# THE JOBS IN **NEW ENGLAND'S CREATIVE ECONOMY** AND WHY THEY MATTER

Produced for the New England Foundation for the Arts
By the Economic and Public Policy Research Group of the UMass Donahue Institute

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## Table of Contents


| | |
|---|---|
| Table of Figures | 3 |
| List of Tables | 4 |
| About the Findings | 6 |
| History and Contextualization of Creative Economy Research | 10 |
| About the Report | 14 |
| Definitions | 18 |
| Summary of Findings | 22 |
| Snapshot of the Current State of New England's Creative Economy | 22 |
| The Current Creative Economy | 26 |
| Creative Enterprises | 27 |
| Creative Economy Industry Groups | 32 |
| Creative Nonemployer Establishments | 36 |
| Geographic Analysis of Creative Economy Enterprises | 38 |
| Change of Creative Economy Over Time | 43 |
| Industries Employing Creative Workers | 51 |
| The Change of the Creative Economy over Time | 56 |
| Change in Creative Enterprise Payroll Employment Since 2007 | 57 |
| Industries That Comprise the Creative Economy | 60 |
| Change in Creative Enterprise Employment by Industry Group, 2007-2015 | 63 |
| Growing Occupations in New England, 2007 – 2015 | 70 |
| Long-Term Trends in the Creative Economy, 2000 through 2015 | 72 |
| Demographic Characteristics | 79 |
| Creatives Count Survey: Worker Resources and Needs | 83 |
| Methodology | 98 |
| Data for Creative Enterprise Employees and Establishments | 98 |
| Data for Nonprofit Organizations | 100 |
| Count and Employment Estimates | 100 |
| Data for Sole Proprietorships and Self-Employed Workers | 101 |
| Data for Occupations | 102 |
| Comparison of Data Source Choices on Employment Data Counts | 102 |
| Data for Geographical Distribution of Establishments | 104 |
| Data on Individuals | 104 |
| Acknowledgements | 108 |
| References and Related Reading | 110 |
| Lessons Learned & Advice for Future Researchers | 111 |
| Appendix A - Creative Economy Profile Detail, New England and the United States, 2007-2015 | 117 |
| Appendix B - Creative Economy in the New England States | 146 |
| Appendix C - Geographic Analysis of Creative Economy Enterprises, 2014 | 192 |
| Appendix D - Methodology: Creative Enterprises, Industry Codes | 194 |
| Appendix E - Methodology: Creative and Artistic Occupations, Occupational Codes | 206 |

## Table of Figures


Figure 1: Relationship of Study Components 15
Figure 2: The Relationship Between Creative Enterprises and Creative Occupations 16
Figure 3: Focus of Section on Creative Enterprises 26
Figure 4: Creative Economy Payroll Employment and Establishments by State's Share of New England Total, 2015 29
Figure 5: New England Creative Economy Establishment Counts By Industry Group, 2015 32
Figure 6: Top 10 New England Towns by Number of Creative Enterprises 39
Figure 7: Creative Enterprises per 1,000 Residents 40
Figure 8: Creative Workforce By Personal Income, 2014 50
Figure 9: Creative Workforce by Household Income, 2014 50
Figure 10: Creative Workforce By Employer Type, 2014 55
Figure 11: Absolute Change in the Payroll Employment of Creative Sectors Compared to Other Industries with Embedded Creative Sectors Removed, 2007–2015 62
Figure 12: Change in Creative Payroll Employment by Industry Group in New England and the U.S., 2007 and 2015 66
Figure 13: Share of Total Creative Payroll Employment by Industry Group in New England, 2007 and 2015 67
Figure 14: New England Creative Enterprise Payroll Employment Compared to Overall Payroll Employment, 2000-2015 72
Figure 15: United States Creative Enterprise Payroll Employment Compared to Overall Payroll Employment, 2000-2015 73
Figure 16: Change in Creative Employment Compared to Independent Artists, Writers, and Performer Nonemployers, 2001-2014 74
Figure 17: Independent Artists, Writers and Performers Nonemployer Establishments in the New England States, 2001-2014 76
Figure 18: Independent Artists, Writers and Performers Nonemployer Establishments in New England and the United States, 2001-2014 77
Figure 20: Creative Workforce by Educational Attainment, 2014 82
Figure 21: Creatives Count Educational Attainment, 2016 83
Figure 22: Place of Residence of Survey Respondents, 2016 85
Figure 23: Groups Served by Survey Respondents, 2016 85
Figure 24: Relationship of Occupational Groupings of Demographic Analysis 105

## List of Tables

Graphic 1: Total Creative Economy Employment and Establishments, Self-employed Creatives from 2014 and Payroll from 2015 28
Table 1: Creative Economy Payroll Employment By Industry Group 2015 33
Table 2: Top Ten Industry Sectors By Payroll Employment in New England and United States, 2015 34
Table 3: Estimate of the Number and Employment of Creative Nonprofits with 2015 Revenues in New England States 36
Table 4: Creative Nonemployers by Creative Industry Group, 2014 37
Table 5: Top 30 New England Cities by Number of Creative Enterprises Per Capita, 2016 41
Graphic 2A: New England Creative Payroll Occupations (2015) and Creative Nonemployers (2014) 42
Graphic 2B: Payroll Occupational Location Quotients by State and Region, 2015 42
Table 6: Top Ten Creative Workforce Occupations in New England and the United States Ranked by Payroll Employment, 2015 44
Table 7: Top Ten Payroll Creative Workforce Occupations by Location Quotient in New England, 2015 45
Table 8: Top Ten Self-Employed Occupations, 2016 46
Table 9: Top Ten Payroll Employment Occupations, 2016 46
Table 10: Top Five Artist Occupations for New England and Its States, 2014 47
Table 11: Artist Occupation Location Quotients for New England and Its States, 2014 48
Table 12: Creative Workforce by Weekly Hours Worked, 2014 49
Table 13: Top Ten Industries That Employ Creative Workers In New England The United States, 2015 52
Table 14: Creatives Count Survey - Top Ten Industries Employing Creative Workers, 2016 52
Table 15: Share Of Income By Source, 2016 54
Table 16: Creative Enterprise Employment Change from 2007 Summary, Self-Employed Creatives to 2014 and Payroll Employment to 2015 56
Table 17: Creative Payroll Employment in New England, Its States, and the U.S., 2007 and 2015 58
Table 18: Creative Payroll Employment Location Quotient in New England, Its States, and the U.S., 2007 and 2015 58
Table 19: Creative Economy Employment within Two-Digit Industry Sectors, 2007 and 2015 61
Table 20: Absolute Change in the Payroll Employment of Creative Sectors Compared to Other Industries with Embedded Creative Sectors Removed, 2007–2015 63
Graphic 3: Change in Creative Employment by Industry Group - Payroll and Nonemployer 2007 and 2015 65
Table 21: Top Ten Creative Industry Sectors by Employment in New England in 2007 and 2015 69
Table 22: Creative Occupations with Growth in New England, 2007-2015 71
Table 23: Creative Workforce by Age, 2014 80

Table 24: Creative Workforce by Race, 2014 80
Table 25: Location of Primary Workspace of Survey Respondents by State, 2016 86
Table 26: Ownership Type of Primary Workspace of Survey Respondents by State, 2016 87
Table 27: Location of Primary Workspace of Survey Respondents by Discipline, 2016 88
Table 28: Ownership Type of Primary Workspace of Survey Respondents by Discipline,2016 89
Table 29: Expenditure Categories of Survey Respondents by Share of Total, 2016 90
Table 30: Survey Respondents' Top 5 Resources of Importance for Career Advancement – Rank by State Including Ties, 2016 92
Table 31: Survey Respondents' Top 5 Resources of Importance for Career Advancement – Rank by Discipline Including Ties, 2016 93
Table 32: Survey Respondents' Top 5 Resources of Importance for Career Advancement – Rank by State Including Ties, 2016 94
Table 33: Survey Respondents' Top 5 Unmet Needs – Rank by Discipline Including Ties, 2016 95
Table 34: Residence after College of Survey Respondents Graduating in New England, 2016 96
Table 35: State of Current Residence and State of College Graduation of Survey Respondents, 2016 96
Table 36: Creative Employment Table from Page 6 of *The Creative Economy: A New Definition* 103
Table 37: Recreation of the Creative Employment Table from Page 6 of *Creative Economy: A New Definition* Using This Study's Data Sources 103

# About The Findings

At the New England Foundation for the Arts (NEFA), one of our missions is to strengthen the region's creative economy through research that informs public policy. That is why we partnered with the Economic and Public Policy Research group of the UMass Donahue Institute (UMDI) to answer a few important questions. What are New England's creative enterprises? Who are New England's creative workers? How do they overlap? How do they vary by state and what role are they playing in the overall economy? By finding data on and accounting for creative sector employment, income, demographics, and socioeconomic attributes, this report aims to provide a full story of creative work and workers in New England.

What we know is that the creative sector is not just creative enterprises like museums and magazines, or artists such as musicians, painters, and dancers. It includes many industry sectors and occupations that contribute to the economic vitality and cultural attractiveness of a place. Creative enterprises employ workers with all kinds of expertise, and creative economy workers are employed in nearly every sector that powers New England, from the arts, to education, to technology and science, to major global brands. They create what we listen to, watch, read, wear and buy. And they play a key role in determining where we want to live, work, and go on vacation.

There are nearly 310,000 people employed by the creative economy of New England—working within an organization or freelancing—who combined earn nearly $17 billion a year. This group is a more prominent part of New England's economy than the national average, and they comprise nearly as many as those who work in either government or construction in the region.

How are these enterprises and workers faring? Those in the creative core industries and occupations, such as theater and photography, are in a segment that is stable or increasing. But the rest are being impacted by global trends in technology and changing consumer habits.

For example, as purchasing moves online, creative enterprises face more competition and less connection to the buyer. Creative workers become even more entrepreneurial—often because they have no choice—which means they are living job to job, with fluctuating wages, and without much of a safety net.

The data about the sector also show a high level of education, but a lack of racial diversity and affordable places to live or work in urban areas.

These trends present a great opportunity for new ideas, policies and business models. The ability of local artists and creative workers to interact with and offer their products within their communities is fragile and maintaining such markets requires purposeful action.

In New England, work life varies across geography and discipline, each place and creative worker has different needs and access to different resources. Working together to grow the region's creative economy is a collective effort with the goal of strengthening New England's overall economy, attracting and retaining young people, and reinforcing New England as a thriving place to live and work.

**Our key takeaways:**

- » The creative economy - through creative enterprises and freelance work - employs over 310,000 people in New England, which puts it in about the middle of all sectors supporting regional jobs.
- » The share of creative employment and establishments (compared to other employment and establishments) is higher in New England than nationally. This is an important edge to maintain and cultivate as a New England asset when the region seeks to attract and retain people.
- » The presence of creative enterprises in New England's cities and towns tends to be concentrated in places with higher population and income levels.
- » A quarter of all creative workers and a third of artists are self-employed, whereas only 10 percent of New England's overall workforce is self-employed.
- » All sectors employ - and need - creative workers. People with creative occupations like writer and designer work everywhere, not just in the arts.
- » New England has an especially high concentration of artists compared to the U.S. with a 20 percent higher prevalence of artists in its employment base.
- » There is a strong need for small business-type services for those in the creative economy, especially given the rise of self-employment to compensate for payroll employment declines. But the system is interdependent; both larger enterprises and sole proprietors require support.
- » Some industries of the creative sector have grown since the recession (film, visual and performing arts, culture and preservation) - but employment increases are modest and need to keep up with economic and audience trends in the future.

Overall, this report builds upon our prior studies (*The Creative Economy Initiative: The Role of the Arts and Culture in New England's Economic Competitiveness in 2000* and *The Creative Economy: A New Definition in 2007*) as well as the real-time online community, CreativeGround, which we launched in 2014 to reflect the creative people and places at work in New England. CreativeGround serves as a tool to promote and connect creatives to each other and those who know that vibrant neighborhoods go hand-in-hand with a vibrant creative sector.

NEFA commissioned this report to assess the current scale and long-term trends of New England's creative economy. But there is more to be done. Our Creatives Count survey, launched for the first time to complement this third installment in the creative economy report series, suggests that creative workers spend over a quarter of their income on space, equipment, and materials for their work – an amount equal to their rent or mortgage payments. Their spending on supporting their work injects thousands of dollars into the local economy but also results in an average savings rate of six percent, leaving some creative workers' vulnerable to financial hardship.

When asked in the survey what resources are important for the advancement of their careers, creative workers top five responses were a mix of the expected and unique:

» The need for income from one's work

» The need for a market to sell the work

» Collaboration with others

» Affordable health care

» Affordable housing

The employment and workforce data this report provides will allow states and cities to craft investments, policies, and programs to reach the workers and objectives of concern. As this research is updated in the future, the results of these investments can be tracked.

For now, we hope you'll agree that this research shows how important arts and culture is in our economy. They're not just nice to have—they're essential to our region's competitive advantage.

Cathy Edwards

CATHY EDWARDS, Executive Director

D. Schneidman

DEE SCHNEIDMAN, Program Director, Research & Creative Economy

# History and Contextualization of Creative Economy Research

For almost 40 years, The New England Foundation for the Arts has played a leadership role in the national conversation around defining the creative economy, measuring its economic activity, and supporting the diverse organizations, individuals, and locations in which creative work takes place. This report is the most recent in a long series that have generated expanding and increasingly refined views of New England's creative economy. During this time, New England as a region, and NEFA as its regional arts organization, has led the nation in systematic research and data-driven policy discussions around arts and culture organizations, workers and the sub-regional clusters in which they congregate. After briefly discussing this regional research history, we identify several broad trends that have developed since the publication of NEFA's last report on the regional creative economy definition and employment in 2007.

In 1980, NEFA pioneered the assessment of artistic activity in New England with the publication of its report *The Arts and the New England Economy* (Wassall, 1980) based on a survey of 2,830 organizations across six states. During the 1980s, data collection remained challenging and relied on paper surveys mailed to organizations identified by state arts agencies in the region. Nevertheless, between 1978 and 1988, the number of organizations identified for surveying had grown to 3,154 (Wassall & DeNatale, 2006: 7). This research was among the first in the nation to identify the creative economy as an important driver of regional economic and cultural prosperity.

Building on nearly two decades of research, in 2000 NEFA worked with the New England Council to publish one of the first systematic definitions of the regional creative economy resulting in *The Creative Economy Initiative: The Role of the Arts and Culture in New England's Economic Competitiveness*. This work was path breaking in its recognition of the creative economy as a complex ecology comprised of commercial and non-profit organizations, creative workers, and the communities in which they seemed to cluster. At that time, the publication of Richard Florida's (2002) *The Rise of the Creative Class* was still two years away and the definition of placemaking (Markusen & Gadwa, 2010) was more

*Akwaaba Ensemble workshop*
*photo by Laura Chadwell*

than a decade away. Nevertheless, the fundamental ideas behind these two field-defining ideas were anticipated by this early NEFA-sponsored work.

In 2007, with the publication of *The Creative Economy: A New Definition*, NEFA again updated its definition of the creative economy to reflect changes in available data and growing nuance in defining the sector. The current study retains the industry and occupational definitions of the 2007 NEFA report while adding a New-England-wide artist survey to explore nuances in the occupations of individual of artists and creative workers. As such, this report continues the NEFA tradition of deepening and broadening our understanding of the regional creative economy.

Since the publication of NEFA's last report in 2007, there have been some developments in the broader economy and regional policy developments that bear mentioning as they may help explain some of the trends in the findings that follow. These include:

» The increasing impact of the internet and digital technology on the distribution and production of creative content;

» Film and television industry tax credits;

» Creative economy's mutually-reinforcing relationship with placemaking and tourism.

Since 2007, digital technology and the internet have continued to disrupt and transform the production and distribution of creative products. This broad economic trend may help explain the decline of employment in bookstores, music stores and other establishments that are particularly susceptible to disruption from digital distribution. However, not all occupations or industries are impacted equally by these changes. While sectors focused on the manufacturing and physical distribution of creative products have clearly experienced declines, those that deal in the creation of digital content (like film and television production, electronic game development, advertising and design) might benefit from these technological changes. Future research could explore the extent to which declines in some sectors driven by digitization are offset by increases in sectors that benefit from these same technologies.

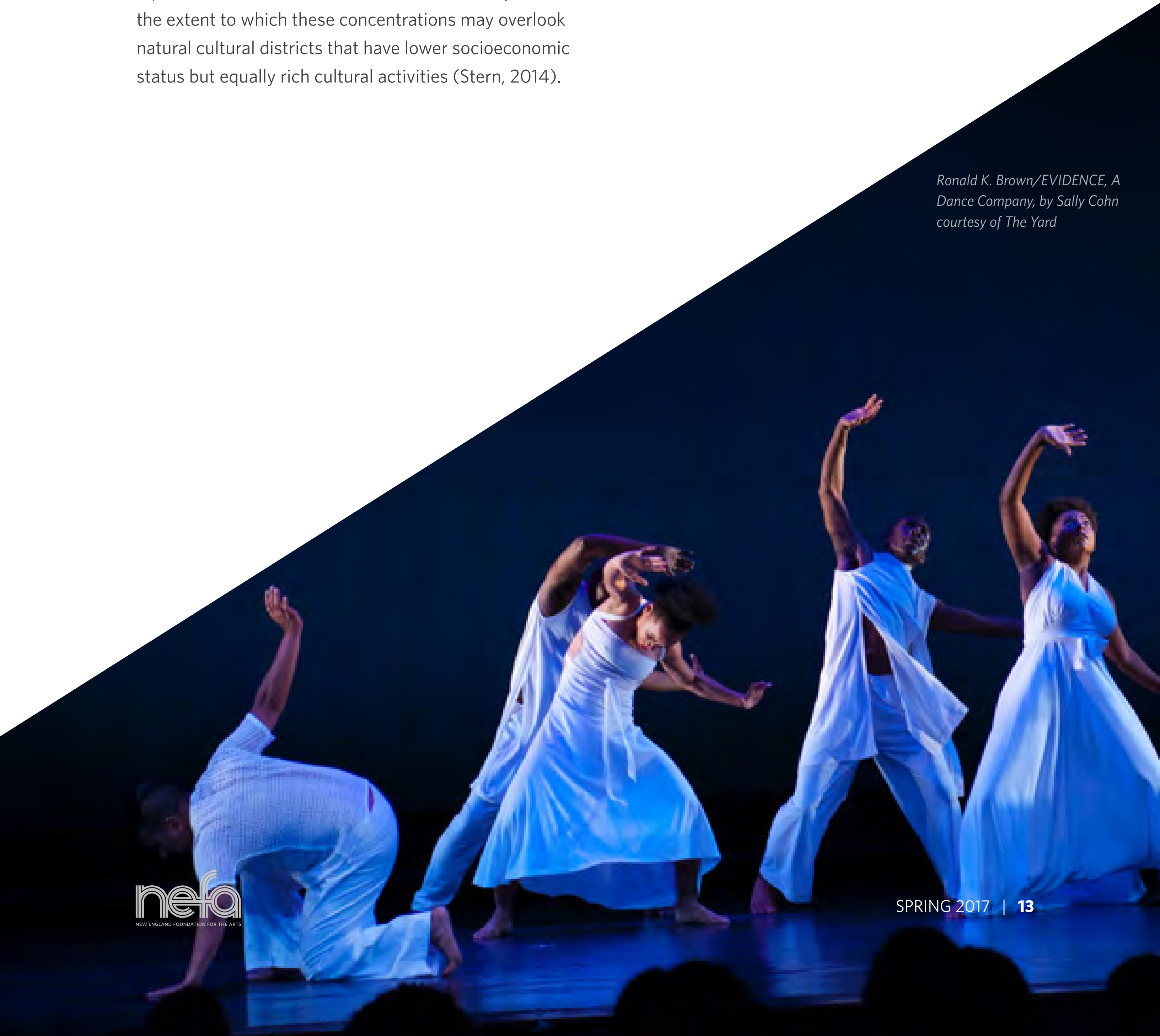
Another important regional and national development since the 2007 is the growth of regional incentive programs designed to stimulate local film and television production. In 2006, Massachusetts launched and incentive program that provides a 25 percent transferable and refundable tax credit for television shows and films produced in the state. Since that time, Rhode Island, Connecticut and Vermont also have developed incentives for this sector.

Although the net return on investment of these programs remain contested, they have clearly stimulated the growth of film industry employment and establishments in the region. In the results that follow, the location quotient for the film and television production shows that New England has more than its expected share of employment in this sector compared to the rest of the country. While it is not possible to draw a causal link between regional incentive programs and this relatively high location quotient, this correlation is worth noting and could be addressed in future research.

Although it has not received the same degree of policy-making attention, digital games have also emerged as an important sector of the regional creative economy since 2007. Like film and television production, this sector seems to benefit from digital production and distribution technology. Unfortunately, the current federal industry classification system makes detailed analysis of this and other emergent creative sectors particularly difficult.

The last trend that bears recognition is the way that public arts funding and local economic and community development initiatives have intersected over the last decade. Not surprisingly, NEFA's work has played a significant role in this development as well. In 2000, the publication of *The Creative Economy Initiative: The Role of the Arts and Culture in New England's Economic Competitiveness* identified an important link between arts and culture and regional economic competitiveness. This study in turn helped the Massachusetts Cultural Council refocus its funding activity and informed the design of the Adams Arts Program. Since 2007, this program alone has invested $12,945,685 in 452 grants to 188 different projects. Other states in the region have similar arts funding programs, many of which focus on placemaking and tourism as outcomes of interest.

In the results that follow, we see clustering of creative activity around locations with high levels of tourism, providing additional evidence of the importance of community and location in the clustering of creative workers and their connection with related creative industries like tourism, entertainment, dining, etc. The fact that some of these clusters may be dependent on the disposable income of tourists, or located in higher income communities, also raises questions about the equitable distribution of arts and culture activity and the extent to which these concentrations may overlook natural cultural districts that have lower socioeconomic status but equally rich cultural activities (Stern, 2014).



*Ronald K. Brown/EVIDENCE, A Dance Company, by Sally Cohn courtesy of The Yard*

# About the Report

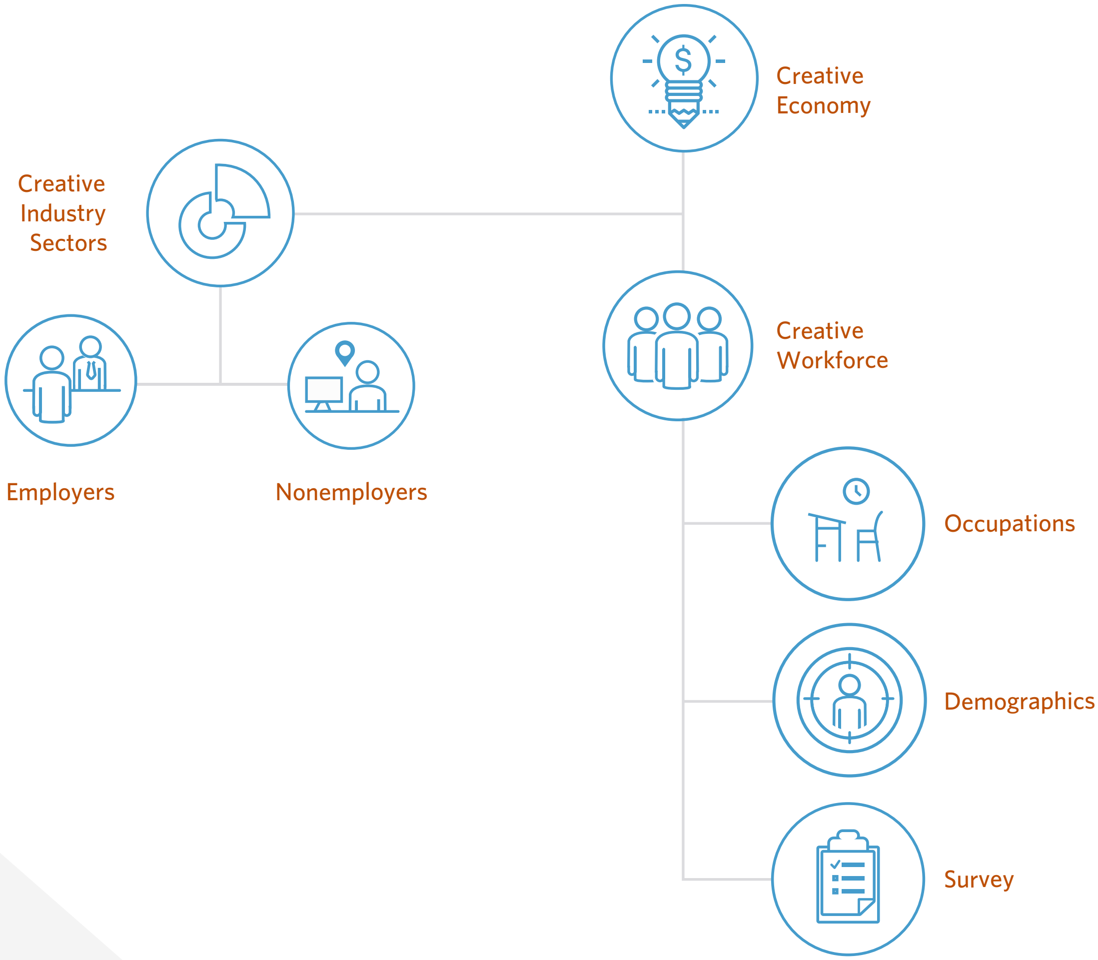
*The Jobs in New England's Creative Economy and Why They Matter* has the following sections:

- An examination of the current state of the creative economy of New England including enterprise and occupational employment, enterprise counts, and its geographical distribution.
- The change of the creative economy over time including an identification of important trends.
- An overview of the creative workforce of New England including demographic and other attributes from the U.S. Census and Creatives Count survey.
- Concluding sections including lessons learned and advice for future researchers, methodology, and appendices.

*The Jobs in the New England Creative Economy and Why They Matter*, commissioned by NEFA in 2017, set out a classification system for the creative economy that we retain in this report. It divides industry sectors and occupations into three categories based on the extent to which they "focus on the production and distribution of cultural goods, services and intellectual property." Those sectors or occupations that, at a national level, have a categorical focus on cultural goods, services, and intellectual property are assigned to the creative core such as architecture, graphic design, and sound recording. Sectors and occupations without a categorical focus at the national level but have the possibility of it at a small geography are in the periphery such as leather product manufacturing that could be at an industrial scale or artisanal. An implied third category is all remaining firms and occupations that are not associated with the creative economy. This report and the 2007 report both focus only on the core of the creative economy, which, by definition, will only capture the activities that can be reliably attributed to the creative economy no matter the geography of interest.[1]

> *"Those sectors or occupations that, at a national level, have a categorical focus on cultural goods, services, and intellectual property are assigned to the creative core such as architecture, graphic design, and sound recording.*

[1] A list of the industries and occupations that are used in this report can be found in the appendix.

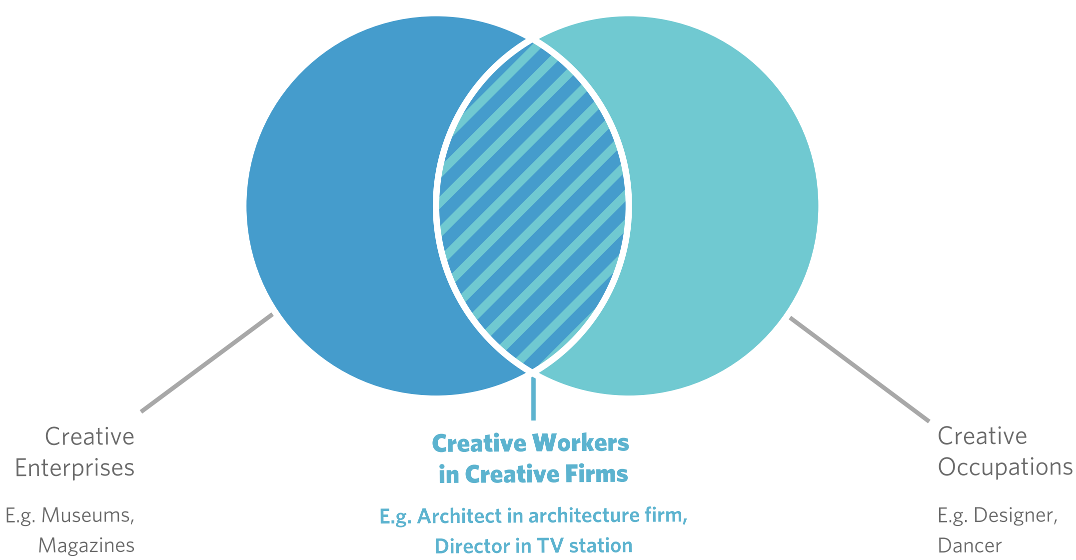

Creative Economy
Creative Industry Sectors
Employers
Nonemployers
Creative Workforce
Occupations
Demographics
Survey

Because the research questions tackled in this report involve both firms and workers, it was necessary to use multiple existing data sources, as well as conduct new primary data collection. When measuring the creative economy, we are focused on both ***place of work*** and ***type of work***, which includes enterprises and occupations that fall within the definition of the core creative economy. For example, creative enterprises include architecture firms or museums while examples of creative occupations are architects and curators.

> *"Creative enterprises employ many people in occupations that are not creative while conversely many creative occupations are inside firms that do not produce creative goods or services.*

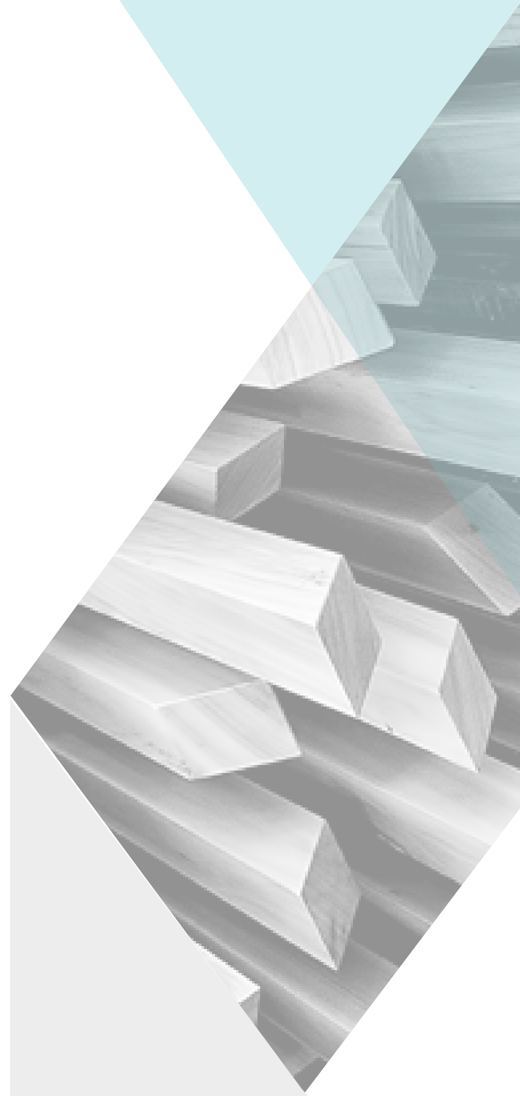
Creative enterprises employ many people in occupations that are not creative while conversely many creative occupations are inside firms that do not produce creative goods or services**.** For example, many creative enterprises employ receptionists while designers and writers can work in a number of different industry sectors. In some cases, these two groups overlap, resulting in creative workers who are employed at creative enterprises. These different relationships are better understood through an example. Anyone who works at a publisher is part of the creative economy, including the security guard at the front desk because his or her job depends on a creative product. Conversely, an editor who reviews technical documentation for a manufacturer is a creative worker because the nature of the job is creative, even though the primary business objective of the employer may not necessarily be "creative." Finally, an editor employed by a publisher is doing creative work at an employer that is also producing a creative product. Additionally, other creative workers are self-employed and pursuing their own creative goals. Many are both employee and independent worker.

**FIGURE 2** | The Relationship Between Creative Enterprises And Creative Occupations



When reviewing the information that follows, it is important to remember the relationships between the elements of the creative economy that are shown in Figure 2. The following pages include employment by enterprise and employment by occupation. These data overlap in the same way as the diagram in the figure: workers in creative occupations who are employed by creative enterprises will appear in both datasets. Because of this overlap, these two concepts cannot be summed together. **Readers should interpret creative enterprise employment as the number of jobs of all occupations that are inside firms producing creative goods and services, i.e. jobs dependent on the revenues and business health of creative enterprises. Creative occupation employment should be seen as the demand for creative workers from all types of employers, i.e. the need for workers in creative fields across the overall economic landscape.**

Most of the place of work and type of work data discussed above is collected at the firm level and therefore only counts jobs at established businesses with paid employees. However, this data source excludes the many creative workers who work independently, i.e. the self-employed. Understanding these workers requires yet another data source. Finally, none of the employment or self-employment data describes the demographic characteristics, needs, and opinions of the people who do this work. For this information, the research relies on existing data from the U.S. Census Bureau and new data from Creatives Count, NEFA's online survey targeted at New England's creative workers. **Greater detail on all our data sources can be found in the methodology section of the report.**



# Definitions

This report makes use of a number of terms and categorizations of businesses and jobs. They are as follows:

- **Creative economy**: The creative economy is a subset of the overall economy that only includes those industry sectors and occupations with a categorical focus on the "production and distribution of cultural goods, services and intellectual property." This definition is taken from and is consistent with NEFA's prior creative economy work. More detail on the derivation and justification for this definition can be found in *The Creative Economy: A New Definition* from 2007, which is available on NEFA's website.

- **Enterprise:** An enterprise is an individual business, which may or may not have paid employees. For example, an architectural firm with dozens of employees or a self-employed architect are both one enterprise.

- **Industry group:** An industry group is a collection of similar industry sectors that reflects a common underlying product or service rather than a specific product or service as is the case in industry sectors. For example, the industry sectors of commercial lithographic printing, commercial screen printing, books printing, and trade-binding and related work are combined into the industry group "printing." Similarly, museums, historical sites, and other similar industry sectors are combined into "culture and preservation."In this report, most of the analysis of enterprises is done at the industry group level because the economic forces acting on each industry sector within an industry group are typically similar.

- **Industry sector:** An industry sector is the lowest level of classification used in this report for the categorization of enterprises. All enterprises that produce similar products or services are combined into one industry sector. Examples of industry sectors used in this report include music publishers, commercial lithographic printing, fine arts schools, and printing and writing paper merchant wholesalers.

- **Location quotient (LQ):** The measurement of the relative concentration of employment. An LQ greater than one implies that creative economy employment in an area is more prevalent as a percentage of all jobs than in the U.S. An LQ of less than one implies the opposite.

- **Nonemployer:** These are the subset of all enterprises that have no paid employees. In other words, the only person or people who work at these enterprises are the owners. The majority of nonemployer enterprises are self-employed individuals. While self-employed enterprises are only provided as a count of business establishments, throughout the report we also interpret each nonemployer establishment as one worker because they are mostly self-employed individuals. Insofar as there are nonemployer establishments with more than one owner – in a partnership for example – it would only result in an undercounting of workers. A nonemployer enterprise must earn at least $1,000 in a calendar year to be included in our data.

- **Occupation:** An occupation is the lowest level of classification used in this report for the categorization of jobs. All jobs that produce similar products or services are combined into one occupation. An occupation is the equivalent of an industry sector, but for jobs rather than enterprises. Examples of occupations used in this report include architects, historians, curators, actors, graphic designers, and photographers. This report focuses on payroll occupations though self-employed workers and occupational data from the U.S. Census are also discussed among the occupations where appropriate.

- **Payroll employment:** These are the jobs that are covered by the unemployment insurance system. They are what most people think of as a job. These workers typically receive a W-2 from their employers. Payroll employment is only found in enterprises with paid employees. Payroll employment covers over 95 percent of all jobs in the economy but does exclude self-employed workers. This exclusion is partially why this report includes nonemployers as a supplement to payroll employment.

It is critical to understand that **the creative economy or "the creative sector" is not a sector or an industry by the definitions of the federal government.** The federal government, specifically the U.S. Census Bureau, maintains the North American Industry Classification System, widely known simply as the NAICS codes. Its classification system is based on production and therefore groups establishments together into industry sectors based on the processes they use to produce goods and services.[2] This system does combine industry sectors into larger groups but always retains its production focus. Because studies of the creative economy seek to divide segments of the economy by the nature of the product rather than the production process, there is not a NAICS code available for "the creative industry sector." Instead, **researchers must comb all the available industry sectors and pull out those that fit the organizing framework of their study, in this case sectors that produce goods and services that are cultural in nature.** The individual creative industry sectors combined for analysis in this study are drawn from a diverse array of industries:

- **Manufacturing**
  - E.g. books printing, pottery and glass manu facturing, and jewelry manufacturing
- **Wholesale Trade**
  - Jewelry, precious metals, and book wholesalers
- **Retail Trade**
  - Art dealers and book stores
- **Information**
  - Newspaper publishers, movie theaters, music publishers, and internet publishing
- **Real Estate and Rental and Leasing**
  - Video and disc rental
- **Professional, Scientific, and Technical Services**
  - Architecture services, interior design, ad agencies, and commercial photography
- **Educational Services**
  - Fine arts schools
- **Arts, Entertainment, and Recreation**
  - Theater and dance companies, museums, and historical sites
- **Other Services (except Public Administration)**
  - Photofinishing[3]

[2] NAICS FAQS: https://www.census.gov/eos/www/naics/faqs/faqs.html#q1

[3] A full list of industry sectors used in the study and the aggregate sectors from which they are drawn is available in the appendix.

For example, here is the classification hierarchy of an industry sector used in this study from most aggregated down to the individual industry sector:

- **Information**
    - Motion Picture and Sound Recording Industries
        - Sound Recording Industries
            - **Music Publishers** (industry sector meeting creative economy definition)

By removing the establishment counts and employment of Music Publishers from the larger Information sector and moving them to our creative economy sector, we can now create an industry that the NAICS does not recognize but is useful for study and does not include double-counting and overlap with other segments of the economy.

*Angelique Kidjo*
*by Judy Sirota Rosenthal*

# Summary of Findings

## SNAPSHOT OF THE CURRENT STATE OF NEW ENGLAND'S CREATIVE ECONOMY

Across the six New England states there are 22,600 **creative establishments** employing 238,500 workers and paying more than $14.9 billion of wages and salaries. In addition, there are nearly 70,800 **creative nonemployers**, most of which are self-employed individuals. New England's creative economy employment compares favorably to that of other sectors, coming in the middle of the rankings of all sectors in the economy. Compared to 3.3 percent and 5.3 percent, at 3.4 percent of all jobs and 6.3 percent of all self-employed workers, the concentrations of creative economy employment in New England are higher than the national average indicating that the creative economy is a larger component of **New England's economic base** than that of the U.S. overall. In New England, the top three **creative industry groups** by employment are media, arts and electronics-related retail, and publishing.

The **communities in New England** with a large number of creative enterprises tend to be population centers or tourism and shopping hubs. Their above average per capita spending supports more arts-related retail and wholesale establishments such as art galleries, book stores, jewelry stores, and art dealers. In the case of the tourism centers, the higher spending is supported by out-of-town visitors who add greater demand for creative goods and services than local residents alone could support. On the other hand, it is the above average income of the local residents themselves that allows wealthy areas to support more creative businesses per person than the regional average.

There are 156,260 workers in **creative occupations** at New England's employers, some of whom are also counted in creative enterprise employment. These occupations only include workers that are performing work of great enough ongoing need to be hired and put on the payroll of New England's businesses. Creative occupations in New England are 2.2 percent of all payroll occupations compared with 2 percent nationally, reinforcing the finding that creative work is a more prominent piece of the economic picture in New England than the U.S. as a whole. The region's top payroll

*Lemonade Stand; Photo by Leonardo March* occupations are public relations specialists, librarians, and graphic designers. The **artist subset of creative workers** is also more concentrated in New England. Census data suggests that artists are 20 percent more prevalent in the region's employment base than the nation's.

Creative workers are much more likely to be **self-employed**. A quarter of all creative workers and a third of core artist occupations are self-employed compared to only 10 percent of all workers. According to the Creatives Count survey conducted for this study, their sources of income reflect their employment types. The survey respondents say that roughly one-third of their income comes from self-employed activities while nearly half comes from outside employment (i.e. wage and salary work where one receives a W-2).

Creative workers reveal the high value they place on their work through their spending patterns. The survey suggests that **creative workers spend** over a quarter of their income on space, equipment, and materials for their work – an amount equal to their rent or mortgage payments. Their spending on supporting their work injects thousands of dollars into the local economy but also results in an average savings rate of six percent, leaving some creative workers vulnerable to financial hardship.

When asked in the survey what resources are important for the **advancement of their careers**, creative workers top five responses were a mix of the expected and unique. While the need for income and markets to sell one's work would be important to workers in most fields, the importance of collaboration intuitively seems more applicable to creative workers than others. Likewise, while everyone would be concerned about housing and health care affordability, the unique patterns of work for creative workers can make these more critical issues. For example, 50 percent of creative workers reported using their home as their primary work space, so their home life and work life are intimately intertwined. Similarly, with many creative workers being self employed, issues of health care coverage and affordability would be of critical importance to this community.

## CHANGE OF THE CREATIVE ECONOMY OVER TIME

The story of the creative economy over the past decade has been mixed. Overall creative payroll employment has fallen nearly constantly for over a decade in both New England and the nation. However, the overall change hides significant differences among the components of the creative economy. Most of the job losses have been concentrated in the manufacturing, wholesale, and retail sectors of the creative economy, which are also among the largest in absolute terms, while those sectors that rely on an audience (e.g. artists, museums, theaters, etc.) have remained stable or have grown over time.

Since 2007, **payroll employment** growth occurred in three creative industry groups in New England—in motion picture and teleproduction; visual arts, music and other performing arts (e.g. independent artists, fine arts schools, and dance companies); and culture and preservation (e.g. museums and historical sites) — three industry groups that rely on an audience for their revenues. Combined, these three groups added 3,027 jobs from 2007 to 2015.

In contrast to the overall decrease in payroll jobs at creative enterprises, the numbers of **nonemployer (self employed) firms** in New England's creative economy have increased over time, adding on net nearly 2,400 businesses or 3.5 percent since 2007. Overall, this rate of growth is slightly higher than the rate of growth of all self-employed workers in the regional economy but slower than the national rate of self-employed growth in the creative economy (12.0 percent) over the same period. Independent artists, writers, and performers added the most self-employed establishments, adding more than 2,600 since 2007 (5.9 percent).

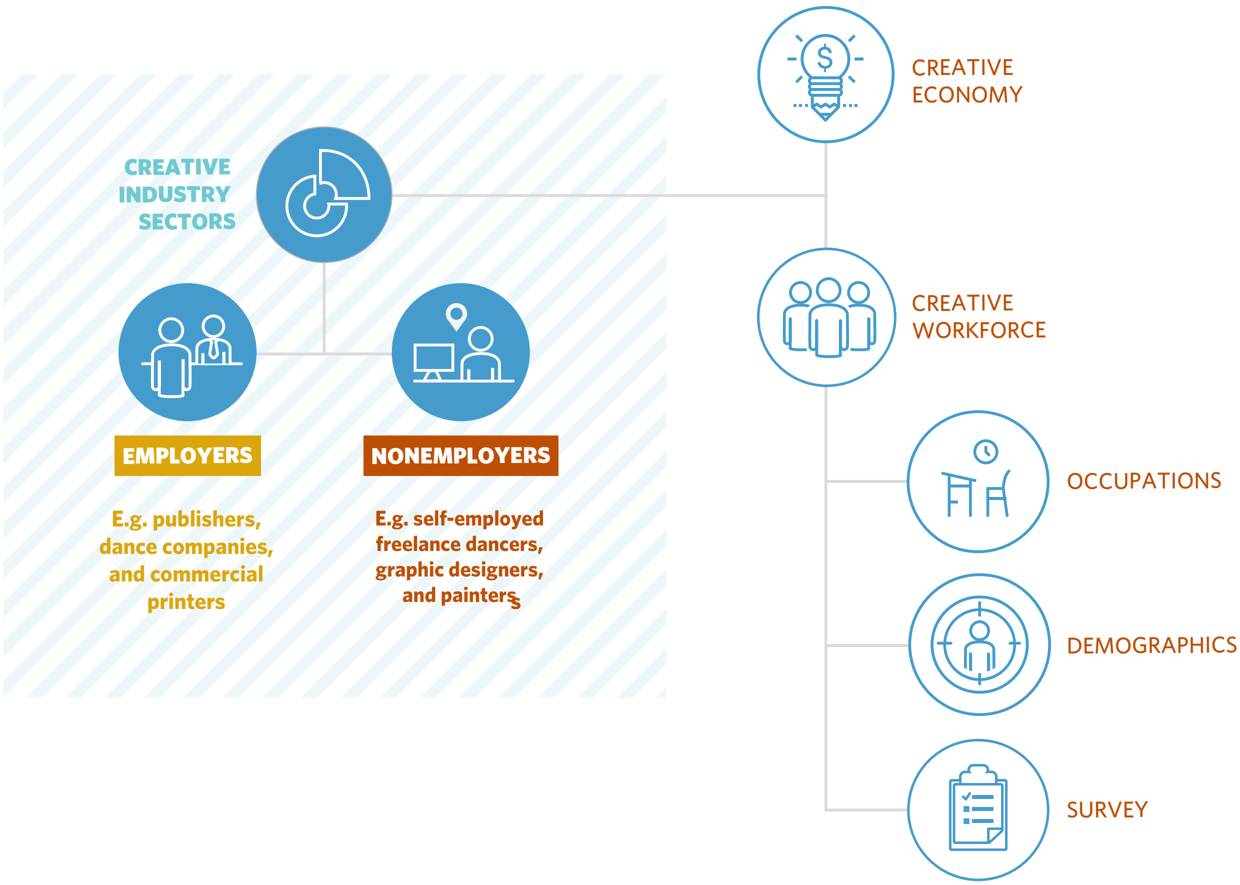
An examination of the **creative occupations** in New England confirms that since 2007 the core artistic occupations comprise the principal components of growth. Growing occupations include those related to motion picture and broadcast production; arts-related postsecondary educators; writers and authors; actors, producers, and directors; and musicians.

While we do see these growth areas in creative sector employment, and New England's total payroll employment has increased by 2.9 percent since 2000, payroll jobs at creative enterprises overall have declined by nearly 20 percent, representing over 50,000 jobs. Comparatively, the nation lost nearly 17 percent of its creative jobs during the same time. Until approximately 2010, New England's creative enterprise jobs roughly paralleled the overall employment trends in the broader economy. But after the end of the recession in 2010, while total employment continued to recover and grow, creative enterprise employment progressively declined.

Technological change has altered the way people consume, produce, and shop for creative goods and services in such a way that the economic "winners" and "losers" are often in different **creative industry sectors**. However, an obstacle to tracking these developments is the definition of the industry sectors themselves, which underlies all federal and state data gathering. These definitions have not evolved as quickly as the creative economy, and therefore are not yet granular enough to provide a suitable window into these shifting elements. The result is an undercounting of gains that should be attributed to the creative economy.

> The creative economy is a more prominent part of the New England economy than the national economy, but it is not insulated from national and global trends including recessions, technological advancement and changing consumer habits. As the way creative goods and services are produced, sold, and consumed has changed, manufacturing and printing firms along with wholesalers and retailers have felt the greatest negative impacts from the evolving market. Yet, these same changes have benefited the central core of artists and cultural preservation organizations that create and present art and artistic endeavors to an audience as new markets are created and the demand for creative goods and services is supported. From these facts, it is our assessment that the demand for creative goodas and services is stable, but the continued evolution of the way they are produced and consumed will create hardship and opportunity that will not fall equally on the various sectors, regions, and individuals who make up the creative economy.

# The Current Creative Economy

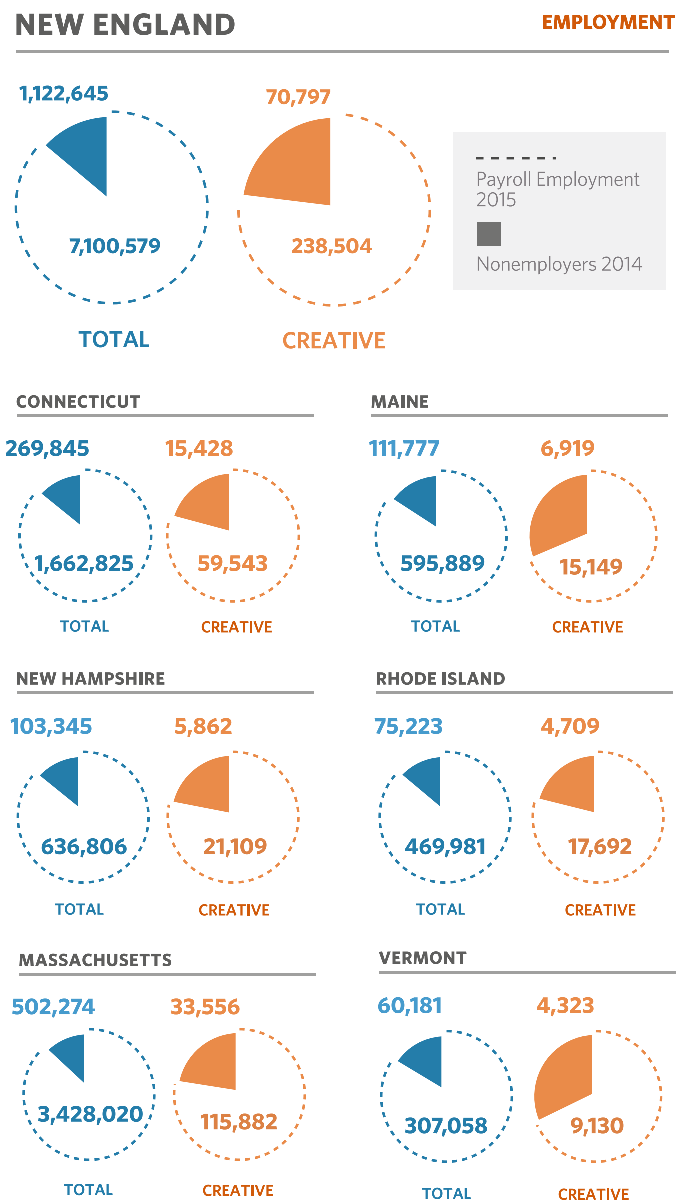


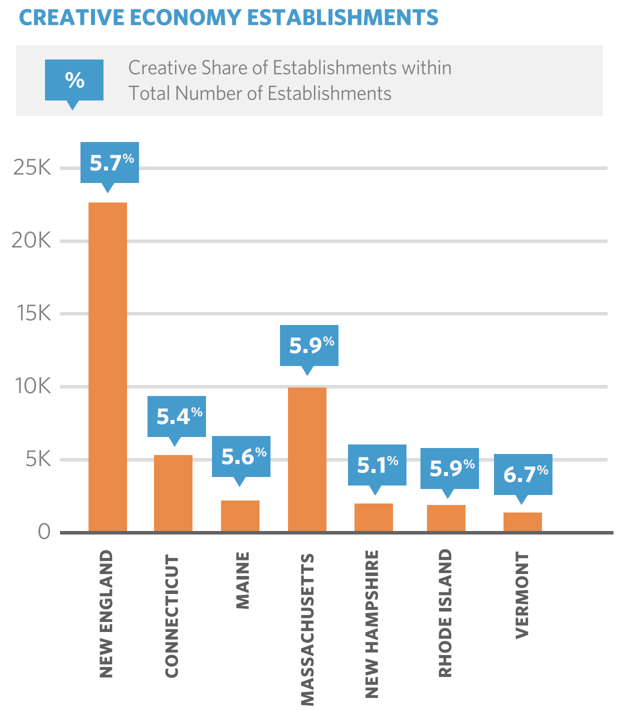
## CREATIVE ENTERPRISES

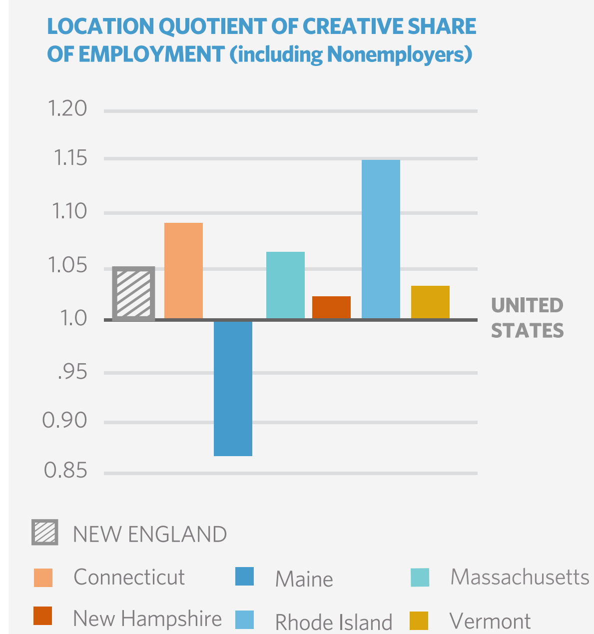
Across the six New England states there are 22,600 creative establishments employing 238,500 workers and paying more than $14.9 billion of wages and salaries. In addition, there are nearly 70,800 creative nonemployers, most of which are self-employed individuals. New England's creative economy employment compares favorably to that of other sectors, coming in the middle of the rankings of all sectors in the economy. The creative economy employs similar numbers of workers as other vital sectors including transportation and warehousing (215,235 jobs), wholesalers (254,735), government (286,140), and construction (298,234). Compared to 3.3 percent and 5.3 percent, at 3.4 percent of all jobs and 6.3 percent of all self-employed workers, the concentrations of creative economy employment in New England are higher than the national average indicating that the creative economy is a larger component of New England's economic base than that of the U.S. overall. In New England, the top three industry groups by employment are media, arts and electronics-related retail, and publishing.

