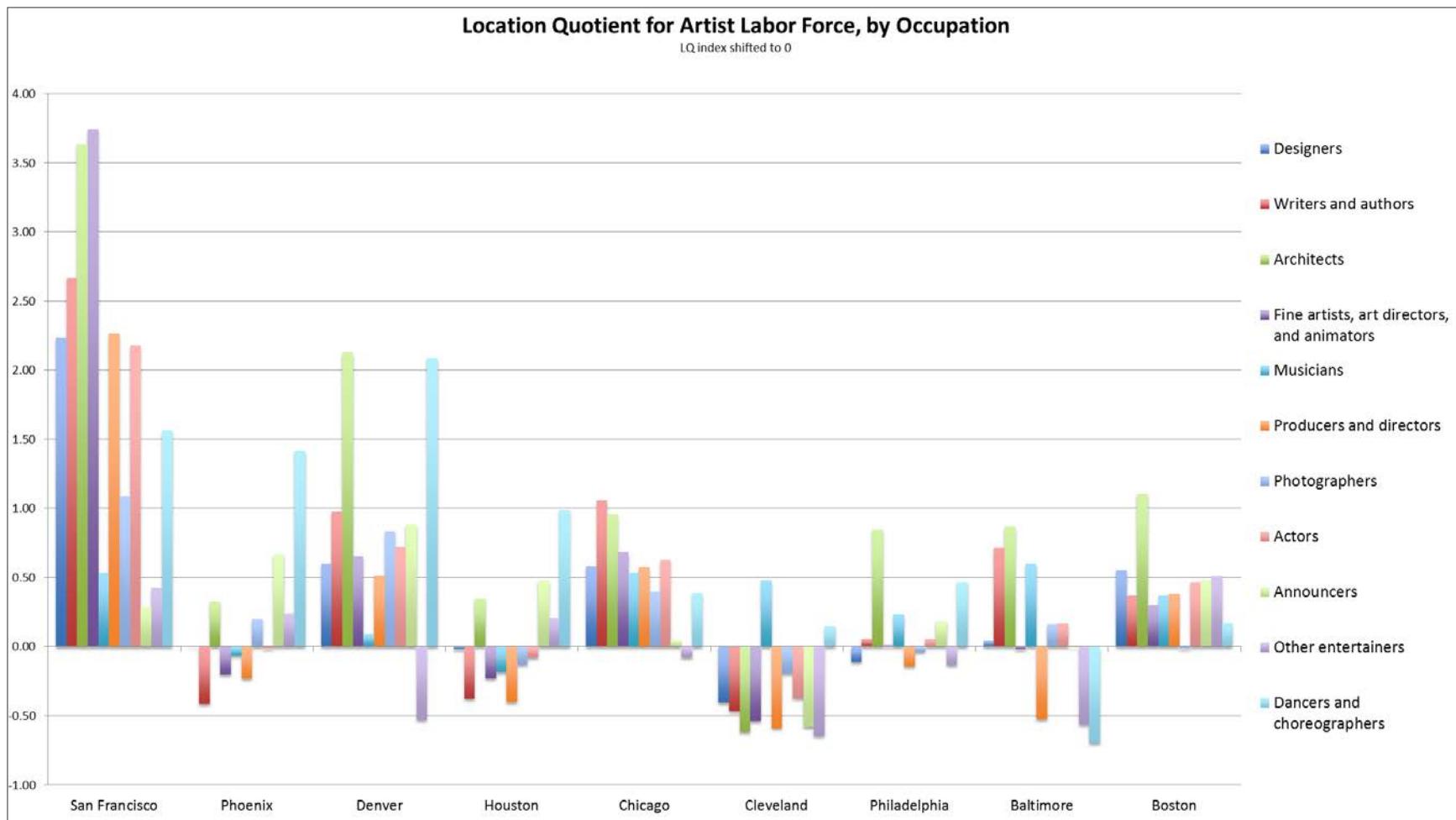
³⁰ Markusen, Schrock and Cameron, 2004

Other cities, while having high relatively high concentrations of a single or a small set of occupations, also fall below the national average for multiple artist occupations — Phoenix, Houston, Cleveland, Philadelphia, and Baltimore.

- Phoenix and Houston have similar location quotient patterns — relatively high concentrations of Dancers/Choreographers and Announcers, but below the national average in concentrations of other occupations.
- Cleveland falls below the national average for most artist occupations, however has a proportionately high, isolated concentration of musicians.

Figure 8 summarizes which artist occupations are concentrated in the comparison cities by depicting the location quotient of each artist occupation across cities, compared to the US average, which is illustrated as zero in this graph for ease of reference.

Figure 8: Location Quotient for Artist Labor Force, by occupation

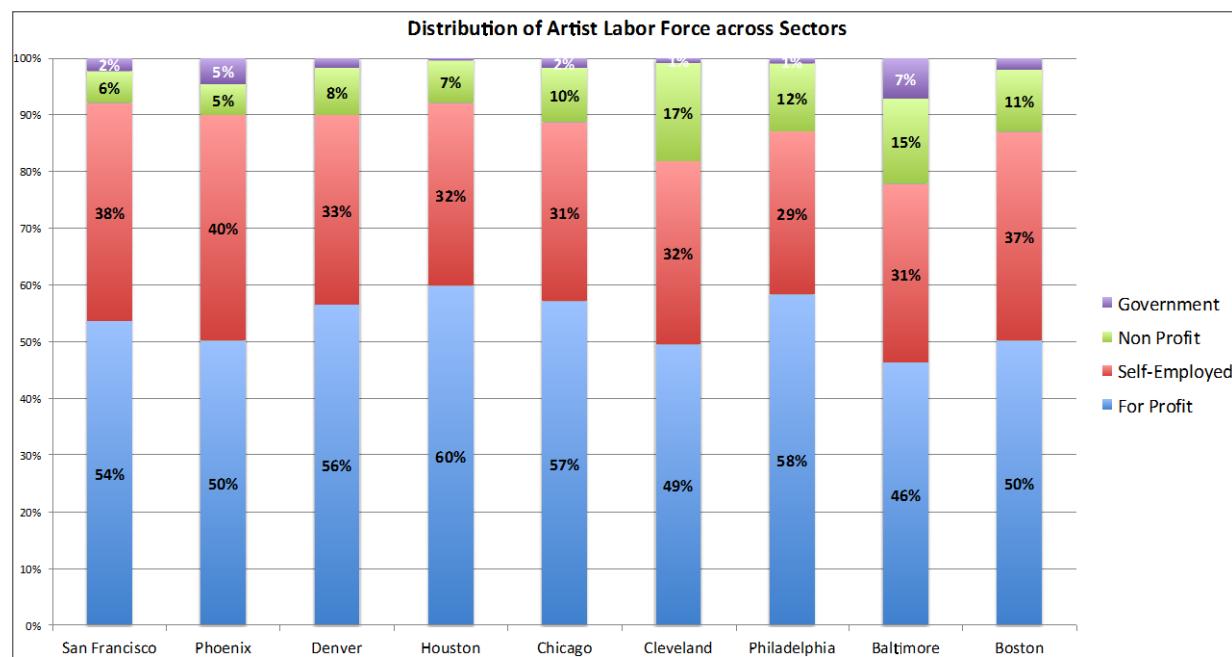


Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01R and 2006-2010 ACS estimates of civilian workforce
 Note: Location quotient index shifted to zero for readability.

SECTOR

Fifty-seven percent of Chicago's artist labor force is employed in the for-profit sector, 31 percent is self-employed, and 10 percent is employed in the non-profit sector. The large portion of Chicago's artists that are self-employed mirror a national trend, since [artists are more than three times as likely as the US labor force to be self-employed](#).³¹

Figure 9: Distribution of Artist Labor Force across Sectors, by city



Source data: U.S. Census Bureau, 2007-2011 American Community Survey, Public Use Microdata Sample

- Only Houston and Philadelphia employ modestly larger proportions of their artist labor force in the for-profit sector than Chicago.
- Proportionately larger shares of the artist labor forces are self-employed in all of our comparison cities compared to Chicago, with the exception of Philadelphia.
- Among our comparison cities, smaller shares of the artist labor force in cities west of Chicago are employed within non-profits compared to Chicago, and larger shares are employed in nonprofits in cities east of Chicago.
- Proportionately larger shares of the artist labor force in San Francisco, Phoenix, Baltimore, and Boston are employed in government than Chicago. Houston, Cleveland, and Philadelphia have proportionately smaller shares.

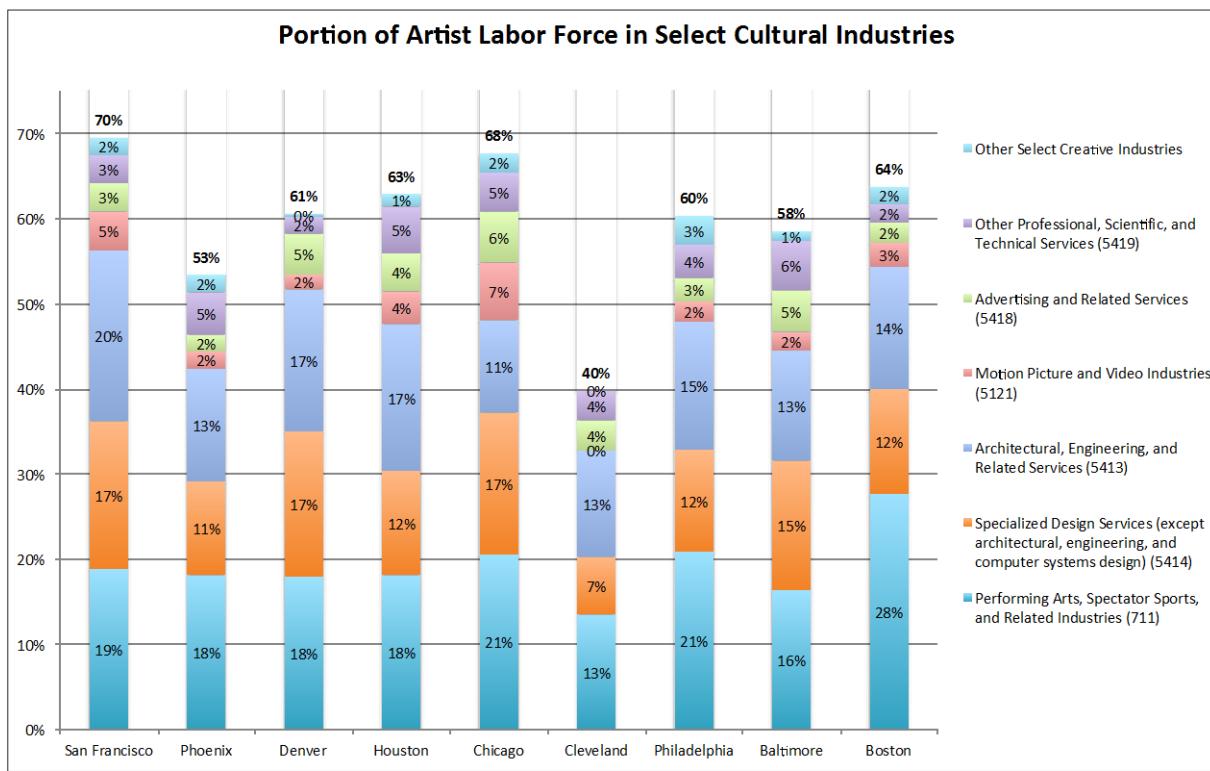
³¹ NEA 2011, 12

INDUSTRY

An estimated 71 percent of Chicago's artist labor force is employed in the select cultural industries identified earlier in this report. The largest portions are employed in performing arts and related industries (21 percent) and in specialized design services (17 percent).

The remaining 29 percent of Chicago's artist labor force is not employed in the selected cultural industries used in this report and is employed in small portions across 66 industries. Approximately, 2 percent of Chicago's labor force is employed in broadcasting (excluding internet) and in florist retail shops; just over 1 percent is employed in religious organizations, in miscellaneous manufacturing and management, and in scientific and technical consulting services. Less than 1 percent of Chicago's artist labor force is employed in each of the 61 remaining industries.

Figure 10: Portion of Artist Labor Force in Select Cultural Industries, by city



Source data: U.S. Census Bureau, 2007-2011 American Community Survey, Public Use Microdata Sample

Figure 10 depicts notable differences across cities regarding where artists are employed and, in particular, where there are concentrations of artists employed outside of cultural industries in each city:

- 5 percent of the artist labor force in Philadelphia, Baltimore, and Cleveland are working in religious organizations³².
- Cleveland's artist labor force presents the greatest contrast with Chicago's:
 - 11 percent works in printing and in related support activities³³ in manufacturing.
 - 5 percent in other personal services³⁴
 - 5 percent in retail of building material and supplies dealers³⁵
- 6 percent of Phoenix's artist labor force works in drinking places that serve alcoholic beverages³⁶.
- 5 percent of Philadelphia's artist labor force works in amusement, gambling, and recreation industries³⁷.
- 5 percent of Denver's artist labor force is working in computer systems design and related services³⁸.