As in NEFA's 2007 creative economy report, this current report seeks to understand the structure of New England's creative economy by measuring the employment at all creative enterprises. It also expands on the previous report by adding a count of the enterprises themselves. As discussed in more detail in the methodology section, we chose not to use Economic Census data, the primary source used in the 2007 creative economy study, because its most recent data sample was from 2012, now five years ago. Instead, the discussion of the size and composition of creative economy enterprises and employment uses data from two sources that are available on a more frequent basis. The first of these sources, the Quarterly Census of Employment and Wages (QCEW) from the U.S. Bureau of Labor Statistics, is a data set providing information on all firms subject to unemployment insurance contributions. The QCEW provides payroll employment numbers, wage and salary information, and enterprise counts. To supplement payroll employment from the QCEW, we use the Nonemployer Statistics (NES) series from the U.S. Census Bureau. This data set provides information on businesses that are mostly individual proprietorships without paid employees and

**GRAPHIC 1** | Total Creative Economy Employment[4], Self-Employed Creatives From 2014 and Payroll From 2015



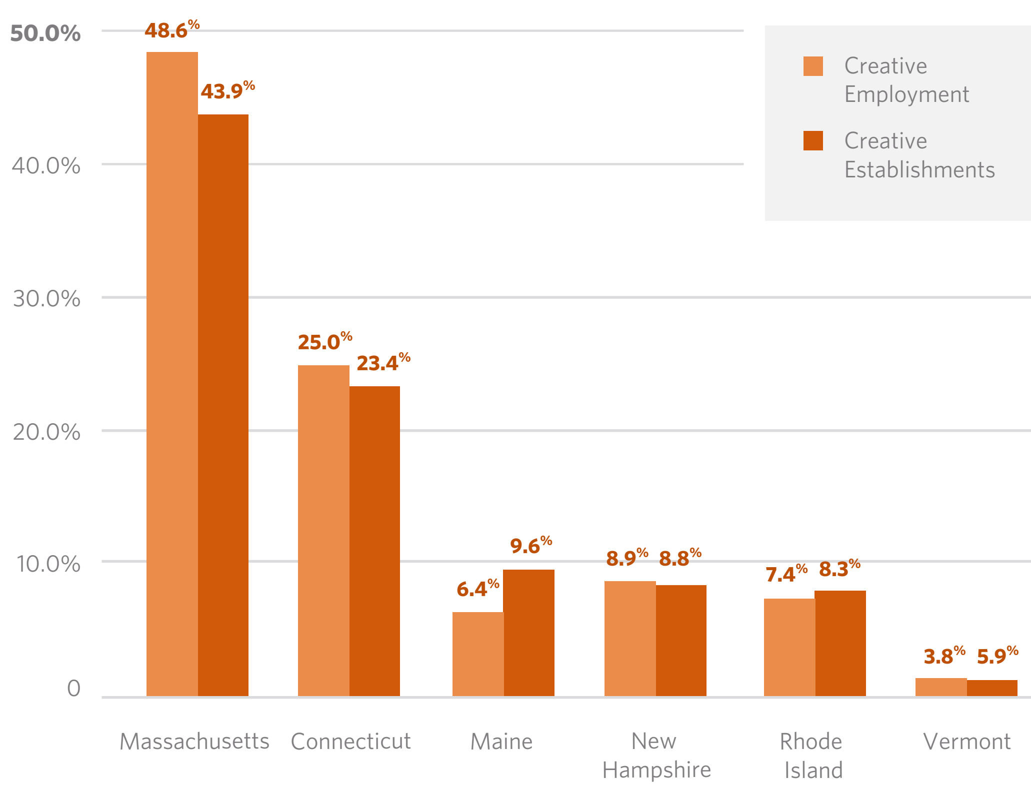




[4] In this analysis, each nonemployer firm is considered the equivalent of one worker. However, it is important to note that each nonemployer firm does not necessarily equate to a full-time job. Most are freelancers or independent contractors.

self-employed persons. The use of these two data sets combined provides a fair measure of the full range of employment in the New England creative economy – everything from employment in the largest firms and organizations to those in the smallest enterprises, including individual freelancers. Graphic 1 summarizes the current employment counts.

Creative employment in New England exceeds 300,000, including both nonemployers (self-employed workers) and all those employed at creative enterprises. These jobs comprise 3.8 percent of all employment, which slightly exceeds the national share of 3.6 percent. By virtue of its relative size and economic importance, nearly half of all New England's creative jobs are in Massachusetts while another quarter are in Connecticut. The remaining four states comprise the final 25 percent. Of roughly 22,600 creative enterprise employer firms in New England, approximately 44 percent of these are located in Massachusetts (9,943 firms employing 115,882); 23 percent (5,300 firms employing 59,543) are located in Connecticut; 9.6

**FIGURE 4** | Creative Economy Payroll Employment And Establishments By State's Share Of New England Total, 2015



percent (2,179 firms employing 15,149) are located in Maine; 8.9 percent (1,980 firms employing 21,109) are located in New Hampshire; followed by 8.3 percent in Rhode Island (1,881 firms employing 17,692), and 5.9 percent in Vermont (1,341 firms employing 9,130). Figure 4 shows the share of employment and establishments by state. Because the share of employment exceeds the share of establishments in Massachusetts and Connecticut, it can be inferred that the average establishment size in these two states is bigger than the regional average.

In comparison to other sectors, New England's creative economy is larger than its transportation and warehousing sector (215,235 jobs) while being smaller than the wholesale trade sector (254,735). In other words, employment at creative establishments exceeds employment at all warehousing, storage, and air, land, and water transportation firms but is smaller than the combined employment of wholesalers all durable and nondurable goods.

The scale and concentration of creative enterprise employment remains varied across the New England states. The relative concentration of employment (or many other economic concepts) is measured by the location quotient (LQ).[5] An LQ greater than one implies that creative economy employment in an area is more prevalent as a percentage of all jobs than in the U.S. An LQ of less than one implies the opposite. New England's highest LQ of 1.14 is in Rhode Island, implying that creative economy employment is 14 percent more prevalent in the employment base of Rhode Island than in the employment base of the U.S. Maine has the region's lowest creative economy LQ of 0.775, or nearly 23 percent less creative economy employment prevalence than the nation. The sectoral composition of each state – and growth trends in those sectors in recent years – play a major role in the differing concentration of creative enterprise employment across the region. For example, one reason that creative economy employment is most concentrated in Rhode Island is that the economy of that state is smaller and does not contain the kind of large, fast growing sectors outside the creative economy that dilute creative economy employment concentrations in other states. The section that follows discusses the sectoral composition of the New England creative economy in more detail.

[5] Definition of location quotient: A location quotient is the share of total employment in a region existing in a particular sector divided by the same sector's share in national employment: (% of Total in Region) / (% of Total in Nation). A location quotient greater than one shows that the region has more than the national average share of employment in that sector. A location quotient less than one shows that the region has less than the national average share.


IMD Photography

# Chachi Carvalho

Chachi Carvalho is a multi-talented artist, educator, and front man for the International Players band. He is a native born-and-raised Rhode Islander with roots that stem from the islands of Cabo Verde. As an educator, Chachi spends his days as a Learning Specialist and interim advisor at the Metropolitan Regional Career and Technical Center in Providence. He is also an advisor for a cohort of adult learners enrolled in the College Unbound Prison Bridge Program. Chachi is the newest appointed board member of Providence based organization AS220. He is also celebrating the 10th anniversary of his business, Beatbox Studio.


*Provided courtesy of the artist*

**Institution/Business Type:**

Artists (Individual)

**Professional Disciplines:**

Music - Rap / Hip-Hop

Literature - Spoken Word

Media - Audio / Sound, Marketing, Advertising, Video

Theater - Storytelling

**Populations Served:**

Adults

Businesses

General Public

Incarcerated (or Formerly Incarcerated) Individuals

Nonprofits

School Groups

Teens

Youth-At-Risk

**Languages Available:**

Creole

**Activities and Services:**

Arts for Social Change / Creative Activism

Audio or Video Recording

Performance / Concert / Reading / Assembly

Writing Services

Workshops / Demonstrations / Master Class / Presentation

**I am on the Rhode Island Education Roster**

**I am a Touring Artist**

**I am a Teaching Artist**

CREATIVE GROUND
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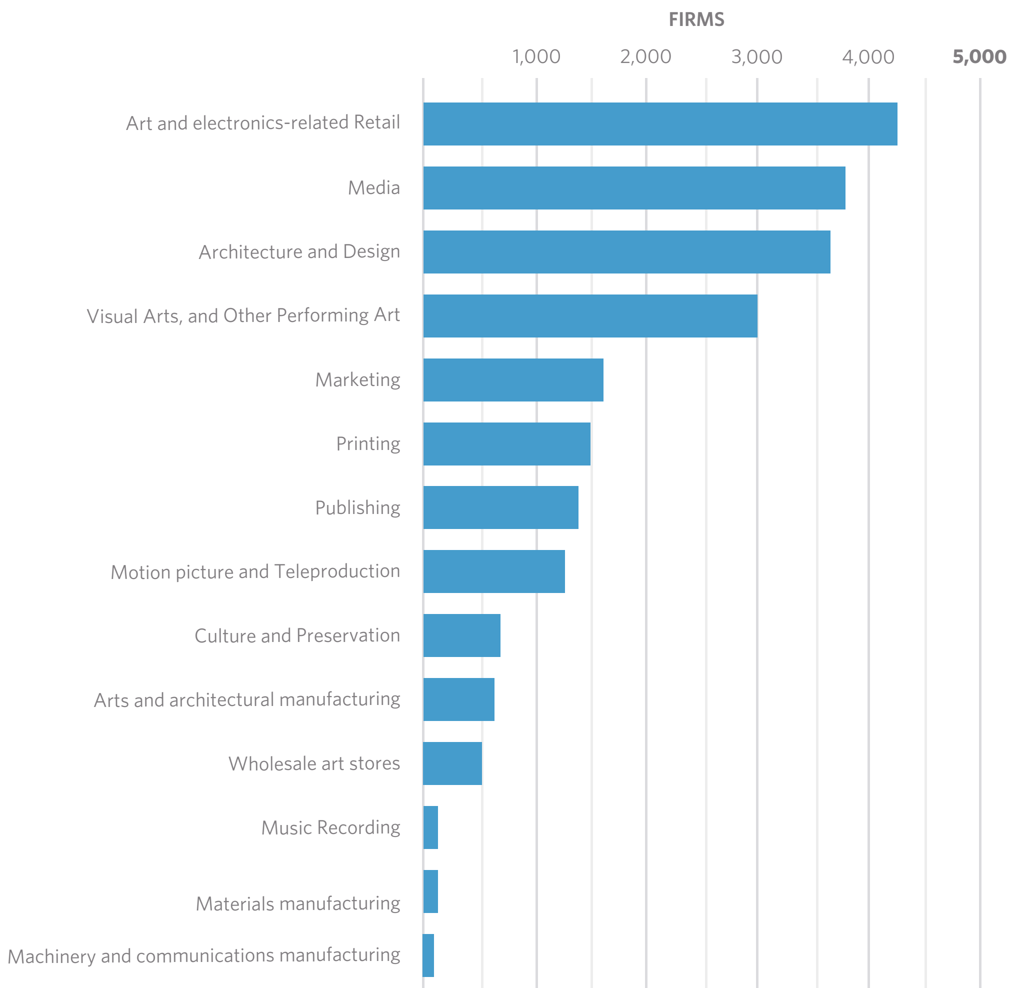
***Learn more about Chachi on CreativeGround***

Professional experience
Awards
Media gallery

**FIGURE 5** | New England Creative Economy Establishment Counts By Industry Group, 2015




Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

## CREATIVE ECONOMY INDUSTRY GROUPS

An analysis of the industry sector composition of New England's creative economy allows a look at major business activities and areas of employment in the region.  New England's largest creative industry group by establishment count is arts and electronics retail businesses with more than 4,200 firms or 18.7 percent of all creative establishments in the region.[6] The main types of firms in this group are electronics stores, jewelry stores, and bookstores. Media-related firms (dominated by cable distribution firms and internet publishing and broadcasting businesses) and architecture and design (mainly architectural, graphic design and interior design services firms) each include more than 3,700 firms or 16.7 percent of creative establish-

[6] Methodology Note: In order to better describe and quantify the range of business activity within the Creative Economy, the industry's six-digit codes (listed in the technical appendix for this report) have been grouped into distinct areas of business activity. The groupings were inspired by an organizing structure for creative economy business development during then Massachusetts Governor Deval Patrick's administration. Manufacturing, retail and wholesale groups are also included as they are part of the 2007 NEFA study definition.

**TABLE 1** | Creative Economy Payroll Employment By Industry Group 2015

| Creative Industry Group | New England | | United States | |
|---|---|---|---|---|
| | Employment | Share | Employment | Share |
| Architecture and Design | 18,702 | 8% | 352,977 | 8% |
| Art and electronic-related Retail | 34,923 | 15% | 763,166 | 17% |
| Arts and architectural manufacturing | 9,297 | 4% | 97,066 | 2% |
| Culture and Preservation | 11,840 | 5% | 239,189 | 5% |
| Machinery and communications manufacturing | 2,078 | 1% | 39,246 | 1% |
| Marketing | 11,631 | 5% | 272,066 | 6% |
| Materials manufacturing | 2,204 | 1% | 54,827 | 1% |
| Media | 65,761 | 28% | 1,113,263 | 24% |
| Motion picture and teleproduction | 12,014 | 5% | 388,568 | 8% |
| Music Recording | 379 | 0% | 16,153 | 0% |
| Printing | 22,952 | 10% | 451,227 | 10% |
| Publishing | 23,177 | 10% | 368,073 | 8% |
| Visual Arts, Music, and Other Performing Arts | 18,022 | 8% | 313,427 | 7% |
| Wholesale art stores | 5,528 | 2% | 108,873 | 2% |
| **Total, Creative Economy** | **238,504** | | **4,578,121** | |
| **Total, All Industries** | **7,100,579** | | **139,491,699** | |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

ments. Finally, visual arts, music and other performing arts firms (more than 3,000 firms) are the fourth largest group of businesses in the region and are dominated by fine arts schools and independent artists, writers and performers.

**Because the average number of employees per establishment differs across creative industry groups, the groups with the most establishments do not necessarily employ the most people.**

Media-related businesses are the biggest employers in the New England region offering nearly 65,800 jobs with large numbers in cable and other program distribution, in libraries and archives, and in internet publishing and broadcasting. Media alone accounts for over 25 percent of all creative payroll employment in New England, much higher than the group's 16.7 percent share of establishments. Publishing and printing both also rise up in the rankings of employment relative to their place in the establishment counts.

A granular look at the individual building blocks that make up the industry groups of the creative economy reveals that the top three sectors by employment are the same, and in the same order, in both New England and the U.S. Overall, seven of the top ten sectors are the same. The sectors where they differ highlight one of New England's key industries: education. Libraries and archives, museums, and fine arts schools are the fourth, ninth, and tenth sectors with the largest employment in the creative economy. These three sectors are 36th, 12th, and 14th in the national rankings of creative employment, respectively. The disparity of employment in the library and archive sector is especially noteworthy as it shows the greatest difference in rankings among the 75 industry sectors in the core creative economy.

**TABLE 2** | Top Ten Creative Industry Sectors By Payroll Emplyment In New England And United States, 2015

| New England | | United States | |
|---|---|---|---|
| **Industry Sector** | **Employment** | **Industry Sector** | **Employment** |
| Cable and Other Program Distribution | 27,335 | Cable and Other Program Distribution | 587,792 |
| Radio, Television, and Other Electronics Store | 18,548 | Radio, Television, and Other Electronics Store | 458,251 |
| Commercial Lithographic Printing | 16,376 | Commercial Lithographic Printing | 331,662 |
| Libraries and Archives | 12,274 | Motion Picture and Video Production | 227,549 |
| Newspaper Publishers | 11,732 | Advertising Agencies | 194,590 |
| Architectural Services | 11,296 | Newspaper Publishers | 190,426 |
| Internet Publishing and Broadcasting | 10,919 | Internet Publishing and Broadcasting | 186,125 |
| Advertising Agencies | 7,555 | Architectural Services | 177,071 |
| Museums | 7,397 | Motion Picture Theaters (except Drive-Ins) | 133,519 |
| Fine Arts Schools | 7,234 | Television Broadcasting | 130,888 |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), and U.S. Census Bureau, County Business Patterns (CBP)

As suggested by the inclusion of libraries, museums, and schools among its top employment sectors, the creative economy of New England contains a significant subset of nonprofits, including establishments like theaters, dance companies, and orchestras. The nonprofits that are classified as part of the industry sectors of relevance to this study are fully accounted for in the QCEW data presented in the pages above. However, the QCEW data does not provide a means of separating for-profit and nonprofit establishments. In an effort to highlightthe contributions of this segment of the creative economy, this section of the report relies on data from the IRS to provide estimates of the number and employment of creative nonprofits in New England. Because it relies on data from the IRS, which is a different data source from the larger discussion above, the following data should be considered as a reasonable estimate of the size of the nonprofit sector and not as an exact subset of the QCEW data. Crucially, these establishments are only a small subset of those found in CreativeGround, NEFA's directory of creative enterprises and artists. Because the IRS data only captures entities that file a tax return, this analysis excludes all nonprofits that do not file with the IRS, most substantially those that are embedded within, or are themselves, a government entity.

> *The nonprofits that are classified as part of the industry sectors of relecance to this study are fully accounted for in the QCEW data presented in the pages above.*

As of the end of 2016, there were 6,346 registered creative nonprofits in New England. Of these, 2,396 reported revenues greater than zero in 2015 via a filing with the IRS. Based on their reported revenues, we estimate that nonprofit employment in 2015 was 54,852. These numbers suggest that creative nonprofits with reported revenues in 2015 are estimated to be roughly 11 percent of all creative establishments and have 23 percent of the sector's payroll employment.

Table 3 shows summary estimates of nonprofits by state. Massachusetts is home to not only the most nonprofits but also the largest ones. By count, 44 percent of New England's registered creative nonprofits are in Massachusetts though this share increases to 50 percent if looking at only those with reported 2015 revenues. The average size of nonprofits by employment in the Bay State are 1.5 times that of the next highest state. Hence, Massachusetts' employment share of 70 percent greatly exceeds its share of establishments of 50 percent.

**TABLE 3** | Estimate Of The Number And Employment Of Creative Nonprofits With 2015 Revenues In New England States

| State | Count | Count with Revenues | Employment | Avg. Employment per Establishment |
|---|---|---|---|---|
| CONNECTICUT | 1,259 | 460 | 7,959 | 17 |
| MASSACHUSETTS | 2,776 | 1,191 | 38,376 | 32 |
| MAINE | 819 | 213 | 1,973 | 9 |
| NEW HAMPSHIRE | 560 | 203 | 1,958 | 10 |
| RHODE ISLAND | 410 | 127 | 2,604 | 21 |
| VERMONT | 522 | 184 | 1,982 | 11 |
| **Total** | **6,3462** | **2,396** | **54,852** | **23** |

## CREATIVE NONEMPLOYER ESTABLISHMENTS

Nonemployer firms – a measure of businesses with no paid employees – are an area of strength in the creative economy.[7] Recent research by the Brookings Institution found that approximately 86 percent of nonemployer firms nationwide are actually self-employed, unincorporated sole-proprietors – individuals earning income as independent contractors.[8] However, it is important to note that nonemployer firms or freelancers only need a minimum of $1,000 of annual business receipts to be counted in the data and therefore should not be equated to full-time jobs. Furthermore, self-employed workers are not subject to the regularity of wages and work hours or the extent of benefits and legal protections of employees, which means that for some workers they are a suboptimal alternative to or supplement for full-time employment. In spite of these qualifications, the latest data available in the Nonemployer Statistics series reports that there are nearly 70,800 creative economy nonemployer (self-employed) firms based in New England that earned nearly $2 billion in annual sales receipts in 2014.

**Independent artists, writers, and performers comprise over 66 percent of all self-employed creatives by count but only 47 percent of receipts. They averaged $19,500 of income per establishment in 2014, which is the lowest of all creative nonemployer industry groups.** Jewelry, watch, precious stone and metal wholesalers—essentially private, independent dealers—earned the most at an average of $88,000 in receipts in 2014. This data is corroborated by the findings of the Creatives Count survey, which suggests an average annual self-employed income of $10,000 to $13,000 for artists.

7 This study utilizes an additional data set to provide information on self-employed creatives, a group of creative enterprises that are not measured in the employer series discussed earlier. Through its Nonemployer Statistics (NES) series, the U.S. Census Bureau provides statistics on the smallest creative enterprises —those who do not employ workers. These types of businesses have no paid employees and are in many but not all cases self-employed workers or sole proprietorships.

8 See: Hathaway, Ian and Mark Muro. October 13, 2016. 'Tracking the gig economy: New numbers.' The Brookings Institution.

**TABLE 4** | Creative Nonemployers By Creative Industry Group, 2014

| Industry Group and Sector | New England | | United States | |
|---|---|---|---|---|
| | Firms | Receipts ($M) | Firms | Receipts ($M) |
| **Architecture and Design** | **6,810** | **$347** | **110,178** | **$4,855** |
| Architectural Services | 3,528 | $124 | 49,120 | $2,843 |
| Drafting Services | 976 | $26 | 21,627 | $595 |
| Landscape Architectural Services | 2,306 | $107 | 39,431 | $1,417 |
| **Art and Electronics-Related Retail** | **6,913** | **$316** | **147,530** | **$5,432** |
| Art Dealers | 1,182 | $80 | 17,686 | $958 |
| Book Stores and News Dealers | 948 | $31 | 16,252 | $532 |
| Electronics and Appliance Stores | 963 | $60 | 27,040 | $1,343 |
| Jewelry Stores | 1,946 | $85 | 45,646 | $1,551 |
| Musical Instrument and Supplies Stores | 419 | $23 | 6,901 | $316 |
| Photofinishing | 678 | $16 | 15,999 | $328 |
| Sewing, Needlework, and Piece Goods Stores | 777 | $21 | 18,006 | $405 |
| **Materials Manufacturing** | **149** | **$5** | **3,082** | **$118** |
| Glass and Glass Product Manufacturing | 149 | $5 | 3,082 | $118 |
| **Media** | **36** | **$1** | **1,771** | **$63** |
| Video Tape and Disc Rental | 36 | $1 | 1,771 | $63 |
| **Visual Arts, Music and Other Performing Arts** | **55,065** | **$1,123** | **959,026** | **$21,413** |
| Independent Artists, Writers, and Performers | 46,974 | $915 | 798,730 | $17,781 |
| Photographic Services | 8,091 | $208 | 160,296 | $3,632 |
| **Wholesale Art Stores** | **1,824** | **$119** | **37,055** | **$2,258** |
| Book, Periodical, and Newspaper Merchant Wholesalers | 694 | $19 | 11,096 | $353 |
| Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers | 1,130 | $100 | 25,969 | $1,905 |
| **Nonemployers, Creative Economy Total** | **70,797** | **$1,910** | **1,258,642** | **$34,139** |
| **Nonemployers, All Industries Total** | **1,122,645** | **$59,212** | **23,836,937** | **$1,115,921** |

Source: U.S. Census Bureau, Nonemployer Statistics

## GEOGRAPHIC ANALYSIS OF CREATIVE ECONOMY ENTERPRISES

Figure 6 shows creative enterprises in New England by town, as reported by Infogroup.[9] These records include businesses of all sizes—including nonemployers (self-employed enterprises)—that fall under the core creative industry sectors of this study, including the widely-prevalent creative industry sectors within the retail and wholesale industries. When mapped by the number of enterprises, the concentration of establishments matches New England's main population centers, especially the metro Boston area. The City of Boston itself is home to the most creative enterprises of any other city or town in New England, with over four percent of the region's total. This concentration is not surprising given that Boston is also the largest city in New England. In many other cases, the size of a city correlates well with its number of creative enterprises. For instance, Providence, Rhode Island, Stamford, Connecticut, and Norwalk, Connecticut all rank in the top ten in terms of both population and creative enterprises.

However, the number of creative enterprises in a community cannot always be predicted by its population. For example, Cambridge, Massachusetts; Portland, Maine; Newton, Massachusetts; and Burlington, Vermont rank significantly higher in their counts of creative enterprises than in their population. Meanwhile, places like Worcester, Springfield, and Lowell in Massachusetts and Bridgeport, Connecticut all show lower numbers of creative enterprises than their population numbers would suggest. To further delve into the geographic distribution of creative enterprises, it is helpful to remove the effects of population size on the number of creative establishments by examining the number of creative enterprises per capita as shown in Figure 6.

In some cases, the communities with the highest number of creative enterprises per capita are extremely small communities with only one or two creative enterprises. As a result, it is more informative to focus on which regions in New England see a large number of creative enterprises in relation to their population versus within individual communities. Here the pattern breaks from population centers and instead reveals the travel and tourism centers of New England. The Cape and Islands region of Massachusetts, Coastal Maine, towns around the White Mountains in New Hampshire, the Berkshires, and various communities in Vermont all emerge as having high concentrations of creative enterprises relative to their populations. Similar patterns are seen in places that are not necessarily tourism destinations but rather shopping destinations or high-income communities such as Burlington, Marblehead, Newton, and Wellesley in Massachusetts or Westport and Newport in Connecticut and Rhode Island, respectively.

A commonality among all these diverse communities is their above average per capita spending, which in turn supports more arts-related retail and wholesale establishments such as art galleries, book stores, jewelry stores, and art dealers. In the case of the tourism centers, the higher spending is supported by out-of-town visitors who add greater demand for creative goods and services than local residents alone could support. On the other hand, it is the above average income of the local residents themselves that allows wealthy areas to support more creative businesses per person than the regional average.

[9] Infogroup business data is collected from thousands of different sources, most of which are event-driven (for example, new business filings, utility connections, and annual reports), and verified by their staff. The Infogroup data was obtained through Esri Business Analyst and manipulated and tabulated using Stata and ArcGIS. These establishment counts are unlikely to match those provided by official government sources given this unique methodology for collecting the data.

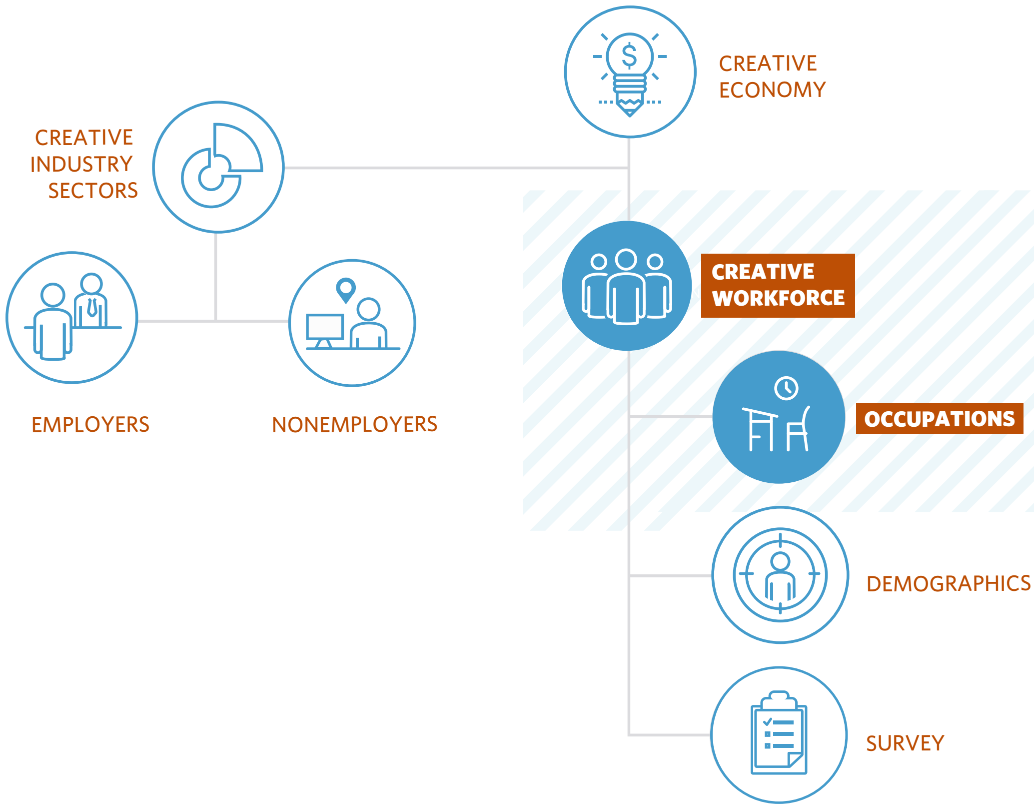
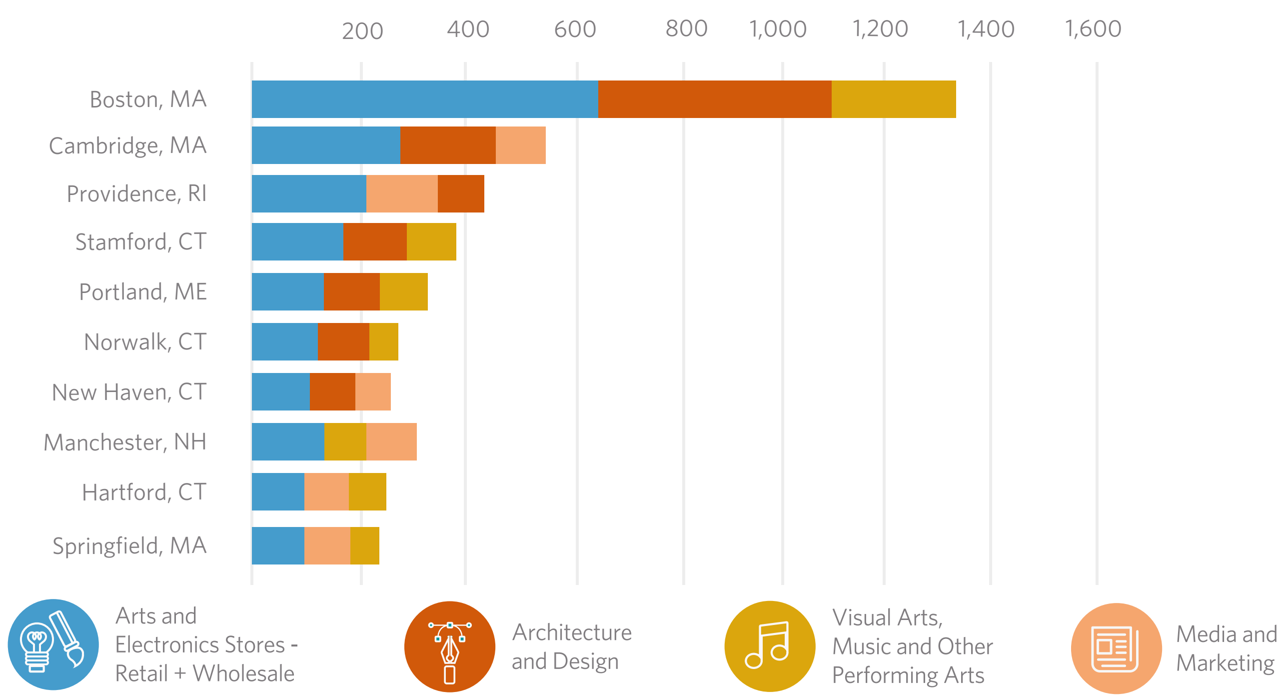
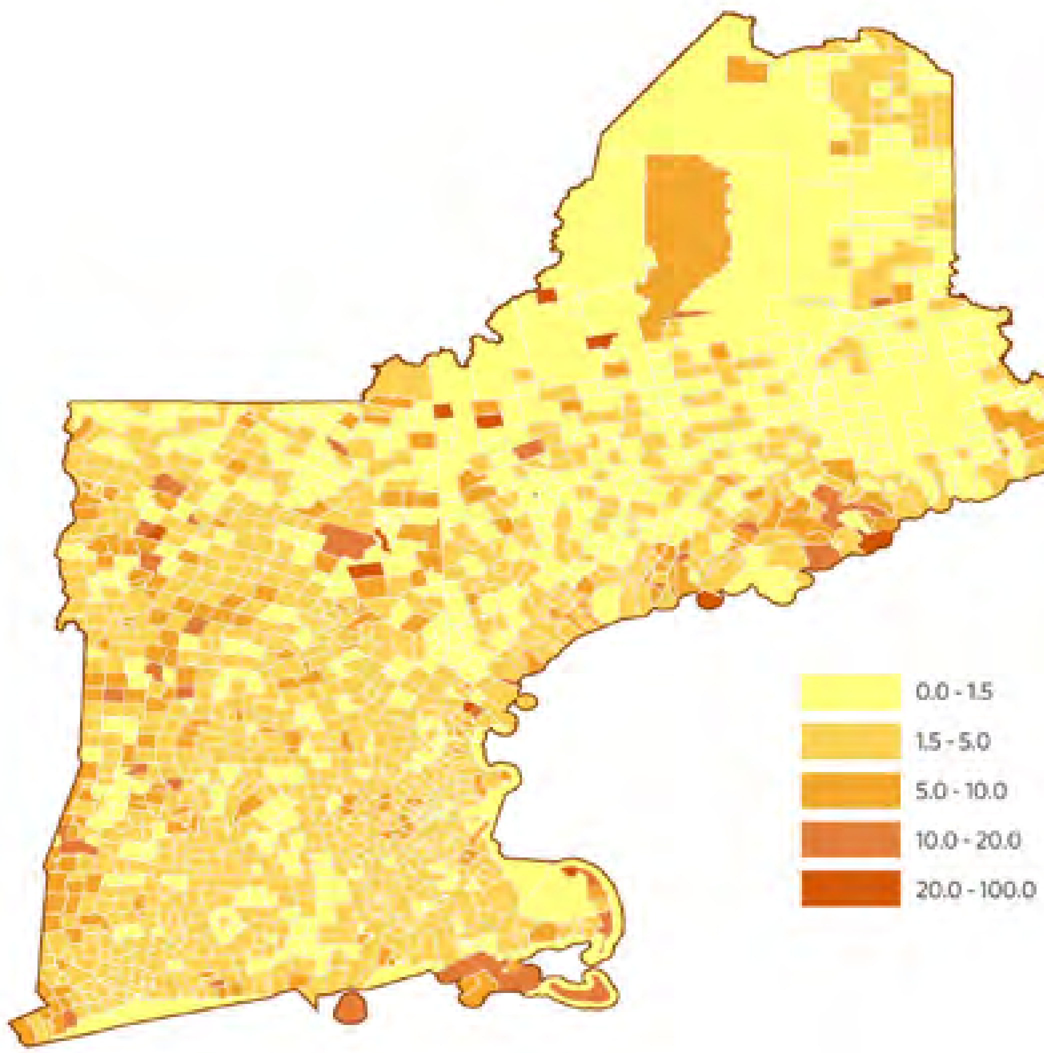



**FIGURE 6** | Top 10 New England Towns by Number of Creative Enterprises




Source: Esri Business Analyst and Infogroup

**FIGURE 7** | Creative Enterprises per 1,000 Residents




Source: Esri Business Analyst, Infogroup
American Community Survey, 2011-2015 Estimates

**TABLE 5** | Top 30 New England Cities By Number Of Creative Enterprises Per Capita, 2016

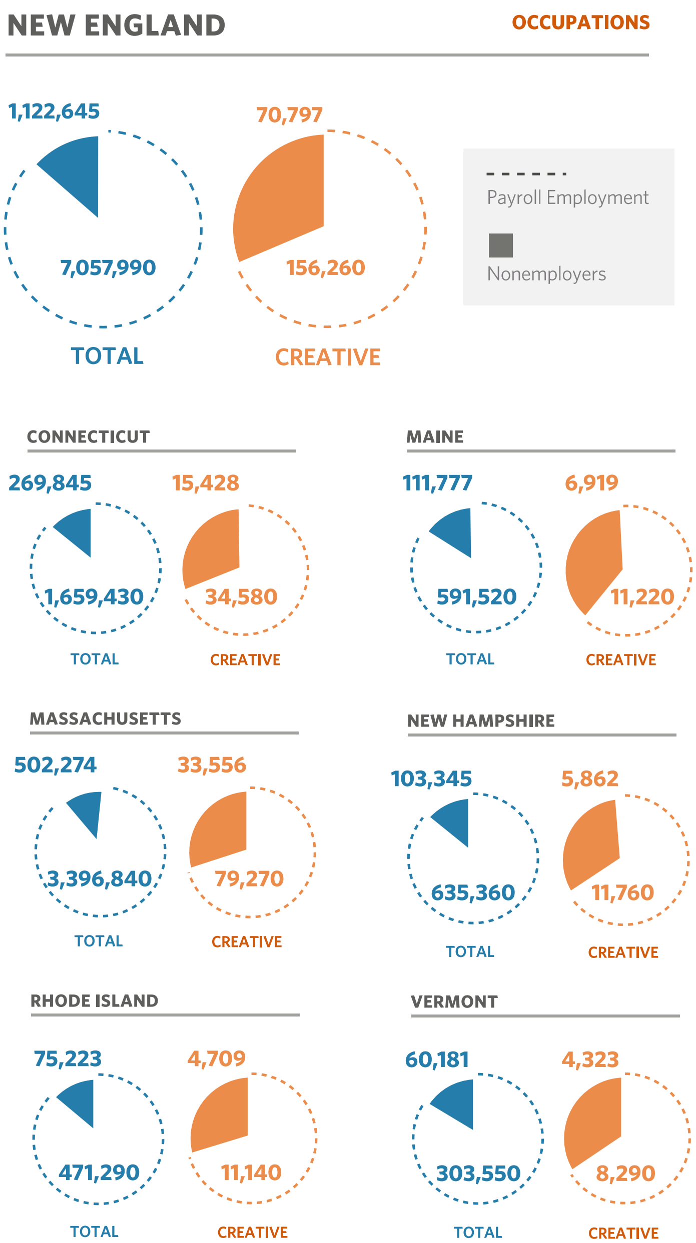
| Rank | City | Creative Enterprise Establishments | Resident Population, Avg. 2011- 2015 | Creative Enterprise Establishments per 1,000 Residents |
|---|---|---|---|---|
| 1 | Portsmouth, NH | 251 | 21,426 | 11.7 |
| 2 | Rutland, VT | 116 | 20,115 | 11.5 |
| 3 | Westport, CT | 278 | 27,343 | 10.2 |
| 4 | Newport, RI | 207 | 24,459 | 8.5 |
| 5 | Barre, VT | 70 | 16,775 | 8.1 |
| 6 | Newburyport, MA | 143 | 17,776 | 8.0 |
| 7 | Burlington, MA | 2,194 | 25,467 | 7.6 |
| 8 | Portland, ME | 496 | 66,490 | 7.5 |
| 9 | Cambridge, MA | 778 | 107,916 | 7.2 |
| 10 | Concord, MA | 1311 | 9,271 | 6.8 |
| 11 | Wilton, CT | 125 | 18,643 | 6.7 |
| 12 | Northampton, MA | 189 | 28,602 | 6.6 |
| 13 | Greenwich, CT | 381 | 62,434 | 6.1 |
| 14 | New Canaan, CT | 118 | 20,219 | 5.8 |
| 15 | Stonington, CT | 106 | 18,492 | 5.7 |
| 16 | Woburn, MA | 222 | 39,104 | 5.7 |
| 17 | Barnstable, MA | 249 | 44,591 | 5.6 |
| 18 | Needham, MA | 161 | 29,853 | 5.4 |
| 19 | Ridgefield, CT | 135 | 25,137 | 5.4 |
| 20 | Burlingtonn, VT | 227 | 42,570 | 5.3 |
| 21 | Natick, MA | 185 | 34,892 | 5.3 |
| 22 | Newton, MA | 460 | 87,675 | 5.2 |
| 23 | Waltham, MA | 324 | 62,438 | 5.2 |
| 24 | Brookfield, CT | 87 | 16,904 | 5.1 |
| 25 | Norwalk, CT | 451 | 87,701 | 5.1 |
| 26 | Wellesley, MA | 145 | 28,832 | 5.0 |
| 27 | Salem, NH | 144 | 28,853 | 5.0 |
| 28 | Marblehead, MA | 101 | 20,270 | 5.0 |
| 29 | Sudbury, MA | 91 | 18,397 | 4.9 |
| 30 | Hingham, MA | 112 | 22,733 | 4.9 |

Source: Esri Business Analyst, Infogroup, American Community Survey 2011-2015 Estimates

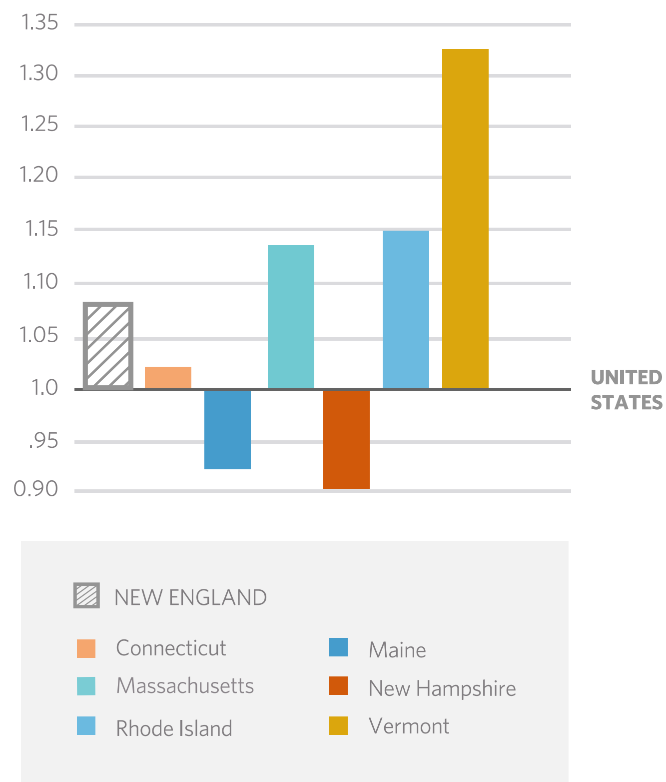
Note: This analysis includes only cities with resident populations over 15,000.

## CREATIVE OCCUPATIONS IN NEW ENGLAND'S BUSINESSES

**GRAPHIC 2A**
New England Creative Payroll Occupations (2015) and Creative Nonemployers (2014)




**GRAPHIC 2B**
Occupational Location Quotients by State and Region



This section shifts from an examination of creative work by place of work to creative work by type of work. This analysis includes any workers who are in the core creative occupations, i.e. perform work that is categorically creative as defined in *The Creative Economy: A New Definition* from 2007.[10] The primary focus of this section is on payroll employment partly because non-employers (self-employed workers) have already been addressed in detail but also because payroll employment represents the ongoing business needs of New England's creative economy.[11]

There are 156,260 creative payroll jobs in New England comprising 2.2 percent of all occupations in the region. These jobs are supplemented by an additional 70,797 self-employed creative workers. With 12,890 jobs, the most prevalent creative payroll occupation in New England is public relations specialist, while the largest artistic occupation is that of designer, with over 11,000 workers. With a 20 percent higher prevalence of artists in its employment base, New England has an especially high concentration of artists compared to the U.S. Census data also indicates that creative workers have higher educational attainment, earn higher incomes than the overall workforce, and are much more likely to be self-employed. As a result, **payroll occupations alone under-represent the true number of workers engaged in creative work.** The industries employing the most creative workers are concentrated in the educational sector.

Payroll jobs are the jobs that regional businesses have deemed necessary enough to their bottom line to undertake the time and expense of formally hiring a permanent employee. Even though a business may have an ongoing need for freelancers and contractors, it may only need an individual freelancer for a short amount of time. Therefore, individual creatives–who are essentially self-employed freelancers and can be brought on in an ad hoc fashion—do not represent ongoing and sustained business needs of an enterprise. However, self-employed creatives are still engaged in creative work and their prominence is important to note. The previous summary table shows that nearly a third of creative work in New England and the U.S. is being done by self-employed creatives. As a single cohort, self-employed creatives are by far the largest group of creative worker. To reiterate data from the previous section, there are nearly 70,800 creative non-employers, of which almost 47,000 are independent artists, writers, and performers. This group alone is nearly four times the size of the largest creative payroll occupation.

Of the six New England states, Vermont has the highest share of workers in creative occupations, at 2.7 percent. It is followed by Rhode Island, Massachusetts, and Connecticut. Maine and New Hampshire, at 1.9 percent, are the only New England states to have a lower share of workers in creative occupations than the U.S. as a whole. These shares correspond with

[10] As defined by DeNatale, Doug, and Gregory H. Wassall. *The Creative Economy: A New Definition*. New England Foundation for the Arts. 2007. pp.22-23. See Appendices for table of occupational codes defining the creative workforce.

[11] Self-employed creatives are measured as establishments, i.e. businesses, not as individuals. As a result, they are categorized by industry sector not by occupation. So while it is safe to assume that a self-employed individual in a creative industry also has a creative occupation, the data does not allow them to be sorted by occupational codes.

**TABLE 6** | Top Ten Creative Workforce Occupations In New England And The United States Ranked By Payroll Employment, 2015

| New England | | United States | |
|---|---|---|---|
| **Occupation** | **Employment** | **Occupation** | **Employment** |
| Public Relations Specialists | 12,890 | Public Relations Specialists | 218,910 |
| Librarians | 10,310 | Graphic Designers | 204,850 |
| Graphic Designers | 9,870 | Advertising Sales Agents | 149,770 |
| Art, Drama, and Music Teachers, Postsecondary | 7,700 | Librarians | 131,550 |
| Library Technicians | 7,540 | Producers and Directors | 104,650 |
| Advertisings Sales Agents | 6,550 | Merchandise Displayers and Window Trimmers | 100,540 |
| Library Assistants, Clerical | 6,140 | Library Assistants, Clerical | 100,090 |
| Public Relations and Fundrasing Managers | 6,080 | Art, Drama, and Music Teachers, Postsecondary | 98,310 |
| Architects, Except Landscape and Naval | 6,050 | Editors | 96,690 |
| Editors | 5,970 | Architectural and Civil Drafters | 95,280 |
| **Creative Economy Total** | **156,260** | **Creative Economy Total** | **2,926,080** |
| **All Occupations** | **7,057,990** | **All Occupations** | **137,896,660** |
| **Creative Economy Share of All Occupations** | **2.2%** | **Creative Economy Share of All Occupations** | **2.0%** |

Marketing | Media | Architecture and Design | Educational Services | Motion Picture and Teleproduction | Publishing | Arts and Electronics-Related Retail

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

location quotients (LQ), which are a measure of the prevalence of creative employment compared to the nation. The LQs of New England states vary from a high of 1.33 in Vermont and low of 0.90 in New Hampshire, meaning that creative occupations are 33 percent more prevalent in Vermont and 10 percent less prevalent in New Hampshire than in the nation's employment base. Overall, creative occupations are eight percent more concentrated in New England (LQ of 1.08) than the U.S.

The composition of the creative workforce within New England also varies from that of the U.S. While public relations specialists are the most prominent creative payroll occupation in both New England and the U.S., librarians; postsecondary art, drama, and music teachers; library technicians; public relations and fundraising

**TABLE 7** | Top Ten Payroll Creative Workforce Occupations By Location Quotient In New England, 2015

| Occupation | 2015 |
|---|---|
| Public Relations and Fundraising Managers | 1.97 |
| Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 1.82 |
| Archivists | 1.75 |
| Curators | 1.71 |
| History Teachers, Postsecondary | 1.63 |
| Architecture Teachers, Postsecondary | 1.60 |
| Library Technicians | 1.56 |
| Librarians | 1.53 |
| Art, Drama, and Music Teachers, Postsecondary | 1.53 |
| English Language and Literature Teachers, Postsecondary | 1.34 |

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

managers; and architects (except landscape and naval) are all more prominent occupations in New England than in the U.S. as a whole. On the other hand, graphic designers, advertising sales agents, producers and directors, merchandise displayers and window trimmers, clerical library assistants, editors, and architectural and civil drafters are all less prominent in New England.

The concentration of post-secondary education and cultural preservation in New England's creative economic base is especially noticeable in the payroll occupation location quotients where nine of the top ten are directly tied to these efforts. The remaining one (public relations and fundraising managers) plays a key role in all nonprofit organizations, which make up a significant portion of education and cultural preservation establishments.

Using the Creatives Count survey, we found that on average each creative worker has about three jobs in any year, split nearly equally between self-employment and outside/payroll employment. As would be expected in this survey, the considerable portion of self-employment is in the arts and entertainment occupations, followed by educational occupations. These two sectors combined comprise 89 percent of the total. The pattern, though not the concentration, is repeated in payroll employment. Here the top two are only 64 percent of the total. The data also refutes a common stereotype of artists making ends meet by working retail or food service jobs. Sales and food preparation occupations together are only five percent of total

**TABLE 8** | Top Ten Self-Employed Occupations, 2016

| Occupation | Share |
|---|---|
| Art and Design Workers | 44% |
| Entertainers and Performers, Sports and Related Workers | 21% |
| Media and Communication Workers | 8% |
| Other Teacheres and Instructors | 7% |
| Other Education, Training, and Library Occupations | 5% |
| Preschool, Primary, Secondary, and Special Education School Teachers | 3% |
| Postsecondary Teachers | 2% |
| Other Office and Administrative Support Workers | 1% |
| Architects, Surveyors, and Cartographers | 1% |
| Counselors, Social Workers, and Other Community and Social Service Specialists | 1% |

Source: Creatives Count Survey

**TABLE 9** | Top Ten Payroll Employment Occupations, 2016

| Occupation | Share |
|---|---|
| Art and Design Workers | 19% |
| Entertainers and Performers, Sports and Related Workers | 11% |
| Other Teachers and Instructors | 8% |
| Postsecondary Teachers | 8% |
| Media and Communication Workers | 7% |
| Preschool, Primary, Secondary, and Special Education School Teachers | 6% |
| Other Education, Training, and Library Occupations | 6% |
| Other Office and Administrative Support Workers | 5% |
| Other Management Occupations | 3% |
| Secretaries and Administrative Assistants | 2% |

Source: Creatives Count Survey

responses. In addition to holding multiple jobs, 72 percent of respondents also said that they had unpaid or volunteer work in the past year.

Artists are a subset of all creative occupations and are at the center of many of the public and private efforts to cultivate the creative economy.[12] Part of the reason that there are few artists in the payroll data is that many are self-employed and are therefore missing from the OES, the source of this study's occupation data. The ACS PUMS, a product of the U.S. Census Bureau, surveys individuals and because it allows respondents to self-identify their occupations, it captures workers of all employment types. However, it limits each respondent to only a single job and because of this, the ACS PUMS only counts workers whose primary occupation is creative while missing those who do creative work for less than 50 percent of their work hours. Nevertheless, it provides a better count of a workforce cohort like artists whose employment patterns are mixed between payroll and self-employment.

Designers are the biggest artistic occupation in every New England state, the region itself, and the U.S., in many cases by a large margin. The second largest occupations in all areas is either writers or architects with

**TABLE 10** | Top Five Artist Occupations For New England And Its States, 2014

| CONNECTICUT | | MAINE | | MASSACHUSETTS | | NEW HAMPSHIRE | |
|---|---|---|---|---|---|---|---|
| Designers | 11,127 | Designers | 3,176 | Designers | 22,871 | Designers | 3,332 |
| Architects | 3,539 | Writers | 1,270 | Arcitects | 7,729 | Writers | 1,242 |
| Writers | 3,156 | Visual Artists | 1,000 | Writers | 6,982 | Visual Artists | 1,095 |
| Musicians | 2,916 | Photographers | 852 | Visual Artists | 5,015 | Musicians | 669 |
| Producers & Directors | 2,728 | Musicians | 569 | Musicians | 4,571 | Architects | 631 |

| RHODE ISLAND | | VERMONT | | NEW ENGLAND | | UNITED STATES | |
|---|---|---|---|---|---|---|---|
| Designers | 3,663 | Designers | 1,996 | Designers | 46,165 | Designers | 534,227 |
| Visual Artists | 825 | Architects | 898 | Writers | 14,288 | Architects | 137,948 |
| Writers | 740 | Visual Artists | 745 | Architects | 13,148 | Writers | 118,098 |
| Photographers | 613 | Musicians | 612 | Visual Artists | 11,037 | Visual Artists | 109,378 |
| Architects | 491 | Photographers | 395 | Musicians | 9,752 | Producers & Directors | 109,200 |

Source: U.S. Census Bureau, ACS PUMS 5 Yr. Estimates 2010-2014

[12] Artistic Occupations represent a subset of the entire creative workforce occupations, which include architects, designers, visual artists, photographers, writers, actors, producers and directors, dancers, musicians, announcers, and all other entertainers (see Creative Workforce Occupations SOC code table for details).

the sole exception of Rhode Island, where visual artists are second. This is perhaps a result of the prominence of the Rhode Island School and Design within an otherwise small state.

In most cases, the New England states and the region show a higher concentration of artistic occupations than the U.S. Showing location quotients over one in most cells, Table 11 shows how the relative prevalence of artistic occupations compares among the states. Overall, New England has a 20 percent greater concentration of artists than the U.S. The highest concentration in the region is among musicians, who are 97 percent higher than the nation. The lowest concentration is among producers and directors with a concentration 16 percent lower than the nation.

Creative workers differ from the overall workforce in their pattern of work. While the ACS PUMS limits survey respondents to a single job for industry and occupation information, it asks for the hours worked and income earned from all jobs. As a result, this information does not undercount the effort and income of individuals with more than one job, such as many artists. According to the ACS PUMS, the share of workers that work over 50 hours per week is relatively equal among the three occupational groupings examined here. In each case, roughly 16 to 17 percent of all workers, cre-

**TABLE 11** | Artist Occupation Location Quotients For New England And Its States, 2014

| Creative Occupations | CT | ME | MA | NH | RI | VT | New England |
|---|---|---|---|---|---|---|---|
| **Architects** | 1.29 | 0.46 | 1.50 | 0.61 | 0.62 | 0.64 | 1.18 |
| **Designers** | 1.05 | 0.84 | 1.15 | 0.83 | 1.20 | 1.06 | 1.07 |
| **Visual Artists** | 1.09 | 1.29 | 1.23 | 1.33 | 1.32 | 1.92 | 1.25 |
| **Photographers** | 1.28 | 1.59 | 1.45 | 0.90 | 1.41 | 1.47 | 1.37 |
| **Writers** | 1.35 | 1.52 | 1.59 | 1.40 | 1.09 | 2.15 | 1.49 |
| **Actors** | 1.48 | 0.66 | 1.10 | 2.59 | 2.10 | 0.63 | 1.34 |
| **Producers & Directors** | 1.26 | 0.42 | 0.83 | 0.43 | 0.65 | 0.67 | 0.84 |
| **Dancers** | 0.93 | 0.60 | 1.50 | *U | 1.09 | *U | 1.05 |
| **Musicians** | 2.41 | 1.32 | 2.01 | 1.46 | 1.19 | 2.83 | 1.97 |
| **Announcers** | 1.51 | 0.91 | 0.94 | 1.87 | 1.98 | 1.23 | 1.25 |
| **Entertainers, All Others** | 0.30 | 0.31 | 2.31 | 1.99 | 1.97 | 2.82 | 1.61 |
| **All Artists** | 1.22 | 0.93 | 1.29 | 0.95 | 1.13 | 1.29 | 1.20 |

**Undisclosed*

Source: U.S. Census Bureau, ACS PUMS 5 Yr. Estimates 2010-2014

ative workers, and artists work over 50 hours per week. It is on the lower end where the creative occupations differ. Workers in these occupations are more likely than the regional average to work fewer than 30 hours per week even though the Creatives Count survey suggests that many are likely to hold more than one job. Interestingly, the lower number of hours worked does not manifest in lower incomes, suggesting that the average hourly earnings of creative workers is higher than the average workforce, which is in agreement with the income and educational attainment findings that follow.

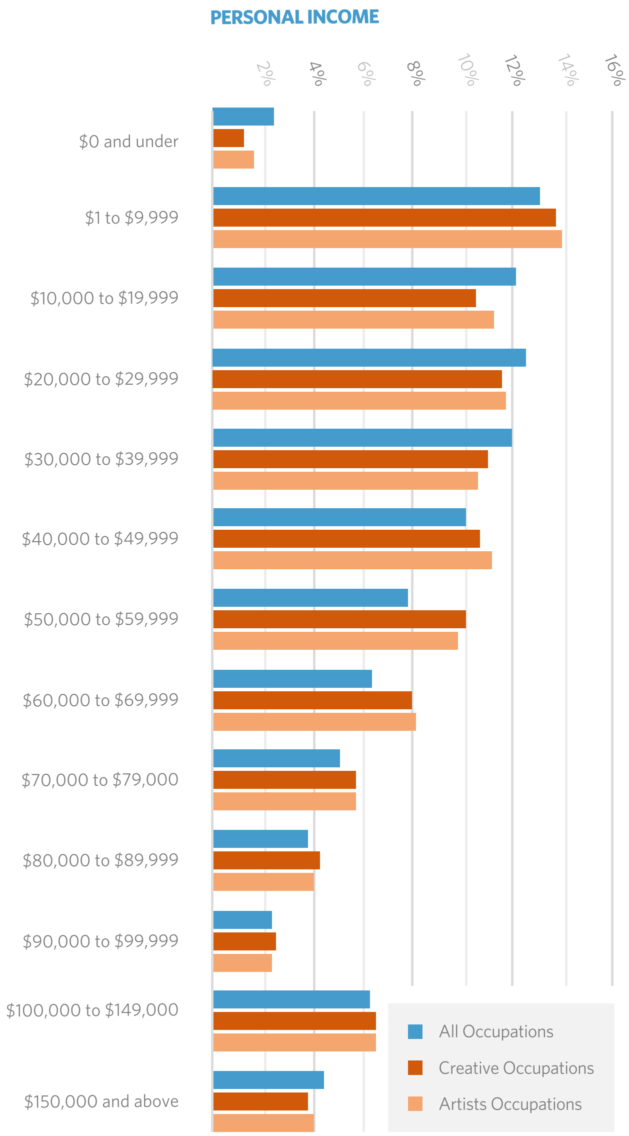
Contrary to the stereotype, the incomes of artists and creative workers are not below average. In fact, the ACE PUMS shows that they have higher incomes. The median income of all occupations in New England is between $30,000 and $40,000, whereas the median for creative workers is higher–between $40,000 and $50,000. Overall, the creative occupations show higher levels of income than workers in general, even though they work fewer hours, which suggests higher hourly earnings. Along with higher personal incomes, creative workers have higher median household incomes than the overall workforce. Median household income for all occupations is between $80,000 and $90,000 whereas the median for creative workers is in the $90,000 to $100,000 range. The median for artist is even higher and somewhere in the $100,000 to $150,000 range. This increase comes even though the personal incomes of artists are not meaningfully different from creative workers as group. These numbers compare favorably with national values. U.S. median personal income in 2015 was $30,240, while median household income is $56,516.[13]

**TABLE 12** | Creative Workforce By Weekly Hours Worked, 2014

| Workforce Category | Group | CT | ME | MA | NH | RI | VT | NE |
|---|---|---|---|---|---|---|---|---|
| All Occupations | Less than 30 | 18% | 18% | 19% | 17% | 19% | 19% | 18% |
| | 30 -50 | 64% | 66% | 64% | 65% | 67% | 64% | 62% |
| | Over 50 | 18% | 17% | 17% | 18% | 14% | 17% | 16% |
| Creative Occupations | Less than 30 | 26% | 26% | 24% | 29% | 25% | 27% | 24% |
| | 30 - 50 | 55% | 56% | 61% | 58% | 64% | 58% | 58% |
| | Over 50 | 19% | 19% | 16% | 14% | 11% | 14% | 16% |
| Artist Occupations | Less than 30 | 26% | 29% | 23% | 30% | 25% | 25% | 24% |
| | 30-50 | 53% | 52% | 60% | 54% | 62% | 59% | 56% |
| | Over 50 | 21% | 19% | 17% | 15% | 12% | 17% | 17% |

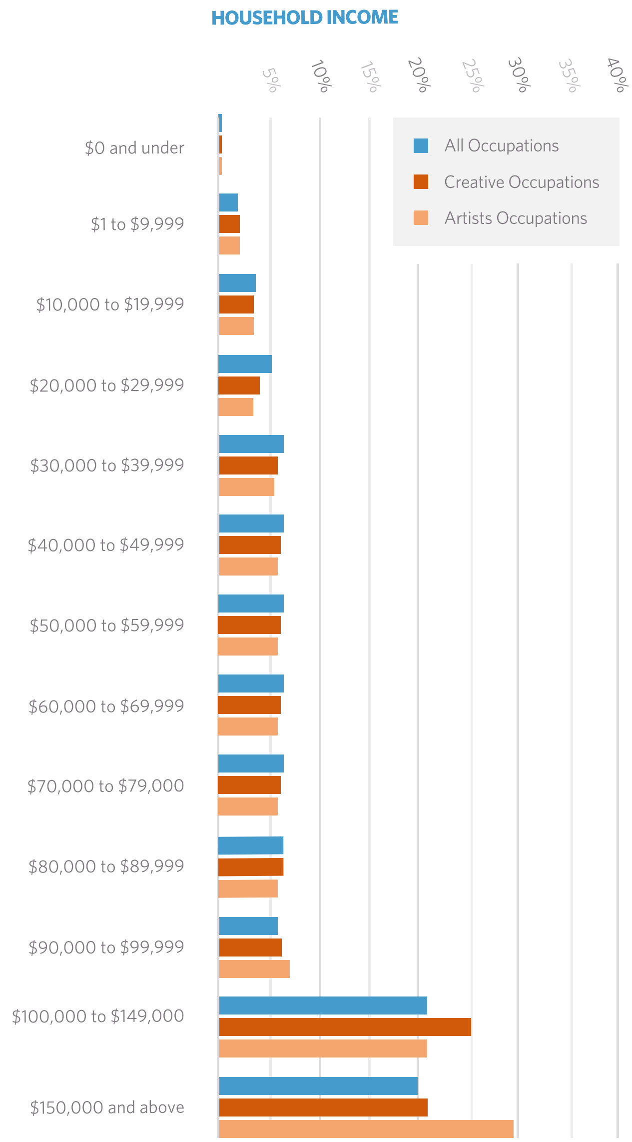
Source: U.S. Census Bureau, ACS PUMS 5 Yr. Estimates 2010-2014

**FIGURE 8** | Creative Workforce By Personal Income, 2014




Source: U.S. Census Bureau, ACS PUMS 5 Yr. Estimates 2010-2014

**FIGURE 9** | Creative Workforce By Household Income, 2014




Source: U.S. Census Bureau, ACS PUMS 5 Yr. Estimates 2010-2014

The findings from the Creatives Count survey contradict those of the ACS PUMS suggesting that the personal and household incomes of creative workers are in fact similar to the overall population rather than higher. It is likely that this difference is due to the nature of the respondents to the survey, who, by design, include many casual or part-time creative workers in contrast to the ACS PUMS, which only captures those who do creative work as their primary occupation. Because of this difference, it is probable that a survey respondent is closer to the average worker's income than those who do creative work full time, despite having considerably higher educational attainment than average (discussed in Figure 19, page 82).

## INDUSTRIES EMPLOYING CREATIVE WORKERS

The types of businesses that use workers in creative occupations are not limited to those industry sectors that are part of the creative economy. Many different sectors, regardless of the nature of the goods and services they produce, rely on occupations like designers, advertising and public relations staff, or writers and editors. In fact, some of the largest employers of creative workers are sectors outside the creative economy.

In New England and the U.S., higher education is the biggest employer of creative workers. Taken together, the education and local government sectors play a significant role in employing creative workers. Creative employment in New England is less "top heavy" than it is in the U.S. The top 10 industries employing creative workers in New England account for 33 percent of creative economy jobs, while the nation's top ten are 58 percent of the total, indicating a greater dispersal of creative workers among New England's economy. As a reminder, the creative nonemployers–i.e. self-employed individuals–number nearly 70,800 in New England and 1.3 million in the U.S., making them larger than any of the payroll employment occupations.

Data from Creatives Count reinforces the importance of the education sector in employing creative workers. While the survey results differ in many other places from the OES data, the prominence of education is clear in both datasets.

To reiterate, the OES only counts payroll employees, which, by definition, excludes the self-employed. This exclusion does not just disproportionately impact the artistic occupations as shown in the preceding tables but rather all creative occupations. According to the ACS PUMS, a quarter of all creative workers and a third of artists are self-employed, whereas only 10 percent of the overall workforce is self-employed. This overrepresentation in self-employment is offset by a lower share in all other employer types. A smaller percentage of creative workers are employed by for-profit companies, nonprofit entities, and the government than workers in non-creative occupations.

The one-third share of self-employment among artists is corroborated by the Creatives Count survey. The survey respondents, who are mainly artists, say that

[13] Source: Federal Reserve Bank of St. Louis. Personal Income (https://fred.stlouisfed.org/series/MEPAINUSA672N) and household income (https://fred.stlouisfed.org/series/MEHOINUSA672N)

**TABLE 13** | Top Ten Industries That Employ Creative Workers In New England The United States, 2015

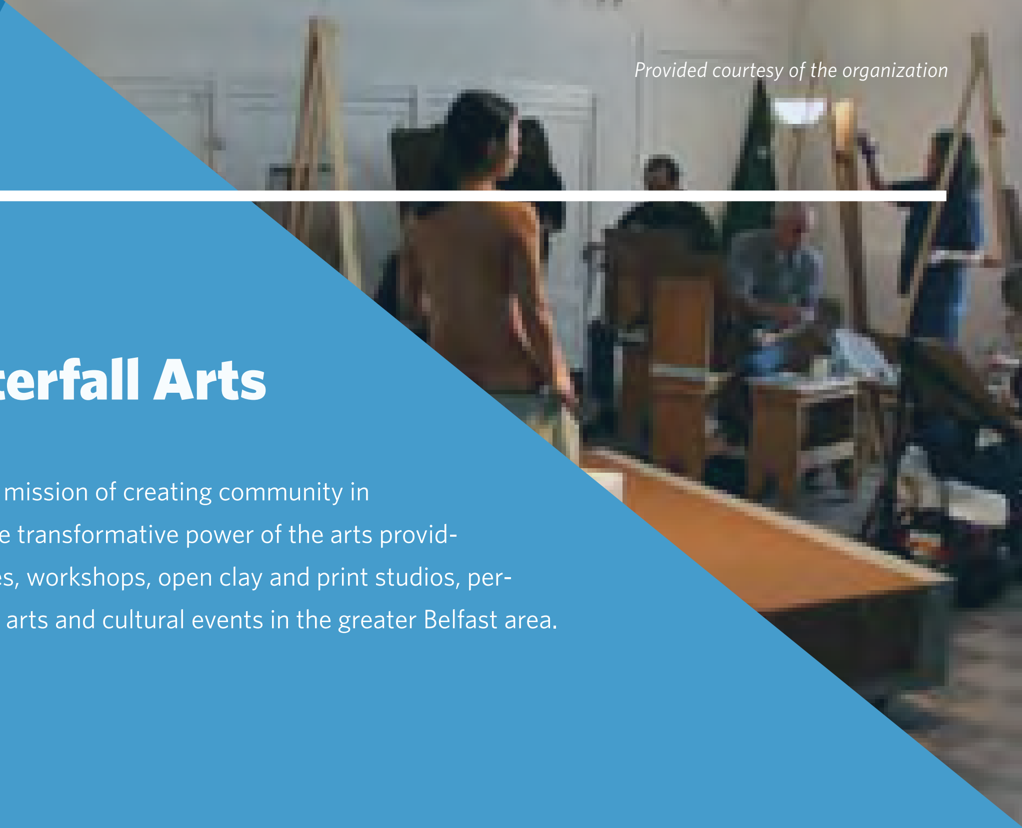
| New England | | United States | |
|---|---|---|---|
| **Industry** | **Employment** | **Industry** | **Employment** |
| *Nonemployer (Self-employed) creatives in Any Sector* | 70.797 | *Nonemployer (Self-employed) creatives in Any Sector* | 1,258,642 |
| Colleges, Universities, and Professional Schools* | 25,200 | Colleges, Universities, and Professional Schools* | 309,200 |
| Local Government (OES Designation) | 11,130 | Architectural, Engineering, and Related Services | 189,530 |
| Architectural, Engineering, and Related Services | 10,470 | Advertising, Public Relation, and Related Services | 186,510 |
| Newspaper, Periodical, Book, and Directory Publishers | 9,150 | Local Government (OES Designation)* | 178,590 |
| Advertising, Public Relations, and Related Services | 6,510 | Motion Picture and Video Industries | 166,030 |
| Elementary and Secondary Schools* | 6,220 | Newspaper, Periodical, Book, and Directory Publishers | 159,360 |
| Radio and Television Broadcasting | 5,630 | Radio and Television Broadcasting | 150,100 |
| Printing and Related Support Activities | 2,820 | Elementary and Secondary Schools* | 109,220 |
| Other Information Services | 2,700 | Junior Colleges* | 93,790 |
| Cable and Other Subscription Programming | 2,370 | Printing and Related Support Activities | 66,450 |
| **Creative Economy Total** | **260,530** | **Creative Economy Total** | **2,751,830** |

Sectors with "*" are outside of the definition of core creative enterprises.
Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).
Note: Due to differences in data collection methods, totals for occupational data by industry do not match with totals in other OES data.

**TABLE 14** | Creatives Count Survey - Top Ten Industries Employing Creative Workers, 2016

| Industry | Share |
|---|---|
| Educational Services | 52% |
| Arts, Entertainment, and Recreation | 19% |
| Professional, Scientific, and Technical Services | 7% |
| Retail Trade | 3% |
| Health Care and Social Assistance | 3% |
| Other Services (except Government) | 3% |
| Administrative and Support Services | 3% |
| Information (including publishing of all media and communications) | 2% |
| Accommodation and Food Services | 2% |
| Manufacturing | 2% |

Source: Creatives Count Survey


*Provided courtesy of the organization*

# Waterfall Arts

Community arts center with the mission of creating community in harmony with nature through the transformative power of the arts providing studio space, exhibits, classes, workshops, open clay and print studios, performance space, and supporting arts and cultural events in the greater Belfast area.

**Institution/Business Type:**

Arts Centers

**Professional Disciplines:**

Multi-Disciplinary

Media - General

Dance - General

Music - General, Dance/DJ

Theater - General, Devised / Artist Led

Visual/Crafts - General, Ceramics, Clay, Experimental, Glass, Illustration / Drawing, Installation, Mixed Media, Painting, Photography, Printmaking

**Populations Served:**

Adults

Families

General Public

School Groups

Teens

**Activities and Services:**

Artist Market

Arts Instruction / Lessons

Performance / Concert / Reading / Assembly

Exhibitions

Film Showings

Public Art Projects (In Free, Public Spaces)

Residency - Community

Workshops / Demonstrations / Master Class / Presentation

**I am a Creative Communities Exchange Presenter**

***Learn more about Waterfall Arts on CreativeGround***

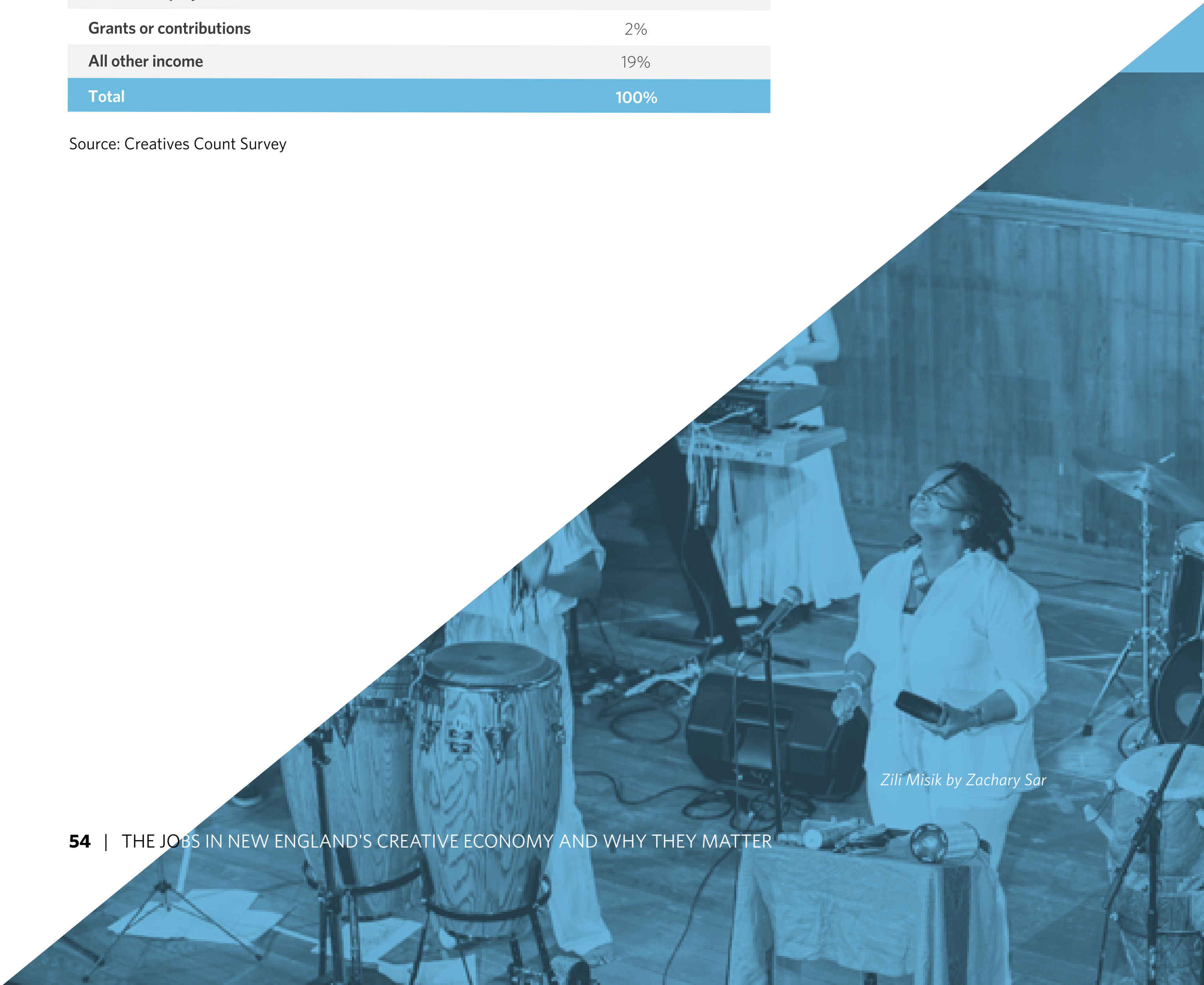
Professional experience
Awards
Media gallery

roughly one-third of their income comes from self-employed activities while nearly half comes from outside employment (i.e. payroll employment or wage and salary work where one receives a W-2). The remainder is mainly "all other income" which includes pensions, social security, investments, and the like.

**TABLE 15** | Share Of Income By Source, 2016

| Source of Income | Mean |
|---|---|
| Self Employment | 32% |
| Outside employment | 47% |
| Grants or contributions | 2% |
| All other income | 19% |
| Total | 100% |

Source: Creatives Count Survey



*Zili Misik by Zachary Sar*

**FIGURE 10** | Creative Workforce By Employer Type, 2014


Source: U.S. Census Bureau, ACS PUMS 5 Yr. Estimates 2010-2014

# The Change of the Creative Economy over Time

A broad look at New England creative enterprise employment shows that creative economy establishments provided more than 238,500 payroll payroll jobs in 2015 with annual wage and salary payments to employees of more than $14.9 billion. Even with declines in payroll overall, creative employment is still a higher proportion of the New England employment base than that of the nation.

Since 2007, the region and nation saw a decline in creative enterprise payroll employment while overall payroll employment grew. As a result of these changes, creative enterprise employment has declined as a percentage of total covered employment – from 4.3 percent of total regional employment in 2007 to 3.4 percent in 2015. During this same time, both creative and total self-employed creatives have grown, suggesting a small but economy-wide increase in the proportion of self-employed workers. Taken together, total payroll employment and self-employment in the creative economy is down by 15 percent in New England and 12 percent in the U.S.

**TABLE 16** | Creative Enterprise Employment Change from 2007 Summary, self-employed creatives to 2014 and Payroll Employment to 2015[14]

| Employment | New England | | United States | |
|---|---|---|---|---|
| | 2015 | Change from 2007 (%) | 2015 | Change from 2007 (%) |
| **Creative Economy Payroll Employment** | 238,504 | -19.2 | 4,578,121 | -16.8 |
| **Total Payroll Employment, All Industries** | 7,100,579 | 2.4% | 139,491,699 | 3.0% |
| **Creative Economy % of Total Payroll Employment** | 3.4% | 0.2% | 3.3% | -0.2% |
| **Creative Economy Nonemployers (self-employed)** | 70,797 | 3.5% | 1,258,642 | 12% |
| **Total Nonemployers (self-employed)** | 1,122,645 | 3.4% | 23,836,937 | 9.8% |
| **Creative Economy % of Nonemployers (self-employed)** | 6.3% | 0% | 5.3% | 0.05% |
| **Creative Payroll and Nonemployers (self-employed)** | 309,301 | -15% | 5,836,763 | -12% |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) and Nonemployer Statistics, U.S. Census Bureau

[14] Nonemployer data is for 2014, the most recently available year

## CHANGE IN CREATIVE ENTERPRISE PAYROLL EMPLOYMENT SINCE 2007

This section delves deeper into changes in the creative economy from its pre-recession peak to today. Comparisons of these pre- and post-recessionary numbers show that the effects of the recession on payroll employment in creative enterprises in New England were severe when compared to growth and recovery patterns in the broader economy. Furthermore, as the long-term trends show, the Great Recession is the point where creative economy employment trends decoupled from the broader economy.

As in the creative economy nationally, creative employment in the region declined during the recent recession and has still not recovered to pre-recession employment levels. Since 2007, creative enterprises in New England shed 19.2 percent of the jobs on their payrolls or nearly 56,600 jobs in the industry between 2007 and 2015. Creative enterprise payroll employment losses in the U.S. of 16.8 percent was only slightly better than the regional decline[15]. In contrast, over the same period, total New England payroll employment in all sectors grew modestly by 2.4 percent or 164,000 jobs while national payroll employment grew by 3.0 percent.

The decline in the number of creative enterprises with paid employees in New England was moderate compared to employment losses—firm counts declined by 10.3 percent between 2007 and 2015 (nearly 2,601 firms). Employment falling faster than firm counts caused average firm size to decrease slightly over the period. Contrary to the creative economy, in the regional economy as a whole, total establishments with paid employees grew by more than 6.8 percent. The change in nonemployer establishments can be found in Graphic 3, page 65.

In spite of the employment declines experienced since 2007, the New England region still has a slightly higher concentration of creative enterprise employment than the nation as a whole. A look at location quotients (LQ) provides one way to assess the significance of employment in creative enterprises in New England. The LQ describes the relative prevalence of employment in an area compared to the nation with values greater than one indicating higher prevalence while values less than one shows lower prevalence. The 2007 creative economy study observed slower growth in creative enterprise employment between 1997 and 2002 and subsequent declines in 2002 location quotients. Due to employment shifts in the creative sectors and the broader state economies between 2007 and 2015, New England's location quotients for creative econo-

[15] These 2007 numbers were developed for this study using the QCEW data and differ from the numbers discussed in *The Creative Economy: A New Definition* study from 2007 that were from the Economic Census.

**TABLE 17** | Creative Payroll Employment in New England, Its States, and the U.S., 2007 and 2015

| 2015 | CT | ME | MA | NH | RI | VT | New England | United States |
|---|---|---|---|---|---|---|---|---|
| **Creative Enterprise Employment** | 59,543 | 15,149 | 115,882 | 21,109 | 17,692 | 9,130 | 238,504 | 4,578,121 |
| **Total Employment, All Industries** | 1,662,825 | 595,889 | 3,428,020 | 636,806 | 469,981 | 307,0587 | ,100,579 | 139,491,699 |
| **Creative Enterprise % of Total Employment** | 3.6% | 2.5% | 3.4% | 3.3% | 3.8% | 3.0% | 3.4% | 3.3% |

| 2007 | CT | ME | MA | NH | RI | VT | New England | United States |
|---|---|---|---|---|---|---|---|---|
| **Creative Enterprise Employment** | 73,381 | 19,648 | 146,846 | 22,9152 | 0,973 | 11,337 | 295,098 | 5,500,791 |
| **Total Employment, All Industries** | 1,686,043 | 602,321 | 3,234,357 | 630,204 | 480,1323 | 03,448 | 6,936,505 | 135,366,106 |
| **Creative Enterprise % of Total Employment** | 4.4% | 3.3% | 4.5% | 3.6% | 4.4% | 3.7% | 4.3% | 4.1% |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

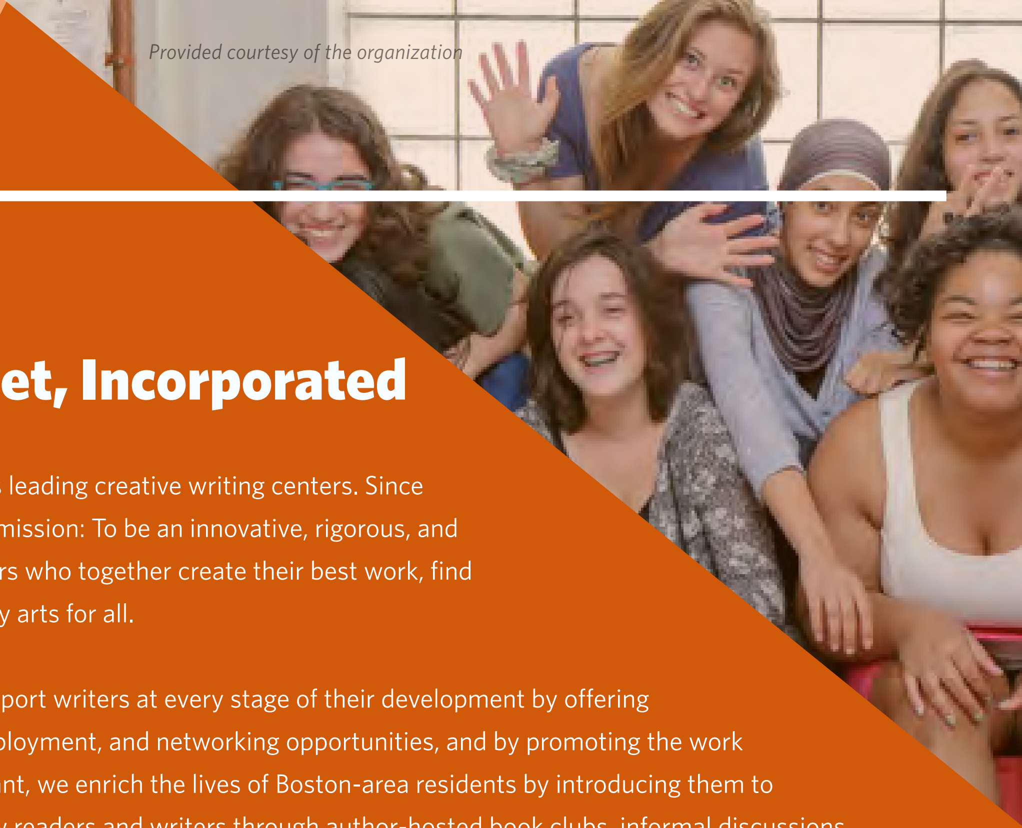
my employment decreased in a few individual states (Maine, Massachusetts, and Vermont) and in the region as a whole. While New England's creative payroll employment declined between 2007 and 2015, so too did the industry nationally. By 2015, New England retained a slightly higher share of creative employment than the national share. In 2015, the location quotient for the industry in New England was 1.023, meaning that creative employment was 2.3 percent more concentrated in New England than nationally, down from 4.7 percent in 2007.

Knowing that creative sectors are spread across diverse industries emphasizes that the creative economy is not homogenous and its components are not subject to uniform economic and technological changes.

**TABLE 18** | Creative Payroll Employment Location Quotient in New England, Its States, and the U.S., 2007 and 2015

| LQ | CT | ME | MA | NH | RI | VT | New England | United States |
|---|---|---|---|---|---|---|---|---|
| **2015** | 1.091 | 0.775 | 1.03 | 1.01 | 1.147 | 0.906 | 1.023 | 1 |
| **2007** | 1.071 | 0.803 | 1.117 | 0.895 | 1.075 | 0.919 | 1.047 | 1 |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

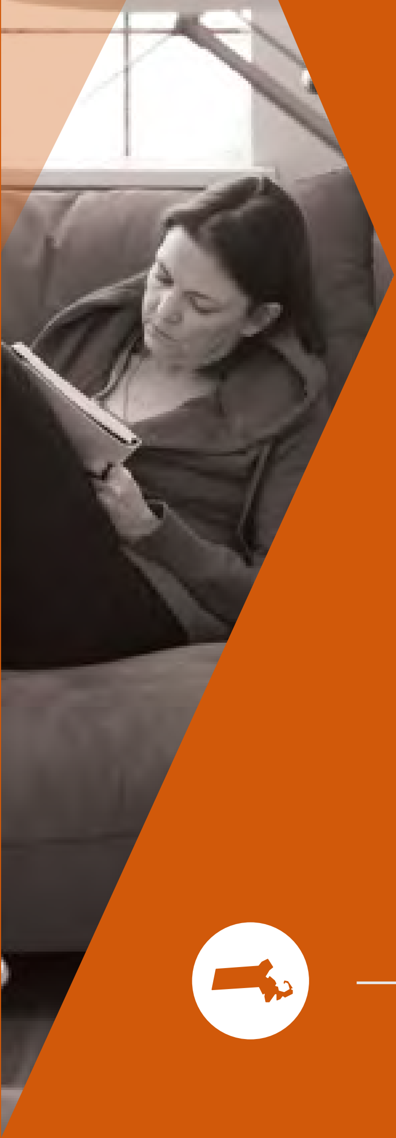


*Provided courtesy of the organization*

# GrubStreet, Incorporated

GrubStreet is one of the nation's leading creative writing centers. Since 1997, we've been driven by one mission: To be an innovative, rigorous, and welcoming community for writers who together create their best work, find audience, and elevate the literary arts for all.

We have two vital roles. We support writers at every stage of their development by offering writing classes, fellowships, employment, and networking opportunities, and by promoting the work of local authors. Equally important, we enrich the lives of Boston-area residents by introducing them to an inclusive community of fellow readers and writers through author-hosted book clubs, informal discussions, movie screenings and more.



**Institution/Business Type:**

Arts Centers

**Professional Disciplines:**

Literature - General, Non-Fiction, Poetry, Publishing, Spoken Word,

Theater - Playwriting

Visual/Crafts - Cartooning / Graphic Novel

**Populations Served:**

Adults

Elders

General Public

People with Disabilities

Teens

Youth-At-Risk

**Activities and Services:**

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Writing Services

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## INDUSTRIES THAT COMPRISE THE CREATIVE ECONOMY

The creative economy is not a single industry as defined by the federal government, rather it is comprised of many different sectors from across many different industries. Table 19  shows the industries where employment in the creative sector is drawn from. For example, in 2015, 15 percent of creative payroll employment (36,530 jobs) was in the manufacturing industry in sectors like printing, and pottery and glass manufacturing, while 42 percent (101,118 jobs) was in information in sectors like newspaper, book and internet publishing.

The individual employment declines within an environment of overall employment gains is not unique to the creative sector. For context on the changes in the creative economy, it is illustrative to examine the changes that have occurred in other industries. Figure 10 shows the change in employment in the creative sectors compared to all other industries after any creative sectors embedded within them are removed. For example, the theater and dance companies within the arts, entertainment, and recreation industry have been removed while the gyms, ski resorts, and casinos remain.

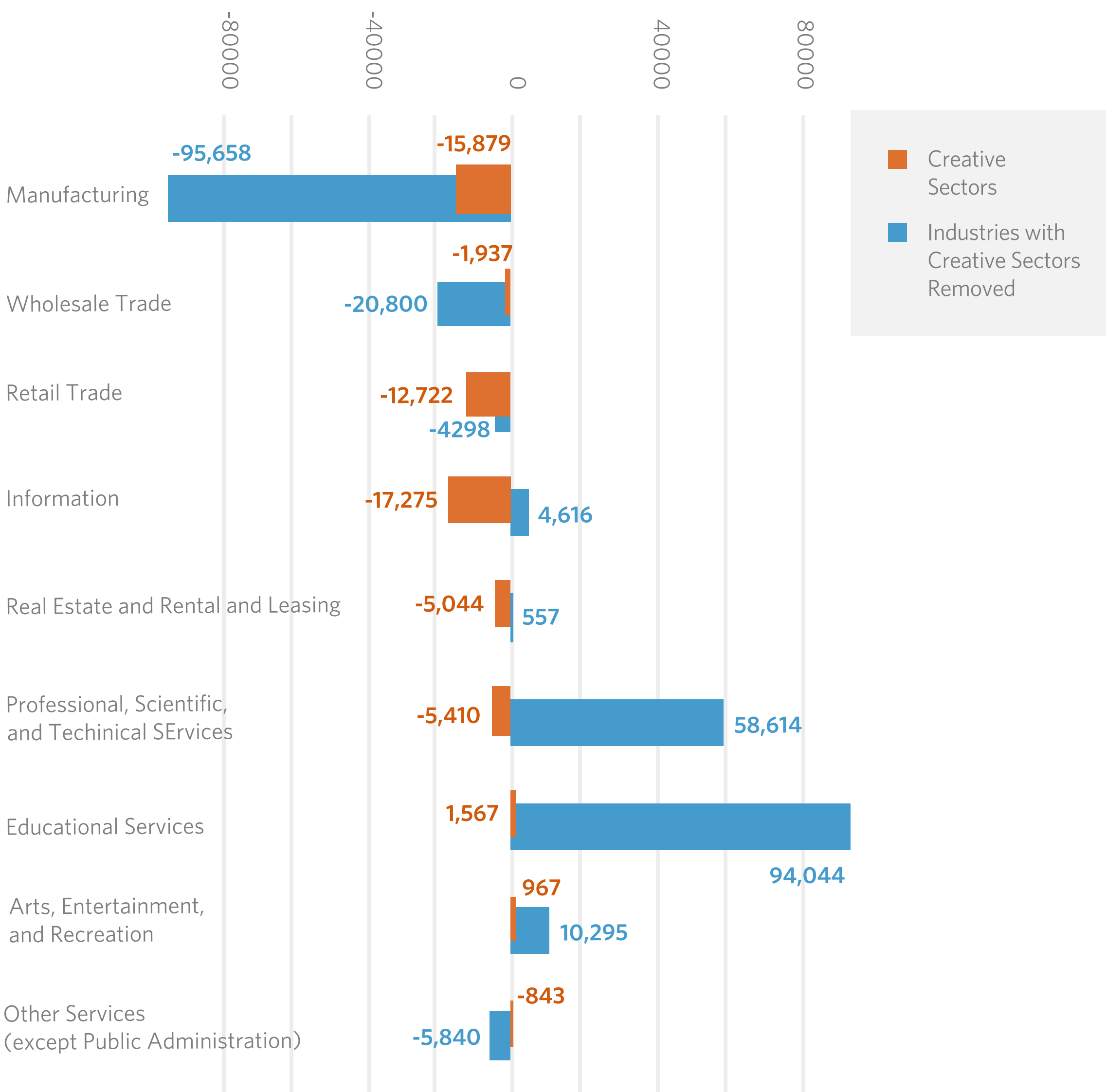
The key industries of construction, wholesale trade, finance and insurance, and manufacturing have all seen significant losses in payroll jobs since 2007. During that time the creative economy sectors lost 19 percent of their payroll jobs, similar in scale to the losses in the manufacturing sector of 14 percent. Mining lost nearly 27 percent of its jobs, the greatest share of all industries but it has few employees so any losses are magnified in percentage terms. Its cumulative payroll employment losses are only 1,064, or roughly two percent of the job losses in the creative sector. Even with widespread employment losses among certain sectors, the region added 164,000 jobs from 2007 through 2015, though they were concentrated in sectors outside of the creative economy: healthcare, education, professional services, and accommodation and food services. Massachusetts was responsible for most of the regional employment gains.

**TABLE 19** | Creative Economy Employment within Two-Digit Industry Sectors, 2007 and 2015

| Creative Employment within 2 Digit NAICS Industries in New England | | Employment | |
|---|---|---|---|
| **2 Digit Industry** | **Description** | **2007** | **2015** |
| 31-33 | **Manufacturing** | 52,427 | 36,530 |
| 42 | **Wholesale Trade** | 7,465 | 5,528 |
| 44-45 | **Retail Trade** | 47,384 | 34,662 |
| 51 | **Information** | 118,393 | 101,118 |
| 53 | **Real Estate and Rental and Leasing** | 5,257 | 213 |
| 54 | **Professional, Scientific, and Techical Services** | 38,104 | 32,694 |
| 61 | **Educational Services** | 5,667 | 7,234 |
| 71 | **Arts, Entertainment, and Recreation** | 19,298 | 20,265 |
| 81 | **Other Services (except Public Administration)** | 1,104 | 261 |
| **Total Creative Employment** | | **295,098** | **238,504** |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) and U.S. Census Bureau County Business Patterns (CBP)

**FIGURE 11** | Absolute Change in the Payroll Employment of Creative Sectors Compared to Other Industries with Embedded Creative Sectors Removed, 2007–2015[16]




Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) and U.S. Census Bureau County Business Patterns (CBP)

[16] These 2007 numbers were developed for this study using the QCEW data and differ from the numbers discussed in *The Creative Economy: A New Definition* study from 2007 that were from the Economic Census.

**TABLE 20** | Absolute Change in the Payroll Employment of Industries Without Creative Sectors, 2007–2015[17]

| Creative Economy Employment | Absolute Change | | | |
|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | % Change |
| Accommodation and Food Services | 543,899 | 610,888 | 66,989 | 12.30% |
| Administrative and Support Services | 349,428 | 370,098 | 20,670 | 5.90% |
| Agriculture, Forestry, Fishing and Hunting | 22,253 | 23,862 | 1,609 | 7.20% |
| Construction | 323,598 | 298,234 | -25,364 | -7.80 |
| Finance and Insurance | 394,634 | 361,092 | -33,542 | -8.50% |
| Health Care and Social Assistance | 1,051,076 | 1,239,557 | 188,481 | 17.90% |
| Management of Companies and Enterprises | 111,845 | 130,602 | 18,757 | 16.80% |
| Mining, Quarry, and Oil and Gas Extration | 3,967 | 2,903 | -1,064 | -26.80 |
| Public Administration | 287,911 | 286,140 | -1,771 | -0.60% |
| Transportation and Warehousing | 205,187 | 215,235 | 10,048 | 4.90% |
| Unclassified | 865 | 1,274 | 409 | 47.30% |
| Utilities | 31,903 | 30,134 | -1,769 | -5.50% |
| **Total Employment, all industries** | **3,326,566** | **3,570,019** | **243,453** | **6.80%** |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) and U.S. Census Bureau County Business Patterns (CBP)

## CHANGE IN CREATIVE ENTERPRISE EMPLOYMENT BY INDUSTRY GROUP, 2007 – 2015[18]

Payroll employment growth occurred in only three creative industry groups in New England since 2007: motion picture and teleproduction; visual arts, music, and other performing arts; and culture and preservation. These three groups are important contributors towards intellectual property production in the region. At the national level, only culture and preservation, motion picture and teleproduction, and marketing grew. The change data shows that New England's biggest creative industry groups as measured by 2007 employment all shrank in both the region and nationally. Figure 12 clearly shows that nearly all the industry groups lie very close to the diagonal line showing equal percentage change in New England and U.S. The line reveals that the manufacturing and retail and wholesale industry groups in New England fared worse than their U.S. counterparts while the region did better in music, media, visual and performing arts, and motion picture and teleproduction.

Disaggregated into their constituent industry sectors, in New England the growth in the motion picture and teleproduction industry group was driven by growth in its constituent industry sectors of motion picture and video production; teleproduction and other

[17] See previous note.
[18] A table showing the detail of industry sectors within industry groups is available in the appendix.

postproduction services; and other motion picture and video industries. In visual arts, music and other performing arts the region saw employment growth among independent artists, writers and performers; at fine arts schools; in dance companies; and in other performing arts companies. Lastly, within the industry group of culture and preservation, employment grew at museums, historical sites, and at zoos and botanical gardens.

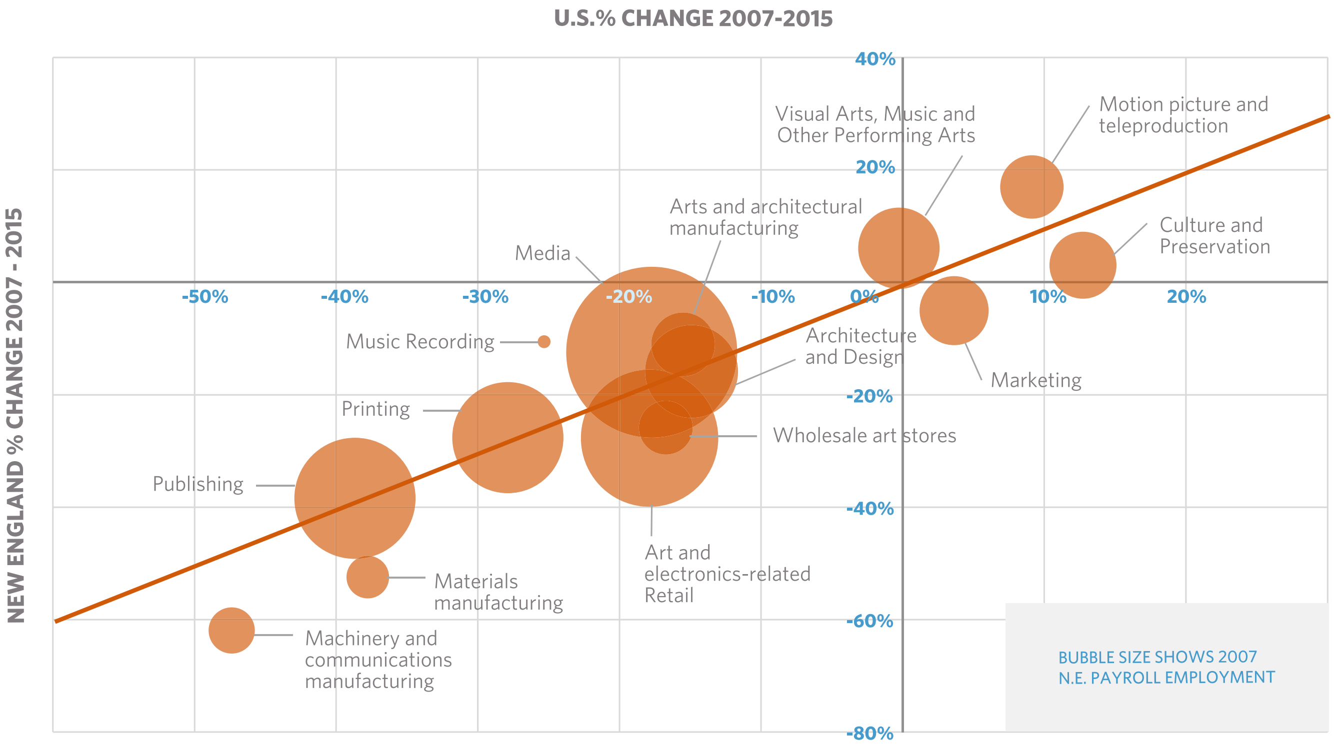
Employment losses were proportionally highest in areas of the creative economy focused on the production and distribution of creative goods. Losses in both of these groups are related to disruptive global trends impacting the location of goods production and the distribution and sales of cultural goods. For example, part of the employment change is related to a long-term trend of manufacturing industry decline in New England and nationally, but exacerbated by changes in the media and format of books, photography, and music. At the industry sector level, the region saw losses in audio and video equipment manufacturing (-3,685), photography-related manufacturing (-1,282), and other types of arts materials manufacturing. Job shifts in goods distribution have been driven by technological changes in media, enabled by the growth of online retail and other forms of commerce and distribution systems. These factors have transformed commercial and wholesale distribution strategies that decreased the presence of regional retail and wholesale box store businesses. As a consequence, the region saw heavy employment losses in radio, television, and electronics retail stores (-6,314); bookstores (-3,475); book and newspaper wholesalers (-2,256); jewelry stores (-1,524); fabric stores (-911); and photo finishing stores (-843).


*Dorrance Dance by Morah Geist*

**GRAPHIC 3** | Change in Creative Employment by Industry Group - Payroll and Nonemployer 2007 and 2015

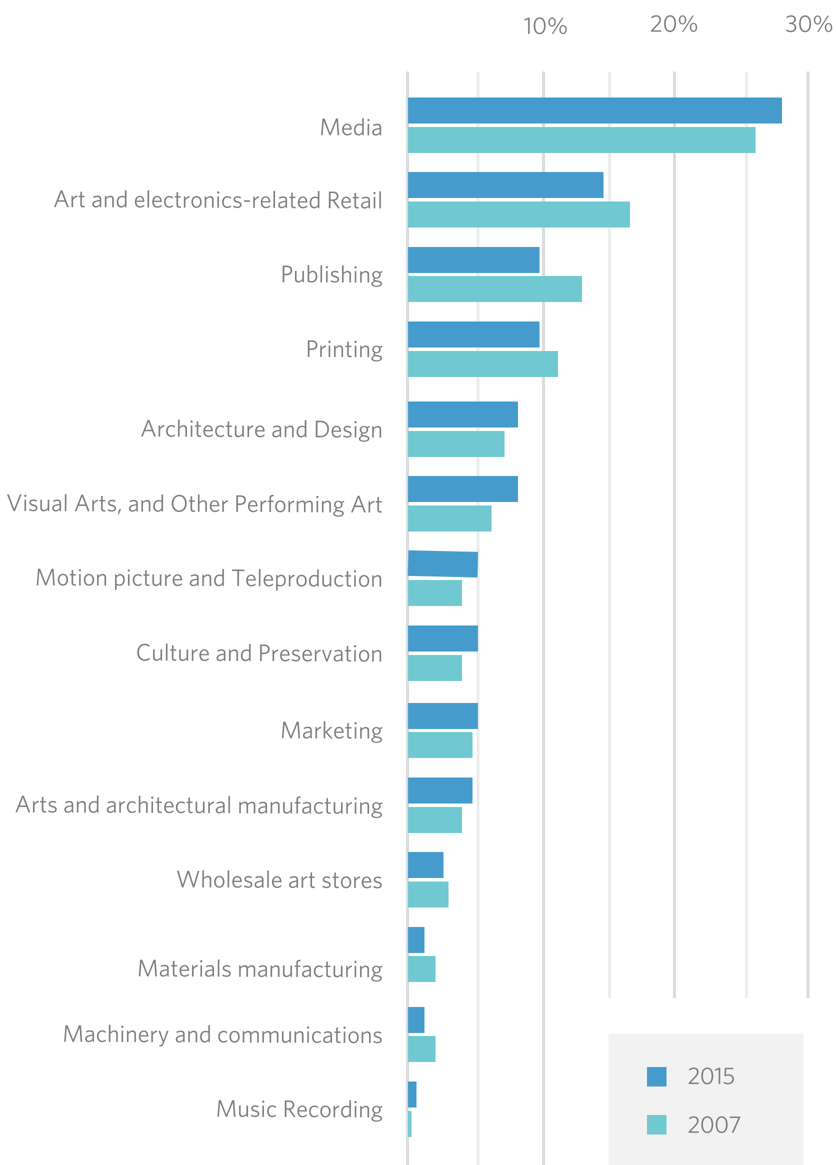

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).
Source: U.S. Census Bureau, Nonemployer Statistics

**FIGURE 12** | Change in Creative Payroll Employment by Industry Group in New England and the U.S., 2007 and 2015




Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**FIGURE 13** | Share of Total Creative Payroll Employment by Industry Group in New England, 2007 and 2015




Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

Technology development and the growth of the internet continues to transform formats and distribution strategies for art, music, movies, books, magazines, news, advertising, and media products. However, it is interesting to note that payroll employment related to the production and distribution of arts, culture, and design-related products and services (i.e. those focused on intellectual property production and distribution) has been relatively more stable in New England than in the other two groups. The losses that did occur have been driven by industries being transformed by technological change. For example, producers of printed media have experienced employment declines as media distribution becomes electronic. The region saw job losses in newspaper publishers (-9,601), periodical publishers (-3,285), and book publishers (-1,474). Businesses involved with older modes of film and television distribution and film products have declined. For example, cable and other program distribution (-9,352), video tape and disk rental (-5,045), and even portrait photography studios (-1,158) have all seen payroll employment reductions. Design and media services that are now reliant on electronic tools and technologies have also experienced losses: employment in architecture and design services has declined by 3,537 since 2007. In the face of this technology-driven change, three areas of culture and arts-based intellectual property production have grown since 2007: motion picture and teleproduction grew 16.7 percent (1,719 jobs); visual arts, music and other performing arts grew 5.8 percent (988 jobs); and culture and preservation organizations stayed relatively stable, growing by 2.8 percent (320 jobs).

The importance of IP production and distribution is further highlighted when one considers the largest employers in the creative industry sectors in New England. Since 2007, libraries and archives, internet publishing and broadcasting, museums and fine arts schools have all gained in importance as top employers in the regional creative economy.

The difficulty of tracking technology-driven shifts in economic activity and jobs from one sector to another has likely exacerbated the losses documented in this report. Many of the sectors that are gaining are not coded by the federal government in such a way as to allow their inclusion in a study of the creative economy, especially one using our definitions. Specifically, the existing classification codes, which are the basis of nearly all data collection, are not yet granular enough in key areas to track the losses in one creative sector and the emergence of another. For example, the audio and video streaming services that are fast becoming the prevalent method of music and video consumption are classified as part of the "Data Processing, Hosting, and Related Services" industry sector. The same classification also includes cloud computing providers, web hosting, and data storage, among other things. The inclusion of all these other activities causes the combined sector to be far removed from the "categorically creative" definition required for inclusion into the core creative economy. In other words, the activities of audio and video streaming firms are not discernable from the business types within the same group and therefore cannot be reliably measured. The arts community may wish to provide feedback to the U.S. Census Bureau, which manages the classification system,

**TABLE 21** | Top Ten Creative Industry Sectors by Employment in New England in 2007 and 2015

| 2007 | | 2015 | | |
|---|---|---|---|---|
| **Top 10 Industries** | **Employment** | **Top 10 Industries** | **Employment** | **% Change** |
| Cable and Other Program Distributions | 36,687 | Cable and Other Program Distributions | 27,335 | -25.5% |
| Radio, Television, and Other Electronics Stores | 24,862 | Radio, Television, and Other Electronics Stores | 18,548 | -25.4% |
| Commercial Lithographic Printing | 24,257 | Commercial Lithographic Printing | 16,376 | -32.5% |
| Newspaper Publishers | 21,333 | Libraries and Archives | 12,274 | -2.6% |
| Architectural Services | 13,292 | Newspaper Publishers | 11,732 | -45.0% |
| Libraries and Archives | 12,601 | Architectural Services | 11,296 | -15.0% |
| Adverstising Agencies | 9,321 | Internet Publishing and Broadcasting | 10,919 | 80.7% |
| Periodical Publishers | 9,075 | Advertising Agencies | 7,555 | -18.9% |
| Book Stores | 8,808 | Museums | 7,397 | 7.4% |
| Jewelry Stores | 7,991 | Fine Arts Schools | 7,234 | 27.7% |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).
Note: U.S. information can be found in the Appendix.

when it solicits ideas for revisions every five years.

From 2007 to 2014 (the most recent year of data availability for nonemployers), the number of creative nonemployer establishments grew, indicating a greater number of individuals with at least $1,000 of self-employed income. However, even with this overall growth, there is considerable diversity of outcomes. Much like in payroll employment, self-employed individuals working in the production and distribution of creative goods and services saw their numbers decline. Net growth is driven by increases in the number of independent artists, writers, performers, and those providing photographic services.

Another area of change is the growing prevalence of self-employed workers generally. The nonemployer sectors that grew very likely indicate the most promising areas for regional artists to establish freelance businesses. In the case of photographic services businesses, nonemployer growth since 2007 may be related to payroll employment losses in commercial photography and photography studio businesses and the ability of freelance arrangements to fill in the gaps, correlating with an earlier finding that payroll employment and self-employment are inversely related. The growth of independent artists, writers and performers, a subset of all creative nonemployers, also illustrates the increasing prevalence of self-employment or freelance work for core creative workers. While slightly more than 820 payroll employers in this area exist in New England, these businesses offer only about 1,800 payroll jobs in the region. In contrast, nearly 47,000 nonemployer businesses earned more than $900m in annual receipts for arts-related work. When considering the self-employed businesses, it is important to note that while most of them are independent contractors or freelancers, the jobs are not necessarily full time. Our survey results suggest that self-employment is an important supplement to wage and salary income and not necessarily a one-to-one substitute.