³² NAICS 8131

³³ NAICS 3231

³⁴ NAICS 8129

³⁵ NACIS 4441

³⁶ NAICS 7224

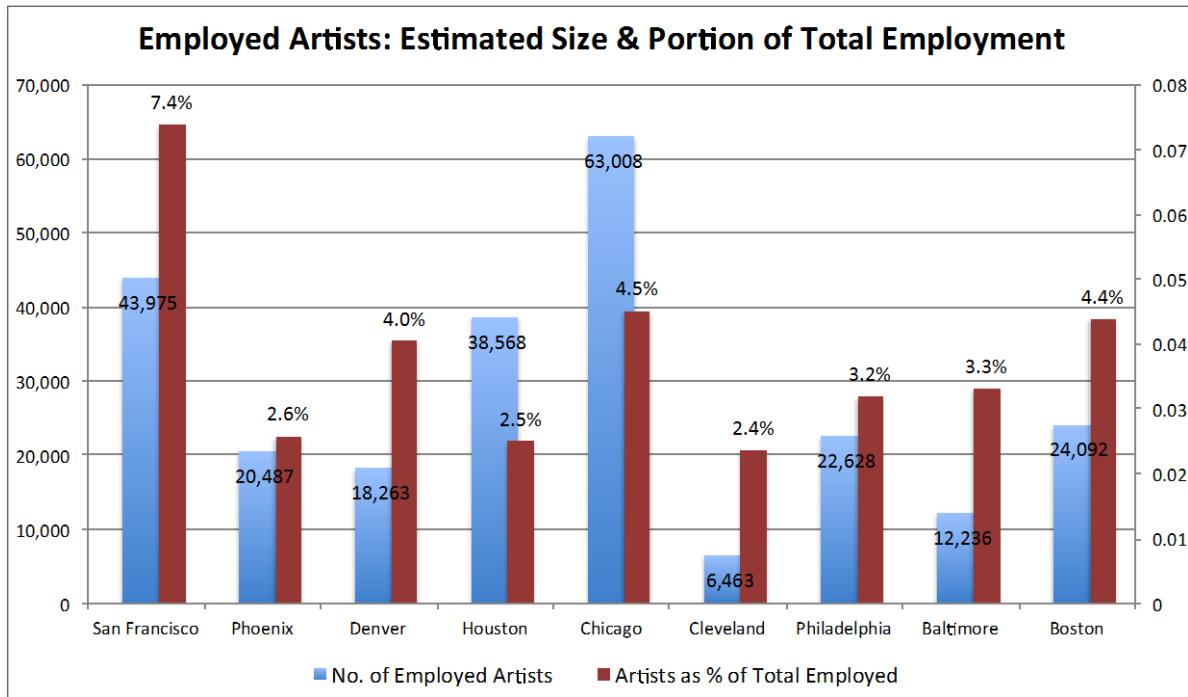
³⁷ NAICS 713

³⁸ NAICS 5415

ARTIST WORKFORCE

Over 63,000 artists are employed in Chicago, comprising 4.5 percent of total employment in the city. Workforce statistics measure employment within a geographic area of interest, regardless of where the employee resides. Artists comprise a similar portion of the total workforce in Denver and Boston. Among our select peer cities, San Francisco has the largest portion of its total employment made up of artists, approximately 7.4 percent.

Figure 11: Employed Artists: Estimated Size & Portion of Total Employment, by city

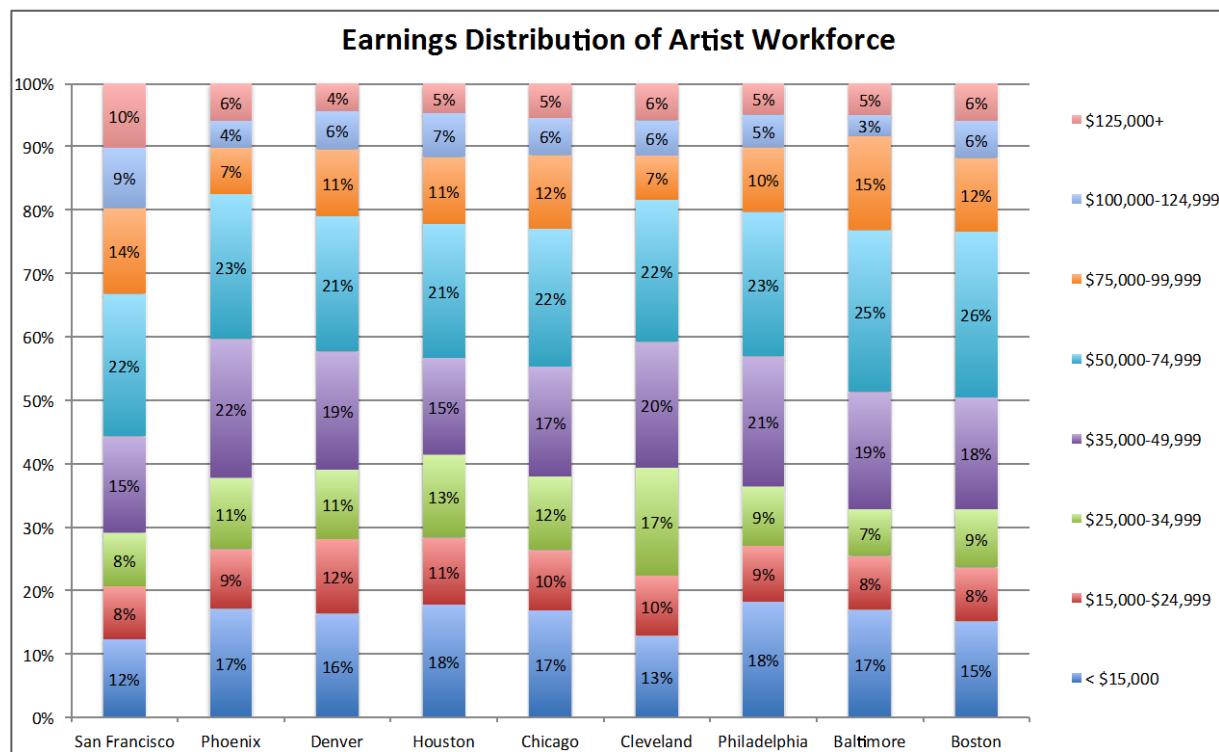


Source: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01W

EARNINGS

San Francisco has the greatest portion of higher income artists, with 33 percent earning \$75,000 or more per year; 23 percent of Chicago's artists earn \$75,000 or more per year. San Francisco also has the smallest portion of lower income artists, with 20 percent earning less than \$25,000 per year; 27 percent of Chicago's artists earn less than \$25,000 per year.