## GROWING OCCUPATIONS IN NEW ENGLAND, 2007 – 2015

A look at growing creative workforce occupations in New England since 2007 confirms that, for the most part, growing occupations are concentrated in a few broad segments. Much like the industry group itself, occupations related to motion picture and teleproduction have grown strongly since 2007 with double-digit percentage growth across the board. This industry group's growth has also helped the artist occupations of actors, producers, and directors. Writers and musicians are among the other artist occupations to see growth. Finally, arts-related postsecondary educators have also followed their industry's trend by showing growth. In summary, growing occupations especially include occupations related to

- **Motion picture and broadcast production**
  - Audio and video equipment technicians
  - Set and exhibit designers
  - Film and video editors
  - Multi-media artists and animators
  - Audio-visual and multimedia collections specialists
  - Broadcast technicians
  - Camera operators for television, video, and motion pictures
  - Sound engineering technicians
  - Media and communication equipment workers

- **Arts-related postsecondary educators**
  - Architecture teachers
  - Art, drama and music teachers
  - Literature teachers
  - Foreign language literature teachers
  - Ethnic and cultural studies teachers
  - Communications teachers

- **Artist Occupations**
  - Writers and authors
  - Actors
  - Producers and directors
  - Musicians
    - Music directors and composers
    - Musicians and singers
    - Musical instrument repairers and tuners

**TABLE 22** | Creative Occupations with Growth in New England, 2007-2015

| SOC Code | Growth in Creative Workforce Occupations | New England | | | |
|---|---|---|---|---|---|
| | | 2007 | 2015 | Absolute Change | Percent Change |
| 00-0000 | All Ocupations | 6,909,680 | 7,057,990 | 148,301 | 2.1% |
| 27-2012 | Producers and Directors | 2,670 | 5,240 | 2,570 | 96.3% |
| 11-2031 | Public Relations and Fundraising Managers | 3,810 | 6,080 | 2,270 | 59.6% |
| 27-1026 | Merchandise Displayers and Window Trimmers | 2,240 | 4,470 | 2,230 | 99.6% |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | 5,880 | 7,700 | 1,820 | 31.0% |
| 27-2011 | Actors | 310 | 1,500 | 1,190 | 383.9% |
| 25-1123 | English Language and Literature Teachers, Postsecondary | 4,080 | 5,210 | 1,130 | 27.7% |
| 27-4011 | Audio and Video Equiptment Technicians | 2,410 | 3,440 | 1,030 | 42.7% |
| 27-2041 | Music Directors and Composers | 310 | 1,310 | 1,000 | 322.6% |
| 2501124 | Foreign Language and Literature Teachers, Postsecondary | 1,390 | 1,840 | 450 | 32.4% |
| 25-1031 | Architecture Teachers, Postsecondary | 170 | 600 | 430 | 252.9% |
| 27-3043 | Writers and Authors | 2,040 | 2,430 | 390 | 19.1% |
| 27-1027 | Set and Exhibit Designers | * | 310 | 310 | - |
| 27-4032 | Film and Video Editors | 480 | 790 | 310 | 64.6% |
| 27-1014 | Multimedia Artists and Animators | 1,350 | 1,650 | 300 | 22.2% |
| 25-9011 | Audio-Visual and Multimedia Collections Specialists | 390 | 670 | 280 | 71.8% |
| 25-1062 | Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 640 | 860 | 220 | 34.4% |
| 27-4012 | Broadcast Technicians | 1,400 | 1,600 | 200 | 14.3% |
| 25-1122 | Communications Teachers, Postsecondary | 1,190 | 1,380 | 190 | 16.0% |
| 27-4031 | Camera Operators, Television, Video, and Motion Picture | 990 | 1,170 | 180 | 18.2% |
| 27-4014 | Sound Engineering Technicians | 440 | 590 | 150 | 34.1% |
| 27-4099 | Media and Communication Equiptment Workers, All Other | 580 | 680 | 100 | 17.2% |
| 27-3012 | Public Address System and Other Announcers | 180 | 260 | 80 | 44.4% |
| 27-2042 | Musicians and Singers | 1,320 | 1,390 | 70 | 5.3% |
| 49-2097 | Electronic Home Entertainment Equiptment Installers and Repairers | 1,100 | 1,170 | 70 | 6.4% |
| 25-4012 | Curators | 1,000 | 1,040 | 40 | 4.0% |
| 17-1011 | Architects, Except LAndscape and Naval | 6,020 | 6,050 | 30 | 0.5% |
| 25-4011 | Archivists | 460 | 490 | 30 | 6.5% |
| 49-9062 | Musical Instrument Repairers and Tuners | 180 | 210 | 30 | 16.7% |
| 25-1082 | Library Science Teachers, Postsecondary | 90 | 100 | 10 | 11.1% |
| 19-3091 | Anthropologists and Archeologists | 30 | 30 | 0 | 0.0% |

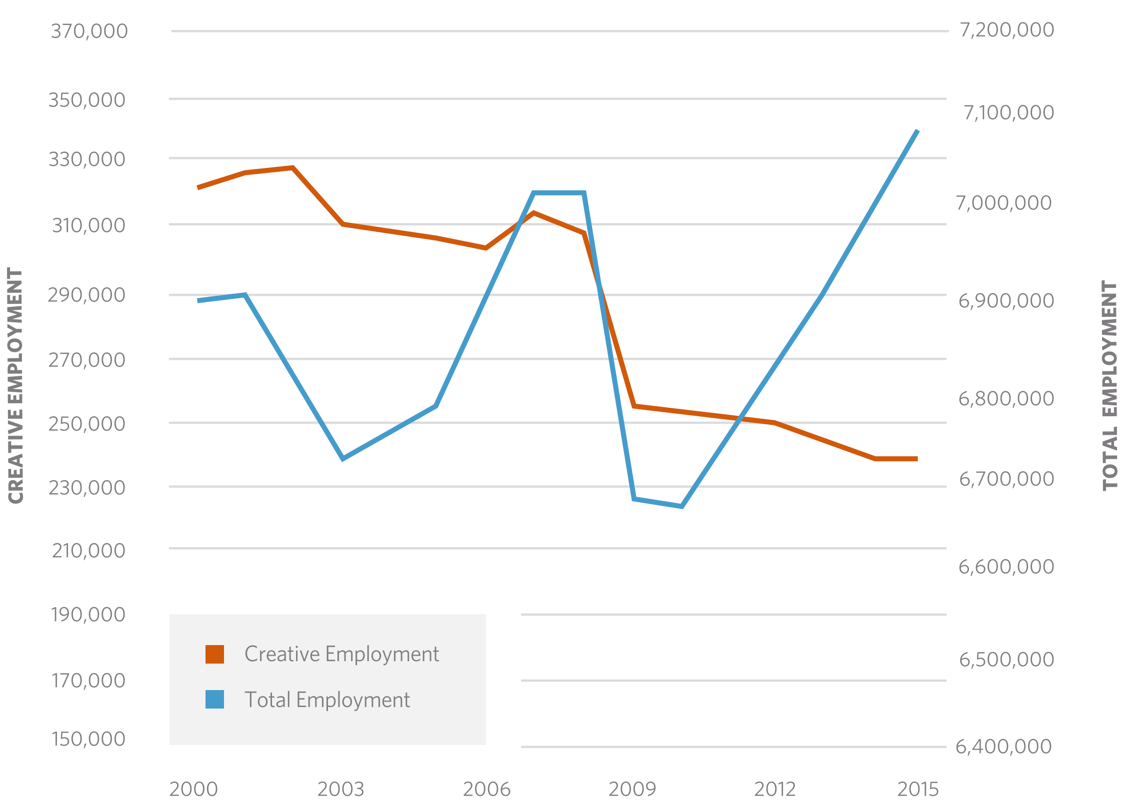
Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES). *Suppressed, data unavailable

## LONG-TERM TRENDS IN THE CREATIVE ECONOMY, 2000 THROUGH 2015

Many factors have come into play to reshape the creative economy in the 2000s: technology development has increased productivity but reduced employees; new technologies have transformed product formats and revolutionized distribution and sales methods; globalization and the growth of markets outside of New England have driven relocation of firms within the U.S. and globally; online sales platforms have transformed consumer purchasing patterns and impacted the viability of retail box stores.

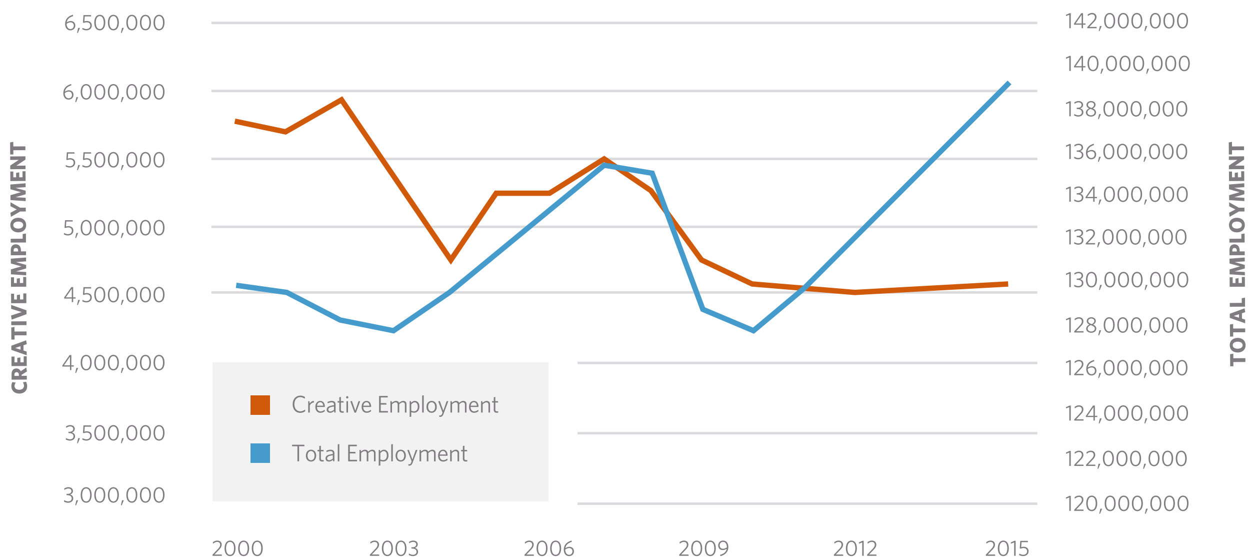
In the meantime, two recessions have impacted consumer discretionary income and spending patterns. Expanding online sales platforms coupled with changing spending can prove a double-edged sword for artists. The expanded reach online allows them to partially decouple their earnings from the local market while simultaneously making it more difficult to get noticed among other choices. In other words, expanded online

**FIGURE 14** | New England Creative Enterprise Payroll Employment Compared to Overall Payroll Employment, 2000-2015




Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**FIGURE 15** | United States Creative Enterprise Payroll Employment Compared to Overall Payroll Employment, 2000-2015



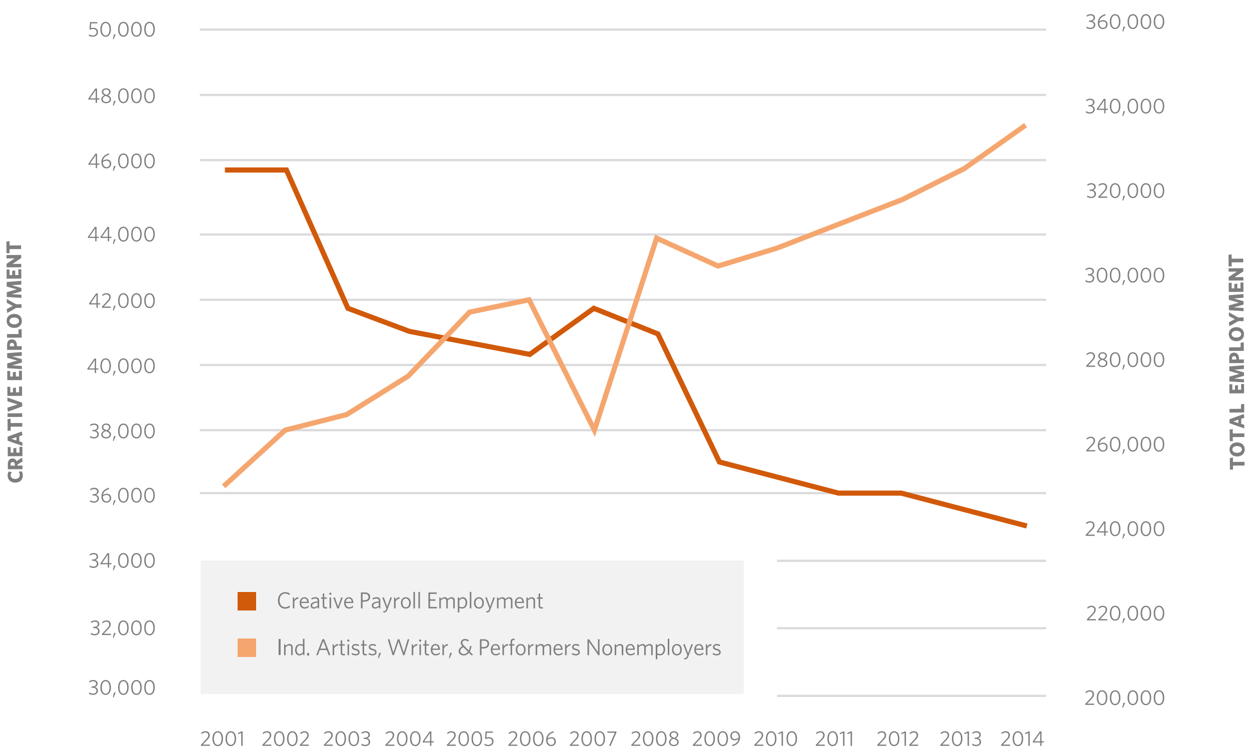

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

sales platforms increase the size of the pie of revenues from art sales while also increasing competition for each slice. These factors and others have served to shape the business climate for creative enterprise businesses since the early 2000s.

In contrast to growth trends for creative enterprise establishments providing payroll jobs, numbers of non-employer establishments in the New England creative economy have increased over time, growing by nearly 17,364 businesses or 32.5 percent since 2001. Overall, this rate of growth is higher than the rate of growth of all self-employed establishments in the regional economy (19.9 percent) but slower than the national rate of self employed establishment growth in the creative economy (56.0 percent) over the same time period. The nonemployer sector that grew most significantly in New England was independent artists, writers and performers, which added more than 10,667 enterprises since 2001 (29.4 percent).

As the sector where the most self-employed artists are

**FIGURE 16** | Change in Creative Employment Compared to Independent Artists, Writers, and Performer Nonemployers, 2001-2014




Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) and U.S. Census Bureau, Nonemployer Statistics. Independent Artists are defined as NAICS code 71151

found, the status of independent artists, writers, and performers is of special concern to artist advocates and other users of this report. The following charts show the change over time of self-employed artists in this sector throughout New England and the U.S. Figure 17 shows the change in independent artists, writers, and performers compared to creative payroll employment. While the absolute numbers are far apart—there are seven times as many payroll jobs as self-employed establishments—their patterns of change relative to one another is informative. Over the period from 2001 to 2014, the change in independent artists, writers, and performers was generally the inverse of creative employment. When one went down the other went up[19]. This pattern suggests that artists are using self-employment as a countercyclical balance to declines in payroll employment.

The Creatives Count survey suggests that many artists are in search of and are having trouble finding business and legal advice, which indicates that for many self-employment may be new or unfamiliar. More generally, workforce data indicates that one-third of creative workers are self-employed. These findings tie together with the inverse relationship between self-employment and payroll employment to suggest that creative workers—or the nature of creative work itself—may be more amenable to self-employment while also suggesting a preference for payroll employment if it is available. An unresolved but important question is whether the strength of employment preference or the strategy for stabilizing income in times of job losses is the stronger force in determining the choice between artists pursuing self-employment over payroll employment.

[19] For the statistically-inclined, their coefficient of correlation is -0.92.

*Provided courtesy of the organization*

# Mystic Knotwork

Nautical knots and weaves. Matt & Jill Beaudoin are continuing a family tradition of knot tying started by his grandfather Alton back in the 1930s. In 1957, Alton founded Beaudoin's Rope Locker and enlisted his 7 year old grandson to help in 1978. By 1996, Matt had taken over most of the responsibility and with his grandfather's passing, Matt took the business and started to build it.

**Institution/Business Type:**

Artists (Individual)

**Professional Disciplines:**

Design - Graphic

Visual/Crafts - General, Decorative Arts, Fiber, Textile Weaving

**Populations Served:**

Businesses

Families

People with Disabilities

Teens

**Activities and Services:**

Art Sales

Artist Market

Exhibitions

Manufacturing / Fabrication

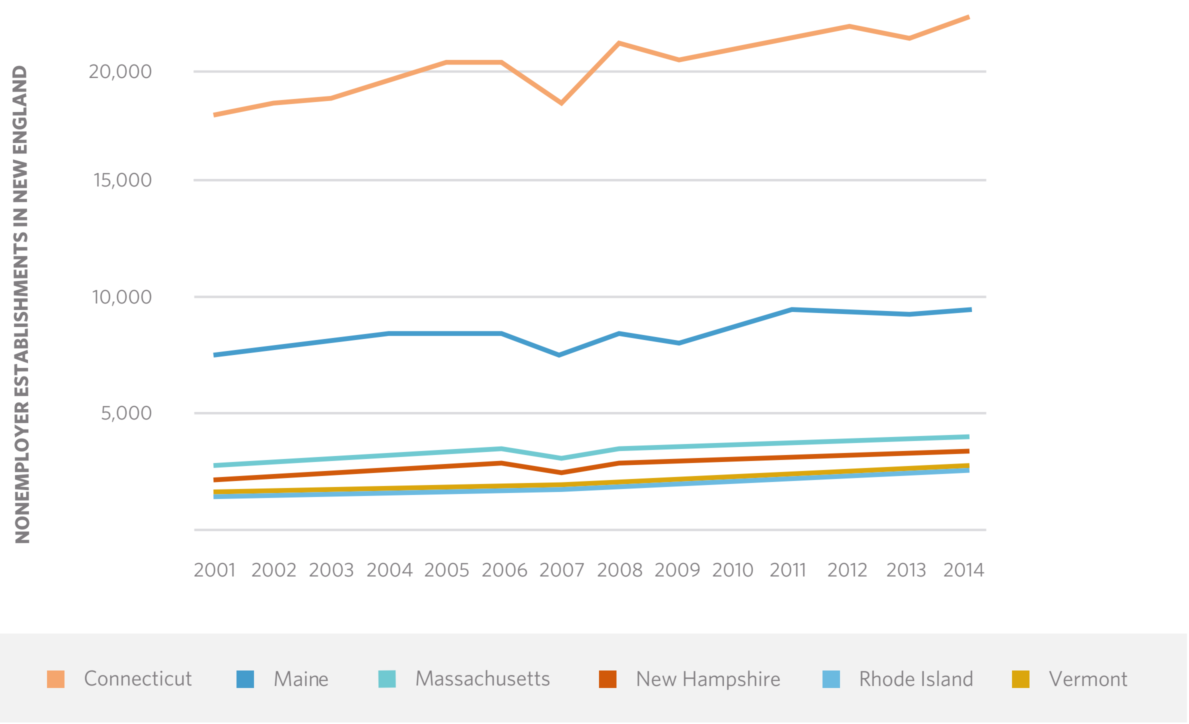
Marketing Services

Workshops / Demonstrations / Master Class / Presentation

***Learn more about Mystic Knotwork on CreativeGround***

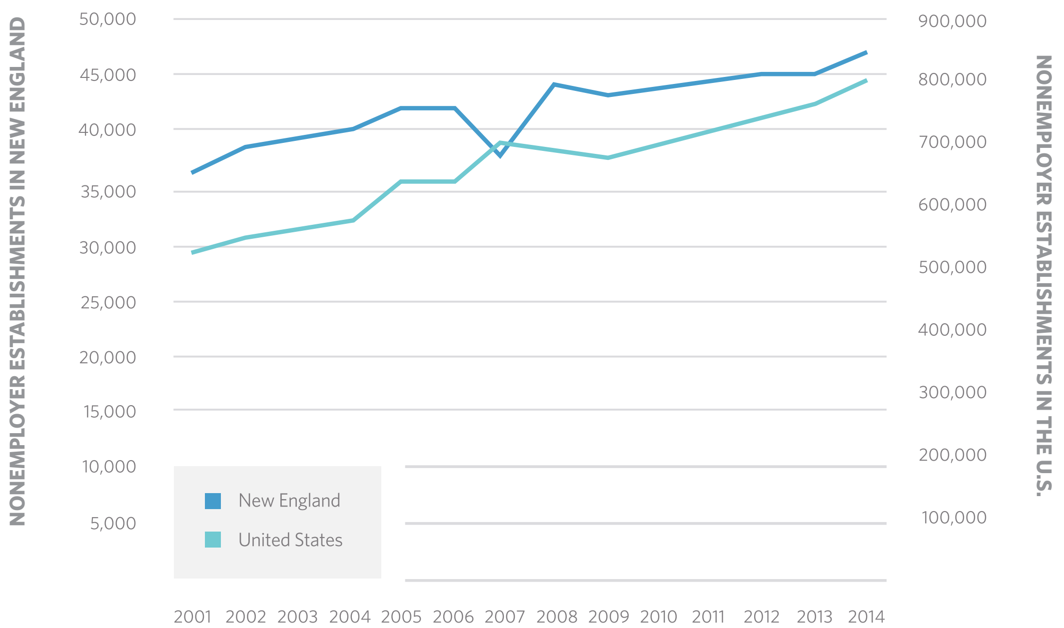
Professional experience
Awards
Media gallery

**FIGURE 17** | Independent Artists, Writers and Performers Nonemployer Establishments in the New England States, 2001-2014




Source: U.S. Census Bureau, Nonemployer Statistics. Independent Artists are defined as NAICS code 71151.

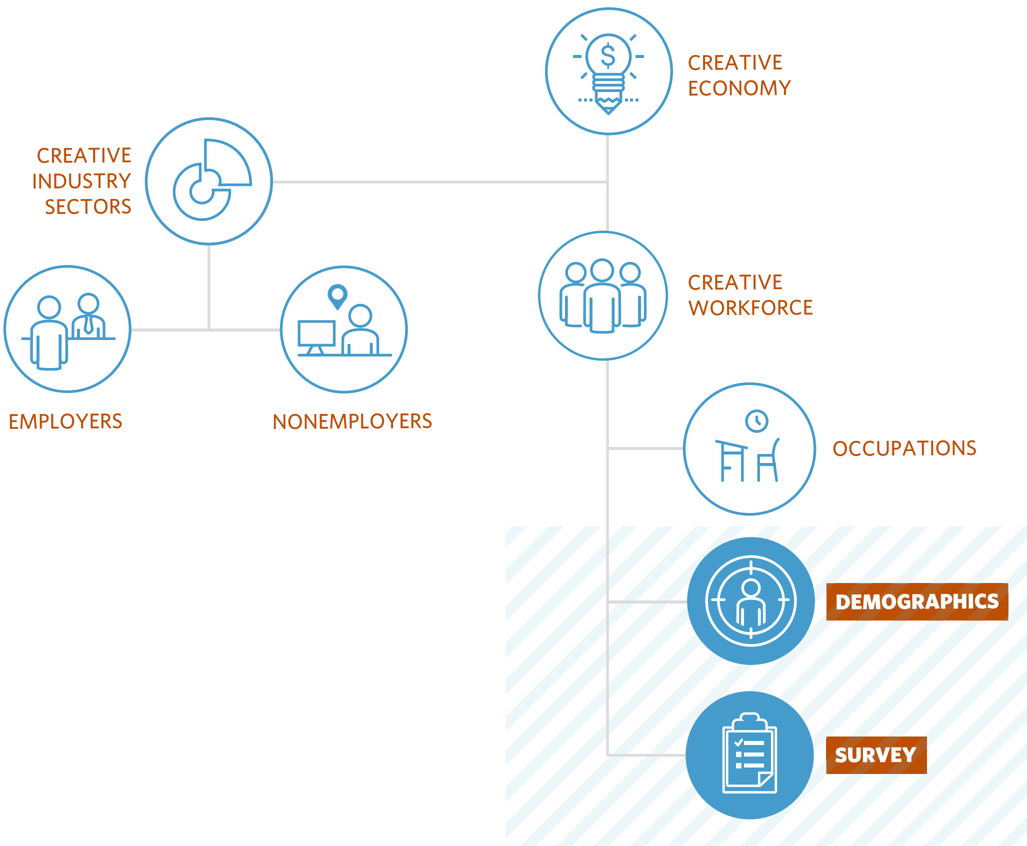
**FIGURE 18** | Independent Artists, Writers and Performers Nonemployer Establishments in New England and the United States, 2001-2014




Source: U.S. Census Bureau, Nonemployer Statistics. Independent Artists are defined as NAICS code 71151.


*Pineapple Diaries; Photo by Paloma Valenzuela*

# Creative Workforce Characteristics



Creative workers are characterized by college completion rates 1.5 times higher than the overall workforce. The extra schooling also manifests in other demographic measures. On average, creative workers are older, less diverse, and higher income than average, all of which can be at least partly explained by the average demographic characteristics of those who have completed higher education. Creative workers are also 2.5 times more likely to be self-employed. The survey suggests that creative workers recycle over a quarter of their earnings back into their creative work. Their unique work patterns also create an unmet need for business advisory services. Among the details there is considerable diversity in the unmet needs of creative workers depending on their place of residence and discipline. Accordingly, those who wish to serve this population would be advised to first choose the location or discipline they wish to address.

## DEMOGRAPHIC CHARACTERISTICS

In contrast to the previous sections, which focused on the firms and jobs of the creative economy, this and the following section examine the characteristics of the people who are engaged in creative work. This section is built upon data from the public use microdata sample (PUMS) of the American Community Survey (ACS), which is a product of the U.S. Census Bureau, and the Creatives Count online survey of New England's creative workers administered for this study.

The ACS is conducted yearly and replaces the decennial census long form, resulting in what is now the most detailed source of demographic and socioeconomic information available[20]. Because it is a survey of individuals, the ACS includes anyone who claims to be a creative worker, regardless of employment type or status. However, it does not count those who do creative work for less than 50 percent of their work hours. Additionally, like all federal data sources, the ACS is required to maintain the privacy of the respondents, which can lead to suppression of some data. For these reasons and others, we decided to create the Creatives Count survey to supplement the ACS data. Creatives Count was open to anyone who did creative work, no matter for how little time or money, and allowed for the collection and cross-tabulation of information across individuals.

Consistent with the findings of the 2007 NEFA creative economy study, creative workers are on average older than the overall workforce. In New England and most states, the share of the workforce under 30 and over 55 is similar at roughly one-quarter in each group. However, the creative occupations as a whole and the artist subset both reflect older workers[21]. The previous study speculated that this pattern is most likely due to the educational requirements of creative work, which result in later entrance into the workforce, and the low levels of physical exertion required, which allows older workers to continue longer in their fields.

[20] Further details on the use of the ACS data can be found in the methodology.

[21] Artistic occupations represent a subset of the entire creative workforce occupations, which include architects, designers, visual artists, photographers, writers, actors, producers and directors, dancers, musicians, announcers, and all other entertainers (see Creative Workforce Occupations SOC code table for details).

**TABLE 23** | Creative Workforce by Age, 2014

| Workforce Category | Group | CT | ME | MA | NH | RI | VT | NE |
|---|---|---|---|---|---|---|---|---|
| **All Occupations** | Under 30 | 23% | 22% | 25% | 23% | 26% | 23% | 24% |
| | 55 and over | 23% | 25% | 22% | 24% | 22% | 26% | 23% |
| **Creative Occupations** | Under 30 | 19% | 14% | 23% | 18% | 23% | 18% | 21% |
| | 55 and over | 28% | 32% | 25% | 30% | 24% | 32% | 27% |
| **Artist Occupations** | Under 30 | 19% | 9% | 22% | 18% | 22% | 14% | 20% |
| | 55 and over | 26% | 31% | 24% | 28% | 24% | 32% | 26% |

Source: U.S. Census Bureau, ACS PUMS 5 Yr. Estimates 2010-2014

**TABLE 24** | Creative Workforce by Race, 2014

| Workforce Category | Group | CT | ME | MA | NH | RI | VT | NE |
|---|---|---|---|---|---|---|---|---|
| **All Occupations** | White | 72% | 95% | 77% | 93% | 78% | 95% | 80% |
| | Black/African American | 9% | 1% | 6% | 1% | 5% | 1% | 6% |
| | Asian | 4% | 1% | 6% | 2% | 3% | 1% | 4% |
| | Hispanic | 13% | 1% | 9% | 3% | 12% | 2% | 8% |
| | Other | 2% | 2% | 2% | 1% | 3% | 2% | 2% |
| **Creative Occupations** | White | 85% | 95% | 85% | 92% | 80% | 95% | 86% |
| | Black/African American | 5% | 0% | 3% | 0% | 3% | 2% | 3% |
| | Asian | 3% | 2% | 4% | 2% | 3% | 0% | 3% |
| | Hispanic | 6% | 1% | 5% | 4% | 12% | 2% | 6% |
| | Other | 2% | 2% | 2% | 2% | 3% | 1% | 2% |
| **Artist Occupations** | White | 84% | 95% | 86% | 92% | 86% | 96% | 87% |
| | Black/African American | 5% | 0% | 3% | 0% | 3% | 2% | 3% |
| | Asian | 3% | 2% | 4% | 1% | 2% | 1% | 3% |
| | Hispanic | 6% | 1% | 5% | 4% | 5% | 1% | 5% |
| | Other | 2% | 2% | 2% | 2% | 4% | 1% | 2% |

Source: U.S. Census Bureau, ACS PUMS 5 Yr. Estimates 2010-2014

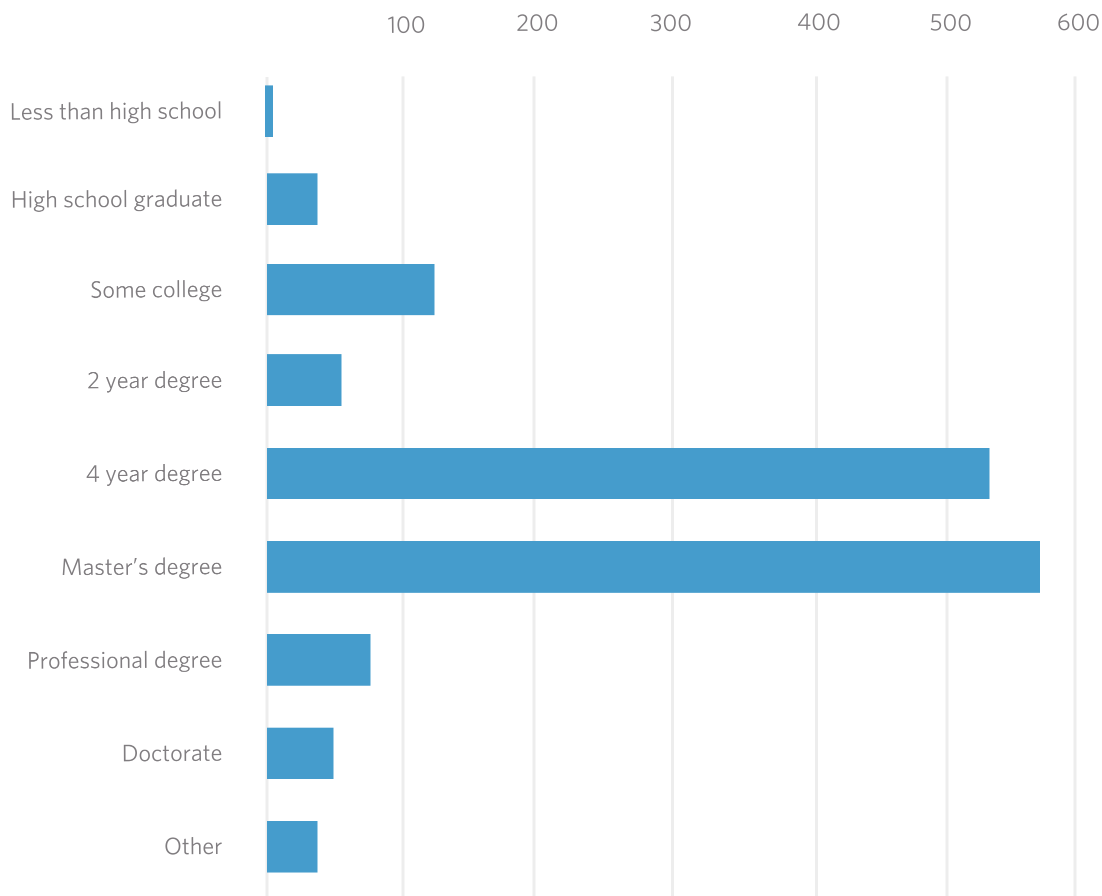
New England is less racially diverse than the nation at large. Within New England, the creative occupations are less diverse than the average and become even less so within the artistic occupations. The share of non-white workers starts from 20 percent for the overall workforce and falls to 13 percent for artists. This pattern does not hold for Maine, New Hampshire, and Vermont, which retain equal racial diversity among occupations, perhaps because they start with very low non-white shares of the overall workforce.

Nationally, 42 percent of adults have an associate's degree or higher, which is lower than the New England total of 46 percent. Even with a higher base, creative workers, whether overall or only the subset of artists, show considerably higher educational attainment than the total workforce. Both groups show 74 percent of the workforce with a college degree of some kind. With some fluctuation, the overall pattern is consistent across the six New England states. The survey results from Creatives Count, which are not limited to only those for whom creative work is a primary occupation, showed even higher levels of educational attainment. Ninety percent of respondents have completed some level of college (two-year degree and higher). The tally of college completion includes those who marked "other" because an examination of respondents' explanations indicate that the considerable majority of them clearly note completion of higher education including MFAs, CAGS, multiple degrees, or incomplete graduate work (which implies complete undergraduate studies).

**FIGURE 20** | Creative Workforce by Educational Attainment, 2014


Source: U.S. Census Bureau, ACS PUMS 5 Yr. Estimates 2010-2014

**FIGURE 21** | Creatives Count Educational Attainment, 2016




## CREATIVES COUNT SURVEY: WORKER RESOURCES AND NEEDS[22]

The UMDI team, with help from NEFA and the New England state arts agencies, created the Creatives Count online survey to address gaps in the BLS and Census data on independent artists and creative workers. These gaps arise from the different universes that each source measures. Data from the BLS only captures employees of businesses covered by unemployment insurance and therefore excludes self-employed workers and those who do not report income from their creative work. From the Census, the nonemployer data only captures self-employed creative workers who report business income on their tax return. The American Community Survey (ACS), which is the source of the PUMS, only allows for each respondent to have one occupation, which is determined by the work that the respondents spend the most time doing. Though it does not take income into account when determining occupation, the ACS results would still be weighted more toward those workers whose predominate form

[22] Results from the survey have already been presented elsewhere in the report where they are applicable to the discussion, e.g. above under educational attainment and with the discussion of occupational employment.

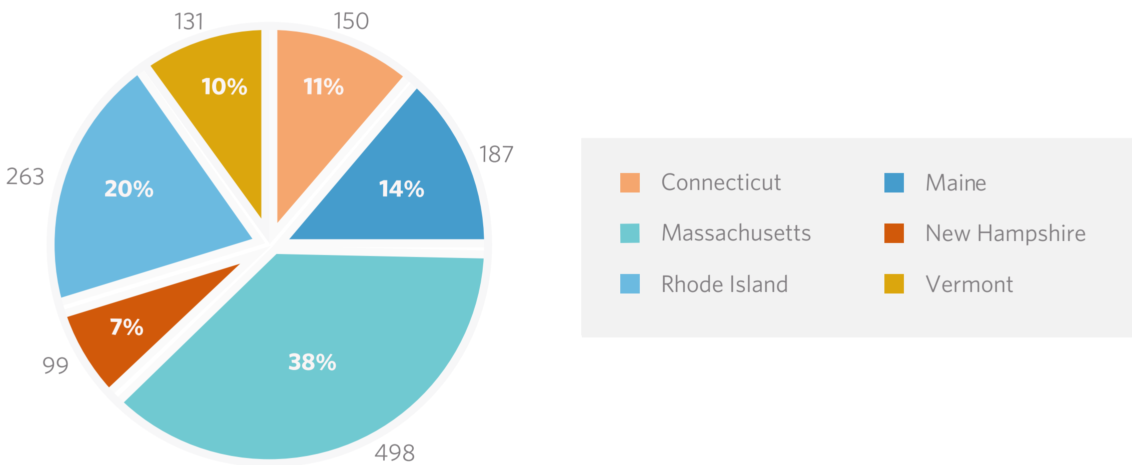
of work is creative rather than those who primarily do non-creative with creative work as a supplementary activity. Collectively, these limits of above data sources would tend to exclude creative workers who spend less than 50 percent of their time on creative work and/or earn little income from it. Furthermore, none of the data sources capture the variety of activities undertaken by an individual or allow creative workers to express their opinions on the state of the creative economy.

As a result of all these unmet data needs, the team developed specific targets for additional information from the survey. On the employment side, they included data on the activities and income of those workers who do creative work outside of formal business structures or only occasionally. Similarly, the team wished to better understand the variety of work undertaken and the nature of these workers' expenditures. Regarding the individuals themselves, the survey also captured various socioeconomic data like educational attainment, personal and household income, and demographic traits. Where these findings were relevant, they were discussed in other sections of this report.

The survey is also designed to provide a benchmark for future study and a forum for New England's creative workers to express their resource needs and opinions about the strengths and challenges of New England as a place for creative work. It is NEFA's intention to reintroduce the survey periodically to track its unique data over time, such as the individual career, spending, and employment choices made by creative workers. This tracking would allow stakeholders and artist advocates to measure the impacts of their initiatives. The Creatives Count survey also serves to supplement the breadth and depth of information in CreativeGround, which has been the primary method for tracking artists and creative workers in New England since 2005. The survey provided additional data for research purposes, and respondents gained the opportunity to create or update a public profile on CreativeGround.

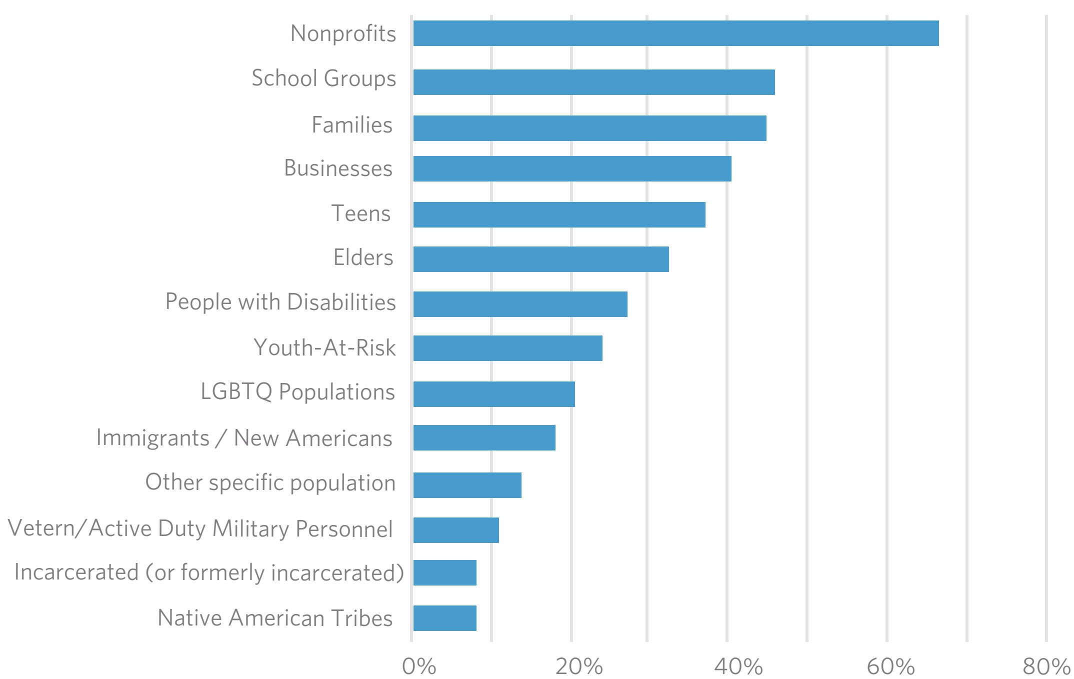
Over 1,200 individuals completed the survey while another roughly 1,700 began but did not complete it, a completion rate of 42 percent, which we believe to be very good for such a long survey. As a result, there are enough respondents to fully analyze each question while certain others, especially those early in the survey, will have more respondents than others. We do not expect the varied response counts to materially impact the results as periodic evaluation of the results during the survey period showed that the overall pattern of responses has remained fairly stable from the 500 respondent level onward. Furthermore, because of the large sample size and consistency of the response patterns over increasing levels of respondent participation, we feel that the survey results are informative and descriptive of the population of concern. This section concludes with comments on areas of possible oversampling and their impacts on the survey results.

**FIGURE 22** | Place of Residence of Survey Respondents, 2016




Source: Creatives Count Survey

**FIGURE 23** | Groups Served by Survey Respondents, 2016




Source: Creatives Count Survey

Overall 1,328 respondents provided their place of residence, shown by state in Figure 22. The largest share of responses came from Massachusetts, Rhode Island, and Maine, respectively. When compared with the data from the ACS PUMS analysis,we find that Massachusetts, though it comprises the largest share of responses, and Connecticut, are actually underrepresented in the survey by 11 and 13 percent, respectively. On the other hand, Rhode Island is especially overrepresented with 12 percent more responses than its share of the PUMS data would imply. These deviations, which in large part can be attributed to the outreach efforts by the respective state arts agencies, should not impact our basic findings as most are presented for New England as a whole.

Aside from the general public, artists and creative workers in New England often work with or target specific audiences for their work. While the survey did not ask what the artists hoped to achieve with the work, their choice of specific groups suggests a desire to expand the reach of creative work and provide benefits to at-risk populations. Figure 23 details the choices made by respondents. This question was multi-select so the percentages represent the share of respondents who selected each option and therefore the categories will not sum to 100 percent.

While conducting outreach prior to drafting the survey, the team heard many comments about the need to better understand the space requirements of creative

**TABLE 25** | Location of Primary Workspace of Survey Respondents by State, 2016

| | At Employer's Premises | Home | Away from Home | Want but Do Not Have Separate Space |
|---|---|---|---|---|
| CONNECTICUT | 23% | 53% | 12% | 12% |
| MAINE | 15% | 56% | 16% | 13% |
| MASSACHUSETTS | 16% | 52% | 16% | 17% |
| NEW HAMPSHIRE | 19% | 53% | 13% | 15% |
| RHODE ISLAND | 20% | 49% | 18% | 13% |
| VERMONT | 14% | 52% | 23% | 11% |
| **Total** | **17%** | **52%** | **16%** | **14%** |

Source: Creatives Count Survey

**TABLE 26** | Ownership Type of Primary Workspace of Survey Respondents by State, 2016

| | Own | Rent | Do Not Require Separate Space |
|---|---|---|---|
| CONNECTICUT | 55% | 33% | 12% |
| MAINE | 60% | 32% | 7% |
| MASSACHUSETTS | 43% | 49% | 8% |
| NEW HAMPSHIRE | 54% | 35% | 11% |
| RHODE ISLAND | 48% | 43% | 9% |
| VERMONT | 63% | 31% | 6% |
| NEW ENGLAND | 51% | 41% | 9% |

Source: Creatives Count Survey

workers. Depending on their discipline, the space needs of creative workers differs considerably. Some may require only a computer while others need specialized studio space. According to the survey results, roughly half of the respondents have their primary work space in their homes while only 14 percent want but do not have a separate space. When asked about the ownership type of their space, roughly half of respondents answered that they own their space.

The states show little difference from the regional average in the location of the respondents' primary workspace but do differ some in ownership types. Table 25 shows that most states are within a few percentage points of the regional average of location. Conversely, Table 26 shows that the states vary noticeably among each other in ownership types. On average, 51 percent of creative workers in New England own their work space though that share climbs to over 60 percent in Maine and Vermont and falls to 43 percent in Massachusetts despite the fact that these three states have similar distributions of location types. In other words, a difference in home versus away from home does not appear to explain the difference in own versus rent. One possible explanation is that the differences in housing prices are impacting the ability of workers to afford ownership.

There is also considerable variance among location and ownership type when evaluating workspace by creative discipline. While the New England average for working at an employer's premises is 17 percent, 42 percent of dancers said that this is their primary work location. At the other extreme, only 7 percent of literary and visual artists claim the same. Similar highs and lows are also found for those who work at home or away from home. Interestingly, there does not appear to be much difference between the disciplines regarding unmet space needs even though their space requirements differ greatly. For example, dancers, musicians, and actors all report similar rates of unmet need while requiring different types of performance and rehearsal spaces.

The survey also suggests that individual disciplines vary meaningfully from the regional average in terms of workspace ownership types. Table 28 shows that unlike with location where the disciplines show some uniformity across one dimension, ownership type is diverse among all attributes measured. The percent of respondents who own their workspace ranges from 10 to 59 percent while renters range from 18 to 87 percent. There is a subset of creative workers who do not require a separate work space. They range from a low of 3 percent of dancers to a high of 36 percent of those

**TABLE 27** | Location of Primary Workspace of Survey Respondents by Discipline, 2016

| Discipline | At Employer's Premises | Home | Away from Home | Want but Do Not Have Separate Space |
|---|---|---|---|---|
| **Dance** | 42% | 24% | 19% | 15% |
| **Design** | 30% | 45% | 16% | 9% |
| **Humanities** | 29% | 46% | 14% | 11% |
| **Literature** | 7% | 70% | 6% | 16% |
| **Media** | 19% | 58% | 11% | 12% |
| **Multi-Disciplinary** | 19% | 46% | 17% | 19% |
| **Music** | 18% | 58% | 11% | 13% |
| **Other** | 22% | 54% | 9% | 15% |
| **Theater** | 31% | 37% | 16% | 16% |
| **Visual/Crafts** | 7% | 59% | 21% | 13% |
| **NEW ENGLAND** | **17%** | **52%** | **17%** | **14%** |

Source: Creatives Count Survey

in the humanities meaning that 97 percent of dancers require a separate work space while only 64 percent of those in the humanities require the same. These large ranges are not the result of one or two outliers but are reflective of a wide distribution of responses.

In order to capture information about the financial circumstances of creative workers, the survey asks a number of questions on expenditures and income. On average, respondents used 28 percent of their income to obtain the space, equipment, and materials required for their creative work. This amount is approximately the same as the share of rent or mortgage and constitutes a significant and ongoing investment of resources in the pursuit of creative endeavors both in terms of total spending and in the opportunity cost of other foregone consumption. By allocating over a quarter of their total spending towards their creative work, the respondents are revealing the high value they place on it and recirculating thousands of dollars back into local economies. The relatively low savings rate in Table 29 suggest the possibility of occasional financial hardship.

**TABLE 28** | Ownership Type of Primary Workspace of Survey Respondents by Discipline, 2016

| Discipline | Own | Rent | Do Not Require Separate Space |
|---|---|---|---|
| Dance | 10% | 87% | 3% |
| Design | 35% | 55% | 11% |
| Humanities | 45% | 18% | 36% |
| Literature | 56% | 19% | 25% |
| Media | 37% | 53% | 10% |
| Multi-Disciplinary | 56% | 37% | 7% |
| Music | 51% | 37% | 12% |
| Other | 59% | 16% | 24% |
| Theater | 40% | 37% | 23% |
| Visual/Crafts | 58% | 37% | 4% |
| **NEW ENGLAND** | **52%** | **40%** | **9%** |

Source: Creatives Count Survey

**TABLE 29** | Expenditure Categories of Survey Respondents by Share of Total, 2016

| Expenditure Type | Share of Total |
|---|---|
| Rent or Mortgage | 27% |
| Studio Separate from your home | 4% |
| Equipment for creative work | 10% |
| Materials for creative work | 14% |
| Student loan payments | 4% |
| All other expenses (e.g. food, transportation, utilities, and discretionary spending) | 35% |
| Savings | 6% |

Source: Creatives Count Survey

The survey results yield an average of 3.75 months where respondents had "trouble making ends meet" in the preceding year, although there is considerable variability in that number as responses range from zero to 12 months.

One goal of this study is to provide more information about the resource requirements and unmet needs of creative workers so that they can be better served by advocates and other stakeholders. The survey asks respondents to choose up to five items from a list of 26 options, including an "other." The same list is used both for selecting the resources that are "important factors for advancing [a] creative career" and identifying "unmet needs." The same choice leads both lists: "Earned income from your creative skills (include teaching, sales of your art, etc.)." This choice on both lists implies that it is highly important for a career (as one would assume) and that it is a substantial unmet need.

Among the top five resources of importance are two that would apply to any field: the need for income from one's work and the need for a market to sell the work. However, collaboration with others appears to be of particular importance in creative work. The remaining two choices among the top five resources for career advancement are affordable healthcare and affordable

# Christine Mix

Christine Mix is a published Children's Illustrator/ Author, PAL Member of SCBWI, member of CBIG-NYC. She is also a Teaching Artist for cartoon & illustration, drawing, painting, art residencies and library programs. Currently listed on the Vermont Arts Council Teaching Artist Roster 2017 and the Vermont Department of Libraries Summer Grant Performer list for the Summer Reading Program 2017, Build a better World!

*Provided courtesy of the artist*

**Institution/Business Type:**

Artists (Individual)

**Professional Disciplines:**

Visual/Crafts - Illustration / Drawing

Design - Graphic, Interior

Literature - Fiction, Publishing

Media - Digital

Visual/Crafts - General, Cartooning / Graphic Novel, Decorative Arts, Illustration / Drawing, Painting

**Populations Served:**

Adults

Businesses

Elders

Families

General Public

Immigrant Populations

Nonprofits

People with Disabilities

School Groups

Teens

Youth-At-Risk

**Activities and Services:**

Creation of a Work of Art (Including Commissions)

Design Services

Exhibitions

Portfolio Review

Residency - Community, In School, Production / Development, Other

Theater Technicial Production

Writing Services

Workshops / Demonstrations / Master Class / Presentation

**I am on the Vermont Education Roster**

**I am a Teaching Artist**

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housing, which to some extent also reflect unique patterns of work of creative workers. In a case where 50 percent of creative workers use their home as their primary work space and many are self-employed, the need for affordable housing and health care is similar to the needs of small business owners for affordable office space and employee benefits.

While the preceding resources are important for advancing a creative career, they do not necessarily represent unmet needs. The top five unmet needs fall into two categories: sources of income and business needs. Income and payment for creative work comprise the income side while retirement plans, affordable studio space, and business advice comprise the business side. It is important to note that the distribution of responses to unmet needs is very flat, meaning that no particular response seems especially popular. No response has a double-digit share of the total with a low of 1 percent and a high of 8 percent. On one hand this means there are no overarching unmet needs among the creative community as a whole while on the other hand there are no obvious targets for investment to help alleviate the most need.

Across the states, there is general consensus among

**TABLE 30** | Survey Respondents' Top 5 Resources of Importance for Career Advancement – Rank by State Including Ties, 2016

| Resources (sorted by overall rank) | CT | ME | MA | NH | RI | VT |
|---|---|---|---|---|---|---|
| **Earned income from your creative skills (include teaching, sales of your art, etc.)** | **1** | **1** | **1** | **1** | **1** | **1** |
| **Affordable healthcare** | 4 | 3 | 2 | 3 | 2 | 3 |
| **Collaboration with other creatives/artists** | 2 | 2 | 3 | 3 | 3 | 2 |
| **Distribution for your work (art markets and online)** | 3 | 3 | | | 5 | 4 |
| **Affordable housing** | | | 5 | | 5 | |
| **Payments for gigs, grants and donations to support my work** | | | 4 | 5 | | |
| **Being able to afford materials** | 5 | 5 | | | 4 | |
| **Equipment to make your work (include software, computer, printers, tools)** | | | | 2 | | 5 |

Source: Creatives Count Survey

respondents about the resources that are important to their career success. This is likely because the factors impacting successful creative careers are not vastly different among the states. On the other hand, resources for success are highly variable among the disciplines, though there are some pockets of agreement. Four of the five most important resources overall appear in the top ten of all disciplines, suggesting that while their order of importance may vary, certain resources are demanded by all. On the other end of the spectrum, some resources are only in the top ten most important of one or few disciplines.

Unmet needs by state show more variability than resources of importance, reflecting the diversity of costs of living, urbanization, and state-level resources available to creative workers. For example, affordable studio or rehearsal space is the number one unmet need in Massachusetts while it does not make the top ten in New Hampshire and Vermont. Again, the picture by discipline is yet more varied. In this case, 25 of 26 available options appeared in the top ten unmet needs

**TABLE 31** | Survey Respondents' Top 5 Resources of Importance for Career Advancement – Rank by Discipline Including Ties, 2016

| Resources (sorted by overall rank) | Dance | Design | Humanities | Literature | Media | Multi-Disicplinary | Music | Other | Theater | Visual/ Crafts |
|---|---|---|---|---|---|---|---|---|---|---|
| Earned income from your creative skills (include teaching, sales of your art, etc.) | **1** | **1** | **1** | **1** | **1** | 2 | 2 | **1** | 2 | **1** |
| Affordable healthcare | | 3 | | 2 | 2 | 3 | 3 | **1** | 4 | 4 |
| Collaboration with other creatives/artists | **1** | 2 | 2 | 4 | 3 | **1** | 4 | | 3 | |
| Distribution for your work (art markets and online) | | | | | | | | 3 | | 2 |
| Affordable housing | | 5 | 4 | 3 | 4 | 5 | 5 | | 5 | |
| Payments for gigs, grants and donations to support my work | 3 | | 4 | 5 | 4 | 4 | **1** | | **1** | |
| Being able to afford materials | | | | | | | | 4 | | 3 |
| Affordable studio or rehearsal space | 4 | | | | | | | | | 5 |
| Equipment to make your work (include software, computer, printers, tools) | | 4 | | | | | | | | |
| Performance or exhibition space for your work | 5 | | | | | | | | | |
| Retirement or savings plan | | | | | | | | 4 | | |
| Creative residences | 5 | | | | | | | | | |
| Professional networks and associations, including unions.guilds | | | 3 | | | | | | | |

Source: Creatives Count Survey

**TABLE 32** | Survey Respondents' Top 5 Resources of Importance for Career Advancement – Rank by State Including Ties, 2016

| Needs (sorted by overall rank) | CT | ME | MA | NH | RI | VT |
|---|---|---|---|---|---|---|
| Earned income from your creative skills (include teaching, sales of your art, etc.) | 2 | **1** | 2 | 2 | **1** | 2 |
| Retirement or savings plan | | 2 | | **1** | 2 | **1** |
| Payments for gigs, grants and donations to support my work | | | 2 | 2 | 3 | |
| Affordable studio or rehearsal space | 3 | | **1** | | | |
| Distribution for your work (art markets and online) | **1** | 3 | | 5 | | 4 |
| Business and legal advice (tax preparation, contracts, etc.) | 5 | | 5 | 5 | 4 | 2 |
| Recognition for your work (press, awards, etc.) | 3 | | | | | |
| Performance or exhibition space for your work | | | 4 | | | |
| Loans or investment capital | | 5 | | | 4 | 5 |
| Affordable healthcare | | 4 | | 4 | | |

Source: Creatives Count Survey

of at least one discipline. The diversity of choices among the disciplines results in the flat distribution of the overall results discussed previously. These breakdowns by state and discipline can help stakeholders break through the flat distribution of overall unmet needs to find investment targets of importance to them.

As a region with many colleges and universities and population centers with varying growth trends, New England can expect extensive in and out migration. The survey asked the respondents in how many different cities they had lived in the previous five years excluding their current place of residence. On average it was slightly less than one meaning that most have been living in the same city or town for over five years. The last states of residence prior to moving to New England are most commonly New York, California, Pennsylvania, and Florida. These four states accounted for half of all migration among 37 places chosen by the respondents.

A hope of any region that attracts college students is that it will retain the human capital it has created for the benefit of the local economy. Of the respondents who completed college in New England, 41 percent remained in the state where they completed their degree. If the net is cast a little wider, retention improves. Nearly 60 percent of respondents who completed college in New England remained in New England. While this survey excludes those who do not currently live in New England and is therefore susceptible to over-representing retention, there is evidence that the retention rate found in the survey is similar to the actual rate[23]. A study from 2013 by the Boston Fed found that the retention rate of the class of 2008 one year after graduation was 63.6 percent, putting New England at the lowest of all major regions in the country. It is likely that this low retention rate is driven at least in part by New England attracting the highest share of students not native to region, who are then likely inclined to return to their home regions upon graduation.

[23] https://www.bostonfed.org/-/media/Documents/Workingpapers/PDF/economic/neppc/briefs/2013/briefs132.pdf

**TABLE 33** | Survey Respondents' Top 5 Unmet Needs – Rank by Discipline Including Ties, 2016

| Needs (sorted by overall rank) | Dance | Design | Humanities | Literature | Media | Multi-Disicplinary | Music | Other | Theater | Visual/ Crafts |
|---|---|---|---|---|---|---|---|---|---|---|
| Earned income from your creative skills (include teaching, sales of your art, etc.) | 3 | | 2 | **1** | | 3 | 4 | 3 | 5 | **1** |
| Retirement or savings plan | | 4 | | **1** | **1** | **1** | 2 | **1** | **1** | 4 |
| Payments for gigs, grants and donations to support my work | **1** | | **1** | 3 | | 3 | **1** | 3 | 5 | |
| Available studio or rehearsal space | | 3 | 2 | | 5 | 3 | | | 3 | 5 |
| Business and legal advice (tax preparation, contracts, etc.) | | **1** | | 3 | | 3 | | | 2 | 5 |
| Distribution for your work (art markets and online) | | | | | | | | | | 2 |
| Recognition for your work (press, awards, etc.) | | | | | | | 5 | 2 | | 3 |
| Performance or exhibition space for your work | 2 | | | | | 2 | | 5 | | |
| Loans or investment capital | | 2 | | | 2 | | | | | |
| Creative residences | 5 | | 2 | | | | 3 | | | |
| Affordable healthcare | 4 | 4 | | 3 | 2 | | | | 4 | |
| Relief of student loan debt | **1** | | | | 4 | | 5 | | | |
| Professional networks and associations, including unions/guilds | | | | | | | 5 | | | |
| Website or design services | | | 2 | | | | | | | |

Source: Creatives Count Survey

**TABLE 34** | Residence after College of Survey Respondents Graduating in New England, 2016

| Residence after college | Count |
|---|---|
| Respondents who stayed in state | 554 |
| **Share of total** | **41%** |
| Respondents who stayed in NE | 772 |
| **Share of total** | **57%** |
| **Total respondents** | **1,361** |

Source: Creatives Count Survey

**TABLE 35** | State of Current Residence and State of College Graduation of Survey Respondents, 2016

| | | State of Residence | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | CT | ME | MA | NH | RI | VT | Total |
| STATE OF COLLEGE | Connecticut | 55 | 8 | 10 | 0 | 9 | 5 | 87 |
| | Maine | 0 | 54 | 5 | 3 | 3 | 1 | 66 |
| | Massachusetts | 12 | 20 | 284 | 19 | 35 | 13 | 383 |
| | New Hampshire | 1 | 7 | 2 | 24 | 3 | 4 | 41 |
| | Rhode Island | 6 | 4 | 14 | 2 | 101 | 4 | 131 |
| | Vermont | 4 | 8 | 10 | 4 | 2 | 36 | 64 |
| | **Total** | **78** | **101** | **325** | **52** | **153** | **63** | **772** |

Source: Creatives Count Survey


Provided courtesy of the organization

# Castle in the Clouds

Castle in the Clouds is a grand mountain top estate built by Thomas and Olive Plant in 1914. They chose the Ossipee Mountains for their home because of its incredible beauty and view of Lake Winnipesaukee. The Estate opened to the public in 1959 and became a popular tourist attraction. In 2006, Castle in the Clouds became a non profit organization focusing on the preservation and restoration of the house and grounds.


Zac Wolf Photography

**Institution/Business Type:**

Museums - Other

**Professional Disciplines:**

Humanities - General, Cultural Heritage, History

**Populations Served:**

Adults

Elders

Families

General Public

School Groups

Teens

**Activities and Services:**

Exhibitions

Preservation / Conservation

Residency - Community

Venue Rental

Wedding / Parties / Private Gatherings

Workshops / Demonstrations / Master Class / Presentation

**Venue Available for Rent/Use**

***Learn more about Castle in the Clouds on CreativeGround***

Professional experience
Awards
Media gallery

# Methodology

## DATA FOR EMPLOYMENT AND ESTABLISHMENTS

The last report on New England's creative economy used a synthesized blend of employment data from the U.S. Economic Census, County Business Patterns, the Decennial U.S. Population Census, the Bureau of Labor Statistic's Current Population Survey, and data from the Internal Revenue Service in order to estimate the magnitude of employment and firm counts in the creative economy. In this report, we take a somewhat different approach which should provide the most current view of New England's creative sector available. The data sources that were used to establish counts of Creative Economy firms and employment in this report are:

- Quarterly Census of Employment and Wages (QCEW) Covered Employment, Bureau of Labor Statistics (BLS)
- Annual Extract of Tax-Exempt Organization Financial Data, Internal Revenue Service (IRS)
- Exempt Organizations Business Master File, IRS
- County Business Patterns (CBP), Census Bureau
- Nonemployer Statistics (NES), Census Bureau
- Occupational Employment Statistics (OES), BLS
- ESRI Business Analyst/Infogroup business lists.

**Data for Creative Enterprise Employees and Establishments**

***Quarterly Census of Employment and Wages (QCEW) program, U.S. Bureau of Labor Statistics***

QCEW data are widely used by federal statistical agencies and other public and private establishments as a basis for their statistical and research publications. The data series provides employment and wage data by NAICS industry from all employers required to participate in the unemployment insurance program. It does not include sole proprietorships with no paid employees or self-employed people. QCEW data on employment and compensation are often suppressed if the number of establishments in an area are low enough that information about individual firms could be inferred from the data. In these cases, we use the most recent vintage of County Business Patterns.

***County Business Patterns (CBP), U.S. Bureau of the Census***

County Business Patterns (CBP) is an annual series that provides subnational economic data by industry. It is useful for our purposes because it provides numeric ranges for suppressed data. These ranges are used in this study to fill in data gaps in industry-level establishment and employment counts that would otherwise remain uncounted.

The CBP series includes the number of establishments, employment during the week of March 12, first quarter payroll, and annual payroll. This data is useful for studying the economic activity of small areas; analyzing economic changes over time; and as a benchmark for other statistical series, surveys, and databases between economic censuses. CBP statistics provide the only annual source of complete and consistent county-level data for U.S., Puerto Rico, and Island Areas business establishments with industry detail.

Employment data collected through the QCEW program differ from employment data published in the Census Bureau's County Business Patterns (CBP) in the following major ways:

QCEW data are published each quarter, with a six-month lag. CBP data are published annually, with approximately an 18-month lag. So while 2015 QCEW data is available, the most recent County Business Patterns data is for 2014.

QCEW data and CBP data are classified under different industry classification systems. QCEW data before 2001 were tabulated based on the 1987 SIC system; data from 2001-2006 are tabulated based on the NAICS 2002, data from 2007 to 2010 are tabulated based on the NAICS 2007, and data from 2011 forward are tabulated based on the NAICS 2012. Data prior to 2001 are available on the Data Files web page.

CBP data for 1974 to 1987 are tabulated based on the 1972 SIC system; data from 1988-1997 are tabulated based on the 1987 SIC system; data from 1998-2002 are tabulated based on the 1997 NAICS; data from 2003-2007 are tabulated based on the 2002 NAICS; data from 2008-2011 are tabulated based on the 2007 NAICS; and data from 2012 forward are tabulated based on the 2012 NAICS.

Employment data are suppressed in County Business Patterns as in QCEW, but in the County Business

Patterns series, suppressed employment numbers are replaced with a range of possible numbers, rather than simply a blank cell. In cases where employment numbers were not given in QCEW, we use the midpoint of the range given in CBP for the corresponding NAICS code.

### Data for Nonprofit Organizations

#### *Annual Extract of Tax-Exempt Organization Financial Data*

This source provides selected information from the tax returns of entities that file Forms 990, 990-EZ, and 990-PF. The data is available by employer identification number (EIN), which is unique to each filer, and also includes much of the information entered on the respective tax forms such as revenues, expenses and employment. Crucially, the extract does not include the state of the filer or its National Taxonomy of Exempt Entities (NTEE) code. These absences prevent the file from being used to place an entity within a specific place or activity.

#### *Exempt Organizations Business Master File*

These files contain cumulative summary data on all registered tax-exempt organizations in the country. Like the annual extract, the EO BMF provides data by EIN and includes revenues for each filer. It also provides crucial classification information that the annual extracts lack such as the NTEE code and state for the each EIN. Overall the annual extract is a richer source of data while the EO BMF contains more organizations.

### Count and Employment Estimates

To produce an estimate of the number and employment of creative nonprofits in New England, we used both the annual extract and the EO BMF. Because both data sources list entities by EIN, the number can be used as a unique identifier to find the same entity in both datasets. First, we filtered the national EO BMF to only include entities in the six New England states and with an NTEE code within those that the 2007 study defined as part of the core creative economy. They are mainly from the “A” group, which is the arts, culture, and humanities category. Next, we used the EIN to find the filtered entities from the EO BMF in the annual extracts. This step resulted in obtaining the tax filings of New England-based creative nonprofits. The annual extract contained 95 percent of the revenue-earning nonprofits in the EO BMF.

The information from the three tax forms provided by the annual extract differs. All three forms provide EIN and revenues while only the 990 provides employment. The entities that filed a 990 were about half of the total records with stated revenues, meaning that the annual extract did not provide employment counts for half of all nonprofits. Without having reported employment for all entities, we used the data available to produce an estimate. Typically, employment is a function of revenues so we used a ratio of revenues to employment of the 990 filers to obtain a ratio that could be applied to overall revenues. While the 990 filers were half of all entities, they comprised 87 percent of the reported revenues so we felt that this derived ratio would be representative of the whole. The average revenue per employee thus found was $49,299.55.

This ratio was then applied to 2015 revenues reported in the EO BMF. Overall, creative nonprofits in New England reported $2,704,195,303 of revenue in 2015, which, after applying the revenue to employment ratio, results in an estimate of 54,852 jobs.

**Data for Sole Proprietorships and Self-Employed Workers**

***Nonemployer Data Series, U.S. Bureau of the Census***

Not all creative enterprises have paid employees. In order to capture the firms that do not, and thus would not be covered by QCEW, we used the Nonemployer Statistics data from the U.S. Census Bureau. Nonemployer Statistics cover businesses who have no paid employees, but which are subject to federal income tax. From the Census:

> *The majority of all business establishments in the United States are nonemployers, yet these firms average less than 4 percent of all sales and receipts nationally. Due to their small economic impact, these firms are excluded from most other Census Bureau business statistics (the primary exception being the Survey of Business Owners). The Nonemployer Statistics series is the primary resource available to study the scope and activities of nonemployers at a detailed geographic level. For complementary statistics on the firms that do have paid employees, refer to the County Business Patterns. Additional sources of data [from the Census] on small businesses include the Economic Census, and the Statistics of U.S. Businesses.*
>
> *The data consist of the number of businesses and total receipts by industry. Most nonemployers are self-employed individuals operating unincorporated businesses (known as sole proprietorships), which may or may not be the owner's principal source of income. However, some other types of organization are included.*

The following Legal Forms of Organization are included in Nonemployer Statistics:

**Corporations and other corporate legal forms of organization:** An incorporated business that is granted a charter recognizing it as a separate legal entity having its own privileges and liabilities distinct from those of its members.

**Partnership:** An unincorporated business where two or more persons join to carry on a trade or business with each having a shared financial interest in the business.

**Sole proprietorship:** Also referred to as an "individual proprietorship," an unincorporated business with a sole owner. Also included in this category are self-employed persons.

**S-Corporations:** A form of corporation where the entity does not pay any federal income taxes. The corporation's income or losses are divided among and passed to its shareholders. The shareholders must then report the income or loss on their own individual income tax returns.

Nonemployer Statistics count the number of nonemployer establishments and the total receipts for those establishments by NAICS code. It does not include the number of people working at these establishments, which in most cases would only be a single person (the owner). In all cases, firms counted in the nonemployer statistics will have no paid employees.

**Data for Occupations**

***Occupational Employment Statistics, Bureau of Labor Statistics***

Occupational employment, wages, and data on occupations by industry are available from the BLS in a series called the Occupational Employment Statistics (OES) program. Like the QCEW and CBP, this series excludes self-employed individuals, owners of unincorporated firms and workers in private households. Participating establishments provide occupational data to state governments on a rotational basis every three years so that estimates can be based on all establishments. The most recent data are from 2015.

**Comparison of Data Source Choices on Employment Data Counts**

Our analysis of the creative economy is based upon the industry sectors and occupations that are part of the core creative economy as first defined in NEFA's *The Creative Economy: A New Definition* (2007). Since that report was published, there have been two major revisions to the NAICS definitions in 2007 and 2012. The creative economy industries from 2007 were crosswalked to their 2012 analogs using concordance tables produced by the U.S. Census Bureau, and we tracked these industries with their new codes.

Yet despite measuring the same industries over time, one major challenge to our analysis was the trade-off between collecting more recent data from the QCEW and CBP and retaining the Economic Census, which is the primary data source from the 2007 report. One major benefit of the QCEW is that the most current year of data is 2015 while the latest data in the Economic Census are from 2012. However, the change in sources ultimately affects the comparability of our results to those of the 2007 report. Even though they purportedly measure the same thing, because their methodologies differ, the QCEW and the Economic

**TABLE 36** | Creative Employment Table from Page 6 of *The Creative Economy: A New Definition*

| 2002 | CT | ME | MA | NH | RI | VT | New England | United States |
|---|---|---|---|---|---|---|---|---|
| Creative Economy Employment | 68,827 | 16,643 | 132,011 | 21,654 | 25,453 | 10,131 | 274,719 | 4,587,826 |
| Creative Economy % of Total Employment | 4.13% | 2.75% | 4.06% | 3.50% | 5.32% | 3.38% | 3.97% | 3.52% |
| Creative Economy Location Quotient | 1.173 | 0.078 | 1.155 | 0.995 | 1.510 | 0.960 | 1.128 | 1.000 |

Source: *The Creative Economy: A New Definition* (2007), page 6

**TABLE 37** | Recreation of the Creative Employment Table from Page 6 of *Creative Economy: A New Definition* Using This Study's Date Source

| 2002 | CT | ME | MA | NH | RI | VT | New England | United States |
|---|---|---|---|---|---|---|---|---|
| Creative Economy Employment | 79,040 | 19,459 | 163,433 | 24,440 | 26,033 | 12,055 | 324,459 | 5,942,920 |
| Creative Economy % of Total Employment | 4.79% | 3.29% | 5.10% | 4.05% | 5.56% | 4.08% | 4.77% | 4.63% |
| Creative Economy Location Quotient | 1.035 | 0.710 | 1.101 | 0.874 | 1.199 | 0.880 | 1.028 | 1.000 |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) and U.S. Census Bureau, County Business Patterns (CBP)

Census produce different numbers for the same industries measured at the same time.

As can be seen in the two tables above, if the table from page six of The Creative Economy is recreated using the data sources used in this study we find higher employment levels – and share of total jobs – for the creative economy. The location quotients are slightly smaller than what was reported in the 2007 report, although the concentrations by state are relatively similar. Both analyses agree that Connecticut, Massachusetts and Rhode Island had higher concentrations of creative jobs than the nation in 2002 while creative jobs were less concentrated in the remaining New England states. The higher starting point of this report's data do not impact any of our conclusions and comparisons because they are internally consistent and do not use the prior report's data as starting values for the computation of changes.

### Data for Geographical Distribution of Establishments

#### *Esri Business Analyst Data from Infogroup*

In order to gain some insight into the geographical distribution of creative enterprises in spite of suppression within the public data sources, we performed an analysis of a list of New England businesses provided by Esri Business Analyst, an extension of its ArcGIS tool. Business Analyst data is collected from a number of different sources with their geocoded business lists coming from Infogroup, a private-sector provider of business and marketing data. Infogroup does not have a comprehensive list of establishments through tax records in the way that federal government data sources do. Instead, it collects data by examining information on business events such as new business filings, utility connections, and annual reports, and verifying these findings with phone calls and emails. While their findings may not be perfect, they do provide interesting data on the relative density of creative enterprises in New England communities.

### Data on Individuals

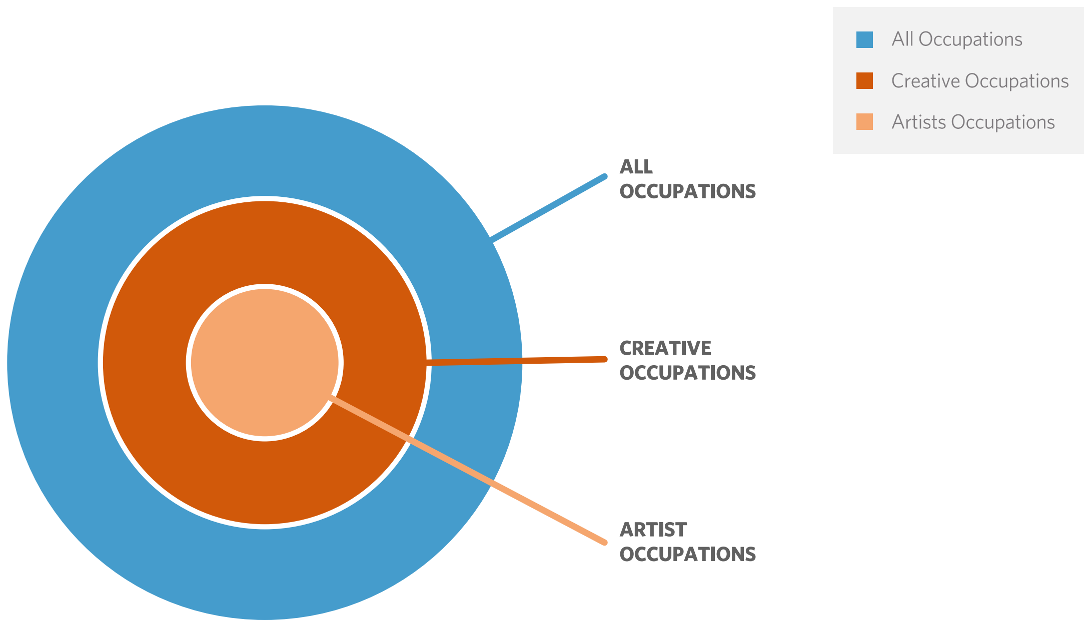
#### *American Community Survey*

The demographic and socioeconomic data was sourced from the American Community Survey Public Use Microdata Sample (ACS PUMS), which is a large data set collected in the national ACS survey and made publicly available by the U.S. Census Bureau. The ACS PUMS is a survey sample of demographic and socioeconomic microdata on people and households by region, state, or PUMA (Census-defined areas with 100,000 or more residents). Microdata are large data sets structured on a case basis to enable customized analysis of multiple demographic and socioeconomic factors together. This allows data users to answer questions about people who fall into multiple categories, for example, females between 35 and 45 who are in the labor force, or people who are in creative occupations and have a college degree. Because the data are a sample, all results are estimates.

The ACS PUMS data are made available in five-year and one-year sets, which are a five percent sample and a one percent sample, respectively. While one-year sets allow single-year comparisons and come out sooner, this analysis utilizes the most recent five-year data available (2010-2014). This is because five-year sets pool data across the 60 months of the given period, creating better coverage and therefore better precision of the estimates. Because five-year data sets have five times as many cases, there is larger sample size within each cell. In other words, the pooled data yields higher totals within defined subtypes after cross-tabulation, which in effect also allows more reliable results from complex and multi-variable inquiries.

Federal law requires responses to the Census Bureau to remain completely confidential and non-identifiable. There are no names or addresses in the files. To additionally protect the confidentiality of the information

**FIGURE 22** | Relationship of Occupational Groupings of Demographic Analysis




collected, the Census Bureau swaps parts of the data across individual lines and groups very low and very high values in categorical variables ("top coding"). This ensures information about individuals and households cannot be used to identify any specific person, while preserving utility of the data for analysis.

The data pulled from the ACS PUMS was based on the occupation of the respondent and further divided into three groups: all occupations, creative occupations, and artistic occupations. The ungrouped occupational counts were used as a second source of workforce data to supplement that from the OES due to the different data universe the ACS PUMS covers. The three groupings were used to further pool individual observations to again improve sample sizes and precision. The three groups are subsets of each other as shown in Figure 22. Each occupational grouping was then further divided into the demographic and socioeconomic variables of interest to this study such as educational attainment, level of income, or employment status.

A key limitation of the ACS and a main driver for the creation of the survey is that the ACS only allows a respondent to have one occupation. In the case of a respondent having multiple jobs, the ACS assigns the one where the respondent spent the most time in the week prior to taking the survey. As a result, the data in the ACS are biased toward those whose main career pursuit is in a creative occupation as these respondents are the most likely to cite a creative occupation as the place where they spend the most time.

***Creatives Count Survey***

The survey script was written by the UMDI team and reviewed and modified using feedback from NEFA, the New England state arts agency (SAA) directors, and other stakeholders convened by NEFA. The main goals that guided the creation of the survey were to gather information on creative workers who are absent from the federal data and to explore aspects of the creative economy that do not exist in other data sources. There was also an early decision that we could only go out with a survey once so it needed to be inclusive of all the team's goals. It was helpful to know that the target population would tolerate a long survey if it was clear that the results would be used to help the creative community.

The survey was programmed into the Qualtrics online survey platform and managed by UMDI. It included skip and display logics and "loop and merge" sections as needed to streamline the survey while still presenting the most applicable information to the respondents. The survey went live on September 19, 2016 and, on the advice of the SAAs, remained open for two months ending on November 20, 2016 (the Friday before Thanksgiving). During the open period respondents could stop and return to the survey with their progress being saved with a browser cookie.

The survey was accessed with an anonymous link meaning that everyone used an identical web link to navigate to the survey. Choosing to use this distribution method meant that the respondents could remain anonymous, the research team would not need to generate and manage multiple versions of the link for our partners, and respondents could easily share the link with others who may wish to participate in the survey. The link was mainly distributed via channels controlled by NEFA including its website, newsletter, social media posts, and email blasts. Further valuable distribution and marketing was done by the SAAs and other regional partners and via earned marketing in regional and industry publications and blogs.

Upon the end of the survey period (11/20/16), all remaining in-progress responses were closed and added

*Cedric Douglas' Up Walls; photo by Adam Glanzman, Northeastern University 2016*

to the completed responses. Their inclusion resulted in the response count differing for many of the questions. Throughout the survey period, the research team provided NEFA with periodic updates on response counts and a sampling of data from key questions. After the 500 completed response threshold was passed, the pattern of responses stabilized. Because total completes surpassed 1,200, we did not do any weighting or other adjustments to the data to account for the addition of the incompletes except for removing blanks from any analysis based on more than one question. For example, when looking at income by age, we only used those responses that included answers for both the income question and the age question.

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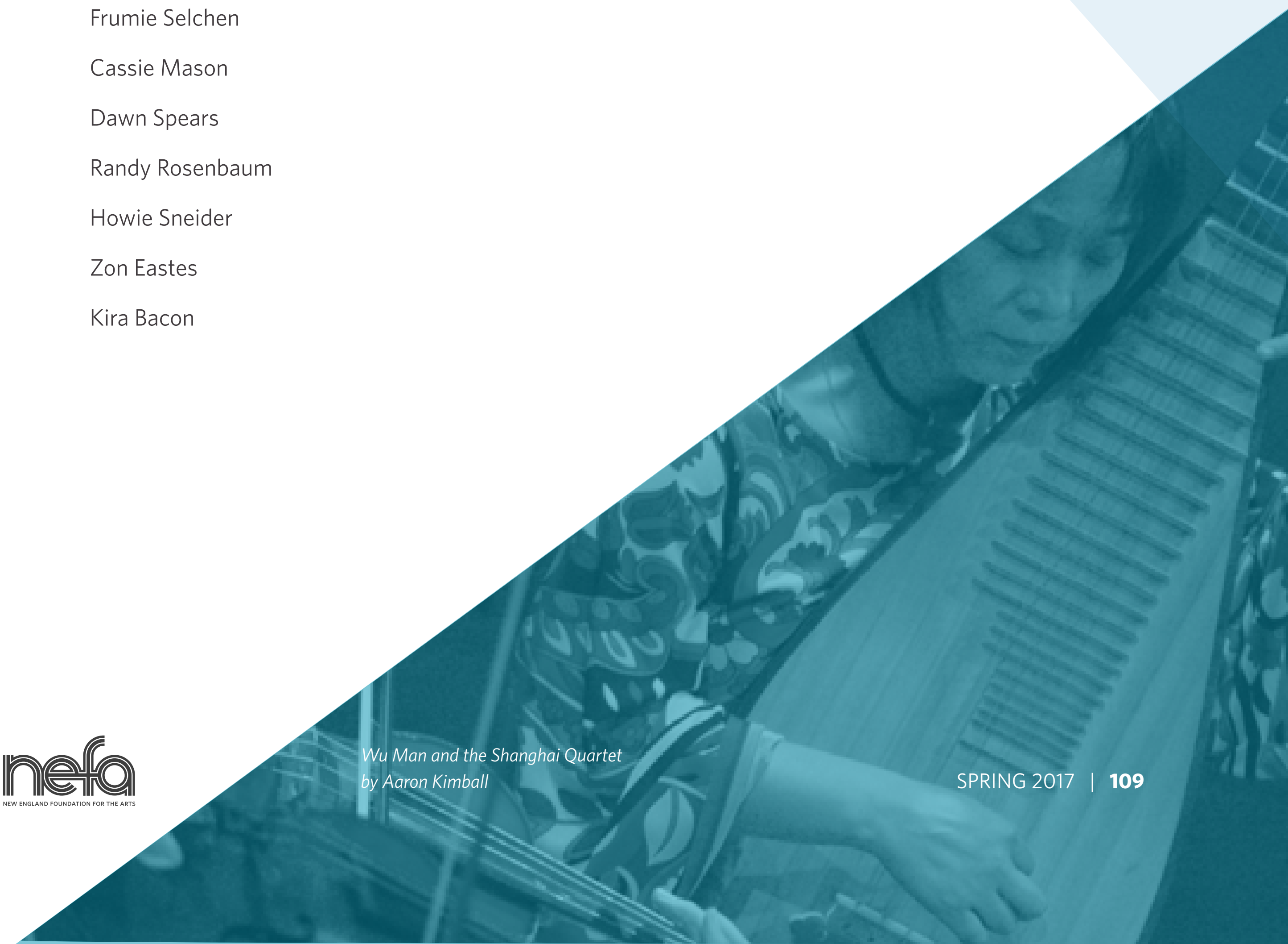

*Wu Man and the Shanghai Quartet by Aaron Kimball*

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## Lessons Learned and Advice for Future Researchers

In a research project of this size and scope, the research team inevitably makes dozens of methodological choices and confronts unanticipated problems. Especially because this study builds upon the work of previous researchers, the team would like to provide a recounting of key choices and issues encountered in this project. It is our hope that these comments will be help streamline the work of others.

### Data

This study differs from the study it immediately follows (*The Creative Economy: A New Definition*, hereafter simply *Creative Economy*) by changing the main data sources used for analysis. While this choice complicates a trend analysis with the preceding study (which we have resolved by showing data from previous years using this study's sources), it creates a more flexible and robust platform going forward. *Creative Economy* relied on a mix of data from the U.S. Census Bureau, the Federal Reserve Bank of Boston, and the U.S. Bureau of Labor Statistics (BLS) for estimates of employment, establishments, and occupations. It also used the public use microdata sample (PUMS) from the 2000 decennial census as its basis for workforce estimates.

The Economic Census, while wide-ranging and useful, is only conducted every five years (those years ending in 2 and 7) with the data becoming fully available two years later (years ending in 4 and 9). Therefore, if using this source, this study would have to rely on data from 2012 as the basis for its analysis, which is five years old and measuring a period only shortly after the height of the Great Recession. Continuing with this data source would preserve these large gaps between newly updated data for future iterations of this research. In and of itself this is not a problem if NEFA or similar agencies could precisely time their research efforts to coincide with the data releases. However, the unpredictability of funding to support these projects necessitates a data source that is updated more frequently.

The data from the BLS, which was also used by *Creative Economy*, provides precisely this kind of data. The team used two products from the BLS: the Quarterly Census of Employment and Wages (QCEW) and the Occupational Employment Statistics (OES).[1] As the name implies, the QCEW is updated quarterly and provides a complete census of payroll employment and wages by industry sector (i.e. NAICS code). The OES is updated annually and uses a survey methodology to provide an estimate of jobs and wages by occupation (i.e. SOC code). Together these two sources provide annually updated estimates for payroll jobs by industry and occupation for every state in the nation.

There are two weaknesses in the BLS data. First, it only includes "covered employment," which are all jobs that are part of the unemployment insurance program. This definition covers most workers in the private and public sectors though it excludes self-employed and contract workers who are a large component of the creative economy. This gap is addressed in this study by combining the QCEW data with estimates from the Census' Nonemployer Statistics, which are updated annually and provide data on businesses "that have no paid employees and are subject to federal income tax. The data consist of

[1] BLS homepage: https://www.bls.gov/home.htm

the number of businesses and total receipts by industry. Most nonemployers are self-employed individuals operating unincorporated businesses (known as sole proprietorships)."[2]

The second weakness of the BLS data is common to all data sources made available by the federal government. Agencies that collect and distribute this data, like the Census and BLS, are prohibited from presenting information in a way that can be used to ascertain the identity of individual firms. As a result, industries with few employees and/or few employers have their information suppressed leaving gaps in the data, which is done using methods to render precise un-suppression impossible. To combat data suppression, the team used data from the County Business Patterns (CBP), also a Census product.[3] While the same privacy limits exist in the CBP, it does not leave holes in the data but instead presents a range estimate. For example, rather than suppressing the fact that Industry A has 12 jobs, it will say that it has one to 19 jobs. For the suppressed industries, we used the midpoint of the CBP employment estimate. Because this was only necessary for small, non-zero sectors, doing so only added 200 to 300 jobs to the New England total (less than one percent).

Another change that is common to all industry-based (i.e. NAICS-based) data collection is the evolving composition of the creative economy as a result of technological changes. As is mentioned elsewhere in this report, some of the losses wrought by technological change in creative sectors, e.g. newspaper publishing, is being offset by firms providing similar products but are categorized under a different NAICS code, e.g. internet publishing. In some cases, the industry sector that is gaining as a result of market shifts would not meet the definition of a core creative economy sector either because the creative aspect it is not a large enough part of the business — like music and movies are to Apple, Google, and Amazon — or because there are too many non-creative firms in the same sector — like Spotify being combined with web hosting and cloud computing firms in one industry sector. Unless researchers have some custom way of teasing out the creative activities from a sector that is largely non-creative, these activities will continue to be uncounted. Researchers and members of the arts and creative communities may wish to engage with the U.S. Census Bureau to provide comment on its periodic update of the industry classification system or review the BEA's recent expansion of its national creative economy satellite accounts to state levels.

For workforce data, this study continued to use PUMS. However, it is no longer a product of the decennial census. For decades, the decennial census used two questionnaires: the short form and the long form. Most households received the short form, which asked basic demographic questions, while the remaining households received the long form, which added more socio-economic questions such as inquiries on employment, income, education, housing, and so on. From the decennial census of 2010 onward, the Census Bureau will only use the short form and the long form will be replaced by the American Community Survey (ACS). Because of this change, *Creative Economy* is the last report of this series that could use the decennial census PUMS to say anything about the workforce. This study and all coming after it will rely on the ACS and its PUMS to delve into the details of workforce, employment, income, and many other characteristics outside of the purvey of this study. This change provides an advantage to researchers because the data collection has now shifted from decennial to annual updates.

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[2] Nonemployer Statistics: http://www.census.gov/econ/nonemployer/

[3] County Business Patterns: http://www.census.gov/programs-surveys/cbp.html

## Direct Survey

This project began with a series of kick-off meetings to gain input and guidance from stakeholders. Nowhere was this feedback more important than in crafting the Creatives Count survey. The NEFA staff were able to summarize the regional issues and topics of interest, while conversations with state arts agency directors ensured that we included questions that addressed their needs and provided comparability to federal data sources for the purpose of corroboration between the data. These conversations helped us prioritize the demands on the survey to ensure it provided the most useful information balanced with the highest possible completion rate.

The first issue we grappled with was what length and level of complexity was acceptable for this survey. The entire team was sensitive to "survey fatigue" among the target population, which led to a key conclusion that we could not go back to the well with additional questions. Everything that we hoped to learn needed to be done in one round, which increased pressure on the length and complexity of the survey. Testing showed that the survey typically took 30 to 40 minutes to complete, creating a heavy investment of time and effort on behalf of the respondent.

To combat the detrimental effect of the length of the survey on completion rates, the team used a few complementary strategies. The first was to leverage two parallel sentiments among the creative community: (1) these surveys rarely come back to benefit them and (2) a willingness to contribute time to help the creative community. At the intersection of these two ideas is a space where creative workers will be generous with their time and respond to a long survey if it is clear that the results will be used to benefit the larger creative community. Thankfully, it has been NEFA's intention from the beginning to use the information from this study to highlight the contributions of and advocate for creative workers. Therefore, the team devoted considerable time in crafting an introduction that clearly outlined how the survey will be used.

Even a well-crafted survey will fail if it does not find the appropriate audience. The survey was distributed through multiple channels including the mailing lists of NEFA and the state arts agencies, social media, newsletters, and earned media. Other regional partners convened for this purpose by NEFA also advertised through their channels. The collection of profiles on CreativeGround also provided a valuable source of known artists and creative workers with established ties to the region. Overall, despite the length of the survey, 42 percent of those who began the survey completed it, with nearly a quarter of those who dropped out doing so at the introduction. If counting only those who continued beyond the introduction, the completion rate is 48 percent. Respondents who completed the survey were entered into a drawing for two cash cards per state, and CreativeGround profiles were updated or created for those who requested that added benefit.

Another strategy to increase completion rates was to focus on simplifying the questions to reduce response burden. Questions requiring typing were minimized so that respondents could do as much as possible through point and click (or touch and tap in the case of mobile users). All questions were evaluated to ensure they were mobile-friendly. To the extent possible, we avoided any questions that would require the respondent to search for any information that could not be recalled from memory, such as information from tax returns, W-2s, or 1099 forms. These strategies also had the welcome side effect of creating cleaner and more consistent data for the research team to analyze.

For researchers who are seeking a target number for completions for their survey, it is also worth noting that the pattern of responses for our survey stabilized around the 500 completions level. The additional detail provided by the 1,255 total completions allowed for more crosstabs and other in-depth analysis but it did not change the overall nature of our results.

Even with the above efforts, there are areas where the survey could be improved. One of the first questions that respondents see asks for the "primary discipline" of their creative work. It is followed by a question that allows for the selection of multiple additional disciplines. We think that completion rates would have improved if the order of the two questions were reversed and reworded to ask for all disciplines and then a primary focus. The speculation is that most creative workers are involved in many disciplines and thinking that they could choose only one created the mistaken assumption that the survey was only meant for those who focus only on one discipline or have only one employer or job. The survey results suggest that only 6 percent of creative workers participate in only one discipline.

We received feedback from multiple respondents that the question exploring their expenses could be refined. The survey asked for the share of income that went to the following categories:

- Rent or mortgage
- Studio space separate from your home
- Equipment for creative work
- Materials for creative work
- Student loan payments
- All other expenses (e.g. food, transportation, utilities, and discretionary spending)
- Savings.

A common request was to include a question asking about the expense of creative workers hiring each other. For example, spending by a writer to hire an editor or a musician to hire other musicians to help on a record. We anticipated that there would be this kind of intra-community hiring happening and included "private individuals" among the client types available for the self-employment questions. Using this approach we expected to capture this hiring from the income side (i.e. "who paid you to do this work?") rather than from the expenditure side (i.e. "who did you pay to do this work?"). The feedback we received indicates that the respondents would have preferred the expenditure approach compared to the income approach that we used.

The most complex and burdensome segment of the survey were the questions focusing on employment. Because these questions lay at the center of the purpose of the survey, we decided that the complexity was worth the trade off in response burden. For self-employed work, the question asked respondents to consider all instances of the same type of work collectively, e.g. if a musician performed in five concerts, he or she should only enter concert performances once. The questions then continued to ask for the type of work, venue, client, duration, and place. For wage and salary employment (W-2 employment), we asked for each job individually and continued with similar questions to self-employment.

Respondents would repeat these loops for every job they wished to enter. While this formulation gave us detailed information on the employment of creative workers, it came with costs. Namely, it is likely that respondents entered fewer jobs than they actually had in the year in question. As mentioned in the survey results, respondents had, on average, 1.5 self-employed and 1.5 wage and salary jobs in 2015, or three per respondent. The conventional wisdom among the stakeholders is that this number is too low.

We believe that the assumed low job count is due to the high response burden of the employment loops. Each loop contains six questions, which means that the average respondent answered 18 questions exploring their employment. A simple solution would be to reduce the question count for each loop to simplify the information sought from the respondents. Doing so would require decisions regarding what information is needed and what is not. Another option is to simplify the questions themselves. Our survey sought detailed occupation and industry data that many others may not need or the number of options for venue or project type could be narrowed.

## New Research

There are several ways that NEFA's current work could be extended to address remaining challenges in identifying data on creative enterprises and employees, measuring their impacts on local communities and understanding their connections with the broader economy and placemaking.

The continued growth of digitization in government means that over time, municipalities will increasingly have access to important indicators of local health, wellbeing, housing, economic vitality, and other important variables of interest to policy makers and the public alike. For example, over the last 15 years, the Boston Indicators Project [4] has been developing measures of 10 civic sectors that now include 150 detailed indicators and 350 affiliated measures. Since one of the long-standing questions among arts funders is how investment in these sectors contributes to the overall health and livability of communities, it seems useful to connect these efforts to the growing collection of digital measures of local health and wellbeing that are being developed by local governments, nonprofits and researchers.

Another way to deepen NEFA's work would be to look more closely at the finances of local arts organizations to identify the project and organizational factors that contribute to their financial health. This work could be conducted using data from the National Center for Charitable Statistics, and would represent a useful continuation of earlier work done by NEFA. This seems particularly timely given the declines in some sectors identified in the preceding chapters.

One of the perennial challenges of creative economy research is the limitation of state and federal statistics on creative workers and enterprises. Although these limitations are much less problematic than they were in the early years of NEFA's work, they remain salient in emerging and fast growing sectors that span traditional economic sectors. For example, the video game sector has been growing in the region since the last NEFA report in 2007. However, because of continuing limitations with existing state and federal data, we are unable to measure employment and establishment count for this sub-sector separate from its current classification under software publishers. Working with industry groups like Mass Digi [5], NEFA could conduct focused research on this sector to understand its development over the last 10 years. In addition, since sectors like digital games and film and television production seem to be growing, future work might compare trends in these two sectors, one of which has been the subject of significant regional investment, to identify any impacts governmental support may have. Because of

[4] http://www.bostonindicators.org/indicators

[5] http://www.massdigi.org/

the similarity in these two sectors in terms of technology and labor, the differences in their growth patterns and needs may prove illustrative.

Indeed, the idea of comparative research in general may provide a useful direction for future work. Not only could similar sectors like film and video games be compared but researchers could also look at how regional and local variations in funding and support lead to different developmental paths, strengths, and challenges.

Finally, we see enormous opportunity to leverage NEFA's long history of research work on the regional creative economy to scale up and develop a regional data center tracking important measures of this sector over time. In our previous work with state arts funders like the Massachusetts Cultural Council, we noted that over the ten years of its Adam's Art Program alone, there were dozens of project level evaluations completed, each of which generated useful data and methods. Unfortunately, even at the state agency level, the data from these project-level evaluations remain hard to access digitally and share. If these project and organizational evaluation data were aggregated, anonymized, and provided to the broader community of researchers and practitioners, it could increase both the feasibility and impact of future program evaluation and research. Indeed, because New England has led the nation in measuring the creative economy, and because of its commitment to data aggregation and experience developing CreativeGround[6], NEFA seems an ideal organization to lead the development of a regional data center for creative economy assessment and evaluation.

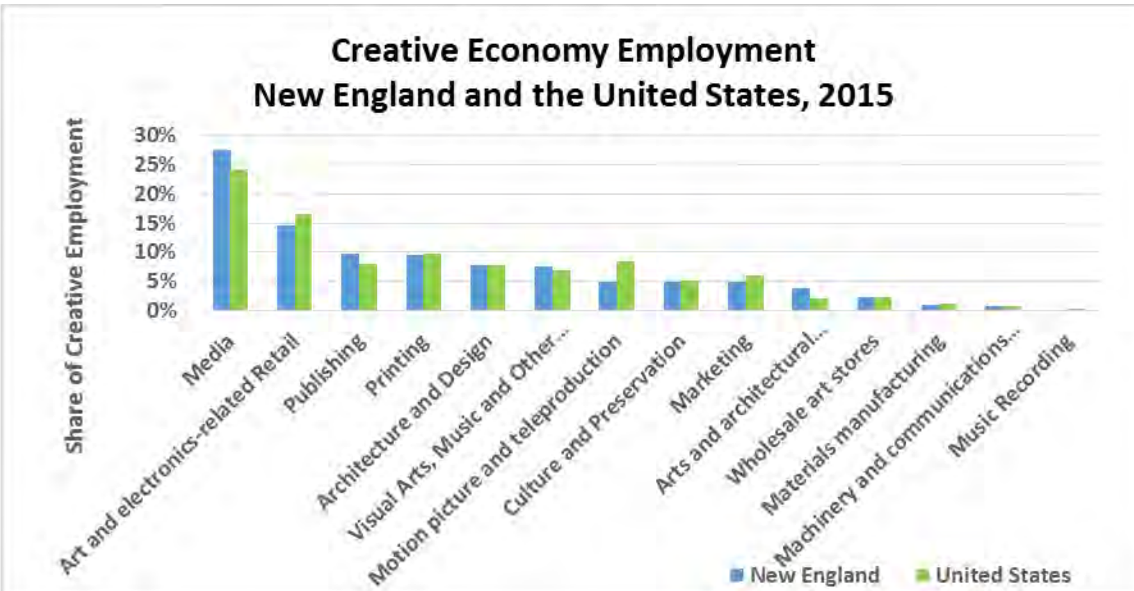
[6] https://www.creativeground.org/

## Appendix A – Creative Economy Profile Detail, New England and the United States, 2007-2015

### Creative Economy Employment in New England and the United States, 2007-2015

| Creative Economy Employment | New England | | | | United States | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 22,239 | 18,702 | -3,537 | -15.9% | 415,481 | 352,977 | -62,504 | -15.0% |
| Art and electronics-related Retail | 48,488 | 34,923 | -13,565 | -28.0% | 929,022 | 763,166 | -165,856 | -17.9% |
| Arts and architectural manufacturing | 10,455 | 9,297 | -1,159 | -11.1% | 114,946 | 97,066 | -17,880 | -15.6% |
| Culture and Preservation | 11,520 | 11,840 | 320 | 2.8% | 212,217 | 239,189 | 26,972 | 12.7% |
| Machinery and communications manufacturing | 5,490 | 2,078 | -3,412 | -62.2% | 74,582 | 39,246 | -35,336 | -47.4% |
| Marketing | 12,276 | 11,631 | -646 | -5.3% | 262,534 | 272,066 | 9,532 | 3.6% |
| Materials manufacturing | 4,664 | 2,204 | -2,460 | -52.7% | 88,184 | 54,827 | -33,357 | -37.8% |
| Media | 75,153 | 65,761 | -9,392 | -12.5% | 1,354,926 | 1,113,263 | -241,663 | -17.8% |
| Motion picture and teleproduction | 10,295 | 12,014 | 1,719 | 16.7% | 356,002 | 388,568 | 32,566 | 9.1% |
| Music Recording | 424 | 379 | -45 | -10.6% | 21,664 | 16,153 | -5,511 | -25.4% |
| Printing | 31,819 | 22,952 | -8,868 | -27.9% | 625,694 | 451,227 | -174,467 | -27.9% |
| Publishing | 37,779 | 23,177 | -14,602 | -38.7% | 600,269 | 368,073 | -232,196 | -38.7% |
| Visual Arts, Music and Other Performing Arts | 17,034 | 18,022 | 988 | 5.8% | 314,460 | 313,427 | -1,033 | -0.3% |
| Wholesale art stores | 7,465 | 5,528 | -1,937 | -25.9% | 130,810 | 108,873 | -21,937 | -16.8% |
| **Grand Total** | **295,098** | **238,504** | **-56,595** | **-19.2%** | **5,500,791** | **4,578,121** | **-922,670** | **-16.8%** |
| **Total, All Industries** | **6,936,505** | **7,100,579** | **164,074** | **2.4%** | **135,366,106** | **139,491,699** | **4,125,593** | **3.0%** |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).




Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Top 10 Creative Economy Industries by Employment in New England, 2007-2015**

| **New England** | | | | |
|---|---|---|---|---|
| **2007** | | **2015** | | |
| **Top 10 Industries** | **Employment** | **Top 10 Industries** | **Employment** | **% Change from 2007** |
| Cable and Other Program Distribution | 36,687 | Cable and Other Program Distribution | 27,335 | -25.5% |
| Radio, Television, and Other Electronics Stores | 24,862 | Radio, Television, and Other Electronics Stores | 18,548 | -25.4% |
| Commercial Lithographic Printing | 24,257 | Commercial Lithographic Printing | 16,376 | -32.5% |
| Newspaper Publishers | 21,333 | Libraries and Archives | 12,274 | -2.6% |
| Architectural Services | 13,292 | Newspaper Publishers | 11,732 | -45.0% |
| Libraries and Archives | 12,601 | Architectural Services | 11,296 | -15.0% |
| Advertising Agencies | 9,312 | Internet Publishing and Broadcasting | 10,919 | 80.7% |
| Periodical Publishers | 9,075 | Advertising Agencies | 7,555 | -18.9% |
| Book Stores | 8,808 | Museums | 7,397 | 7.4% |
| Jewelry Stores | 7,991 | Fine Arts Schools | 7,234 | 27.7% |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Top 10 Creative Economy Industries by Employment in the United States, 2007-2015**

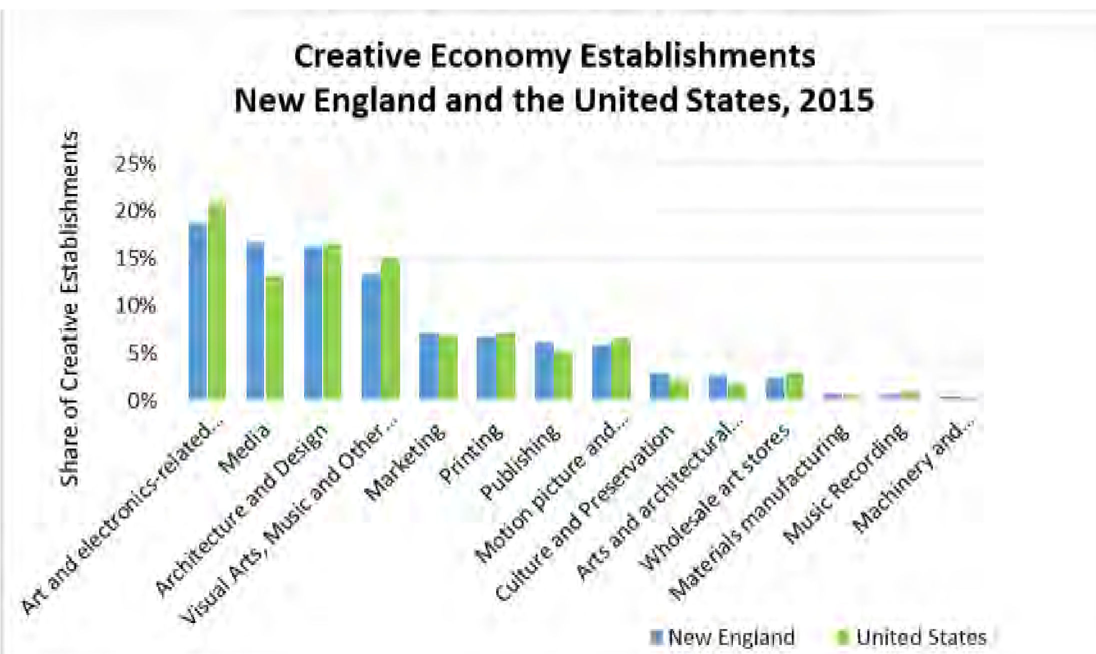
| **United States** | | | | |
|---|---|---|---|---|
| **2007** | | **2015** | | |
| **Top 10 Industries** | **Employment** | **Top 10 Industries** | **Employment** | **% Change from 2007** |
| Cable and Other Program Distribution | 658,503 | Cable and Other Program Distribution | 587,792 | -10.7% |
| Radio, Television, and Other Electronics Stores | 505,062 | Radio, Television, and Other Electronics Stores | 458,251 | -9.3% |
| Commercial Lithographic Printing | 477,120 | Commercial Lithographic Printing | 331,662 | -30.5% |
| Newspaper Publishers | 348,325 | Motion Picture and Video Production | 227,549 | 17.3% |
| Architectural Services | 216,183 | Advertising Agencies | 194,590 | 5.5% |
| Motion Picture and Video Production | 194,065 | Newspaper Publishers | 190,426 | -45.3% |
| Advertising Agencies | 184,394 | Internet Publishing and Broadcasting | 186,125 | 159.3% |
| Libraries and Archives | 168,079 | Architectural Services | 177,071 | -18.1% |
| Jewelry Stores | 150,097 | Motion Picture Theaters (except Drive-Ins) | 133,519 | 1.3% |
| Periodical Publishers | 144,470 | Television Broadcasting | 130,888 | 3.5% |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW)

**Creative Economy Establishments in New England and the United States, 2007-2015**

| Creative Economy Establishments | New England | | | | United States | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 3,937 | 3,700 | -237 | -6.0% | 72,474 | 66,876 | -5,598 | -7.7% |
| Art and electronics-related Retail | 5,820 | 4,236 | -1,584 | -27.2% | 104,333 | 84,006 | -20,327 | -19.5% |
| Arts and architectural manufacturing | 705 | 597 | -108 | -15.3% | 7,604 | 7,056 | -548 | -7.2% |
| Culture and Preservation | 598 | 644 | 46 | 7.7% | 7,551 | 8,660 | 1,109 | 14.7% |
| Machinery and communications manufacturing | 90 | 80 | -10 | -11.1% | 2,230 | 1,815 | -415 | -18.6% |
| Marketing | 1,535 | 1,588 | 53 | 3.5% | 27,116 | 27,262 | 146 | 0.5% |
| Materials manufacturing | 175 | 158 | -17 | -9.7% | 3,065 | 2,128 | -937 | -30.6% |
| Media | 4,067 | 3,772 | -295 | -7.3% | 65,440 | 53,091 | -12,349 | -18.9% |
| Motion picture and teleproduction | 1,025 | 1,313 | 288 | 28.1% | 22,991 | 26,325 | 3,334 | 14.5% |
| Music Recording | 133 | 130 | -3 | -2.3% | 3,872 | 3,558 | -314 | -8.1% |
| Printing | 2,011 | 1,495 | -516 | -25.7% | 36,015 | 29,115 | -6,900 | -19.2% |
| Publishing | 1,635 | 1,369 | -266 | -16.3% | 23,922 | 20,520 | -3,402 | -14.2% |
| Visual Arts, Music and Other Performing Arts | 2,934 | 3,016 | 82 | 2.8% | 59,434 | 60,550 | 1,116 | 1.9% |
| Wholesale art stores | 560 | 526 | -34 | -6.1% | 12,682 | 11,909 | -773 | -6.1% |
| **Grand Total** | **25,225** | **22,624** | **-2,601** | **-10.3%** | **448,729** | **402,871** | **-45,858** | **-10.2%** |
| **Total, All Industries** | **482,970** | **515,940** | **32,970** | **6.8%** | **8,971,897** | **9,522,775** | **550,878** | **6.1%** |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).