Figure 12: Distribution of Artists' Earnings, by city



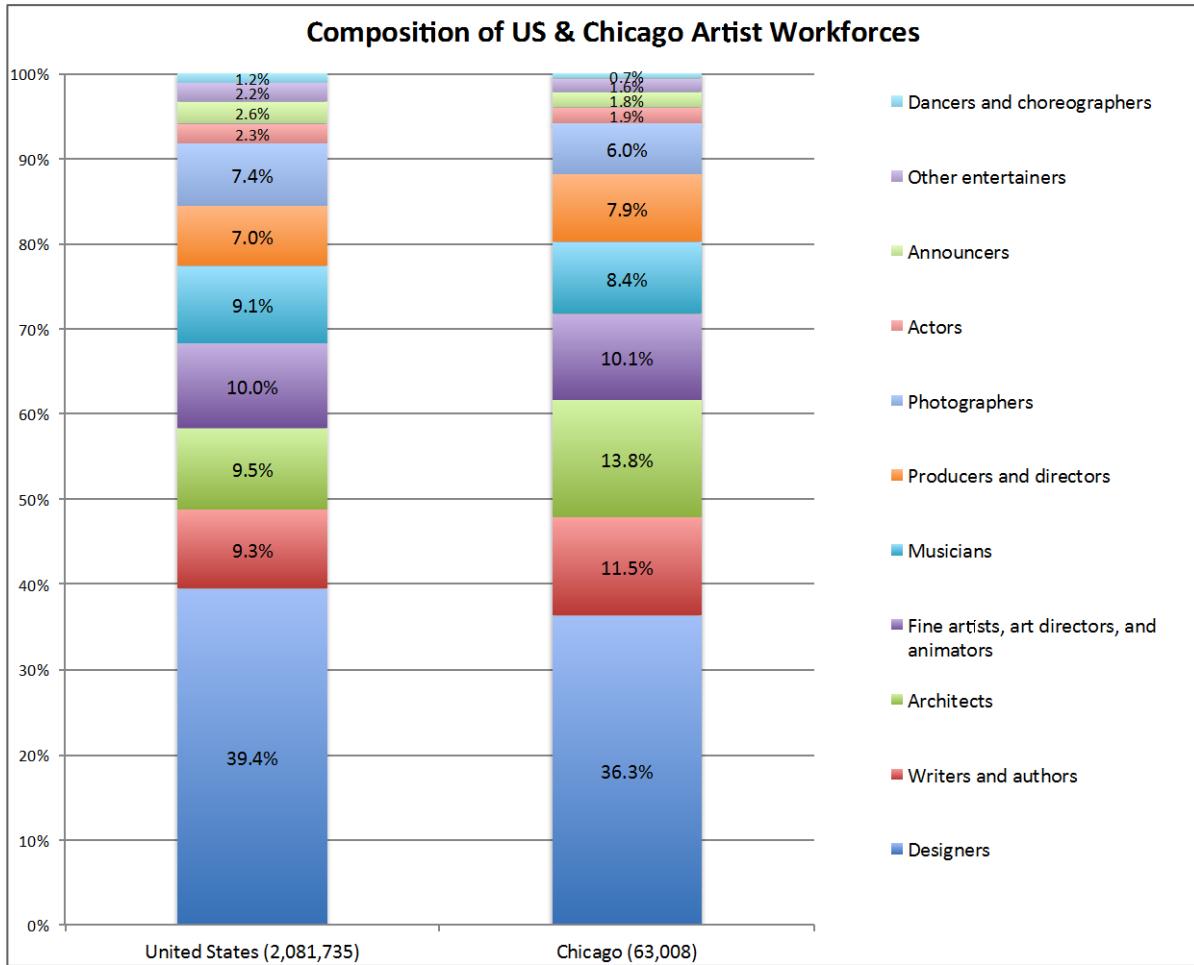
Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL11W

For additional information on occupational and wage data at the national, state and MSA level for specific occupations, see the [Bureau of Labor Statistics' Occupational Employment Statistics](#).

A CLOSER LOOK AT CHICAGO

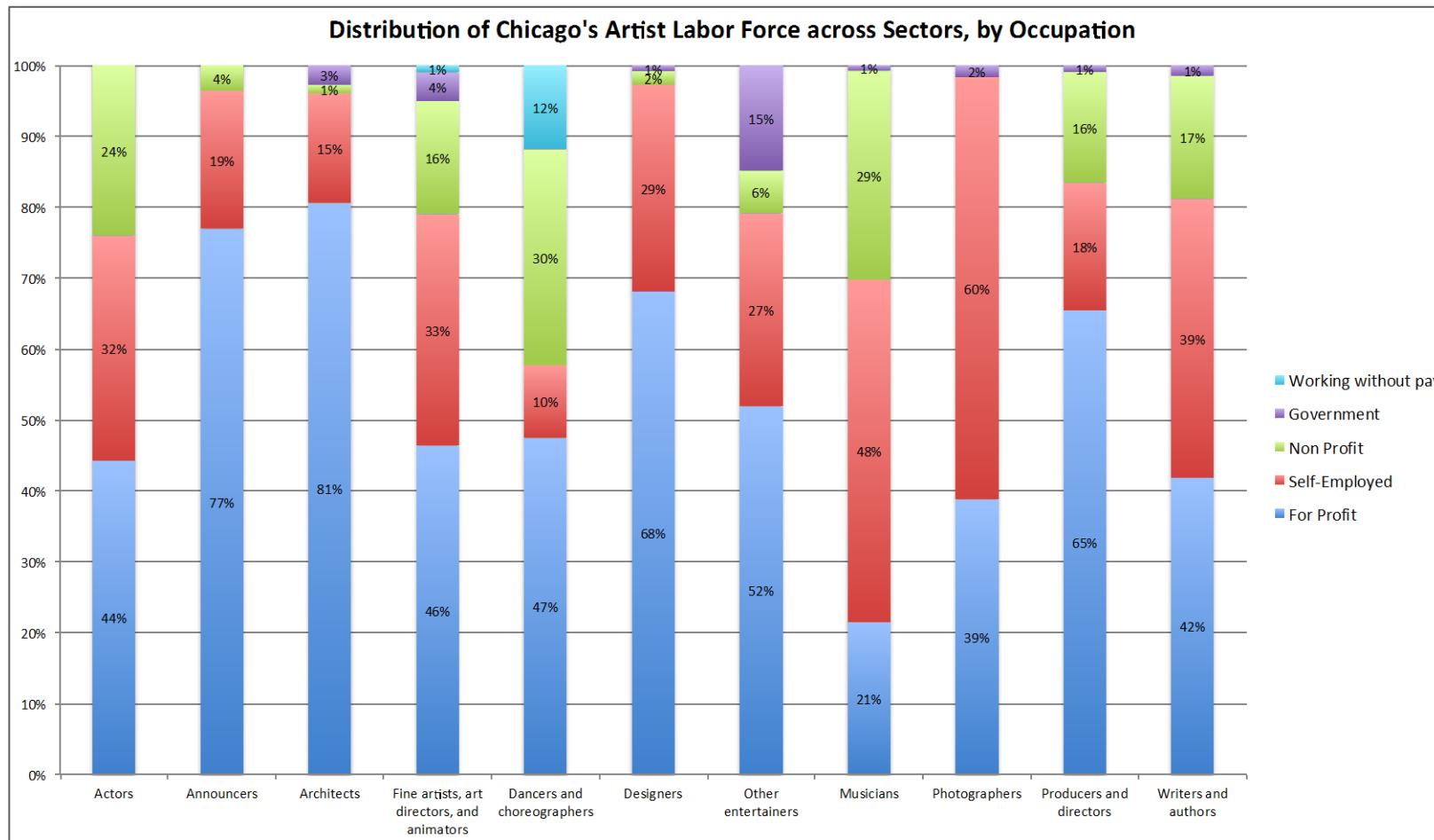
An estimated 63,008 artists work in Chicago. Designers represent the largest share of the artist workforce in Chicago, at 36.3 percent. Overall, the composition of Chicago's artist workforce mirrors that of the US as a whole.³⁹