**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

## Creative Economy Employment, Major Sector Detail, New England and the United States, 2007-2015

| Creative Economy Employment | New England | | | | United States | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| **Architecture and Design** | 22,239 | 18,702 | -3,537 | -15.9% | 415,481 | 352,977 | -62,504 | -15.0% |
| Architectural Services | 13,292 | 11,296 | -1,996 | -15.0% | 216,183 | 177,071 | -39,112 | -18.1% |
| Landscape Architectural Services | 1,905 | 1,642 | -263 | -13.8% | 44,546 | 34,297 | -10,249 | -23.0% |
| Drafting Services | 444 | 314 | -130 | -29.3% | 11,051 | 8,241 | -2,810 | -25.4% |
| Interior Design Services | 2,040 | 1,411 | -629 | -30.8% | 43,815 | 38,934 | -4,881 | -11.1% |
| Industrial Design Services | 703 | 689 | -14 | -2.0% | 13,328 | 16,979 | 3,651 | 27.4% |
| Graphic Design Services | 3,484 | 2,638 | -846 | -24.3% | 73,179 | 62,558 | -10,621 | -14.5% |
| Other Specialized Design Services | 371 | 712 | 341 | 91.9% | 13,379 | 14,897 | 1,518 | 11.3% |
| **Art and electronics-related Retail** | 48,488 | 34,923 | -13,565 | -28.0% | 929,022 | 763,166 | -165,856 | -17.9% |
| Radio, Television, and Other Electronics Stores | 24,862 | 18,548 | -6,314 | -25.4% | 505,062 | 458,251 | -46,811 | -9.3% |
| Jewelry Stores | 7,991 | 6,467 | -1,524 | -19.1% | 150,097 | 121,372 | -28,725 | -19.1% |
| Sewing, Needlework, and Piece Goods Stores | 2,912 | 2,002 | -911 | -31.3% | 50,199 | 42,731 | -7,468 | -14.9% |
| Musical Instrument and Supplies Stores | 1,737 | 1,518 | -219 | -12.6% | 34,113 | 31,147 | -2,966 | -8.7% |
| Book Stores | 8,808 | 5,334 | -3,475 | -39.4% | 142,432 | 82,062 | -60,370 | -42.4% |
| Art Dealers | 1,074 | 794 | -280 | -26.1% | 23,320 | 17,172 | -6,148 | -26.4% |
| Photofinishing Laboratories (except One-Hour) | 844 | 209 | -635 | -75.3% | 20,198 | 9,664 | -10,534 | -52.2% |
| One-Hour Photofinishing | 261 | 53 | -208 | -79.8% | 3,601 | 767 | -2,834 | -78.7% |
| **Arts and architectural manufacturing** | 10,455 | 9,297 | -1,159 | -11.1% | 114,946 | 97,066 | -17,880 | -15.6% |
| Ornamental and Architectural Metal Work Manufacturing | 2,019 | 1,913 | -106 | -5.3% | 42,020 | 38,706 | -3,314 | -7.9% |
| Custom Architectural Woodwork and Millwork Manufacturing | 1,905 | 1,602 | -303 | -15.9% | 20,124 | 18,972 | -1,152 | -5.7% |
| Jewelry (except Costume) Manufacturing | 5,616 | 5,116 | -500 | -8.9% | 40,049 | 28,516 | -11,533 | -28.8% |
| Musical Instrument Manufacturing | 915 | 666 | -250 | -27.3% | 12,753 | 10,872 | -1,881 | -14.7% |
| **Culture and Preservation** | 11,520 | 11,840 | 320 | 2.8% | 212,217 | 239,189 | 26,972 | 12.7% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Museums | 6,890 | 7,397 | 507 | 7.4% | 87,426 | 100,672 | 13,246 | 15.2% |
| Historical Sites | 1,312 | 1,344 | 32 | 2.4% | 14,564 | 17,008 | 2,444 | 16.8% |
| Zoos and Botanical Gardens | 1,312 | 1,452 | 140 | 10.7% | 32,998 | 41,089 | 8,091 | 24.5% |
| Nature Parks and Other Similar Institutions | 2,007 | 1,647 | -360 | -17.9% | 77,229 | 80,420 | 3,191 | 4.1% |
| **Machinery and communications manufacturing** | 5,490 | 2,078 | -3,412 | -62.2% | 74,582 | 39,246 | -35,336 | -47.4% |
| Printing Machinery and Equipment Manufacturing | 1,076 | 1,174 | 98 | 9.1% | 12,819 | 7,448 | -5,371 | -41.9% |
| Audio and Video Equipment Manufacturing | 4,384 | 699 | -3,685 | -84.1% | 29,408 | 19,965 | -9,443 | -32.1% |
| Prerecorded Compact Disc (except Software), Tape, and Record Reproducing | 30 | 205 | 175 | 583.3% | 32,355 | 11,833 | -20,522 | -63.4% |
| **Marketing** | 12,276 | 11,631 | -646 | -5.3% | 262,534 | 272,066 | 9,532 | 3.6% |
| Advertising Agencies | 9,312 | 7,555 | -1,757 | -18.9% | 184,394 | 194,590 | 10,196 | 5.5% |
| Media Buying Agencies | 432 | 549 | 117 | 27.0% | 10,001 | 15,663 | 5,662 | 56.6% |
| Media Representatives | 1,254 | 925 | -329 | -26.2% | 31,958 | 25,126 | -6,832 | -21.4% |
| Display Advertising | 1,279 | 2,602 | 1,324 | 103.5% | 36,181 | 36,687 | 506 | 1.4% |
| **Materials manufacturing** | 4,664 | 2,204 | -2,460 | -52.7% | 88,184 | 54,827 | -33,357 | -37.8% |
| Photographic Film, Paper, Plate, and Chemical Manufacturing | 1,611 | 329 | -1,282 | -79.6% | 25,084 | 12,540 | -12,544 | -50.0% |
| Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing | 569 | 687 | 118 | 20.7% | 21,454 | 15,550 | -5,904 | -27.5% |
| Other Pressed and Blown Glass and Glassware Manufacturing | 1,440 | 914 | -526 | -36.5% | 21,616 | 14,951 | -6,665 | -30.8% |
| Lead Pencil and Art Good Manufacturing | 1,044 | 274 | -770 | -73.8% | 20,030 | 11,786 | -8,244 | -41.2% |
| **Media** | 75,153 | 65,761 | -9,392 | -12.5% | 1,354,926 | 1,113,263 | -241,663 | -17.8% |
| Radio Networks | 714 | 602 | -112 | -15.6% | 24,853 | 18,271 | -6,582 | -26.5% |
| Radio Stations | 4,129 | 3,514 | -615 | -14.9% | 85,376 | 69,411 | -15,965 | -18.7% |
| Television Broadcasting | 5,124 | 5,078 | -46 | -0.9% | 126,425 | 130,888 | 4,463 | 3.5% |
| Cable and Other Subscription | 4,054 | 5,566 | 1,513 | 37.3% | 91,137 | 61,687 | -29,450 | -32.3% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Programming | | | | | | | | |
| Cable and Other Program Distribution | 36,687 | 27,335 | -9,352 | -25.5% | 658,503 | 587,792 | -70,711 | -10.7% |
| News Syndicates | 545 | 261 | -284 | -52.2% | 12,361 | 12,055 | -306 | -2.5% |
| Libraries and Archives | 12,601 | 12,274 | -327 | -2.6% | 168,079 | 32,992 | -135,087 | -80.4% |
| Internet Publishing and Broadcasting | 6,043 | 10,919 | 4,876 | 80.7% | 71,784 | 186,125 | 114,341 | 159.3% |
| Video Tape and Disc Rental | 5,257 | 213 | -5,045 | -96.0% | 116,408 | 14,042 | -102,366 | -87.9% |
| **Motion picture and teleproduction** | 10,295 | 12,014 | 1,719 | 16.7% | 356,002 | 388,568 | 32,566 | 9.1% |
| Motion Picture and Video Production | 3,571 | 5,842 | 2,271 | 63.6% | 194,065 | 227,549 | 33,484 | 17.3% |
| Motion Picture and Video Distribution | 123 | 103 | -20 | -16.3% | 7,511 | 7,304 | -207 | -2.8% |
| Motion Picture Theaters (except Drive-Ins) | 6,258 | 5,526 | -732 | -11.7% | 131,791 | 133,519 | 1,728 | 1.3% |
| Drive-In Motion Picture Theaters | 86 | 55 | -31 | -36.0% | 2,755 | 1,955 | -800 | -29.0% |
| Teleproduction and Other Postproduction Services | 230 | 403 | 174 | 75.6% | 15,538 | 15,160 | -378 | -2.4% |
| Other Motion Picture and Video Industries | 28 | 85 | 57 | - | 4,342 | 3,081 | -1,261 | -29.0% |
| **Music Recording** | 424 | 379 | -45 | -10.6% | 21,664 | 16,153 | -5,511 | -25.4% |
| Record Production | 41 | 39 | -2 | -3.7% | 2,367 | 1,997 | -370 | -15.6% |
| Integrated Record Production/Distribution | 48 | 42 | -6 | - | 3,467 | 3,373 | -94 | -2.7% |
| Music Publishers | 47 | 42 | -5 | -9.7% | 4,332 | 3,916 | -416 | -9.6% |
| Sound Recording Studios | 192 | 203 | 12 | 6.0% | 8,157 | 4,645 | -3,512 | -43.1% |
| Other Sound Recording Industries | 98 | 53 | -45 | -46.2% | 3,341 | 2,222 | -1,119 | -33.5% |
| **Printing** | 31,819 | 22,952 | -8,868 | -27.9% | 625,694 | 451,227 | -174,467 | -27.9% |
| Commercial Lithographic Printing | 24,257 | 16,376 | -7,881 | -32.5% | 477,120 | 331,662 | -145,458 | -30.5% |
| Commercial Screen Printing | 3,273 | 3,831 | 558 | 17.0% | 68,901 | 71,945 | 3,044 | 4.4% |
| Books Printing | 1,386 | 1,159 | -228 | -16.4% | 32,003 | 21,242 | -10,761 | -33.6% |
| Tradebinding and Related Work | 2,903 | 1,586 | -1,317 | -45.4% | 47,670 | 26,378 | -21,292 | -44.7% |
| **Publishing** | 37,779 | 23,177 | -14,602 | -38.7% | 600,269 | 368,073 | -232,196 | -38.7% |
| Newspaper Publishers | 21,333 | 11,732 | -9,601 | -45.0% | 348,325 | 190,426 | -157,899 | -45.3% |
| Periodical Publishers | 9,075 | 5,790 | -3,285 | -36.2% | 144,470 | 98,999 | -45,471 | -31.5% |
| Book Publishers | 6,005 | 4,531 | -1,474 | -24.5% | 80,436 | 63,107 | -17,329 | -21.5% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Greeting Card Publishers | 508 | 492 | -16 | -3.1% | 11,402 | 4,874 | -6,528 | -57.3% |
| All Other Publishers | 858 | 632 | -226 | -26.3% | 15,636 | 10,667 | -4,969 | -31.8% |
| **Visual Arts, Music and Other Performing Arts** | 17,034 | 18,022 | 988 | 5.8% | 314,460 | 313,427 | -1,033 | -0.3% |
| Photography Studios, Portrait | 3,144 | 1,986 | -1,158 | -36.8% | 71,446 | 46,149 | -25,297 | -35.4% |
| Commercial Photography | 445 | 376 | -69 | -15.5% | 10,977 | 9,606 | -1,371 | -12.5% |
| Fine Arts Schools | 5,667 | 7,234 | 1,567 | 27.7% | 65,626 | 86,792 | 21,166 | 32.3% |
| Theater Companies and Dinner Theaters | 3,627 | 3,843 | 216 | 6.0% | 62,713 | 65,430 | 2,717 | 4.3% |
| Dance Companies | 465 | 589 | 124 | 26.7% | 8,945 | 11,078 | 2,133 | 23.8% |
| Musical Groups and Artists | 2,001 | 1,858 | -144 | -7.2% | 39,492 | 35,128 | -4,364 | -11.1% |
| Other Performing Arts Companies | 304 | 336 | 32 | 10.5% | 5,963 | 7,130 | 1,167 | 19.6% |
| Independent Artists, Writers, and Performers | 1,382 | 1,801 | 419 | 30.3% | 49,298 | 52,114 | 2,816 | 5.7% |
| **Wholesale art stores** | 7,465 | 5,528 | -1,937 | -25.9% | 130,810 | 108,873 | -21,937 | -16.8% |
| Photographic Equipment and Supplies Merchant Wholesalers | 363 | 373 | 10 | 2.8% | 15,201 | 14,904 | -297 | -2.0% |
| Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers | 2,168 | 2,789 | 622 | 28.7% | 44,579 | 43,103 | -1,476 | -3.3% |
| Printing and Writing Paper Merchant Wholesalers | 1,091 | 778 | -313 | -28.7% | 15,311 | 10,963 | -4,348 | -28.4% |
| Book, Periodical, and Newspaper Merchant Wholesalers | 3,844 | 1,588 | -2,256 | -58.7% | 55,719 | 39,903 | -15,816 | -28.4% |
| **Grand Total** | **295,098** | **238,504** | **-56,595** | **-19.2%** | **5,500,791** | **4,578,121** | **-922,670** | **-16.8%** |
| **Total Employment** | **6,936,505** | **7,100,579** | **164,074** | **2.4%** | **135,366,106** | **139,491,699** | **4,125,593** | **3.0%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Creative Economy Employment by Major Groups, New England and the United States, 2007-2015**

| **Creative Economy Employment** | **New England** | | | | **United States** | | | |
|---|---|---|---|---|---|---|---|---|
| | **2007** | **2015** | **Absolute Change** | **% Change** | **2007** | **2015** | **Absolute Change** | **% Change** |
| Group 1 Cultural Goods Production | 52,427 | 36,530 | -15,898 | -30.3% | 903,406 | 642,366 | -261,040 | -28.9% |
| Group 2 Cultural Goods Distribution | 55,953 | 40,451 | -15,502 | -27.7% | 1,059,832 | 872,039 | -187,793 | -17.7% |
| Group 3 Intellectual Property Production & Distribution | 186,718 | 161,523 | -25,195 | -13.5% | 3,537,553 | 3,063,716 | -473,837 | -13.4% |
| **Grand Total** | **295,098** | **238,504** | **-56,595** | **-19.2%** | **5,500,791** | **4,578,121** | **-922,670** | **-16.8%** |
| **Total Employment** | **6,936,505** | **7,100,579** | **164,074** | **2.4%** | **135,366,106** | **139,491,699** | **4,125,593** | **3.0%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Creative Economy Employment by Major Groups, New England and the U.S., 2007-2015**

| Creative Economy Employment | New England | | | | United States | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| **Group 1 Cultural Goods Production** | 52,427 | 36,530 | -15,898 | -30.3% | 903,406 | 642,366 | -261,040 | -28.9% |
| Commercial Lithographic Printing | 24,257 | 16,376 | -7,881 | -32.5% | 477,120 | 331,662 | -145,458 | -30.5% |
| Commercial Screen Printing | 3,273 | 3,831 | 558 | 17.0% | 68,901 | 71,945 | 3,044 | 4.4% |
| Books Printing | 1,386 | 1,159 | -228 | -16.4% | 32,003 | 21,242 | -10,761 | -33.6% |
| Tradebinding and Related Work | 2,903 | 1,586 | -1,317 | -45.4% | 47,670 | 26,378 | -21,292 | -44.7% |
| Photographic Film, Paper, Plate, and Chemical Manufacturing | 1,611 | 329 | -1,282 | -79.6% | 25,084 | 12,540 | -12,544 | -50.0% |
| Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing | 569 | 687 | 118 | 20.7% | 21,454 | 15,550 | -5,904 | -27.5% |
| Other Pressed and Blown Glass and Glassware Manufacturing | 1,440 | 914 | -526 | -36.5% | 21,616 | 14,951 | -6,665 | -30.8% |
| Ornamental and Architectural Metal Work Manufacturing | 2,019 | 1,913 | -106 | -5.3% | 42,020 | 38,706 | -3,314 | -7.9% |
| Printing Machinery and Equipment Manufacturing | 1,076 | 1,174 | 98 | 9.1% | 12,819 | 7,448 | -5,371 | -41.9% |
| Audio and Video Equipment Manufacturing | 4,384 | 699 | -3,685 | -84.1% | 29,408 | 19,965 | -9,443 | -32.1% |
| Prerecorded Compact Disc (except Software), Tape, and Record Reproducing | 30 | 205 | 175 | 583.3% | 32,355 | 11,833 | -20,522 | -63.4% |
| Custom Architectural Woodwork and Millwork | 1,905 | 1,602 | -303 | -15.9% | 20,124 | 18,972 | -1,152 | -5.7% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Manufacturing | | | | | | | | |
| Jewelry (except Costume) Manufacturing | 5,616 | 5,116 | -500 | -8.9% | 40,049 | 28,516 | -11,533 | -28.8% |
| Lead Pencil and Art Good Manufacturing | 1,044 | 274 | -770 | -73.8% | 20,030 | 11,786 | -8,244 | -41.2% |
| Musical Instrument Manufacturing | 915 | 666 | -250 | -27.3% | 12,753 | 10,872 | -1,881 | -14.7% |
| **Group 2 Cultural Goods Distribution** | 55,953 | 40,451 | -15,502 | -27.7% | 1,059,832 | 872,039 | -187,793 | -17.7% |
| Photographic Equipment and Supplies Merchant Wholesalers | 363 | 373 | 10 | 2.8% | 15,201 | 14,904 | -297 | -2.0% |
| Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers | 2,168 | 2,789 | 622 | 28.7% | 44,579 | 43,103 | -1,476 | -3.3% |
| Printing and Writing Paper Merchant Wholesalers | 1,091 | 778 | -313 | -28.7% | 15,311 | 10,963 | -4,348 | -28.4% |
| Book, Periodical, and Newspaper Merchant Wholesalers | 3,844 | 1,588 | -2,256 | -58.7% | 55,719 | 39,903 | -15,816 | -28.4% |
| Radio, Television, and Other Electronics Stores | 24,862 | 18,548 | -6,314 | -25.4% | 505,062 | 458,251 | -46,811 | -9.3% |
| Jewelry Stores | 7,991 | 6,467 | -1,524 | -19.1% | 150,097 | 121,372 | -28,725 | -19.1% |
| Sewing, Needlework, and Piece Goods Stores | 2,912 | 2,002 | -911 | -31.3% | 50,199 | 42,731 | -7,468 | -14.9% |
| Musical Instrument and Supplies Stores | 1,737 | 1,518 | -219 | -12.6% | 34,113 | 31,147 | -2,966 | -8.7% |
| Book Stores | 8,808 | 5,334 | -3,475 | -39.4% | 142,432 | 82,062 | -60,370 | -42.4% |
| Art Dealers | 1,074 | 794 | -280 | -26.1% | 23,320 | 17,172 | -6,148 | -26.4% |
| Photofinishing Laboratories (except One-Hour) | 844 | 209 | -635 | -75.3% | 20,198 | 9,664 | -10,534 | -52.2% |
| One-Hour Photofinishing | 261 | 53 | -208 | -79.8% | 3,601 | 767 | -2,834 | -78.7% |

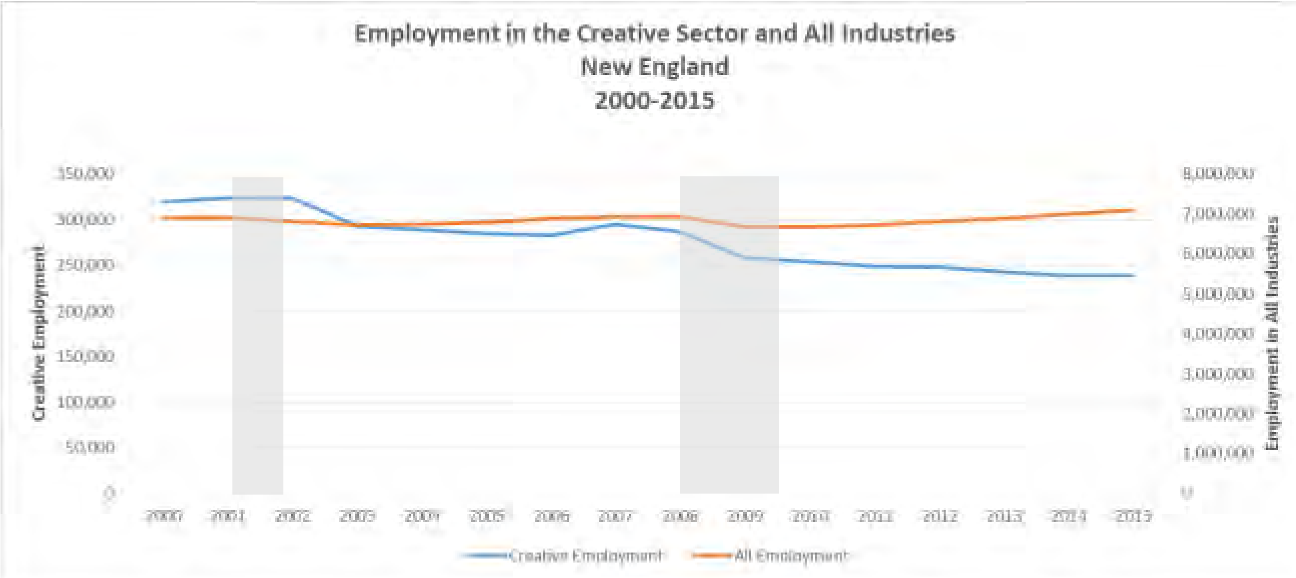
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Group 3 Intellectual Property Production & Distribution** | 186,718 | 161,523 | -25,195 | -13.5% | 3,537,553 | 3,063,716 | -473,837 | -13.4% |
| Museums* | 6,890 | 7,397 | 507 | 7.4% | 87,426 | 100,672 | 13,246 | 15.2% |
| Newspaper Publishers | 21,333 | 11,732 | -9,601 | -45.0% | 348,325 | 190,426 | -157,899 | -45.3% |
| Periodical Publishers | 9,075 | 5,790 | -3,285 | -36.2% | 144,470 | 98,999 | -45,471 | -31.5% |
| Book Publishers | 6,005 | 4,531 | -1,474 | -24.5% | 80,436 | 63,107 | -17,329 | -21.5% |
| Greeting Card Publishers | 508 | 492 | -16 | -3.1% | 11,402 | 4,874 | -6,528 | -57.3% |
| All Other Publishers | 858 | 632 | -226 | -26.3% | 15,636 | 10,667 | -4,969 | -31.8% |
| Motion Picture and Video Production | 3,571 | 5,842 | 2,271 | 63.6% | 194,065 | 227,549 | 33,484 | 17.3% |
| Motion Picture and Video Distribution | 123 | 103 | -20 | -16.3% | 7,511 | 7,304 | -207 | -2.8% |
| Motion Picture Theaters (except Drive-Ins) | 6,258 | 5,526 | -732 | -11.7% | 131,791 | 133,519 | 1,728 | 1.3% |
| Drive-In Motion Picture Theaters | 86 | 55 | -31 | -36.0% | 2,755 | 1,955 | -800 | -29.0% |
| Teleproduction and Other Postproduction Services | 230 | 403 | 174 | 75.6% | 15,538 | 15,160 | -378 | -2.4% |
| Other Motion Picture and Video Industries | 28 | 85 | 57 | - | 4,342 | 3,081 | -1,261 | -29.0% |
| Record Production | 41 | 39 | -2 | -3.7% | 2,367 | 1,997 | -370 | -15.6% |
| Integrated Record Production/Distribution | 48 | 42 | -6 | - | 3,467 | 3,373 | -94 | -2.7% |
| Music Publishers | 47 | 42 | -5 | -9.7% | 4,332 | 3,916 | -416 | -9.6% |
| Sound Recording Studios | 192 | 203 | 12 | 6.0% | 8,157 | 4,645 | -3,512 | -43.1% |
| Other Sound Recording Industries | 98 | 53 | -45 | -46.2% | 3,341 | 2,222 | -1,119 | -33.5% |
| Radio Networks | 714 | 602 | -112 | -15.6% | 24,853 | 18,271 | -6,582 | -26.5% |
| Radio Stations | 4,129 | 3,514 | -615 | -14.9% | 85,376 | 69,411 | -15,965 | -18.7% |
| Television Broadcasting | 5,124 | 5,078 | -46 | -0.9% | 126,425 | 130,888 | 4,463 | 3.5% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Cable and Other Subscription Programming | 4,054 | 5,566 | 1,513 | 37.3% | 91,137 | 61,687 | -29,450 | -32.3% |
| Cable and Other Program Distribution | 36,687 | 27,335 | -9,352 | -25.5% | 658,503 | 587,792 | -70,711 | -10.7% |
| News Syndicates | 545 | 261 | -284 | -52.2% | 12,361 | 12,055 | -306 | -2.5% |
| Libraries and Archives | 12,601 | 12,274 | -327 | -2.6% | 168,079 | 32,992 | -135,087 | -80.4% |
| Internet Publishing and Broadcasting | 6,043 | 10,919 | 4,876 | 80.7% | 71,784 | 186,125 | 114,341 | 159.3% |
| Video Tape and Disc Rental | 5,257 | 213 | -5,045 | -96.0% | 116,408 | 14,042 | -102,366 | -87.9% |
| Architectural Services | 13,292 | 11,296 | -1,996 | -15.0% | 216,183 | 177,071 | -39,112 | -18.1% |
| Landscape Architectural Services | 1,905 | 1,642 | -263 | -13.8% | 44,546 | 34,297 | -10,249 | -23.0% |
| Drafting Services | 444 | 314 | -130 | - | 11,051 | 8,241 | -2,810 | -25.4% |
| Interior Design Services | 2,040 | 1,411 | -629 | -30.8% | 43,815 | 38,934 | -4,881 | -11.1% |
| Industrial Design Services | 703 | 689 | -14 | - | 13,328 | 16,979 | 3,651 | 27.4% |
| Graphic Design Services | 3,484 | 2,638 | -846 | -24.3% | 73,179 | 62,558 | -10,621 | -14.5% |
| Other Specialized Design Services | 371 | 712 | 341 | 91.9% | 13,379 | 14,897 | 1,518 | 11.3% |
| Advertising Agencies | 9,312 | 7,555 | -1,757 | -18.9% | 184,394 | 194,590 | 10,196 | 5.5% |
| Media Buying Agencies | 432 | 549 | 117 | 27.0% | 10,001 | 15,663 | 5,662 | 56.6% |
| Media Representatives | 1,254 | 925 | -329 | -26.2% | 31,958 | 25,126 | -6,832 | -21.4% |
| Display Advertising | 1,279 | 2,602 | 1,324 | 103.5% | 36,181 | 36,687 | 506 | 1.4% |
| Photography Studios, Portrait | 3,144 | 1,986 | -1,158 | -36.8% | 71,446 | 46,149 | -25,297 | -35.4% |
| Commercial Photography | 445 | 376 | -69 | -15.5% | 10,977 | 9,606 | -1,371 | -12.5% |
| Fine Arts Schools | 5,667 | 7,234 | 1,567 | 27.7% | 65,626 | 86,792 | 21,166 | 32.3% |
| Theater Companies and Dinner Theaters | 3,627 | 3,843 | 216 | 6.0% | 62,713 | 65,430 | 2,717 | 4.3% |
| Dance Companies | 465 | 589 | 124 | 26.7% | 8,945 | 11,078 | 2,133 | 23.8% |
| Musical Groups and Artists | 2,001 | 1,858 | -144 | -7.2% | 39,492 | 35,128 | -4,364 | -11.1% |
| Other Performing Arts Companies | 304 | 336 | 32 | 10.5% | 5,963 | 7,130 | 1,167 | 19.6% |

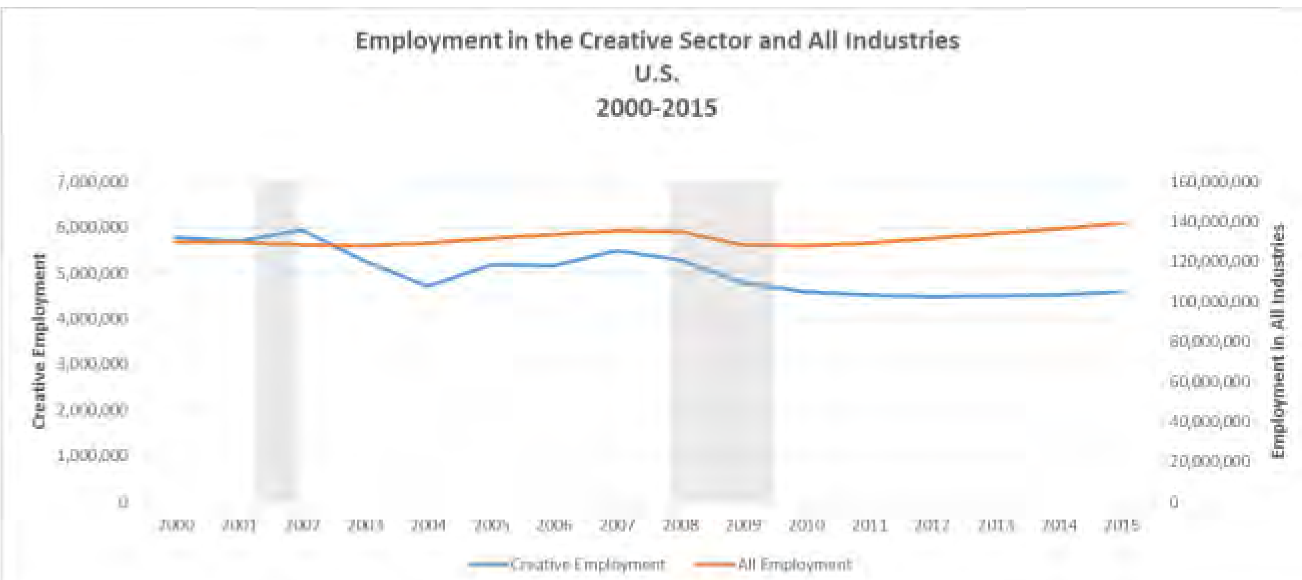
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Independent Artists, Writers, and Performers | 1,382 | 1,801 | 419 | 30.3% | 49,298 | 52,114 | 2,816 | 5.7% |
| Historical Sites | 1,312 | 1,344 | 32 | 2.4% | 14,564 | 17,008 | 2,444 | 16.8% |
| Zoos and Botanical Gardens | 1,312 | 1,452 | 140 | 10.7% | 32,998 | 41,089 | 8,091 | 24.5% |
| Nature Parks and Other Similar Institutions | 2,007 | 1,647 | -360 | -17.9% | 77,229 | 80,420 | 3,191 | 4.1% |
| **Grand Total** | **295,098** | **238,504** | **-56,595** | **-19.2%** | **5,500,791** | **4,578,121** | **-922,670** | **-16.8%** |
| **Total Employment** | **6,936,505** | **7,100,579** | **164,074** | **2.4%** | **135,366,106** | **139,491,699** | **4,125,593** | **3.0%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW). *Note: In this study we shifted the categorization of Museums from Group 2 Cultural Goods Distribution to Group 3 Intellectual Property Production & Distribution.

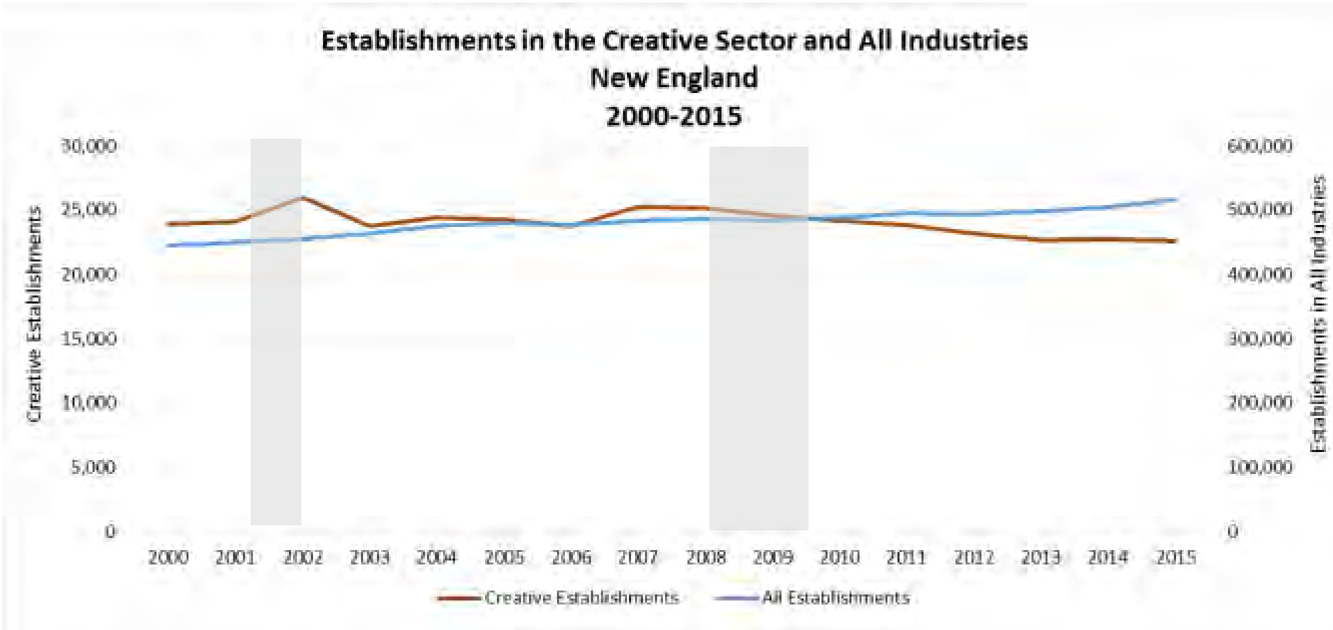
**Time Series of Creative Employment and Establishments in New England, 2000-2015**



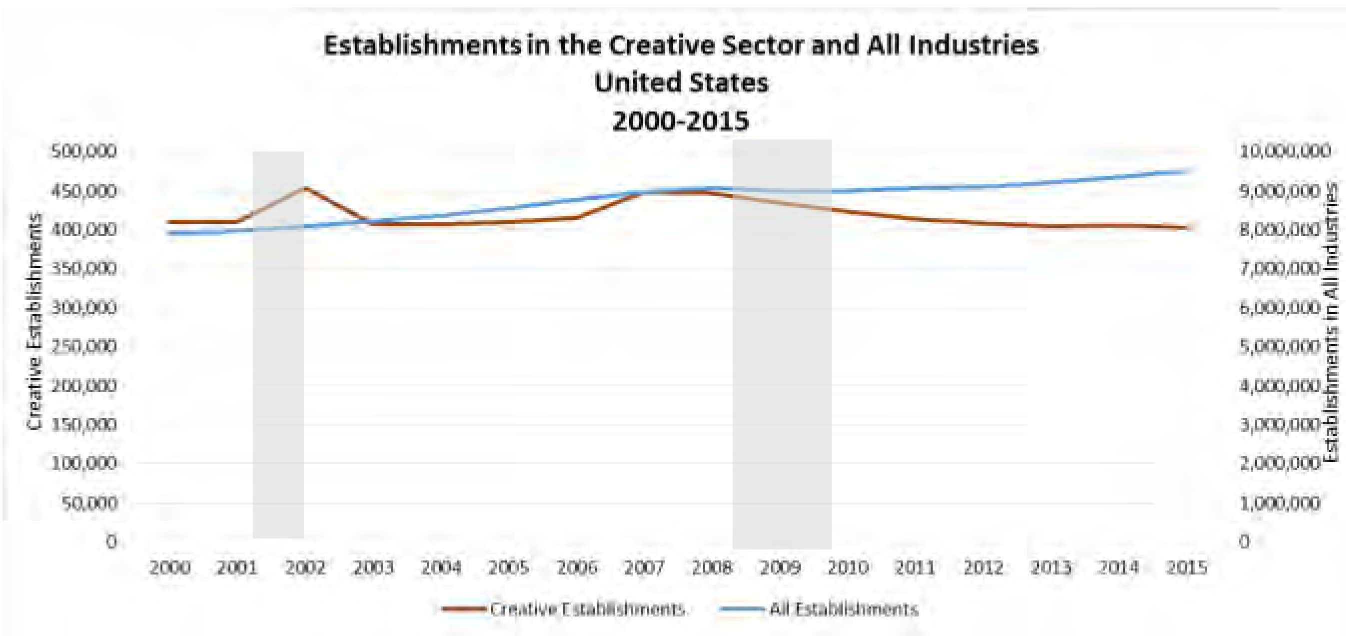

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of pvEmployment and Wages (QCEW**)** and U.S. Census Bureau County Business Patterns (CBP). Shaded areas indicate periods of recession.



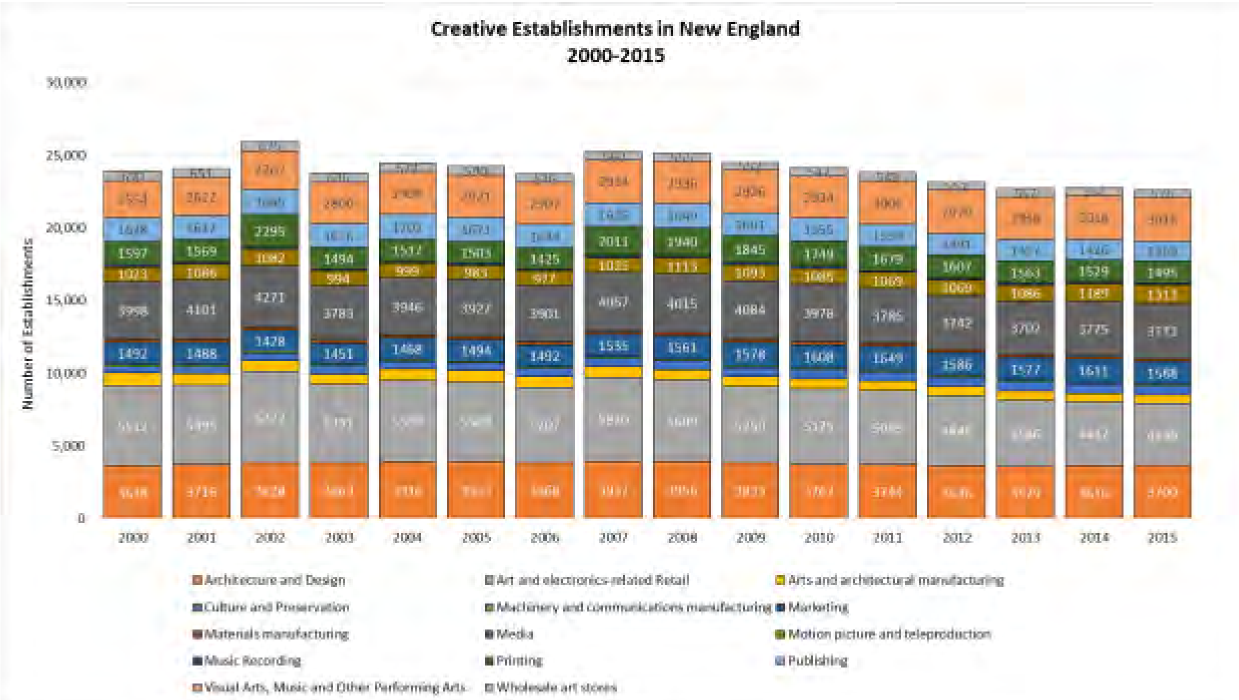

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW**)** and U.S. Census Bureau County Business Patterns (CBP). Shaded areas indicate periods of recession.



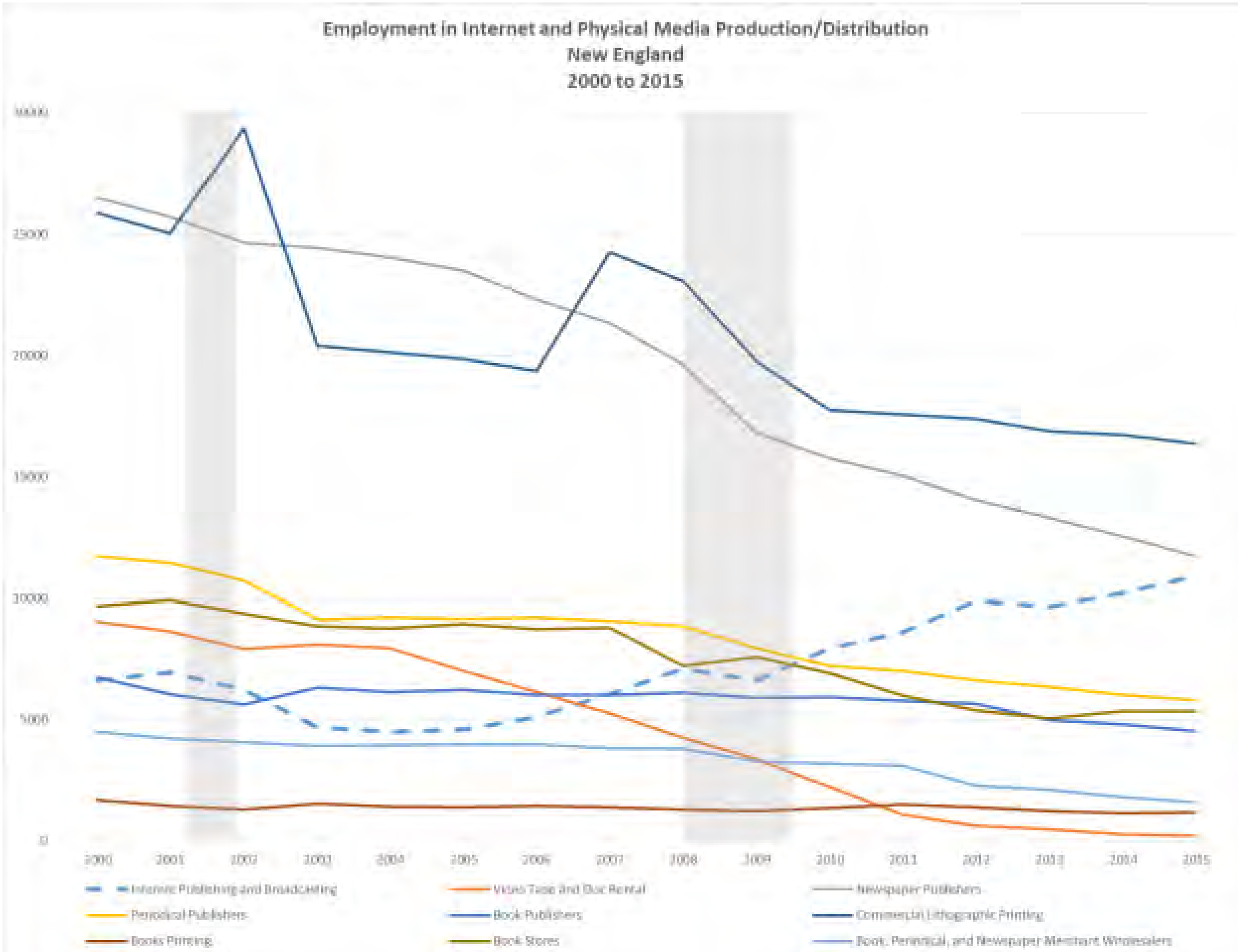

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW**)** and U.S. Census Bureau County Business Patterns (CBP). Shaded areas indicate periods of recession.




**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW**)** and U.S. Census Bureau County Business Patterns (CBP). Shaded areas indicate periods of recession.

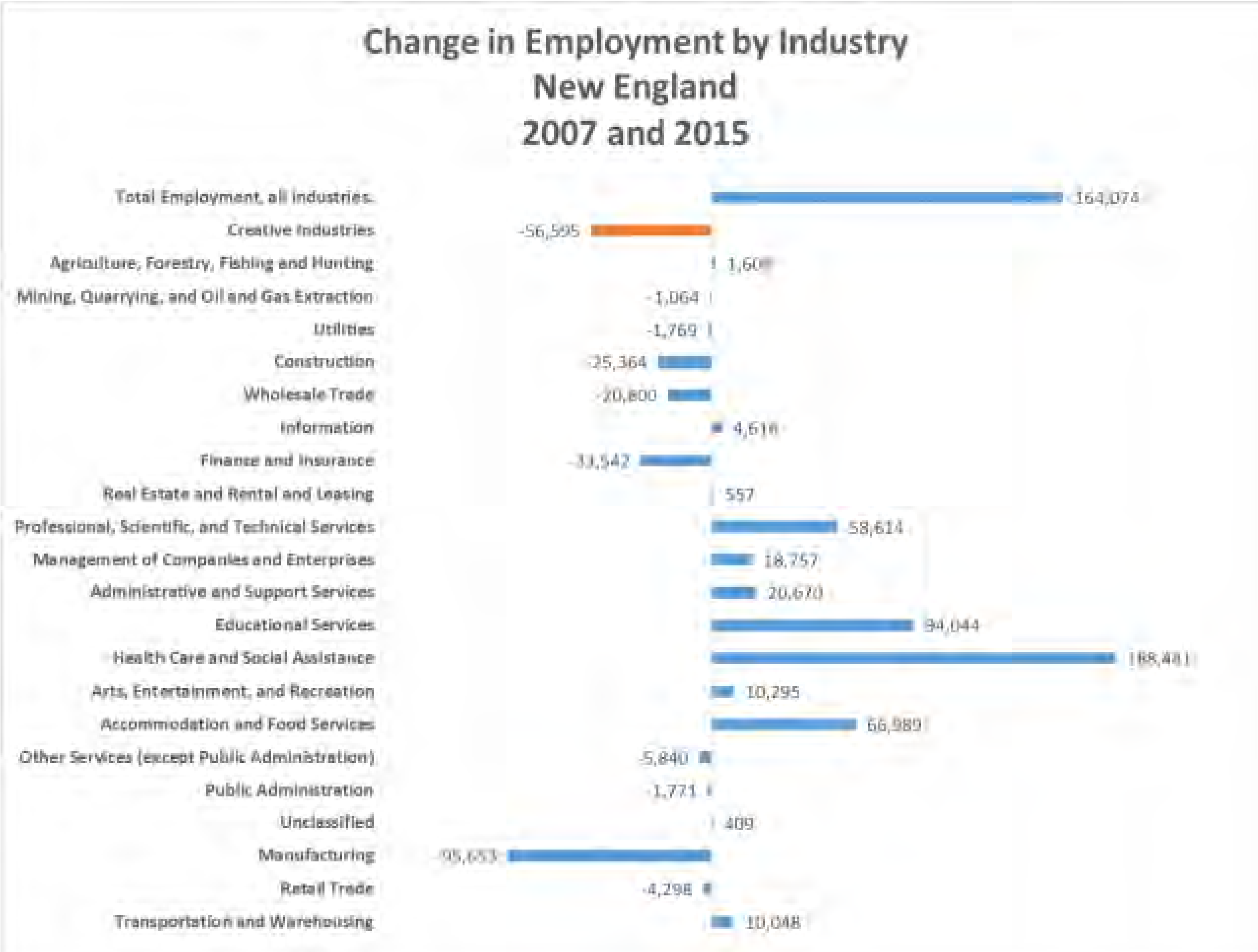



**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW**)** and U.S. Census Bureau County Business Patterns (CBP)




**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW**)** and U.S. Census Bureau County Business Patterns (CBP). Shaded areas indicate periods of recession.

**Comparison of Change in Employment of Creative Industries and Other 2-digit NAICS, 2007 and 2015**



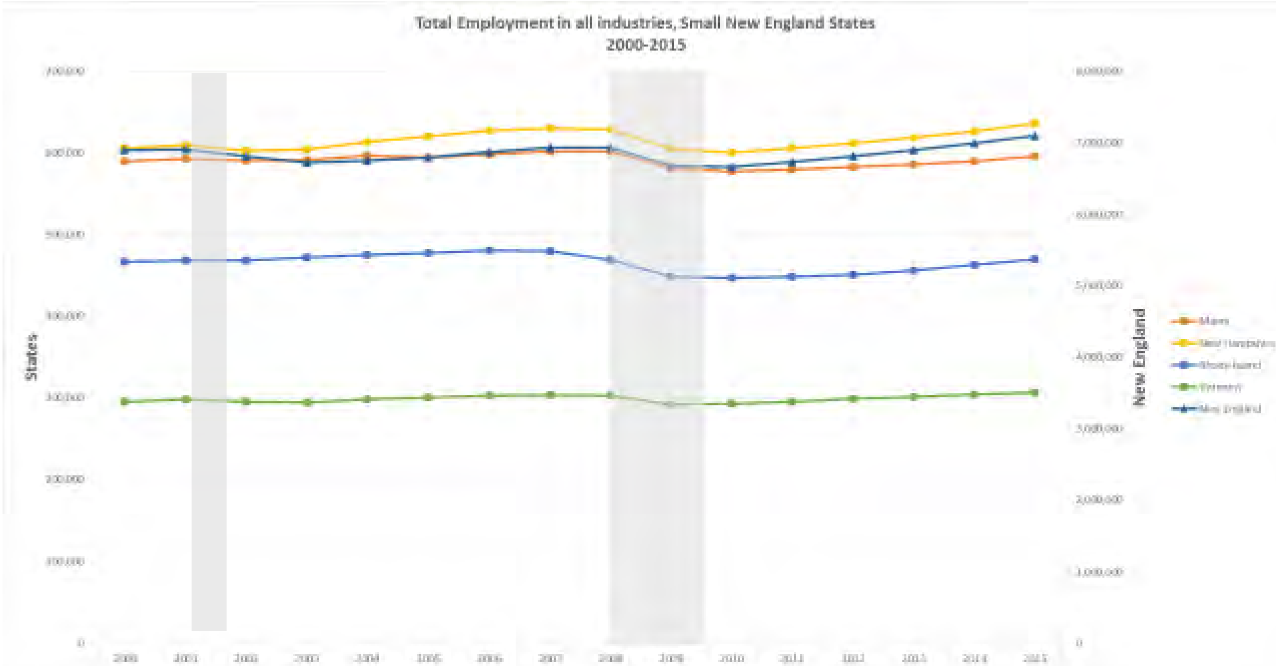

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW**)** and U.S. Census Bureau County Business Patterns (CBP)

| Creative Economy Employment | New England | | | |
|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | % Change |
| Transportation and Warehousing | 205,187 | 215,235 | 10,048 | 4.9% |
| Retail Trade | 771,883 | 767,585 | -4,298 | -0.6% |
| Manufacturing | 662,362 | 566,709.50 | -95,653 | -14.4% |
| Unclassified | 865 | 1,274 | 409 | 47.3% |
| Public Administration | 287,911 | 286,140 | -1,771 | -0.6% |
| Other Services (except Public Administration) | 247,770 | 241,930 | -5,840 | -2.4% |
| Accommodation and Food Services | 543,899 | 610,888 | 66,989 | 12.3% |
| Arts, Entertainment, and Recreation | 113,607 | 123,902 | 10,295 | 9.1% |
| Health Care and Social Assistance | 1,051,076 | 1,239,557 | 188,481 | 17.9% |
| Educational Services | 619,968 | 714,012 | 94,044 | 15.2% |
| Administrative and Support Services | 349,428 | 370,098 | 20,670 | 5.9% |
| Management of Companies and Enterprises | 111,845 | 130,602 | 18,757 | 16.8% |
| Professional, Scientific, and Technical Services | 432,661 | 491,275 | 58,614 | 13.5% |
| Real Estate and Rental and Leasing | 85,790 | 86,347 | 557 | 0.6% |
| Finance and Insurance | 394,634 | 361,092 | -33,542 | -8.5% |
| Information | 57,647 | 62,263 | 4,616 | 8.0% |
| Wholesale Trade | 275,535 | 254,735 | -20,800 | -7.5% |
| Construction | 323,598 | 298,234 | -25,364 | -7.8% |
| Utilities | 31,903 | 30,134 | -1,769 | -5.5% |
| Mining, Quarrying, and Oil and Gas Extraction | 3,967 | 2,903 | -1,064 | -26.8% |
| Agriculture, Forestry, Fishing and Hunting | 22,253 | 23,862 | 1,609 | 7.2% |
| **Creative Industries** | **295,098** | **238,504** | **-56,595** | **-19.2%** |
| Total Employment, all industries. | 6,936,505 | 7,100,579 | 164,074 | 2.4% |

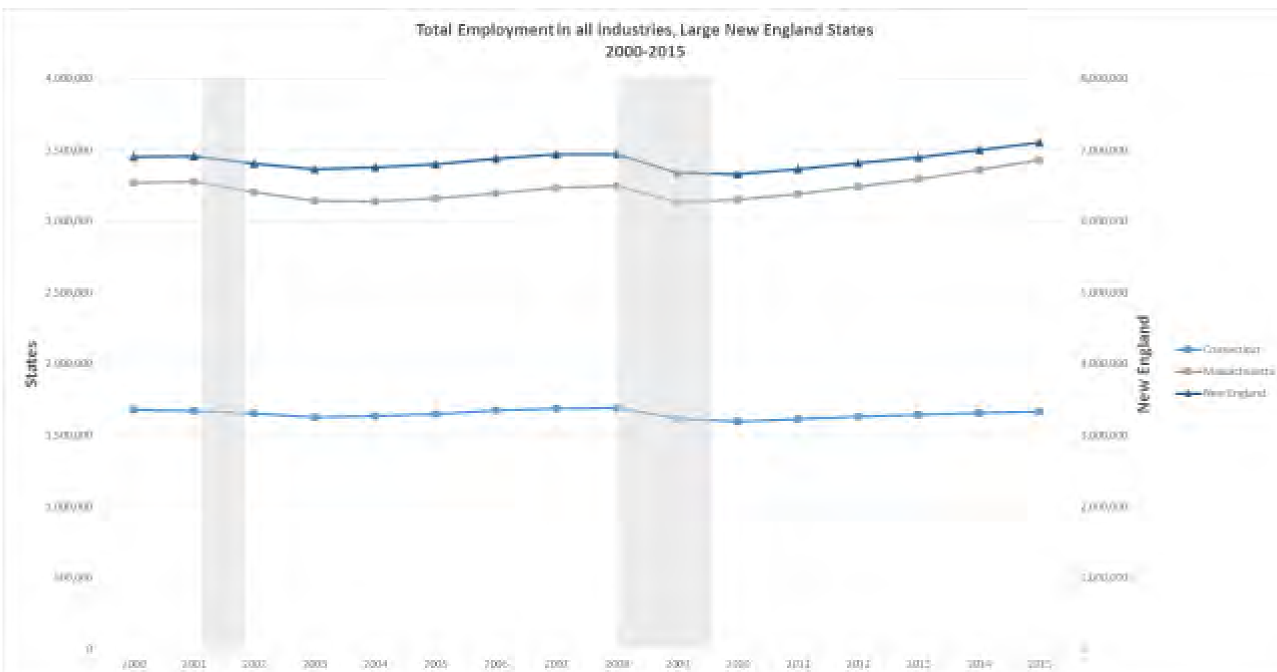
**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW**)** and U.S. Census Bureau County Business Patterns (CBP)

*Note: Total Employment is from QCEW, and does not include additional CBP data. Total employment may differ from sum of listed industries

**Total Employment in All Industries, New England, 2000-2015**




**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW). Shaded areas indicate periods of recession.




**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW). Shaded areas indicate periods of recession.

### Creative Workforce Occupations

### Creative Workforce Employment by Occupational group in New England, 2007-2015

| Growth in Creative Workforce Occupations | New England | | | | United States | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Management occupations | 6,140 | 8,030 | 1,890 | 30.8% | 83,510 | 89,720 | 6,210 | 7.4% |
| Architecture and engineering occupations | 12,990 | 11,550 | -1,440 | -11.1% | 240,180 | 208,820 | -31,360 | -13.1% |
| Life, physical and social science occupations | 120 | 90 | -30 | -25.0% | 8,850 | 9,990 | 1,140 | 12.9% |
| Education, training and library occupations | 38,200 | 40,730 | 2,530 | 6.6% | 522,040 | 548,350 | 26,310 | 5.0% |
| Arts, design entertainment, sports and media occupations | 76,110 | 75,170 | -940 | -1.2% | 1,534,770 | 1,538,590 | 3,820 | 0.2% |
| Personal care and service occupations | 490 | 310 | -180 | -36.7% | 15,410 | 11,740 | -3,670 | -23.8% |
| Sales and related occupations | 7,130 | 6,550 | -580 | -8.1% | 161,440 | 149,770 | -11,670 | -7.2% |
| Office and administrative support occupations | 9,930 | 7,050 | -2,880 | -29.0% | 141,620 | 113,330 | -28,290 | -20.0% |
| Installation, maintenance and repair occupations | 1,590 | 1,380 | -210 | -13.2% | 47,450 | 38,160 | -9,290 | -19.6% |
| Production occupations | 9,990 | 5,400 | -4,590 | -45.9% | 199,900 | 117,610 | -82,290 | -41.2% |
| Total, Creative Economy | 319,240 | 304,490 | -14,750 | -4.6% | 5,826,830 | 5,562,440 | -264,390 | -4.5% |
| All Occupations | 6,909,680 | 7,057,990 | 148,310 | 2.1% | 134,354,250 | 137,896,660 | 3,542,410 | 2.6% |

**Source:** U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

**Growing Creative Workforce Occupations in New England 2007-2015**

| SOC Code | Growth in Creative Workforce Occupations | New England | | | |
|---|---|---|---|---|---|
| | | 2007 | 2015 | Absolute Change | Percent Change |
| 27-2012 | *Producers and Directors | 2,670 | 5,240 | 2,570 | 96.3% |
| 11-2031 | Public Relations and Fundraising Managers | 3,810 | 6,080 | 2,270 | 59.6% |
| 27-1026 | *Merchandise Displayers and Window Trimmers | 2,240 | 4,470 | 2,230 | 99.6% |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | 5,880 | 7,700 | 1,820 | 31.0% |
| 27-2011 | *Actors | 310 | 1,500 | 1,190 | 383.9% |
| 25-1123 | English Language and Literature Teachers, Postsecondary | 4,080 | 5,210 | 1,130 | 27.7% |
| 27-4011 | Audio and Video Equipment Technicians | 2,410 | 3,440 | 1,030 | 42.7% |
| 27-2041 | Music Directors and Composers | 310 | 1,310 | 1,000 | 322.6% |
| 25-1124 | Foreign Language and Literature Teachers, Postsecondary | 1,390 | 1,840 | 450 | 32.4% |
| 25-1031 | Architecture Teachers, Postsecondary | 170 | 600 | 430 | 252.9% |
| 27-3043 | *Writers and Authors | 2,040 | 2,430 | 390 | 19.1% |
| 27-1027 | *Set and Exhibit Designers | 0 | 310 | 310 | - |
| 27-4032 | Film and Video Editors | 480 | 790 | 310 | 64.6% |
| 27-1014 | *Multimedia Artists and Animators | 1,350 | 1,650 | 300 | 22.2% |
| 25-9011 | Audio-Visual and Multimedia Collections Specialists | 390 | 670 | 280 | 71.8% |
| 25-1062 | Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 640 | 860 | 220 | 34.4% |
| 27-4012 | Broadcast Technicians | 1,400 | 1,600 | 200 | 14.3% |
| 25-1122 | Communications Teachers, Postsecondary | 1,190 | 1,380 | 190 | 16.0% |
| 27-4031 | Camera Operators, Television, Video, and Motion Picture | 990 | 1,170 | 180 | 18.2% |
| 27-4014 | Sound Engineering Technicians | 440 | 590 | 150 | 34.1% |
| 27-4099 | Media and Communication Equipment Workers, All Other | 580 | 680 | 100 | 17.2% |
| 27-3012 | *Public Address System and Other Announcers | 180 | 260 | 80 | 44.4% |
| 27-2042 | *Musicians and Singers | 1,320 | 1,390 | 70 | 5.3% |
| 49-2097 | Electronic Home Entertainment Equipment Installers and Repairers | 1,100 | 1,170 | 70 | 6.4% |
| 25-4012 | Curators | 1,000 | 1,040 | 40 | 4.0% |
| 17-1011 | *Architects, Except Landscape and Naval | 6,020 | 6,050 | 30 | 0.5% |
| 25-4011 | Archivists | 460 | 490 | 30 | 6.5% |
| 49-9063 | Musical Instrument Repairers and Tuners | 180 | 210 | 30 | 16.7% |
| 25-1082 | Library Science Teachers, Postsecondary | 90 | 100 | 10 | 11.1% |

**Source:** U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

*Indicates artistic occupations

**Growing Creative Workforce Occupations in the United States 2007-2015**

| SOC Code | Growth in Creative Workforce Occupations | United States | | | |
|---|---|---|---|---|---|
| | | 2007 | 2015 | Absolute Change | Percent Change |
| 27-2012 | *Producers and Directors | 72,390 | 104,650 | 32,260 | 44.6% |
| 27-1026 | *Merchandise Displayers and Window Trimmers | 68,660 | 100,540 | 31,880 | 46.4% |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | 73,890 | 98,310 | 24,420 | 33.0% |
| 27-4011 | Audio and Video Equipment Technicians | 40,360 | 62,460 | 22,100 | 54.8% |
| 25-1123 | English Language and Literature Teachers, Postsecondary | 60,910 | 75,730 | 14,820 | 24.3% |
| 11-2031 | Public Relations and Fundraising Managers | 47,210 | 60,380 | 13,170 | 27.9% |
| 27-2041 | Music Directors and Composers | 9,110 | 21,540 | 12,430 | 136.4% |
| 27-4032 | Film and Video Editors | 17,410 | 27,660 | 10,250 | 58.9% |
| 27-2011 | *Actors | 44,860 | 50,570 | 5,710 | 12.7% |
| 25-1122 | Communications Teachers, Postsecondary | 23,690 | 29,050 | 5,360 | 22.6% |
| 25-1124 | Foreign Language and Literature Teachers, Postsecondary | 25,100 | 30,120 | 5,020 | 20.0% |
| 27-1024 | *Graphic Designers | 201,080 | 204,850 | 3,770 | 1.9% |
| 25-9011 | Audio-Visual and Multimedia Collections Specialists | 6,530 | 10,170 | 3,640 | 55.7% |
| 27-1027 | *Set and Exhibit Designers | 8,620 | 11,930 | 3,310 | 38.4% |
| 27-3042 | Technical Writers | 46,740 | 49,770 | 3,030 | 6.5% |
| 25-1125 | History Teachers, Postsecondary | 20,760 | 23,680 | 2,920 | 14.1% |
| 27-1022 | *Fashion Designers | 16,460 | 19,040 | 2,580 | 15.7% |
| 27-1011 | *Art Directors | 32,290 | 34,690 | 2,400 | 7.4% |
| 49-9063 | Musical Instrument Repairers and Tuners | 5,410 | 7,730 | 2,320 | 42.9% |
| 25-1062 | Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 7,280 | 9,240 | 1,960 | 26.9% |
| 25-4012 | Curators | 10,120 | 11,870 | 1,750 | 17.3% |
| 27-1013 | *Fine Artists, Including Painters, Sculptors, and Illustrators | 10,500 | 12,240 | 1,740 | 16.6% |
| 19-3091 | Anthropologists and Archeologists | 5,250 | 6,980 | 1,730 | 33.0% |
| 39-3092 | Costume Attendants | 4,570 | 6,120 | 1,550 | 33.9% |
| 25-1031 | Architecture Teachers, Postsecondary | 6,070 | 7,340 | 1,270 | 20.9% |
| 25-1082 | Library Science Teachers, Postsecondary | 4,080 | 4,910 | 830 | 20.3% |
| 25-4013 | Museum Technicians and Conservators | 9,950 | 10,750 | 800 | 8.0% |
| 27-1014 | *Multimedia Artists and Animators | 29,440 | 30,240 | 800 | 2.7% |
| 25-1061 | Anthropology and Archeology Teachers, Postsecondary | 5,290 | 6,000 | 710 | 13.4% |
| 27-4031 | Camera Operators, Television, Video, and Motion Picture | 19,990 | 20,060 | 70 | 0.4% |
| 25-4011 | Archivists | 5,420 | 5,460 | 40 | 0.7% |

**Source:** U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

*Indicates artistic occupations

**Top Ten Creative Workforce Occupations in New England and the United States, 2015**

| New England | | United States | |
|---|---|---|---|
| **Occupation** | **Employment** | **Occupation** | **Employment** |
| Public Relations Specialists | 12,890 | Public Relations Specialists | 218,910 |
| Librarians | 10,310 | *Graphic Designers | 204,850 |
| *Graphic Designers | 9,870 | Advertising Sales Agents | 149,770 |
| Art, Drama, and Music Teachers, Postsecondary | 7,700 | Librarians | 131,550 |
| Library Technicians | 7,540 | *Producers and Directors | 104,650 |
| Advertising Sales Agents | 6,550 | Merchandise Displayers and Window Trimmers | 100,540 |
| Library Assistants, Clerical | 6,140 | Library Assistants, Clerical | 100,090 |
| Public Relations and Fundraising Managers | 6,080 | Art, Drama, and Music Teachers, Postsecondary | 98,310 |
| *Architects, Except Landscape and Naval | 6,050 | Editors | 96,690 |
| Editors | 5,970 | Architectural and Civil Drafters | 95,280 |
| **Creative Economy Total** | **156,260** | **Creative Economy Total** | **2,826,080** |
| **All Occupations** | **7,057,990** | **All Occupations** | **137,896,660** |
| **Creative Economy Share of All Occupations** | **2.2%** | **Creative Economy Share of All Occupations** | **2.0%** |

**Source:** U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

*Indicates artistic occupations

**Top Ten Industries for Creative Workforce Occupations in New England the United States, 2015**

| New England | | United States | |
|---|---|---|---|
| **Industry** | **Employment** | **Industry** | **Employment** |
| Educational Services | 38,060 | Colleges, Universities, and Professional Schools | 309,200 |
| Professional, Scientific, and Technical Services | 27,800 | Architectural, Engineering, and Related Services | 189,530 |
| Colleges, Universities, and Professional Schools | 25,200 | Advertising, Public Relations, and Related Services | 186,510 |
| Federal, State, and Local Government (excluding state and local schools and hospitals) | 12,490 | Local Government (OES Designation) | 178,590 |
| Local Government (OES Designation) | 11,130 | Motion Picture and Video Industries | 166,030 |
| Architectural, Engineering, and Related Services | 10,470 | Newspaper, Periodical, Book, and Directory Publishers | 159,360 |
| Publishing Industries (except Internet) | 10,400 | Radio and Television Broadcasting | 150,100 |
| Newspaper, Periodical, Book, and Directory Publishers | 9,150 | Elementary and Secondary Schools | 109,220 |
| Broadcasting (except Internet) | 8,930 | Junior Colleges | 93,790 |
| Advertising, Public Relations, and Related Services | 6,510 | Printing and Related Support Activities | 66,450 |
| **Creative Economy Total** | **260,530** | **Creative Economy Total** | **2,751,830** |

**Source:** U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

**Top Ten Industries for Creative Workforce Occupations in New England the United States, 2015**

| 2015 | CT | ME | MA | NH | RI | VT | New England | United States |
|---|---|---|---|---|---|---|---|---|
| **Creative Economy Occupations** | **34,580** | **11,220** | **79,270** | **11,760** | **11,140** | **8,290** | **156,260** | **2,826,080** |
| Creative Economy % of All Occupations | 2.1% | 1.9% | 2.3% | 1.9% | 2.4% | 2.7% | 2.2% | 2.0% |
| Creative Economy Location Quotient | 1.017 | 0.926 | 1.139 | 0.903 | 1.153 | 1.333 | 1.080 | 1.000 |
| **Artistic Occupations** | **12,370** | **3,370** | **23,440** | **3,360** | **3,130** | **2,000** | **47,670** | **1,022,110** |
| Artistic Occupations % of All Occupations | 0.7% | 0.6% | 0.7% | 0.5% | 0.7% | 0.7% | 0.7% | 0.7% |
| Artistic Occupations Location Quotient | 1.006 | 0.769 | 0.931 | 0.713 | 0.896 | 0.889 | 0.911 | 1.000 |
| **Total Employment, All Occupations** | **1,659,430** | **591,520** | **3,396,840** | **635,360** | **471,290** | **303,550** | **7,057,990** | **137,896,660** |

**Source:** U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

*Note: Artistic occupations represent a subset of the entire creative workforce occupations (see SOC code table), which include architects, designers, visual artists, photographers, writers, actors, producers & directors, dancers, musicians, announcers, and all other entertainers.

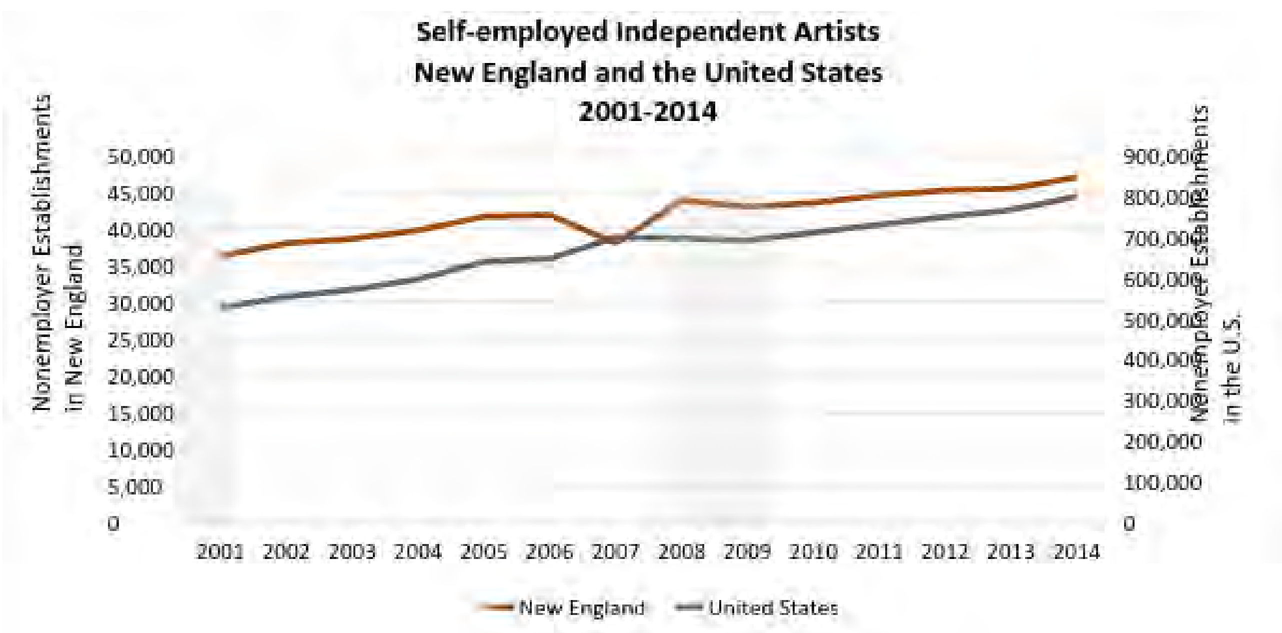
## Creative Economy Nonemployers

### Nonemployer Establishments and Receipts in New England and the United States, 2007-2015

| Industry | New England | | | | | United States | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (In $1,000s) | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (In $1,000s) |
| Glass and Glass Product Manufacturing | 180 | 149 | -31 | -17.2% | $5,047 | 3,203 | 3,082 | -121 | -3.8% | $118,442 |
| Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers | 1,176 | 1,130 | -46 | -3.9% | $99,526 | 22,990 | 25,959 | 2,969 | 12.9% | $1,904,540 |
| Book, Periodical, and Newspaper Merchant | 863 | 694 | -169 | -19.6% | $19,010 | 15,418 | 11,096 | -4,322 | -28.0% | $353,426 |
| Electronics and Appliance Stores | 1,502 | 963 | -539 | -35.9% | $59,666 | 37,949 | 27,040 | -10,909 | -28.7% | $1,342,768 |
| Jewelry Stores | 2,468 | 1,946 | -522 | -21.2% | $84,935 | 43,604 | 45,646 | 2,042 | 4.7% | $1,551,323 |
| Sewing, Needlework, and Piece Goods Stores | 780 | 777 | -3 | -0.4% | $21,004 | 16,198 | 18,006 | 1,808 | 11.2% | $404,667 |
| Musical Instrument and Supplies Stores | 360 | 419 | 59 | 16.4% | $23,222 | 6,289 | 6,901 | 612 | 9.7% | $315,814 |
| Book Stores and News Dealers | 1,294 | 948 | -346 | -26.7% | $30,758 | 24,547 | 16,252 | -8,295 | -33.8% | $531,877 |
| Art Dealers | 1,282 | 1,182 | -100 | -7.8% | $79,687 | 18,499 | 17,686 | -813 | -4.4% | $957,570 |
| Video Tape and Disc Rental | 145 | 36 | -109 | -75.2% | $1,390 | 3,901 | 1,771 | -2,130 | -54.6% | $63,050 |
| Architectural Services | 3,432 | 3,528 | 96 | 2.8% | $213,480 | 47,044 | 49,120 | 2,076 | 4.4% | $2,843,389 |
| Landscape Architectural Services | 2,372 | 2,306 | -66 | -2.8% | $107,190 | 34,765 | 39,431 | 4,666 | 13.4% | $1,417,095 |
| Drafting Services | 1,223 | 976 | -247 | -20.2% | $26,208 | 26,075 | 21,627 | -4,448 | -17.1% | $594,589 |
| Photographic Services | 6,248 | 8,091 | 1,843 | 29.5% | $207,476 | 110,946 | 160,296 | 49,350 | 44.5% | $3,631,760 |
| Independent Artists, Writers, and Performers | 44,364 | 46,974 | 2,610 | 5.9% | $915,299 | 698,856 | 798,730 | 99,874 | 14.3% | $17,780,937 |
| Photofinishing | 708 | 678 | -30 | -4.2% | $16,343 | 13,758 | 15,999 | 2,241 | 16.3% | $327,938 |
| **Nonemployers, Creative Economy Total** | **68,397** | **70,797** | **2,400** | **3.5%** | **$1,910,241** | **1,124,042** | **1,258,642** | **134,600** | **12.0%** | **$34,139,185** |
| **Nonemployers, All Industries Total** | **1,086,184** | **1,122,645** | **36,461** | **3.4%** | **$59,212,071** | **21,708,021** | **23,836,937** | **2,128,916** | **9.8%** | **$1,115,921,379** |

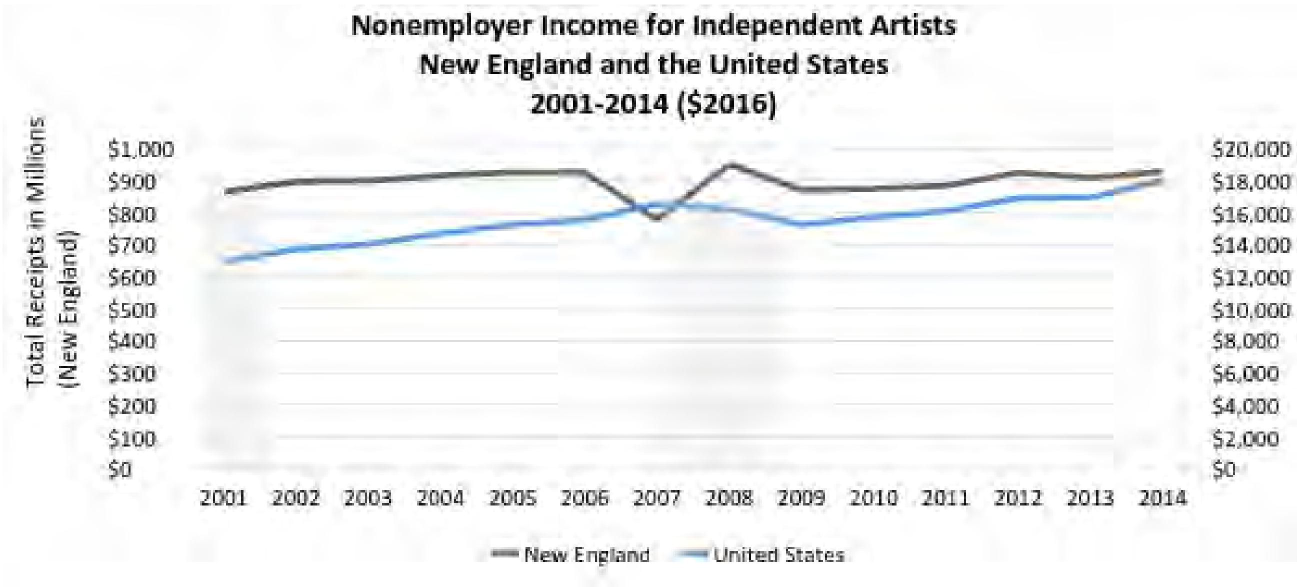
**Source:** U.S. Census Bureau, Nonemployer Statistics.

### Time Series of Self-employed Independent Artists in New England and the United States, 2001-2014




**Source:** U.S. Census Bureau, Nonemployer Statistics.

*Note: Shaded areas indicate periods of recession.




**Source:** U.S. Census Bureau, Nonemployer Statistics.

*Note: Shaded areas indicate periods of recession.

**Creative Economy Data Summary for New England and the United States**

| 2014/2015 | New England | United States |
|---|---|---|
| Creative Enterprise Covered Employment | 238,504 | 4,578,121 |
| Creative Enterprise Nonemployers | 70,797 | 1,258,642 |
| Total Creative Enterprise Employment | 309,301 | 5,836,763 |
| Total Covered Employment | 7,100,579 | 139,491,699 |
| Total Nonemployers | 1,122,645 | 23,836,937 |
| Total Employment, All Industries | 8,223,224 | 163,328,636 |
| Share of Creative Enterprise Employment | 3.8% | 3.6% |

**Source:** U.S. Bureau of Labor Statistics, QCEW; U.S. Census Bureau, Nonemployer Statistics and County Business Patterns (for suppressed values)

## Appendix B – Creative Economy the New England States

### Creative Economy Summary by New England State, 2007-2015

| Employment | CT | | New England | |
|---|---|---|---|---|
| | 2015 | Change from 2007 (%) | 2015 | Change from 2007 (%) |
| Creative Economy Employment | 59,543 | -18.9% | 238,504 | -19.2% |
| Total Employment, All Industries | 1,662,825 | -1.4% | 7,100,579 | 2.4% |
| Creative Economy % of Total Employment | 3.6% | -0.18 | 3.4% | -0.21 |
| Creative Economy Location Quotient | 1.091 | 1.9% | 1.02 | -0.02 |

| Employment | ME | | New England | |
|---|---|---|---|---|
| | 2015 | Change from 2007 (%) | 2015 | Change from 2007 (%) |
| Creative Economy Employment | 15,149 | -22.9% | 238,504 | -19.2% |
| Total Employment, All Industries | 595,889 | -1.1% | 7,100,579 | 2.4% |
| Creative Economy % of Total Employment | 2.5% | -0.22 | 3.4% | -0.21 |
| Creative Economy Location Quotient | 0.775 | -3.5% | 1.02 | -0.02 |

| Employment | MA | | New England | |
|---|---|---|---|---|
| | 2015 | Change from 2007 (%) | 2015 | Change from 2007 (%) |
| Creative Economy Employment | 115,882 | -21.1% | 238,504 | -19.2% |
| Total Employment, All Industries | 3,428,020 | 6.0% | 7,100,579 | 2.4% |
| Creative Economy % of Total Employment | 3.4% | -0.26 | 3.4% | -0.21 |
| Creative Economy Location Quotient | 1.030 | -7.8% | 1.02 | -0.02 |

| Employment | NH | | New England | |
|---|---|---|---|---|
| | 2015 | Change from 2007 (%) | 2015 | Change from 2007 (%) |
| **Creative Economy Employment** | 21,109 | -7.9% | 238,504 | -19.2% |
| **Total Employment, All Industries** | 636,806 | 1.0% | 7,100,579 | 2.4% |
| **Creative Economy % of Total Employment** | 3.3% | -0.09 | 3.4% | -0.21 |
| **Creative Economy Location Quotient** | 1.010 | 12.9% | 1.02 | -0.02 |

| Employment | RI | | New England | |
|---|---|---|---|---|
| | 2015 | Change from 2007 (%) | 2015 | Change from 2007 (%) |
| **Creative Economy Employment** | 17,692 | -15.6% | 238,504 | -19.2% |
| **Total Employment, All Industries** | 469,981 | -2.1% | 7,100,579 | 2.4% |
| **Creative Economy % of Total Employment** | 3.8% | -0.14 | 3.4% | -0.21 |
| **Creative Economy Location Quotient** | 1.147 | 6.7% | 1.02 | -0.02 |

| Employment | VT | | New England | |
|---|---|---|---|---|
| | 2015 | Change from 2007 (%) | 2015 | Change from 2007 (%) |
| **Creative Economy Employment** | 9,130 | -19.5% | 238,504 | -19.2% |
| **Total Employment, All Industries** | 307,058 | 1.2% | 7,100,579 | 2.4% |
| **Creative Economy % of Total Employment** | 3.0% | -0.20 | 3.4% | -0.21 |
| **Creative Economy Location Quotient** | 0.906 | -1.5% | 1.02 | -0.02 |

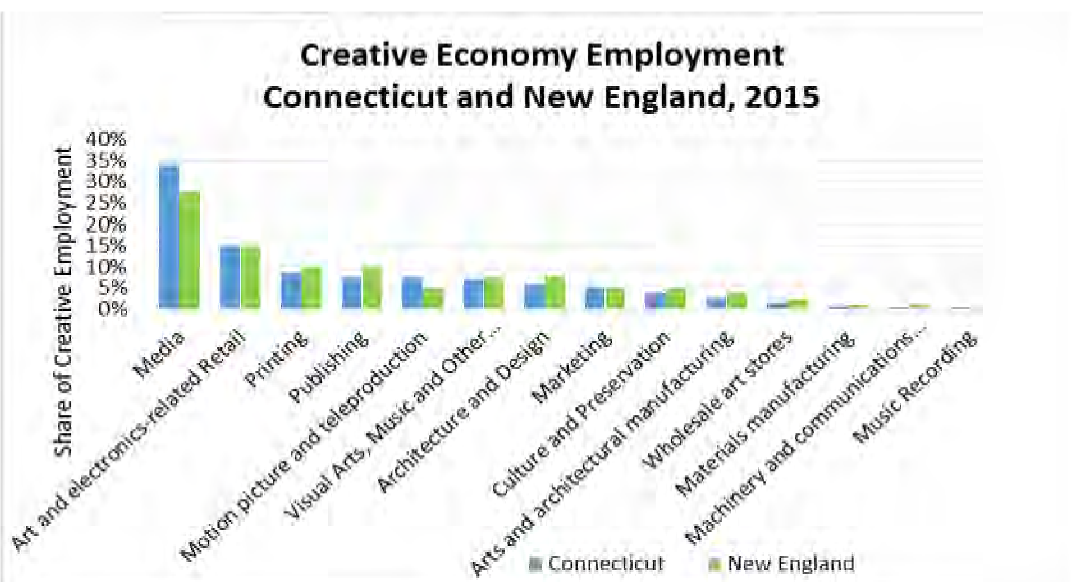
**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Employment by Major Sector, New England States, 2007-2015**

**Employment by Major Sector, Connecticut and New England, 2007-2015**

| Creative Economy Employment | CT | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 4,525 | 3,464 | -1,061 | -23.4% | 22,239 | 18,702 | -3,537 | -15.9% |
| Art and electronics-related Retail | 11,893 | 8,932 | -2,961 | -24.9% | 48,488 | 34,923 | -13,565 | -28.0% |
| Arts and architectural manufacturing | 1,518 | 1,632 | 114 | 7.5% | 10,455 | 9,297 | -1,159 | -11.1% |
| Culture and Preservation | 2,428 | 2,199 | -229 | -9.4% | 11,520 | 11,840 | 320 | 2.8% |
| Machinery and communications manufacturing | 523 | 267 | -257 | -49.0% | 5,490 | 2,078 | -3,412 | -62.2% |
| Marketing | 3,451 | 3,146 | -305 | -8.8% | 12,276 | 11,631 | -646 | -5.3% |
| Materials manufacturing | 1,419 | 449 | -970 | -68.4% | 4,664 | 2,204 | -2,460 | -52.7% |
| Media | 22,267 | 20,142 | -2,125 | -9.5% | 75,153 | 65,761 | -9,392 | -12.5% |
| Motion picture and teleproduction | 3,234 | 4,419 | 1,186 | 36.7% | 10,295 | 12,014 | 1,719 | 16.7% |
| Music Recording | 75 | 76 | 1 | 1.3% | 424 | 379 | -45 | -10.6% |
| Printing | 7,650 | 5,183 | -2,467 | -32.3% | 31,819 | 22,952 | -8,868 | -27.9% |
| Publishing | 8,707 | 4,468 | -4,239 | -48.7% | 37,779 | 23,177 | -14,602 | -38.7% |
| Visual Arts, Music and Other Performing Arts | 4,397 | 4,209 | -188 | -4.3% | 17,034 | 18,022 | 988 | 5.8% |
| Wholesale art stores | 1,296 | 958 | -338 | -26.1% | 7,465 | 5,528 | -1,937 | -25.9% |
| **Grand Total** | **73,381** | **59,543** | **-13,839** | **-18.9%** | **295,098** | **238,504** | **-56,595** | **-19.2%** |
| **Total, All Industries** | **1,686,043** | **1,662,825** | **-23,218** | **-1.4%** | **6,936,505** | **7,100,579** | **164,074** | **2.4%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

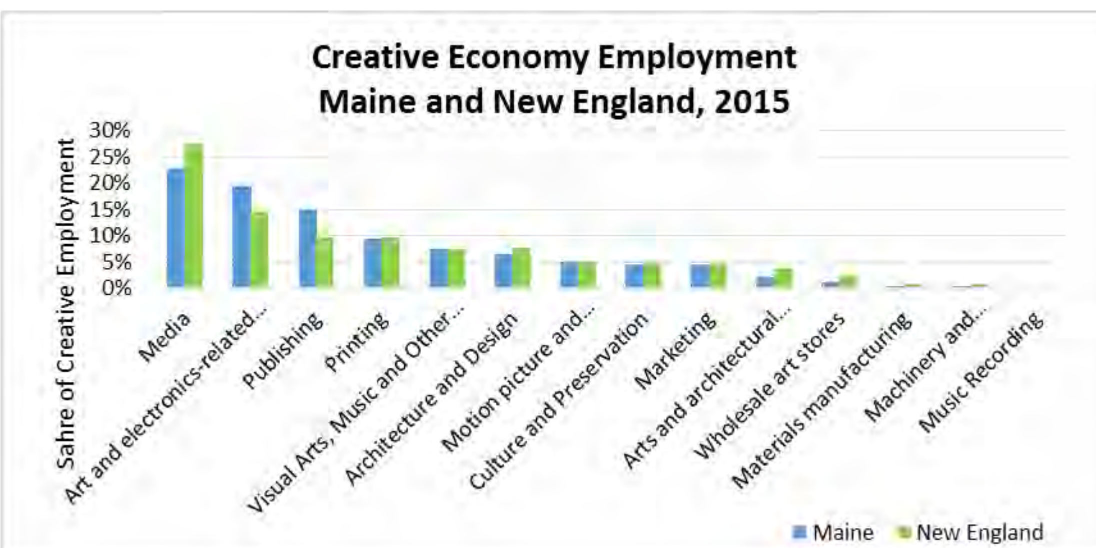



**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Employment by Major Sector, Maine and New England, 2007-2015**

| Creative Economy Employment | ME | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 1,189 | 982 | -207 | -17.4% | 22,239 | 18,702 | -3,537 | -15.9% |
| Art and electronics-related Retail | 3,627 | 2,945 | -683 | -18.8% | 48,488 | 34,923 | -13,565 | -28.0% |
| Arts and architectural manufacturing | 433 | 336 | -97 | -22.4% | 10,455 | 9,297 | -1,159 | -11.1% |
| Culture and Preservation | 604 | 714 | 110 | 18.2% | 11,520 | 11,840 | 320 | 2.8% |
| Machinery and communications manufacturing | 81 | 69 | -12 | -14.3% | 5,490 | 2,078 | -3,412 | -62.2% |
| Marketing | 517 | 711 | 194 | 37.6% | 12,276 | 11,631 | -646 | -5.3% |
| Materials manufacturing | 19 | 79 | 60 | - | 4,664 | 2,204 | -2,460 | -52.7% |
| Media | 4,654 | 3,452 | -1,202 | -25.8% | 75,153 | 65,761 | -9,392 | -12.5% |
| Motion picture and teleproduction | 1,182 | 759 | -424 | -35.8% | 10,295 | 12,014 | 1,719 | 16.7% |
| Music Recording | 35 | 33 | -2 | -4.3% | 424 | 379 | -45 | -10.6% |
| Printing | 2,345 | 1,432 | -913 | -38.9% | 31,819 | 22,952 | -8,868 | -27.9% |
| Publishing | 3,598 | 2,300 | -1,298 | -36.1% | 37,779 | 23,177 | -14,602 | -38.7% |
| Visual Arts, Music and Other Performing Arts | 1,066 | 1,141 | 76 | 7.1% | 17,034 | 18,022 | 988 | 5.8% |
| Wholesale art stores | 301 | 198 | -103 | -34.2% | 7,465 | 5,528 | -1,937 | -25.9% |
| **Grand Total** | **19,648** | **15,149** | **-4,499** | **-22.9%** | **295,098** | **238,504** | **-56,595** | **-19.2%** |
| **Total, All Industries** | **602,321** | **595,889** | **-6,432** | **-1.1%** | **6,936,505** | **7,100,579** | **164,074** | **2.4%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

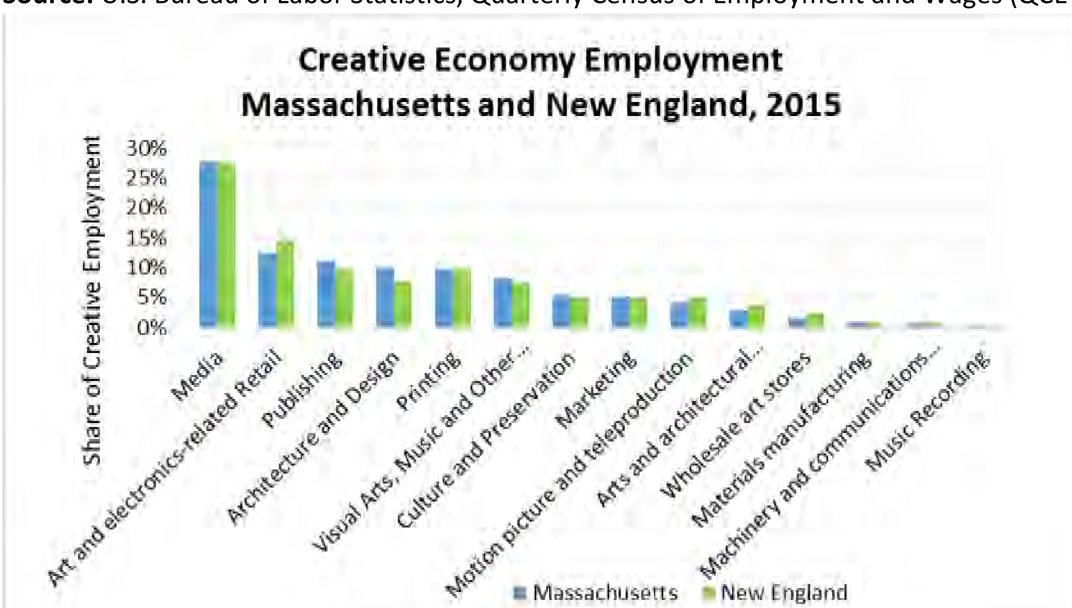



**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Employment by Major Sector, Massachusetts and New England, 2007-2015**

| Creative Economy Employment | MA | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 13,050 | 11,508 | -1,542 | -11.8% | 22,239 | 18,702 | -3,537 | -15.9% |
| Art and electronics-related Retail | 22,795 | 14,556 | -8,239 | -36.1% | 48,488 | 34,923 | -13,565 | -28.0% |
| Arts and architectural manufacturing | 4,357 | 3,300 | -1,057 | -24.3% | 10,455 | 9,297 | -1,159 | -11.1% |
| Culture and Preservation | 5,858 | 6,294 | 436 | 7.4% | 11,520 | 11,840 | 320 | 2.8% |
| Machinery and communications manufacturing | 4,419 | 826 | -3,593 | -81.3% | 5,490 | 2,078 | -3,412 | -62.2% |
| Marketing | 6,524 | 5,891 | -633 | -9.7% | 12,276 | 11,631 | -646 | -5.3% |
| Materials manufacturing | 1,867 | 989 | -879 | -47.1% | 4,664 | 2,204 | -2,460 | -52.7% |
| Media | 36,307 | 32,055 | -4,252 | -11.7% | 75,153 | 65,761 | -9,392 | -12.5% |
| Motion picture and teleproduction | 4,227 | 4,870 | 643 | 15.2% | 10,295 | 12,014 | 1,719 | 16.7% |
| Music Recording | 241 | 189 | -52 | -21.4% | 424 | 379 | -45 | -10.6% |
| Printing | 15,875 | 11,132 | -4,743 | -29.9% | 31,819 | 22,952 | -8,868 | -27.9% |
| Publishing | 19,309 | 12,960 | -6,349 | -32.9% | 37,779 | 23,177 | -14,602 | -38.7% |
| Visual Arts, Music and Other Performing Arts | 8,095 | 9,422 | 1,327 | 16.4% | 17,034 | 18,022 | 988 | 5.8% |
| Wholesale art stores | 3,922 | 1,891 | -2,031 | -51.8% | 7,465 | 5,528 | -1,937 | -25.9% |
| **Grand Total** | **146,846** | **115,882** | **-30,964** | **-21.1%** | **295,098** | **238,504** | **-56,595** | **-19.2%** |
| **Total, All Industries** | **3,234,357** | **3,428,020** | **193,663** | **6.0%** | **6,936,505** | **7,100,579** | **164,074** | **2.4%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW)

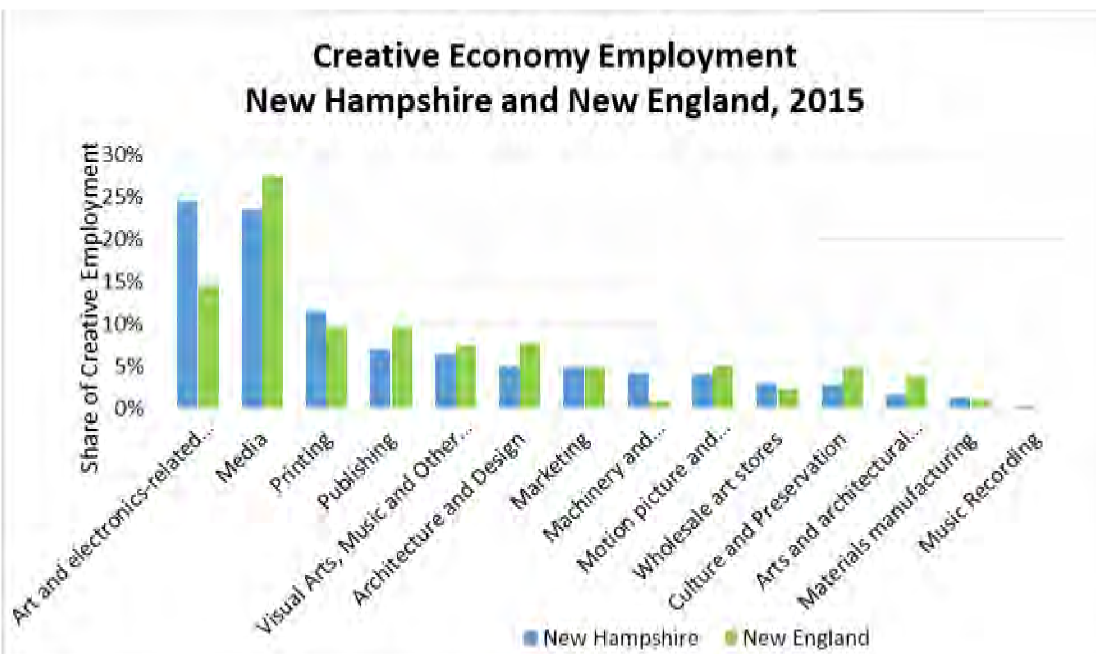



**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Employment by Major Sector, New Hampshire and New England, 2007-2015**

| Creative Economy Employment | NH | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 1,192 | 1,040 | -152 | -12.8% | 22,239 | 18,702 | -3,537 | -15.9% |
| Art and electronics-related Retail | 6,032 | 5,191 | -841 | -13.9% | 48,488 | 34,923 | -13,565 | -28.0% |
| Arts and architectural manufacturing | 256 | 331 | 76 | 29.5% | 10,455 | 9,297 | -1,159 | -11.1% |
| Culture and Preservation | 552 | 590 | 38 | 6.9% | 11,520 | 11,840 | 320 | 2.8% |
| Machinery and communications manufacturing | 320 | 869 | 549 | - | 5,490 | 2,078 | -3,412 | -62.2% |
| Marketing | 830 | 1,034 | 204 | 24.6% | 12,276 | 11,631 | -646 | -5.3% |
| Materials manufacturing | 680 | 287 | -393 | -57.8% | 4,664 | 2,204 | -2,460 | -52.7% |
| Media | 4,535 | 4,976 | 441 | 9.7% | 75,153 | 65,761 | -9,392 | -12.5% |
| Motion picture and teleproduction | 873 | 840 | -33 | -3.8% | 10,295 | 12,014 | 1,719 | 16.7% |
| Music Recording | 19 | 35 | 16 | - | 424 | 379 | -45 | -10.6% |
| Printing | 3,078 | 2,441 | -637 | -20.7% | 31,819 | 22,952 | -8,868 | -27.9% |
| Publishing | 2,561 | 1,489 | -1,073 | -41.9% | 37,779 | 23,177 | -14,602 | -38.7% |
| Visual Arts, Music and Other Performing Arts | 1,461 | 1,355 | -107 | -7.3% | 17,034 | 18,022 | 988 | 5.8% |
| Wholesale art stores | 527 | 633 | 106 | 20.1% | 7,465 | 5,528 | -1,937 | -25.9% |
| **Grand Total** | **22,915** | **21,109** | **-1,806** | **-7.9%** | **295,098** | **238,504** | **-56,595** | **-19.2%** |
| **Total, All Industries** | **630,204** | **636,806** | **6,602** | **1.0%** | **6,936,505** | **7,100,579** | **164,074** | **2.4%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

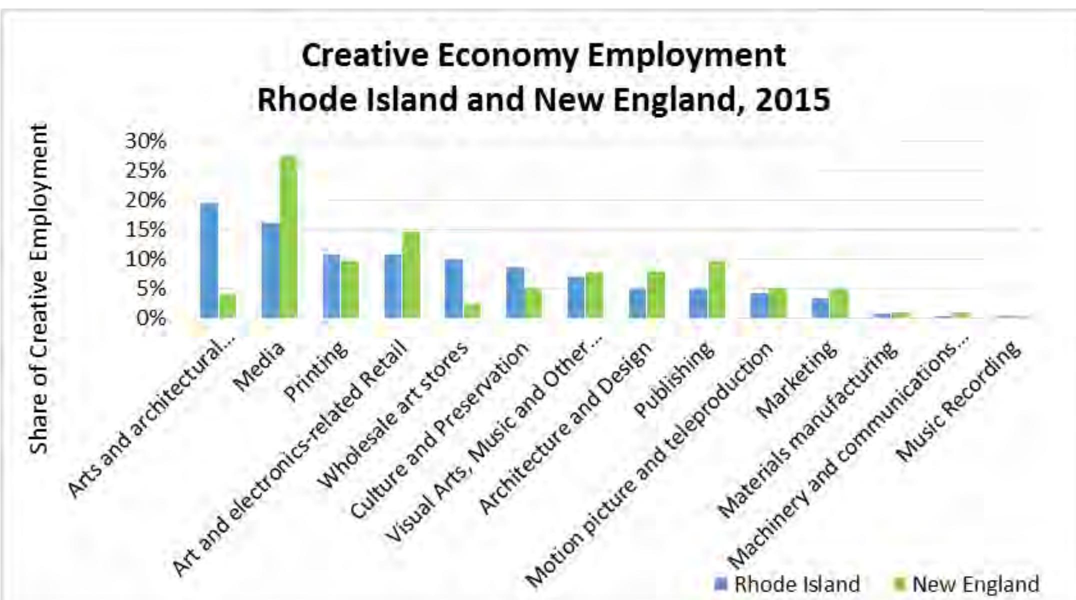



**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Employment by Major Sector, Rhode Island and New England, 2007-2015**

| Creative Economy Employment | RI | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 1,295 | 866 | -429 | -33.1% | 22,239 | 18,702 | -3,537 | -15.9% |
| Art and electronics-related Retail | 2,293 | 1,892 | -402 | -17.5% | 48,488 | 34,923 | -13,565 | -28.0% |
| Arts and architectural manufacturing | 3,682 | 3,435 | -247 | -6.7% | 10,455 | 9,297 | -1,159 | -11.1% |
| Culture and Preservation | 1,561 | 1,490 | -71 | -4.5% | 11,520 | 11,840 | 320 | 2.8% |
| Machinery and communications manufacturing | 79 | 19 | -60 | -75.8% | 5,490 | 2,078 | -3,412 | -62.2% |
| Marketing | 541 | 569 | 29 | 5.3% | 12,276 | 11,631 | -646 | -5.3% |
| Materials manufacturing | 497 | 119 | -378 | -76.0% | 4,664 | 2,204 | -2,460 | -52.7% |
| Media | 4,436 | 2,841 | -1,595 | -36.0% | 75,153 | 65,761 | -9,392 | -12.5% |
| Motion picture and teleproduction | 390 | 740 | 350 | 89.6% | 10,295 | 12,014 | 1,719 | 16.7% |
| Music Recording | 27 | 17 | -11 | -38.9% | 424 | 379 | -45 | -10.6% |
| Printing | 1,689 | 1,900 | 211 | 12.5% | 31,819 | 22,952 | -8,868 | -27.9% |
| Publishing | 1,839 | 851 | -988 | -53.7% | 37,779 | 23,177 | -14,602 | -38.7% |
| Visual Arts, Music and Other Performing Arts | 1,365 | 1,221 | -145 | -10.6% | 17,034 | 18,022 | 988 | 5.8% |
| Wholesale art stores | 1,283 | 1,736 | 454 | 35.4% | 7,465 | 5,528 | -1,937 | -25.9% |
| **Grand Total** | **20,973** | **17,692** | **-3,281** | **-15.6%** | **295,098** | **238,504** | **-56,595** | **-19.2%** |
| **Total, All Industries** | **480,132** | **469,981** | **-10,151** | **-2.1%** | **6,936,505** | **7,100,579** | **164,074** | **2.4%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

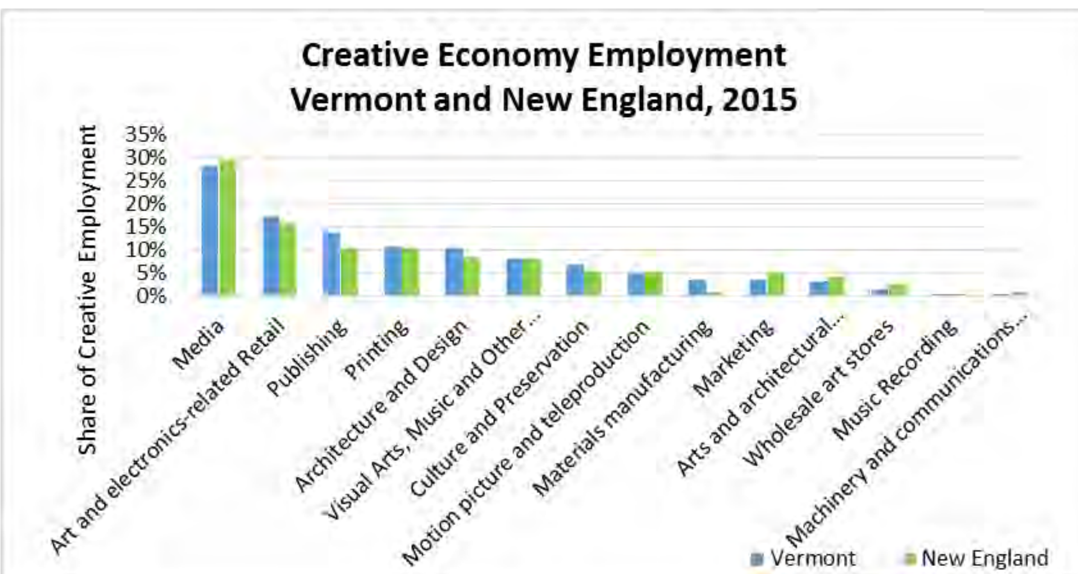



**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Employment by Major Sector, Vermont and New England, 2007-2015**

| Creative Economy Employment | VT | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 988 | 842 | -147 | -14.8% | 22,239 | 18,702 | -3,537 | -15.9% |
| Art and electronics-related Retail | 1,848 | 1,408 | -440 | -23.8% | 48,488 | 34,923 | -13,565 | -28.0% |
| Arts and architectural manufacturing | 210 | 263 | 53 | 25.2% | 10,455 | 9,297 | -1,159 | -11.1% |
| Culture and Preservation | 518 | 553 | 36 | 6.9% | 11,520 | 11,840 | 320 | 2.8% |
| Machinery and communications manufacturing | 69 | 29 | -40 | -58.4% | 5,490 | 2,078 | -3,412 | -62.2% |
| Marketing | 414 | 280 | -134 | -32.4% | 12,276 | 11,631 | -646 | -5.3% |
| Materials manufacturing | 183 | 282 | 99 | 54.2% | 4,664 | 2,204 | -2,460 | -52.7% |
| Media | 2,955 | 2,296 | -659 | -22.3% | 75,153 | 65,761 | -9,392 | -12.5% |
| Motion picture and teleproduction | 390 | 388 | -3 | -0.6% | 10,295 | 12,014 | 1,719 | 16.7% |
| Music Recording | 28 | 30 | 2 | 7.1% | 424 | 379 | -45 | -10.6% |
| Printing | 1,184 | 865 | -319 | -27.0% | 31,819 | 22,952 | -8,868 | -27.9% |
| Publishing | 1,766 | 1,110 | -656 | -37.1% | 37,779 | 23,177 | -14,602 | -38.7% |
| Visual Arts, Music and Other Performing Arts | 651 | 675 | 24 | 3.7% | 17,034 | 18,022 | 988 | 5.8% |
| Wholesale art stores | 137 | 112 | -25 | -17.9% | 7,465 | 5,528 | -1,937 | -25.9% |
| **Grand Total** | **11,337** | **9,130** | **-2,207** | **-19.5%** | **295,098** | **238,504** | **-56,595** | **-19.2%** |
| **Total, All Industries** | **303,448** | **307,058** | **3,610** | **1.2%** | **6,936,505** | **7,100,579** | **164,074** | **2.4%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).