Figure 13: Composition of US & Chicago Artist Workforces



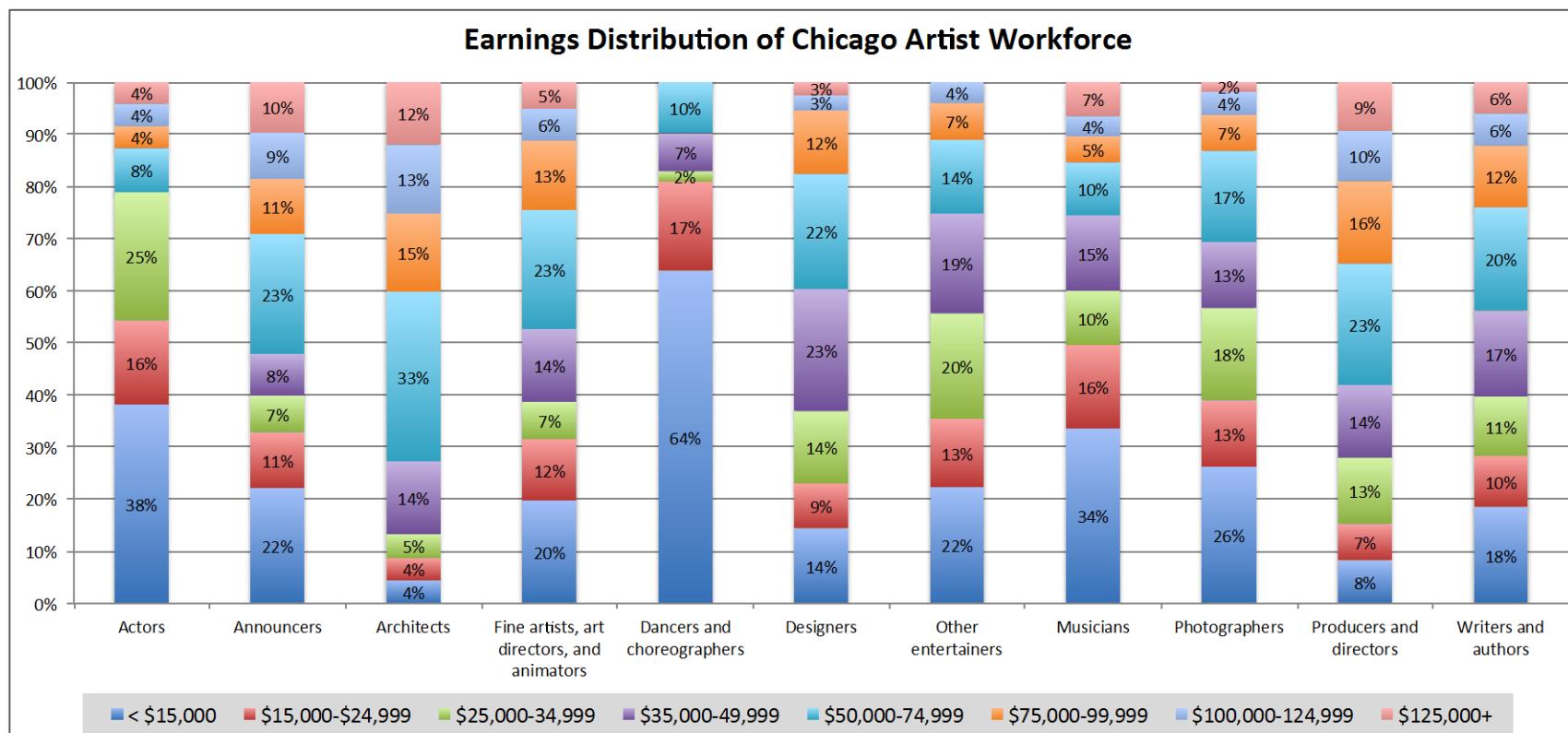
Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01W

³⁹ See NEA's calculations: <http://arts.gov/artistic-fields/research-analysis/data-profiles/data-profile-1/sample-findings>

Figure 14: Distribution of Chicago's Artist Labor Force across Sectors, by occupation

Source data: U.S. Census Bureau, 2006-2010 American Community Survey

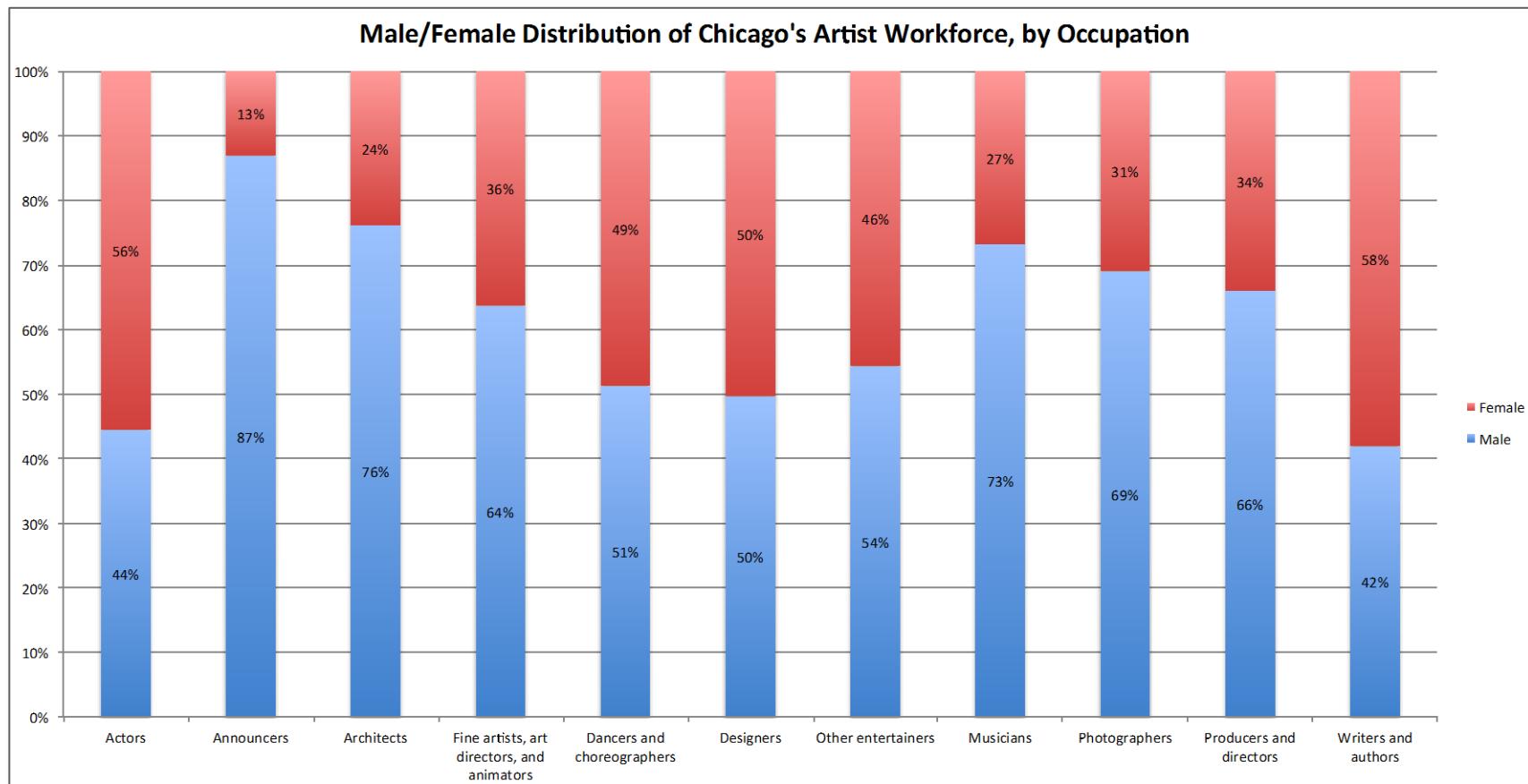
- Over half of Chicago's Announcers, Architects, Designers, Other entertainers, Producers and Directors are in the for-profit sector.
- A relatively high portion of Chicago's Musicians and Photographers are self-employed, underscoring the often short-term, project-based nature of these artistic professions.
- Almost one-third of Chicago's actors, dancers/choreographers, and musicians are in the non-profit sector.

Figure 15: Earnings Distribution of Chicago's Artist Workforce, by occupation

Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL11W

- Over 50 percent of Dancers/Choreographers (90 percent), Actors (79 percent), Other entertainers (75 percent), Musicians (74 percent), Photographers (69 percent), Designers (60 percent), Writers/Authors (56 percent) and Fine Artists (53 percent) make \$49,999 or less annually; Chicago's median household income is \$47,371.⁴⁰
 - 48 percent of Announcers, 42 percent of Producers and only 27 percent of Architects make \$49,999 or less per year.
- Dancers/Choreographers are the most likely (64 percent) to earn less than \$15,000 per year. Although other artist occupations also have a small portion at high earnings levels (long tail or superstar effect in economics), the data estimate that no or practically no dancer/choreographer in the Chicago workforce earns more than \$75,000 annually.

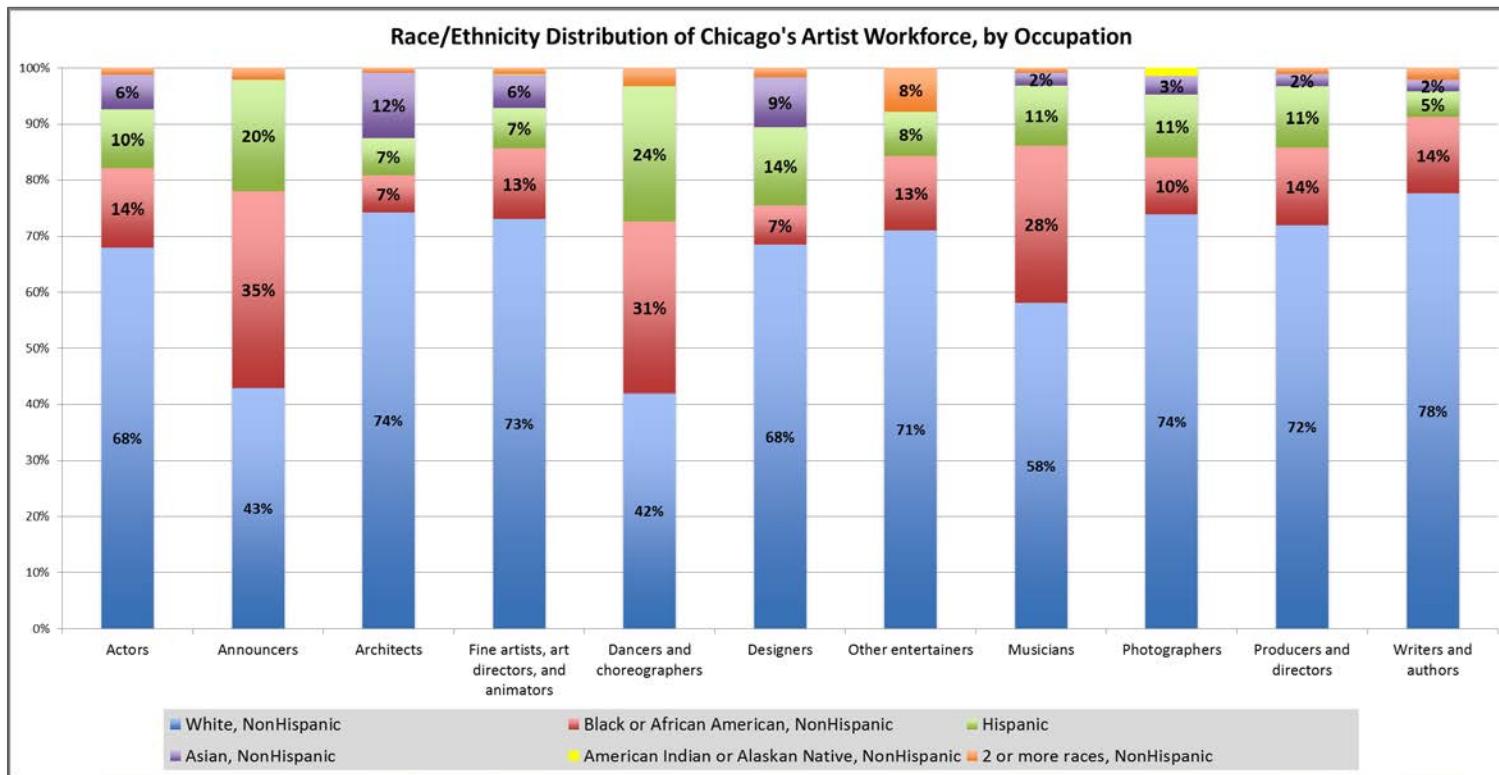
⁴⁰ US Census Bureau, <http://quickfacts.census.gov/qfd/states/17/1714000.html> (accessed July 24, 2013)

Figure 16: Male/Female Distribution of Chicago's Artist Workforce, by occupation

Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01W

- 59 percent of Chicago's artist labor force is male. Males predominate as announcers (87 percent), architects (76 percent) and musicians (73 percent).
 - 48.6 percent of Chicago's total population is male and 51.4 percent is female⁴¹.
- Women represent larger portions of writers/authors (58 percent) and actors (56 percent).
- There is the highest degree of gender parity among groups of designers, dancers and choreographers, and other entertainers.

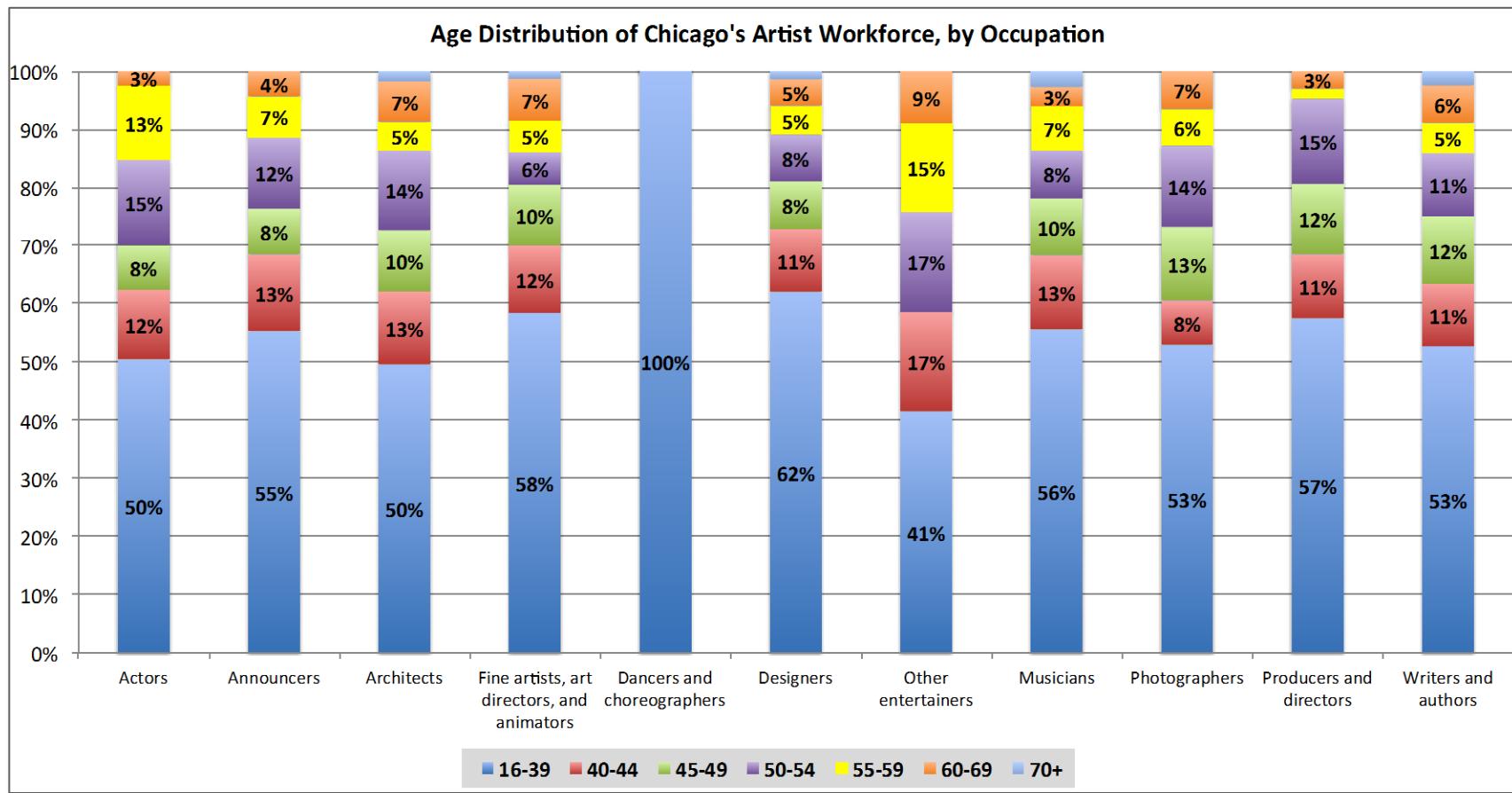
⁴¹ Source: U.S. Census Bureau, 2007-2011 American Community Survey

Figure 17: Race/Ethnicity Distribution of Chicago's Artist Workforce, by occupation

Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL01W

- In total, 74 percent of Chicago's artist workforce is White (Non-Hispanic); 9 percent Black or African American (Non-Hispanic); 9 percent Hispanic; 6 percent Asian (Non-Hispanic).
 - Chicago's total population is 32 percent White (Non-Hispanic); 33 percent Black or African American (Non-Hispanic); 28 percent Hispanic; 5 percent Asian (Non-Hispanic).⁴² Chicago's artist workforce is less diverse, in terms of race and ethnicity, than its total population.
- Announcers, Dancers/Choreographers, and Musicians are more racially/ethnically diverse than other artist occupations in Chicago.
- Dancers/Choreographers have the largest portion of Hispanic artists (36 percent), while Musicians have a proportionately large population of Black or African American artists (26 percent).

⁴² Source: U.S. Census Bureau, 2007-2011 American Community Survey

Figure 18: Age Distribution of Chicago's Artist Workforce, by occupation

Source data: U.S. Census Bureau, 2006-2010 American Community Survey, EEO-ALL12W

- The majority (57 percent) of Chicago's artist workforce is aged 16-39; 31 percent are between 40-54; and 11 percent are aged 55 or older.
- Almost all of Chicago's employed dancers and choreographers are estimated to be aged 39 or younger.

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TECHNICAL APPENDIX

SELECT CULTURAL INDUSTRIES USING 2007 NAICS CODES

Camera and Photographic Supplies Stores	44313
Musical Instrument and Supplies Stores	45114
Art Dealers	45392
Newspaper Publishers	51111
Periodical Publishers	51112
Book Publishers	51113
Other Publishers	51119
Motion Picture and Video Production	51211
Motion Picture and Video Exhibition	51213
Postproduction Services and Other Motion Picture and Video Industries	51219
Music Publishers	51223
Sound Recording Studios	51224
Libraries and Archives	51912
Architectural Services	54131
Interior Design Services	54141
Industrial Design Services	54142
Graphic Design Services	54143
Other Specialized Design Services	54149
Advertising Agencies	54181
Photographic Services	54192
Fine Arts Schools	61161
Theater Companies and Dinner Theaters	71111
Dance Companies	71112
Musical Groups and Artists	71113
Other Performing Arts Companies	71119
Promoters of Performing Arts, Sports, and Similar Events with Facilities	71131
Promoters of Performing Arts, Sports, and Similar Events without Facilities	71132
Independent Artists, Writers, and Performers	71151
Museums	71211
Historical Sites	71212
Zoos and Botanical Gardens	71213

“CREATIVE WORKERS” OCCUPATIONS

- Accountants and auditors 0800 (SOC 13-2011)
- Actors 2700 (SOC 27-2011)
- Actuaries 1200 (SOC 15-2011)
- Advertising and promotions managers 0040 (SOC 11-2011)
- Advertising sales agents 4800 (SOC 41-3011)
- Aerospace engineers 1320 (SOC 17-2011)
- Agricultural and food scientists 1600 (SOC 19-1010)
- Announcers 2800 (SOC 27-3010)
- Architects, except naval 1300 (SOC 17-1010)
- Archivists, curators, and museum technicians 2400 (SOC 25-4010)
- Artists and related workers 2600 (SOC 27-1010)
- Astronomers and physicists 1700 (SOC 19-2010)
- Athletes, coaches, umpires, and related workers 2720 (SOC 27-2020)
- Atmospheric and space scientists 1710 (SOC 19-2021)
- Biological scientists 1610 (SOC 19-1020)
- Biomedical and agricultural engineers 1340 (SOC 17-20XX)
- Broadcast and sound engineering technicians and radio operators, and media and communication equipment workers, all other 2900 (SOC 27-40XX)
- Chemical engineers 1350 (SOC 17-2041)
- Chemists and materials scientists 1720 (SOC 19-2030)
- Chief executives and legislators 0010 (SOC 11-10XX)
- Civil engineers 1360 (SOC 17-2051)
- Compensation and benefits managers 0135 (SOC 11-3111)
- Computer and information research scientists 1005 (SOC 15-1111)
- Computer hardware engineers 1400 (SOC 17-2061)
- Computer network architects 1106 (SOC 15-1143)
- Computer occupations, all other 1107 (SOC 15-1199)
- Computer programmers 1010 (SOC 15-1131)
- Computer support specialists 1050 (SOC 15-1150)
- Computer systems analysts 1006 (SOC 15-1121)
- Conservation scientists and foresters 1640 (SOC 19-1030)
- Dancers and choreographers 2740 (SOC 27-2030)
- Database administrators 1060 (SOC 15-1141)
- Designers 2630 (SOC 27-1020)
- Door-to-door sales workers, news and street vendors, and related workers 4950 (SOC 41-9091)
- Drafters 1540 (SOC 17-3010)

- Economists 1800 (SOC 19-3011)
- Editors 2830 (SOC 27-3041)
- Electrical and electronics engineers 1410 (SOC 17-2070)
- Engineering technicians, except drafters 1550 (SOC 17-3020)
- Entertainers and performers, sports and related workers, all other 2760 (SOC 27-2099)
- Environmental engineers 1420 (SOC 17-2081)
- Environmental scientists and geoscientists 1740 (SOC 19-2040)
- Financial managers 0120 (SOC 11-3031)
- First-line supervisors of non-retail sales workers 4710 (SOC 41-1012)
- First-line supervisors of retail sales workers 4700 (SOC 41-1011)
- Fundraisers 0726 (SOC 13-1131)
- General and operations managers 0020 (SOC 11-1021)
- Human resources managers 0136 (SOC 11-3121)
- Industrial engineers, including health and safety 1430 (SOC 17-2110)
- Industrial production managers 0140 (SOC 11-3051)
- Information security analysts 1007 (SOC 15-1122)
- Insurance sales agents 4810 (SOC 41-3021)
- Lawyers, and judges, magistrates, and other judicial workers 2100 (SOC 23-10XX)
- Librarians 2430 (SOC 25-4021)
- Library technicians 2440 (SOC 25-4031)
- Marine engineers and naval architects 1440 (SOC 17-2121)
- Market research analysts and marketing specialists 0735 (SOC 13-1161)
- Marketing and sales managers 0050 (SOC 11-2020)
- Materials engineers 1450 (SOC 17-2131)
- Mechanical engineers 1460 (SOC 17-2141)
- Medical scientists, and life scientists, all other 1650 (SOC 19-10XX)
- Meeting, convention, and event planners 0725 (SOC 13-1121)
- Miscellaneous engineers, including nuclear engineers 1530 (SOC 17-21YY)
- Miscellaneous mathematical science occupations, including mathematicians and statisticians 1240 (SOC 15-20XX)
- Miscellaneous media and communication workers 2860 (SOC 27-3090)
- Miscellaneous social scientists, including survey researchers and sociologists 1860 (SOC 19-30XX)
- Models, demonstrators, and product promoters 4900 (SOC 41-9010)
- Musicians, singers, and related workers 2750 (SOC 27-2040)
- Network and computer systems administrators 1105 (SOC 15-1142)
- News analysts, reporters and correspondents 2810 (SOC 27-3020)
- Operations research analysts 1220 (SOC 15-2031)

- Petroleum, mining and geological engineers, including mining safety engineers 1520 (SOC 17-21XX)
- Photographers 2910 (SOC 27-4021)
- Physical scientists, all other 1760 (SOC 19-2099)
- Postsecondary teachers 2200 (SOC 25-1000)
- Producers and directors 2710 (SOC 27-2012)
- Psychologists 1820 (SOC 19-3030)
- Public relations and fundraising managers 0060 (SOC 11-2031)
- Public relations specialists 2825 (SOC 27-3031)
- Purchasing managers 0150 (SOC 11-3061)
- Real estate brokers and sales agents 4920 (SOC 41-9020)
- Sales engineers 4930 (SOC 41-9031)
- Sales representatives, services, all other 4840 (SOC 41-3099)
- Sales representatives, wholesale and manufacturing 4850 (SOC 41-4010)
- Securities, commodities, and financial services sales agents 4820 (SOC 41-3031)
- Software developers, applications and systems software 1020 (SOC 15-113X)
- Surveying and mapping technicians 1560 (SOC 17-3031)
- Surveyors, cartographers, and photogrammetrists 1310 (SOC 17-1020)
- Technical writers 2840 (SOC 27-3042)
- Telemarketers 4940 (SOC 41-9041)
- Television, video, and motion picture camera operators and editors 2920 (SOC 27-4030)
- Training and development managers 0137 (SOC 11-3131)
- Transportation, storage, and distribution managers 0160 (SOC 11-3071)
- Travel agents 4830 (SOC 41-3041)
- Urban and regional planners 1840 (SOC 19-3051)
- Web developers 1030 (SOC 15-1134)
- Writers and authors 2850 (SOC 27-3043)
- Chefs and head cooks 4000 (SOC 35-1011)⁴³

MARGINS OF ERROR

All estimates have margins of error that are not explicitly reported in this document. MEs are not included here given the nature of this report to provide indicators on the creative economy; more detailed analyses should consider MEs more closely. All MEs are publicly available for data sources cited.

⁴³ Wojan and McGranahan did not include Chefs and Head Cooks in their analyses, but I opted to include this occupation given Chicago's particular profile in culinary arts. Chefs and Head cooks comprise 0.37% of Chicago's labor force and minimally affect aggregate analyses.

GEOGRAPHY

For PUMS (Public Use Microdata Sample) data, it is necessary to select which PUMA comprise each city. For most cities in the analyses, PUMAs correspond with the city's geographic boundaries. For those cities where PUMAs did not align with the city's geographic boundaries, I used the [Missouri Census Data Center Geocorr](#) concordance data, as recommended by the US Census Bureau, to determine the portion of select PUMA that lie within city limits. This method assumes that the population living within PUMAs that are less than 100% within the city limits is evenly distributed across the geography.

SELECTION OF COMPARISON CITIES

The cities used for comparative analyses were selected on the combined basis of total population size, the use of the city as a comparison to Chicago in other arts-related reports, the city's public profile including a richness of arts-related activity, and Arts Alliance Illinois' use of the city for comparative understanding.

SAMPLE OF REGIONAL STUDIES ON CREATIVE ECONOMY/INDUSTRIES

- Boston: <http://unitus.org/FULL/BostonCreativeEconomy.pdf>
- San Antonio:
http://www.sahearts.com/sites/sahearts.com/Creative_Industry_Report_2011%281%29.pdf
- Colorado:
http://www.doleta.gov/performance/results/AnnualReports/2010_economic_reports/co_economic_report_py2010creative_industries.pdf
- North Carolina:
http://www.ncarts.org/elements/docs/NCCreativeIndustryEconomicContributionStudy_FullReport.pdf