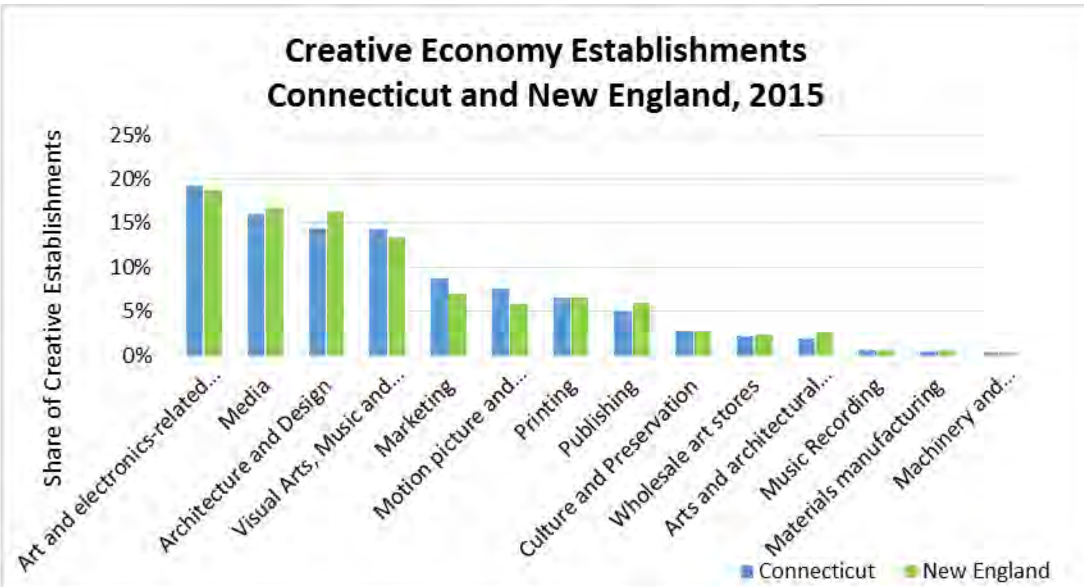

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

## Establishments by Major Sector, New England States, 2007-2015

### Establishments by Major Sector, Connecticut and New England, 2007-2015

| Creative Economy Establishments | CT | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 933 | 761 | -172 | -18.4% | 3,937 | 3,700 | -237 | -6.0% |
| Art and electronics-related Retail | 1,420 | 1,018 | -402 | -28.3% | 5,820 | 4,236 | -1,584 | -27.2% |
| Arts and architectural manufacturing | 86 | 101 | 15 | 17.4% | 705 | 597 | -108 | -15.3% |
| Culture and Preservation | 148 | 150 | 2 | 1.4% | 598 | 644 | 46 | 7.7% |
| Machinery and communications manufacturing | 31 | 18 | -13 | -41.9% | 90 | 80 | -10 | -11.1% |
| Marketing | 467 | 462 | -5 | -1.1% | 1,535 | 1,588 | 53 | 3.5% |
| Materials manufacturing | 32 | 23 | -9 | -28.1% | 175 | 158 | -17 | -9.7% |
| Media | 954 | 845 | -109 | -11.4% | 4,067 | 3,772 | -295 | -7.3% |
| Motion picture and teleproduction | 291 | 404 | 113 | 38.8% | 1,025 | 1,313 | 288 | 28.1% |
| Music Recording | 47 | 35 | -12 | -25.5% | 133 | 130 | -3 | -2.3% |
| Printing | 460 | 349 | -111 | -24.1% | 2,011 | 1,495 | -516 | -25.7% |
| Publishing | 359 | 265 | -94 | -26.2% | 1,635 | 1,369 | -266 | -16.3% |
| Visual Arts, Music and Other Performing Arts | 763 | 754 | -9 | -1.2% | 2,934 | 3,016 | 82 | 2.8% |
| Wholesale art stores | 135 | 115 | -20 | -14.8% | 560 | 526 | -34 | -6.1% |
| **Grand Total** | **6,126** | **5,300** | **-826** | **-13.5%** | **25,225** | **22,624** | **-2,601** | **-10.3%** |
| **Total, All Industries** | **112,322** | **115,612** | **3,290** | **2.9%** | **482,970** | **515,940** | **32,970** | **6.8%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

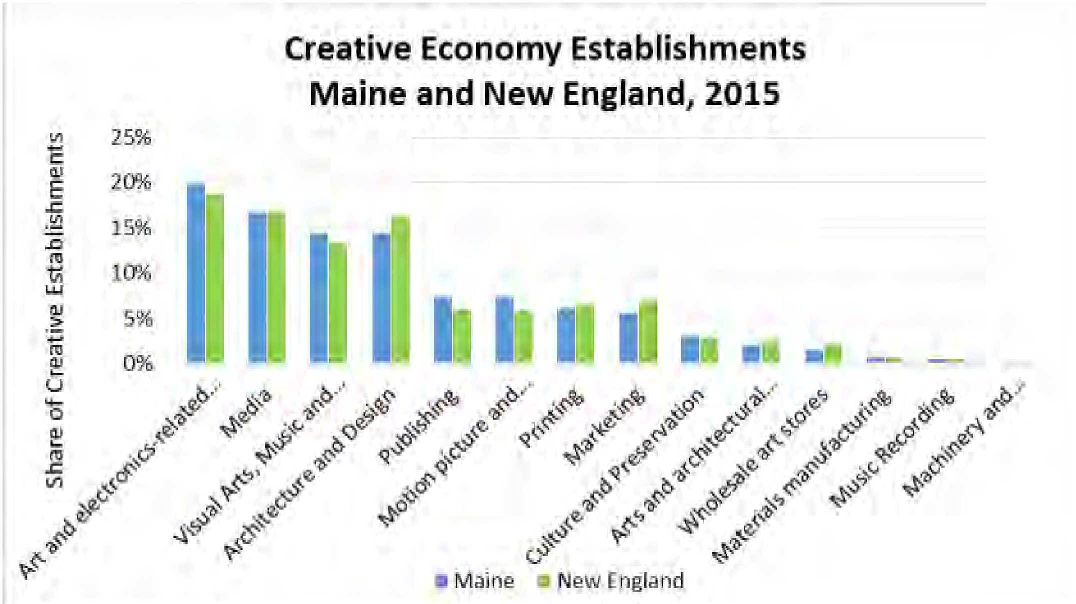



**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Establishments by Major Sector, Maine and New England, 2007-2015**

| Creative Economy Establishments | ME | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 309 | 315 | 6 | 1.9% | 3,937 | 3,700 | -237 | -6.0% |
| Art and electronics-related Retail | 544 | 432 | -112 | -20.6% | 5,820 | 4,236 | -1,584 | -27.2% |
| Arts and architectural manufacturing | 40 | 44 | 4 | 10.0% | 705 | 597 | -108 | -15.3% |
| Culture and Preservation | 53 | 65 | 12 | 22.6% | 598 | 644 | 46 | 7.7% |
| Machinery and communications manufacturing | 6 | 2 | -4 | -66.7% | 90 | 80 | -10 | -11.1% |
| Marketing | 95 | 122 | 27 | 28.4% | 1,535 | 1,588 | 53 | 3.5% |
| Materials manufacturing | 5 | 17 | 12 | 240.0% | 175 | 158 | -17 | -9.7% |
| Media | 459 | 364 | -95 | -20.7% | 4,067 | 3,772 | -295 | -7.3% |
| Motion picture and teleproduction | 106 | 161 | 55 | 51.9% | 1,025 | 1,313 | 288 | 28.1% |
| Music Recording | 10 | 10 | 0 | 0.0% | 133 | 130 | -3 | -2.3% |
| Printing | 179 | 134 | -45 | -25.1% | 2,011 | 1,495 | -516 | -25.7% |
| Publishing | 182 | 163 | -19 | -10.4% | 1,635 | 1,369 | -266 | -16.3% |
| Visual Arts, Music and Other Performing Arts | 282 | 316 | 34 | 12.1% | 2,934 | 3,016 | 82 | 2.8% |
| Wholesale art stores | 30 | 34 | 4 | 13.3% | 560 | 526 | -34 | -6.1% |
| **Grand Total** | **2,300** | **2,179** | **-121** | **-5.3%** | **25,225** | **22,624** | **-2,601** | **-10.3%** |
| **Total, All Industries** | **50,306** | **50,769** | **463** | **0.9%** | **482,970** | **515,940** | **32,970** | **6.8%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

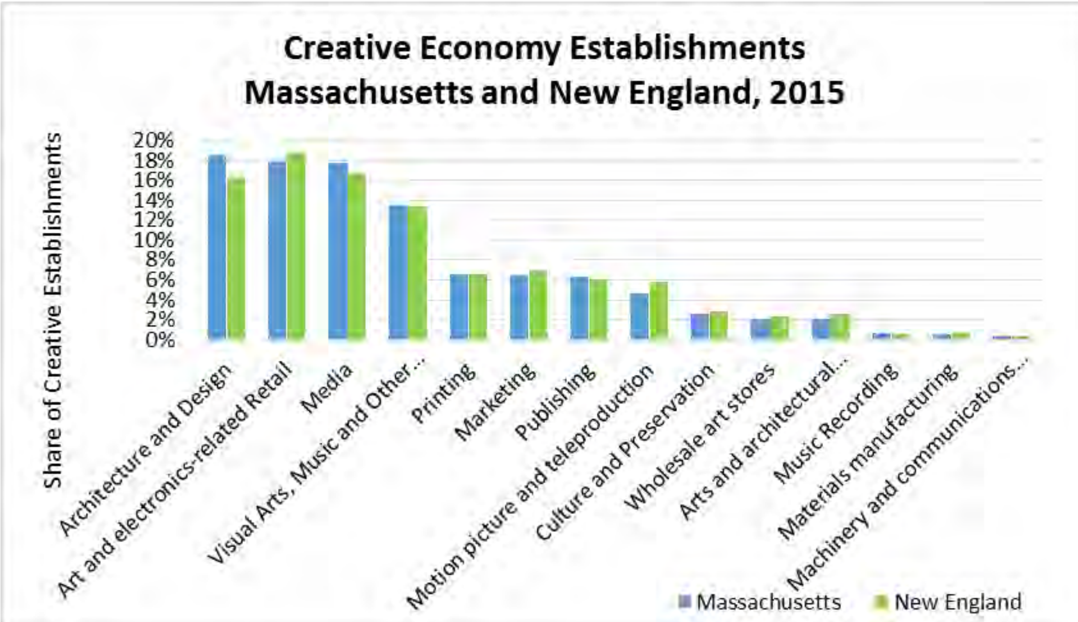



**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Establishments by Major Sector, Massachusetts and New England, 2007-2015**

| **Creative Economy Establishments** | **MA** | | | | **New England** | | | |
|---|---|---|---|---|---|---|---|---|
| | **2007** | **2015** | **Absolute Change** | **Percent Change** | **2007** | **2015** | **Absolute Change** | **Percent Change** |
| Architecture and Design | 1,873 | 1,840 | -33 | -1.8% | 3,937 | 3,700 | -237 | -6.0% |
| Art and electronics-related Retail | 2,551 | 1,783 | -768 | -30.1% | 5,820 | 4,236 | -1,584 | -27.2% |
| Arts and architectural manufacturing | 208 | 205 | -3 | -1.4% | 705 | 597 | -108 | -15.3% |
| Culture and Preservation | 225 | 252 | 27 | 12.0% | 598 | 644 | 46 | 7.7% |
| Machinery and communications manufacturing | 36 | 40 | 4 | 11.1% | 90 | 80 | -10 | -11.1% |
| Marketing | 616 | 636 | 20 | 3.2% | 1,535 | 1,588 | 53 | 3.5% |
| Materials manufacturing | 86 | 59 | -27 | -31.4% | 175 | 158 | -17 | -9.7% |
| Media | 1,790 | 1,767 | -23 | -1.3% | 4,067 | 3,772 | -295 | -7.3% |
| Motion picture and teleproduction | 420 | 468 | 48 | 11.4% | 1,025 | 1,313 | 288 | 28.1% |
| Music Recording | 55 | 61 | 6 | 10.9% | 133 | 130 | -3 | -2.3% |
| Printing | 889 | 657 | -232 | -26.1% | 2,011 | 1,495 | -516 | -25.7% |
| Publishing | 694 | 625 | -69 | -9.9% | 1,635 | 1,369 | -266 | -16.3% |
| Visual Arts, Music and Other Performing Arts | 1,233 | 1,338 | 105 | 8.5% | 2,934 | 3,016 | 82 | 2.8% |
| Wholesale art stores | 221 | 212 | -9 | -4.1% | 560 | 526 | -34 | -6.1% |
| **Grand Total** | **10,897** | **9,943** | **-954** | **-8.8%** | **25,225** | **22,624** | **-2,601** | **-10.3%** |
| **Total, All Industries** | **210,441** | **237,928** | **27,487** | **13.1%** | **482,970** | **515,940** | **32,970** | **6.8%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

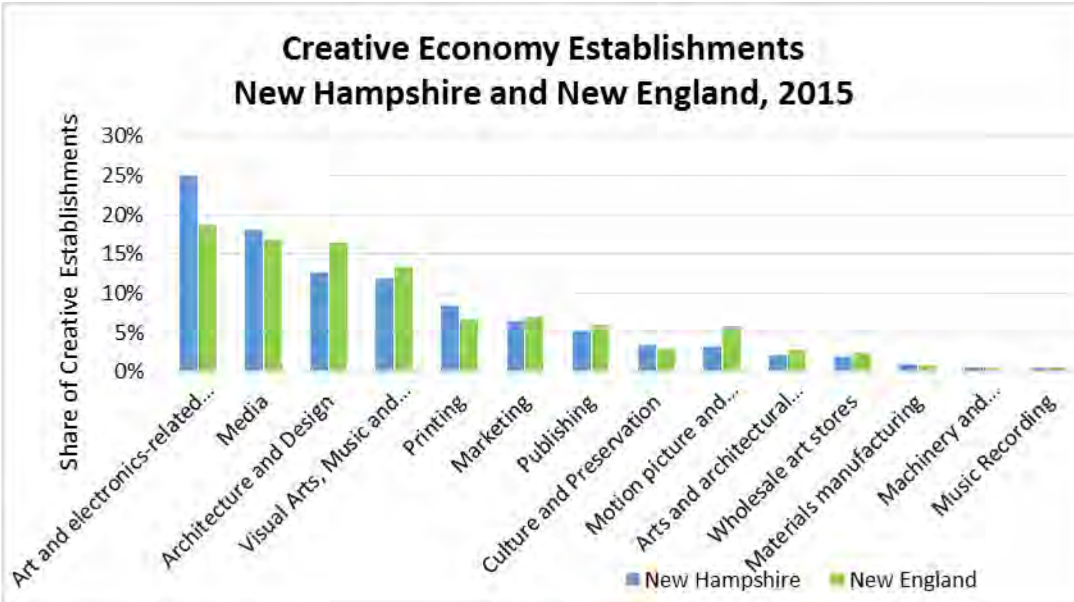



**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Establishments by Major Sector, New Hampshire and New England, 2007-2015**

| Creative Economy Establishments | NH | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|
| | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| Architecture and Design | 248 | 252 | 4 | 1.6% | 3,937 | 3,700 | -237 | -6.0% |
| Art and electronics-related Retail | 637 | 492 | -145 | -22.8% | 5,820 | 4,236 | -1,584 | -27.2% |
| Arts and architectural manufacturing | 32 | 41 | 9 | 28.1% | 705 | 597 | -108 | -15.3% |
| Culture and Preservation | 70 | 68 | -2 | -2.9% | 598 | 644 | 46 | 7.7% |
| Machinery and communications manufacturing | 5 | 12 | 7 | 140.0% | 90 | 80 | -10 | -11.1% |
| Marketing | 161 | 127 | -34 | -21.1% | 1,535 | 1,588 | 53 | 3.5% |
| Materials manufacturing | 22 | 19 | -3 | -13.6% | 175 | 158 | -17 | -9.7% |
| Media | 358 | 358 | 0 | 0.0% | 4,067 | 3,772 | -295 | -7.3% |
| Motion picture and teleproduction | 70 | 63 | -7 | -10.0% | 1,025 | 1,313 | 288 | 28.1% |
| Music Recording | 4 | 7 | 3 | 75.0% | 133 | 130 | -3 | -2.3% |
| Printing | 232 | 166 | -66 | -28.4% | 2,011 | 1,495 | -516 | -25.7% |
| Publishing | 155 | 103 | -52 | -33.5% | 1,635 | 1,369 | -266 | -16.3% |
| Visual Arts, Music and Other Performing Arts | 266 | 235 | -31 | -11.7% | 2,934 | 3,016 | 82 | 2.8% |
| Wholesale art stores | 35 | 37 | 2 | 5.7% | 560 | 526 | -34 | -6.1% |
| **Grand Total** | **2,295** | **1,980** | **-315** | **-13.7%** | **25,225** | **22,624** | **-2,601** | **-10.3%** |
| **Total, All Industries** | **48,927** | **50,660** | **1,733** | **3.5%** | **482,970** | **515,940** | **32,970** | **6.8%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

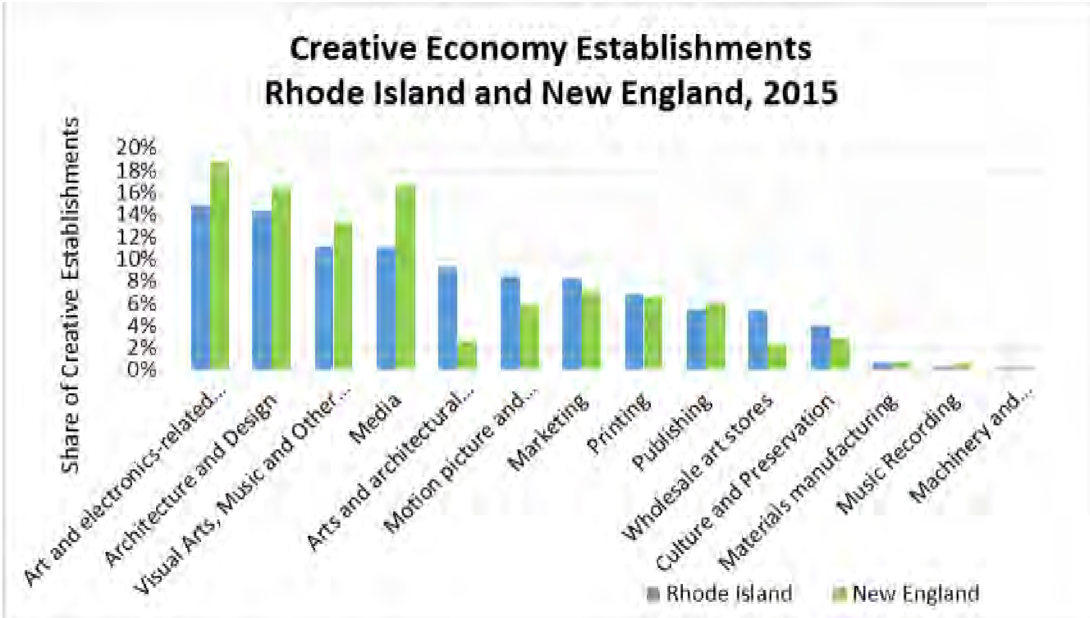



**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

**Establishments by Major Sector, Rhode Island and New England, 2007-2015**

| **Creative Economy Establishments** | **RI** | | | | **New England** | | | |
|---|---|---|---|---|---|---|---|---|
| | **2007** | **2015** | **Absolute Change** | **Percent Change** | **2007** | **2015** | **Absolute Change** | **Percent Change** |
| Architecture and Design | 297 | 270 | -27 | -9.1% | 3,937 | 3,700 | -237 | -6.0% |
| Art and electronics-related Retail | 367 | 281 | -86 | -23.4% | 5,820 | 4,236 | -1,584 | -27.2% |
| Arts and architectural manufacturing | 302 | 173 | -129 | -42.7% | 705 | 597 | -108 | -15.3% |
| Culture and Preservation | 72 | 75 | 3 | 4.2% | 598 | 644 | 46 | 7.7% |
| Machinery and communications manufacturing | 6 | 4 | -2 | -33.3% | 90 | 80 | -10 | -11.1% |
| Marketing | 121 | 154 | 33 | 27.3% | 1,535 | 1,588 | 53 | 3.5% |
| Materials manufacturing | 13 | 12 | -1 | -7.7% | 175 | 158 | -17 | -9.7% |
| Media | 248 | 208 | -40 | -16.1% | 4,067 | 3,772 | -295 | -7.3% |
| Motion picture and teleproduction | 71 | 159 | 88 | 123.9% | 1,025 | 1,313 | 288 | 28.1% |
| Music Recording | 9 | 7 | -2 | -22.2% | 133 | 130 | -3 | -2.3% |
| Printing | 166 | 128 | -38 | -22.9% | 2,011 | 1,495 | -516 | -25.7% |
| Publishing | 110 | 102 | -8 | -7.3% | 1,635 | 1,369 | -266 | -16.3% |
| Visual Arts, Music and Other Performing Arts | 229 | 209 | -20 | -8.7% | 2,934 | 3,016 | 82 | 2.8% |
| Wholesale art stores | 106 | 99 | -7 | -6.6% | 560 | 526 | -34 | -6.1% |
| **Grand Total** | **2,117** | **1,881** | **-236** | **-11.1%** | **25,225** | **22,624** | **-2,601** | **-10.3%** |
| **Total, All Industries** | **36,141** | **36,347** | **206** | **0.6%** | **482,970** | **515,940** | **32,970** | **6.8%** |

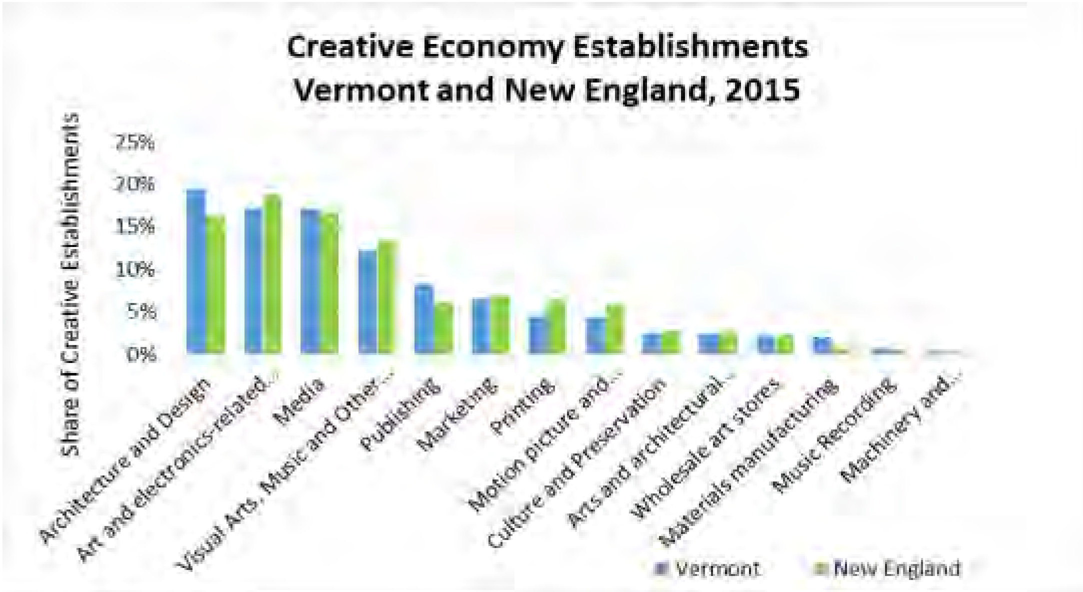
**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).




**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).
Establishments by Major Sector, Vermont and New England, 2007-2015

| **Creative Economy Establishments** | **VT** | | | | **New England** | | | |
|---|---|---|---|---|---|---|---|---|
| | **2007** | **2015** | **Absolute Change** | **Percent Change** | **2007** | **2015** | **Absolute Change** | **Percent Change** |
| Architecture and Design | 277 | 262 | -15 | -5.4% | 3,937 | 3,700 | -237 | -6.0% |
| Art and electronics-related Retail | 301 | 230 | -71 | -23.6% | 5,820 | 4,236 | -1,584 | -27.2% |
| Arts and architectural manufacturing | 37 | 33 | -4 | -10.8% | 705 | 597 | -108 | -15.3% |
| Culture and Preservation | 30 | 34 | 4 | 13.3% | 598 | 644 | 46 | 7.7% |
| Machinery and communications manufacturing | 6 | 4 | -2 | -33.3% | 90 | 80 | -10 | -11.1% |
| Marketing | 75 | 87 | 12 | 16.0% | 1,535 | 1,588 | 53 | 3.5% |
| Materials manufacturing | 17 | 28 | 11 | 64.7% | 175 | 158 | -17 | -9.7% |
| Media | 258 | 230 | -28 | -10.9% | 4,067 | 3,772 | -295 | -7.3% |
| Motion picture and teleproduction | 67 | 58 | -9 | -13.4% | 1,025 | 1,313 | 288 | 28.1% |
| Music Recording | 8 | 10 | 2 | 25.0% | 133 | 130 | -3 | -2.3% |
| Printing | 85 | 61 | -24 | -28.2% | 2,011 | 1,495 | -516 | -25.7% |
| Publishing | 135 | 111 | -24 | -17.8% | 1,635 | 1,369 | -266 | -16.3% |
| Visual Arts, Music and Other Performing Arts | 161 | 164 | 3 | 1.9% | 2,934 | 3,016 | 82 | 2.8% |
| Wholesale art stores | 33 | 29 | -4 | -12.1% | 560 | 526 | -34 | -6.1% |
| **Grand Total** | **1,490** | **1,341** | **-149** | **-10.0%** | **25,225** | **22,624** | **-2,601** | **-10.3%** |
| **Total, All Industries** | **24,833** | **24,624** | **-209** | **-0.8%** | **482,970** | **515,940** | **32,970** | **6.8%** |

**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).




**Source:** U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

Creative Workforce Occupations

## Creative Workforce Employment by New England State, 2007-2015

| SOC Code | Growth in Creative Workforce Occupations | New England | | | | United States | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| | Management occupations | 6,140 | 8,030 | 1,890 | 30.8% | 83,510 | 89,720 | 6,210 | 7.4% |
| 11-2011 | Advertising and Promotions Managers | 2,330 | 1,950 | -380 | -16.3% | 36,300 | 29,340 | -6,960 | -19.2% |
| 11-2031 | Public Relations and Fundraising Managers | 3,810 | 6,080 | 2,270 | 59.6% | 47,210 | 60,380 | 13,170 | 27.9% |
| | Architecture and engineering occupations | 12,990 | 11,550 | -1,440 | -11.1% | 240,180 | 208,820 | -31,360 | -13.1% |
| 17-1011* | Architects, Except Landscape and Naval | 6,020 | 6,050 | 30 | 0.5% | 106,830 | 93,720 | -13,110 | -12.3% |
| 17-1012* | Landscape Architects | 1,420 | 970 | -450 | -31.7% | 21,890 | 19,820 | -2,070 | -9.5% |
| 17-3011 | Architectural and Civil Drafters | 5,550 | 4,530 | -1,020 | -18.4% | 111,460 | 95,280 | -16,180 | -14.5% |
| | Life, physical and social science occupations | 120 | 90 | -30 | -25.0% | 8,850 | 9,990 | 1,140 | 12.9% |
| 19-3091 | Anthropologists and Archeologists | 30 | 30 | 0 | 0.0% | 5,250 | 6,980 | 1,730 | 33.0% |
| 19-3093 | Historians | 90 | 60 | -30 | -33.3% | 3,600 | 3,010 | -590 | -16.4% |
| | Education, training and library occupations | 38,200 | 40,730 | 2,530 | 6.6% | 522,040 | 548,350 | 26,310 | 5.0% |
| 25-1031 | Architecture Teachers, Postsecondary | 170 | 600 | 430 | 252.9% | 6,070 | 7,340 | 1,270 | 20.9% |
| 25-1061 | Anthropology and Archeology Teachers, Postsecondary | 530 | 320 | -210 | -39.6% | 5,290 | 6,000 | 710 | 13.4% |
| 25-1062 | Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 640 | 860 | 220 | 34.4% | 7,280 | 9,240 | 1,960 | 26.9% |
| 25-1082 | Library Science Teachers, Postsecondary | 90 | 100 | 10 | 11.1% | 4,080 | 4,910 | 830 | 20.3% |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | 5,880 | 7,700 | 1,820 | 31.0% | 73,890 | 98,310 | 24,420 | 33.0% |
| 25-1122 | Communications Teachers, Postsecondary | 1,190 | 1,380 | 190 | 16.0% | 23,690 | 29,050 | 5,360 | 22.6% |
| 25-1123 | English Language and Literature Teachers, Postsecondary | 4,080 | 5,210 | 1,130 | 27.7% | 60,910 | 75,730 | 14,820 | 24.3% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 25-1124 | Foreign Language and Literature Teachers, Postsecondary | 1,390 | 1,840 | 450 | 32.4% | 25,100 | 30,120 | 5,020 | 20.0% |
| 25-1125 | History Teachers, Postsecondary | 2,180 | 1,980 | -200 | -9.2% | 20,760 | 23,680 | 2,920 | 14.1% |
| 25-4011 | Archivists | 460 | 490 | 30 | 6.5% | 5,420 | 5,460 | 40 | 0.7% |
| 25-4012 | Curators | 1,000 | 1,040 | 40 | 4.0% | 10,120 | 11,870 | 1,750 | 17.3% |
| 25-4013 | Museum Technicians and Conservators | 810 | 690 | -120 | -14.8% | 9,950 | 10,750 | 800 | 8.0% |
| 25-4021 | Librarians | 10,730 | 10,310 | -420 | -3.9% | 148,800 | 131,550 | -17,250 | -11.6% |
| 25-4031 | Library Technicians | 8,660 | 7,540 | -1,120 | -12.9% | 114,150 | 94,170 | -19,980 | -17.5% |
| 25-9011 | Audio-Visual and Multimedia Collections Specialists | 390 | 670 | 280 | 71.8% | 6,530 | 10,170 | 3,640 | 55.7% |
| | Arts, design entertainment, sports and media occupations | 76,110 | 75,170 | -940 | -1.2% | 1,534,770 | 1,538,590 | 3,820 | 0.2% |
| 27-1011* | Art Directors | 2,070 | 1,680 | -390 | -18.8% | 32,290 | 34,690 | 2,400 | 7.4% |
| 27-1012* | Craft Artists | 310 | 170 | -140 | -45.2% | 5,390 | 5,270 | -120 | -2.2% |
| 27-1013* | Fine Artists, Including Painters, Sculptors, and Illustrators | 440 | 300 | -140 | -31.8% | 10,500 | 12,240 | 1,740 | 16.6% |
| 27-1014* | Multimedia Artists and Animators | 1,350 | 1,650 | 300 | 22.2% | 29,440 | 30,240 | 800 | 2.7% |
| 27-1019* | Artists and Related Workers, All Other | 540 | 200 | -340 | -63.0% | 7,910 | 7,700 | -210 | -2.7% |
| 27-1021* | Commercial and Industrial Designers | 2,250 | 1,830 | -420 | -18.7% | 34,800 | 31,330 | -3,470 | -10.0% |
| 27-1022* | Fashion Designers | 550 | 470 | -80 | -14.5% | 16,460 | 19,040 | 2,580 | 15.7% |
| 27-1023* | Floral Designers | 3,730 | 2,050 | -1,680 | -45.0% | 59,530 | 44,350 | -15,180 | -25.5% |
| 27-1024* | Graphic Designers | 11,000 | 9,870 | -1,130 | -10.3% | 201,080 | 204,850 | 3,770 | 1.9% |
| 27-1025* | Interior Designers | 2,790 | 2,590 | -200 | -7.2% | 52,620 | 51,050 | -1,570 | -3.0% |
| 27-1026* | Merchandise Displayers and Window Trimmers | 2,240 | 4,470 | 2,230 | 99.6% | 68,660 | 100,540 | 31,880 | 46.4% |
| 27-1027* | Set and Exhibit Designers | 0 | 310 | 310 | - | 8,620 | 11,930 | 3,310 | 38.4% |
| 27-1029* | Designers, All Other | 480 | 190 | -290 | -60.4% | 11,890 | 6,590 | -5,300 | -44.6% |
| 27-2011* | Actors | 310 | 1,500 | 1,190 | 383.9% | 44,860 | 50,570 | 5,710 | 12.7% |
| 27-2012* | Producers and Directors | 2,670 | 5,240 | 2,570 | 96.3% | 72,390 | 104,650 | 32,260 | 44.6% |
| 27-2031* | Dancers | 50 | 40 | -10 | -20.0% | 12,530 | 10,030 | -2,500 | -20.0% |
| 27-2032 | Choreographers | 650 | 270 | -380 | -58.5% | 15,250 | 5,130 | -10,120 | -66.4% |
| 27-2041 | Music Directors and Composers | 310 | 1,310 | 1,000 | 322.6% | 9,110 | 21,540 | 12,430 | 136.4% |
| 27-2042* | Musicians and | 1,320 | 1,390 | 70 | 5.3% | 47,520 | 37,090 | -10,430 | -21.9% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Singers | | | | | | | | |
| 27-2099* | Entertainers and Performers, Sports and Related Workers, All Other | 290 | 280 | -10 | -3.4% | 32,040 | 14,570 | -17,470 | -54.5% |
| 27-3011* | Radio and Television Announcers | 1,710 | 1,310 | -400 | -23.4% | 39,500 | 30,390 | -9,110 | -23.1% |
| 27-3012* | Public Address System and Other Announcers | 180 | 260 | 80 | 44.4% | 8,490 | 8,000 | -490 | -5.8% |
| 27-3021 | Broadcast News Analysts | 190 | 150 | -40 | -21.1% | 6,550 | 4,730 | -1,820 | -27.8% |
| 27-3022 | Reporters and Correspondents | 2,590 | 2,150 | -440 | -17.0% | 51,620 | 41,050 | -10,570 | -20.5% |
| 27-3031 | Public Relations Specialists | 15,170 | 12,890 | -2,280 | -15.0% | 225,880 | 218,910 | -6,970 | -3.1% |
| 27-3041 | Editors | 6,660 | 5,970 | -690 | -10.4% | 105,920 | 96,690 | -9,230 | -8.7% |
| 27-3042 | Technical Writers | 3,880 | 3,420 | -460 | -11.9% | 46,740 | 49,770 | 3,030 | 6.5% |
| 27-3043* | Writers and Authors | 2,040 | 2,430 | 390 | 19.1% | 44,310 | 43,380 | -930 | -2.1% |
| 27-3099 | Media and Communication Workers, All Other | 650 | 90 | -560 | -86.2% | 24,420 | 22,240 | -2,180 | -8.9% |
| 27-4011 | Audio and Video Equipment Technicians | 2,410 | 3,440 | 1,030 | 42.7% | 40,360 | 62,460 | 22,100 | 54.8% |
| 27-4012 | Broadcast Technicians | 1,400 | 1,600 | 200 | 14.3% | 34,250 | 28,270 | -5,980 | -17.5% |
| 27-4014 | Sound Engineering Technicians | 440 | 590 | 150 | 34.1% | 15,490 | 13,840 | -1,650 | -10.7% |
| 27-4021* | Photographers | 3,390 | 2,420 | -970 | -28.6% | 62,370 | 50,070 | -12,300 | -19.7% |
| 27-4031 | Camera Operators, Television, Video, and Motion Picture | 990 | 1,170 | 180 | 18.2% | 19,990 | 20,060 | 70 | 0.4% |
| 27-4032 | Film and Video Editors | 480 | 790 | 310 | 64.6% | 17,410 | 27,660 | 10,250 | 58.9% |
| 27-4099 | Media and Communication Equipment Workers, All Other | 580 | 680 | 100 | 17.2% | 18,580 | 17,670 | -910 | -4.9% |
| | Personal care and service occupations | 490 | 310 | -180 | -36.7% | 15,410 | 11,740 | -3,670 | -23.8% |
| 39-3021 | Motion Picture Projectionists | 410 | 240 | -170 | -41.5% | 10,840 | 5,620 | -5,220 | -48.2% |
| 39-3092 | Costume Attendants | 80 | 70 | -10 | -12.5% | 4,570 | 6,120 | 1,550 | 33.9% |
| | Sales and related occupations | 7,130 | 6,550 | -580 | -8.1% | 161,440 | 149,770 | -11,670 | -7.2% |
| 41-3011 | Advertising Sales Agents | 7,130 | 6,550 | -580 | -8.1% | 161,440 | 149,770 | -11,670 | -7.2% |
| | Office and administrative | 9,930 | 7,050 | -2,880 | -29.0% | 141,620 | 113,330 | -28,290 | -20.0% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | support occupations | | | | | | | | |
| 43-4121 | Library Assistants, Clerical | 6,950 | 6,140 | -810 | -11.7% | 112,300 | 100,090 | -12,210 | -10.9% |
| 43-9031 | Desktop Publishers | 2,980 | 910 | -2,070 | -69.5% | 29,320 | 13,240 | -16,080 | -54.8% |
| | Installation, maintenance and repair occupations | 1,590 | 1,380 | -210 | -13.2% | 47,450 | 38,160 | -9,290 | -19.6% |
| 49-2097 | Electronic Home Entertainment Equipment Installers and Repairers | 1,100 | 1,170 | 70 | 6.4% | 38,170 | 26,890 | -11,280 | -29.6% |
| 49-9061 | Camera and Photographic Equipment Repairers | 310 | 0 | -310 | -100.0% | 3,870 | 3,540 | -330 | -8.5% |
| 49-9063 | Musical Instrument Repairers and Tuners | 180 | 210 | 30 | 16.7% | 5,410 | 7,730 | 2,320 | 42.9% |
| | Production occupations | 9,990 | 5,400 | -4,590 | -45.9% | 199,900 | 117,610 | -82,290 | -41.2% |
| 51-5113 | Print Binding and Finishing Workers | 3,730 | 2,090 | -1,640 | -44.0% | 69,220 | 52,380 | -16,840 | -24.3% |
| 51-9071 | Jewelers and Precious Stone and Metal Workers | 2,070 | 1,530 | -540 | -26.1% | 27,160 | 25,270 | -1,890 | -7.0% |
| 51-9123 | Painting, Coating, and Decorating Workers | 900 | 400 | -500 | -55.6% | 31,740 | 16,020 | -15,720 | -49.5% |
| 51-9151 | Photographic Process Workers and Processing Machine Operators | 3,290 | 1,380 | -1,910 | -58.1% | 71,780 | 23,940 | -47,840 | -66.6% |
| 0 | Total, Creative Economy | 319,240 | 304,490 | -14,750 | -4.6% | 5,826,830 | 5,562,440 | -264,390 | -4.5% |
| 00-0000 | All Occupations | 6,909,680 | 7,057,990 | 148,310 | 2.1% | 134,354,250 | 137,896,660 | 3,542,410 | 2.6% |

*Indicates artistic occupations

| SOC Code | Growth in Creative Workforce Occupations | Connecticut | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| 11-2011 | Advertising and Promotions Managers | 730 | 290 | -440 | -60.3% | 2,330 | 1,950 | -380 | -16.3% |
| 11-2031 | Public Relations and Fundraising Managers | 1,050 | 920 | -130 | -12.4% | 3,810 | 6,080 | 2,270 | 59.6% |
| 17-1011* | Architects, Except Landscape and Naval | 1,090 | 1,330 | 240 | 22.0% | 6,020 | 6,050 | 30 | 0.5% |
| 17-1012* | Landscape Architects | 500 | 230 | -270 | -54.0% | 1,420 | 970 | -450 | -31.7% |
| 17-3011 | Architectural and Civil Drafters | 1,150 | 790 | -360 | -31.3% | 5,550 | 4,530 | -1,020 | -18.4% |
| 19-3091 | Anthropologists and Archeologists | 0 | 0 | 0 | - | 30 | 30 | 0 | 0.0% |
| 19-3093 | Historians | 0 | 0 | 0 | - | 90 | 60 | -30 | -33.3% |
| 25-1031 | Architecture Teachers, Postsecondary | 0 | 0 | 0 | - | 170 | 600 | 430 | 252.9% |
| 25-1061 | Anthropology and Archeology Teachers, Postsecondary | 190 | 120 | -70 | -36.8% | 530 | 320 | -210 | -39.6% |
| 25-1062 | Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 60 | 530 | 470 | 783.3% | 640 | 860 | 220 | 34.4% |
| 25-1082 | Library Science Teachers, Postsecondary | 0 | 0 | 0 | - | 90 | 100 | 10 | 11.1% |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | 930 | 1,090 | 160 | 17.2% | 5,880 | 7,700 | 1,820 | 31.0% |
| 25-1122 | Communications Teachers, Postsecondary | 260 | 390 | 130 | 50.0% | 1,190 | 1,380 | 190 | 16.0% |
| 25-1123 | English Language and Literature Teachers, Postsecondary | 560 | 830 | 270 | 48.2% | 4,080 | 5,210 | 1,130 | 27.7% |
| 25-1124 | Foreign Language and Literature Teachers, Postsecondary | 0 | 280 | 280 | - | 1,390 | 1,840 | 450 | 32.4% |
| 25-1125 | History Teachers, Postsecondary | 850 | 320 | -530 | -62.4% | 2,180 | 1,980 | -200 | -9.2% |
| 25-4011 | Archivists | 90 | 110 | 20 | 22.2% | 460 | 490 | 30 | 6.5% |
| 25-4012 | Curators | 160 | 180 | 20 | 12.5% | 1,000 | 1,040 | 40 | 4.0% |
| 25-4013 | Museum Technicians and Conservators | 170 | 240 | 70 | 41.2% | 810 | 690 | -120 | -14.8% |
| 25-4021 | Librarians | 2,490 | 2,370 | -120 | -4.8% | 10,730 | 10,310 | -420 | -3.9% |
| 25-4031 | Library Technicians | 1,990 | 1,690 | -300 | -15.1% | 8,660 | 7,540 | -1,120 | -12.9% |
| 25-9011 | Audio-Visual and Multimedia Collections Specialists | 110 | 230 | 120 | 109.1% | 390 | 670 | 280 | 71.8% |
| 27-1011* | Art Directors | 470 | 610 | 140 | 29.8% | 2,070 | 1,680 | -390 | -18.8% |
| 27-1012* | Craft Artists | 0 | 0 | 0 | - | 310 | 170 | -140 | -45.2% |
| 27-1013* | Fine Artists, Including Painters, Sculptors, and Illustrators | 70 | 90 | 20 | 28.6% | 440 | 300 | -140 | -31.8% |
| 27-1014* | Multimedia Artists and Animators | 380 | 610 | 230 | 60.5% | 1,350 | 1,650 | 300 | 22.2% |
| 27-1019* | Artists and Related Workers, All Other | 180 | 70 | -110 | -61.1% | 540 | 200 | -340 | -63.0% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27-1021* | Commercial and Industrial Designers | 460 | 300 | -160 | -34.8% | 2,250 | 1,830 | -420 | -18.7% |
| 27-1022* | Fashion Designers | 180 | 0 | -180 | -100.0% | 550 | 470 | -80 | -14.5% |
| 27-1023* | Floral Designers | 770 | 480 | -290 | -37.7% | 3,730 | 2,050 | -1,680 | -45.0% |
| 27-1024* | Graphic Designers | 2,680 | 2,190 | -490 | -18.3% | 11,000 | 9,870 | -1,130 | -10.3% |
| 27-1025* | Interior Designers | 470 | 620 | 150 | 31.9% | 2,790 | 2,590 | -200 | -7.2% |
| 27-1026* | Merchandise Displayers and Window Trimmers | 440 | 900 | 460 | 104.5% | 2,240 | 4,470 | 2,230 | 99.6% |
| 27-1027* | Set and Exhibit Designers | 0 | 180 | 180 | - | 0 | 310 | 310 | - |
| 27-1029* | Designers, All Other | 120 | 60 | -60 | -50.0% | 480 | 190 | -290 | -60.4% |
| 27-2011* | Actors | 270 | 580 | 310 | 114.8% | 310 | 1,500 | 1,190 | 383.9% |
| 27-2012* | Producers and Directors | 0 | 2,040 | 2,040 | - | 2,670 | 5,240 | 2,570 | 96.3% |
| 27-2031* | Dancers | 50 | 0 | -50 | -100.0% | 50 | 40 | -10 | -20.0% |
| 27-2032 | Choreographers | 650 | 200 | -450 | -69.2% | 650 | 270 | -380 | -58.5% |
| 27-2041 | Music Directors and Composers | 60 | 430 | 370 | 616.7% | 310 | 1,310 | 1,000 | 322.6% |
| 27-2042* | Musicians and Singers | 330 | 350 | 20 | 6.1% | 1,320 | 1,390 | 70 | 5.3% |
| 27-2099* | Entertainers and Performers, Sports and Related Workers, All Other | 100 | 200 | 100 | 100.0% | 290 | 280 | -10 | -3.4% |
| 27-3011* | Radio and Television Announcers | 540 | 320 | -220 | -40.7% | 1,710 | 1,310 | -400 | -23.4% |
| 27-3012* | Public Address System and Other Announcers | 110 | 30 | -80 | -72.7% | 180 | 260 | 80 | 44.4% |
| 27-3021 | Broadcast News Analysts | 0 | 0 | 0 | - | 190 | 150 | -40 | -21.1% |
| 27-3022 | Reporters and Correspondents | 550 | 320 | -230 | -41.8% | 2,590 | 2,150 | -440 | -17.0% |
| 27-3031 | Public Relations Specialists | 2,780 | 1,440 | -1,340 | -48.2% | 15,170 | 12,890 | -2,280 | -15.0% |
| 27-3041 | Editors | 1,300 | 1,050 | -250 | -19.2% | 6,660 | 5,970 | -690 | -10.4% |
| 27-3042 | Technical Writers | 690 | 620 | -70 | -10.1% | 3,880 | 3,420 | -460 | -11.9% |
| 27-3043* | Writers and Authors | 490 | 590 | 100 | 20.4% | 2,040 | 2,430 | 390 | 19.1% |
| 27-3099 | Media and Communication Workers, All Other | 210 | 0 | -210 | -100.0% | 650 | 90 | -560 | -86.2% |
| 27-4011 | Audio and Video Equipment Technicians | 680 | 1,060 | 380 | 55.9% | 2,410 | 3,440 | 1,030 | 42.7% |
| 27-4012 | Broadcast Technicians | 360 | 500 | 140 | 38.9% | 1,400 | 1,600 | 200 | 14.3% |
| 27-4014 | Sound Engineering Technicians | 260 | 330 | 70 | 26.9% | 440 | 590 | 150 | 34.1% |
| 27-4021* | Photographers | 960 | 590 | -370 | -38.5% | 3,390 | 2,420 | -970 | -28.6% |
| 27-4031 | Camera Operators, Television, Video, and Motion Picture | 430 | 390 | -40 | -9.3% | 990 | 1,170 | 180 | 18.2% |
| 27-4032 | Film and Video Editors | 170 | 320 | 150 | 88.2% | 480 | 790 | 310 | 64.6% |
| 27-4099 | Media and Communication Equipment Workers, All Other | 160 | 310 | 150 | 93.8% | 580 | 680 | 100 | 17.2% |
| 39-3021 | Motion Picture Projectionists | 50 | 0 | -50 | -100.0% | 410 | 240 | -170 | -41.5% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 39-3092 | Costume Attendants | 0 | 40 | 40 | - | 80 | 70 | -10 | -12.5% |
| 41-3011 | Advertising Sales Agents | 1,610 | 1,660 | 50 | 3.1% | 7,130 | 6,550 | -580 | -8.1% |
| 43-4121 | Library Assistants, Clerical | 1,480 | 1,570 | 90 | 6.1% | 6,950 | 6,140 | -810 | -11.7% |
| 43-9031 | Desktop Publishers | 330 | 80 | -250 | -75.8% | 2,980 | 910 | -2,070 | -69.5% |
| 49-2097 | Electronic Home Entertainment Equipment Installers and Repairers | 300 | 470 | 170 | 56.7% | 1,100 | 1,170 | 70 | 6.4% |
| 49-9061 | Camera and Photographic Equipment Repairers | 60 | 0 | -60 | -100.0% | 310 | 0 | -310 | -100.0% |
| 49-9063 | Musical Instrument Repairers and Tuners | 60 | 40 | -20 | -33.3% | 180 | 210 | 30 | 16.7% |
| 51-5113 | Print Binding and Finishing Workers** | 820 | 560 | -260 | -31.7% | 3,730 | 2,090 | -1,640 | -44.0% |
| 51-9071 | Jewelers and Precious Stone and Metal Workers | 150 | 0 | -150 | -100.0% | 2,070 | 1,530 | -540 | -26.1% |
| 51-9123 | Painting, Coating, and Decorating Workers | 230 | 140 | -90 | -39.1% | 900 | 400 | -500 | -55.6% |
| 51-9151 | Photographic Process Workers and Processing Machine Operators | 890 | 300 | -590 | -66.3% | 3,290 | 1,380 | -1,910 | -58.1% |
| 0 | Total, Creative Economy | 35,730 | 34,580 | -1,150 | -3.2% | 162,690 | 156,260 | -6,430 | -4.0% |
| 00-0000 | All Occupations | 1,682,220 | 1,659,430 | -22,790 | -1.4% | 6,909,680 | 7,057,990 | 148,310 | 2.1% |

*Indicates artistic occupations

| SOC Code | Growth in Creative Workforce Occupations | Maine | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| 11-2011 | Advertising and Promotions Managers | 280 | 150 | -130 | -46.4% | 2,330 | 1,950 | -380 | -16.3% |
| 11-2031 | Public Relations and Fundraising Managers | 290 | 470 | 180 | 62.1% | 3,810 | 6,080 | 2,270 | 59.6% |
| 17-1011* | Architects, Except Landscape and Naval | 370 | 230 | -140 | -37.8% | 6,020 | 6,050 | 30 | 0.5% |
| 17-1012* | Landscape Architects | 60 | 0 | -60 | -100.0% | 1,420 | 970 | -450 | -31.7% |
| 17-3011 | Architectural and Civil Drafters | 680 | 520 | -160 | -23.5% | 5,550 | 4,530 | -1,020 | -18.4% |
| 19-3091 | Anthropologists and Archeologists | 0 | 0 | 0 | - | 30 | 30 | 0 | 0.0% |
| 19-3093 | Historians | 0 | 0 | 0 | - | 90 | 60 | -30 | -33.3% |
| 25-1031 | Architecture Teachers, Postsecondary | 0 | 0 | 0 | - | 170 | 600 | 430 | 252.9% |
| 25-1061 | Anthropology and Archeology Teachers, Postsecondary | 50 | 0 | -50 | -100.0% | 530 | 320 | -210 | -39.6% |
| 25-1062 | Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 0 | 0 | 0 | - | 640 | 860 | 220 | 34.4% |
| 25-1082 | Library Science Teachers, Postsecondary | 0 | 0 | 0 | - | 90 | 100 | 10 | 11.1% |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | 250 | 230 | -20 | -8.0% | 5,880 | 7,700 | 1,820 | 31.0% |
| 25-1122 | Communications Teachers, Postsecondary | 80 | 70 | -10 | -12.5% | 1,190 | 1,380 | 190 | 16.0% |
| 25-1123 | English Language and Literature Teachers, Postsecondary | 280 | 470 | 190 | 67.9% | 4,080 | 5,210 | 1,130 | 27.7% |
| 25-1124 | Foreign Language and Literature Teachers, Postsecondary | 110 | 80 | -30 | -27.3% | 1,390 | 1,840 | 450 | 32.4% |
| 25-1125 | History Teachers, Postsecondary | 130 | 130 | 0 | 0.0% | 2,180 | 1,980 | -200 | -9.2% |
| 25-4011 | Archivists | 30 | 0 | -30 | -100.0% | 460 | 490 | 30 | 6.5% |
| 25-4012 | Curators | 90 | 90 | 0 | 0.0% | 1,000 | 1,040 | 40 | 4.0% |
| 25-4013 | Museum Technicians and Conservators | 60 | 70 | 10 | 16.7% | 810 | 690 | -120 | -14.8% |
| 25-4021 | Librarians | 910 | 780 | -130 | -14.3% | 10,730 | 10,310 | -420 | -3.9% |
| 25-4031 | Library Technicians | 1200 | 880 | -320 | -26.7% | 8,660 | 7,540 | -1,120 | -12.9% |
| 25-9011 | Audio-Visual and Multimedia Collections Specialists | 0 | 0 | 0 | - | 390 | 670 | 280 | 71.8% |
| 27-1011* | Art Directors | 90 | 80 | -10 | -11.1% | 2,070 | 1,680 | -390 | -18.8% |
| 27-1012* | Craft Artists | 60 | 40 | -20 | -33.3% | 310 | 170 | -140 | -45.2% |
| 27-1013* | Fine Artists, Including Painters, Sculptors, and Illustrators | 0 | 0 | 0 | - | 440 | 300 | -140 | -31.8% |
| 27-1014* | Multimedia Artists and Animators | 70 | 0 | -70 | -100.0% | 1,350 | 1,650 | 300 | 22.2% |
| 27-1019* | Artists and Related Workers, All Other | 0 | 0 | 0 | - | 540 | 200 | -340 | -63.0% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27-1021* | Commercial and Industrial Designers | 140 | 150 | 10 | 7.1% | 2,250 | 1,830 | -420 | -18.7% |
| 27-1022* | Fashion Designers | 60 | 70 | 10 | 16.7% | 550 | 470 | -80 | -14.5% |
| 27-1023* | Floral Designers | 320 | 220 | -100 | -31.3% | 3,730 | 2,050 | -1,680 | -45.0% |
| 27-1024* | Graphic Designers | 700 | 760 | 60 | 8.6% | 11,000 | 9,870 | -1,130 | -10.3% |
| 27-1025* | Interior Designers | 120 | 100 | -20 | -16.7% | 2,790 | 2,590 | -200 | -7.2% |
| 27-1026* | Merchandise Displayers and Window Trimmers | 0 | 1,010 | 1,010 | - | 2,240 | 4,470 | 2,230 | 99.6% |
| 27-1027* | Set and Exhibit Designers | 0 | 0 | 0 | - | 0 | 310 | 310 | - |
| 27-1029* | Designers, All Other | 50 | 0 | -50 | -100.0% | 480 | 190 | -290 | -60.4% |
| 27-2011* | Actors | 40 | 0 | -40 | -100.0% | 310 | 1,500 | 1,190 | 383.9% |
| 27-2012* | Producers and Directors | 210 | 230 | 20 | 9.5% | 2,670 | 5,240 | 2,570 | 96.3% |
| 27-2031* | Dancers | 0 | 0 | 0 | - | 50 | 40 | -10 | -20.0% |
| 27-2032 | Choreographers | 0 | 0 | 0 | - | 650 | 270 | -380 | -58.5% |
| 27-2041 | Music Directors and Composers | 0 | 0 | 0 | - | 310 | 1,310 | 1,000 | 322.6% |
| 27-2042* | Musicians and Singers | 0 | 40 | 40 | - | 1,320 | 1,390 | 70 | 5.3% |
| 27-2099* | Entertainers and Performers, Sports and Related Workers, All Other | 0 | 0 | 0 | - | 290 | 280 | -10 | -3.4% |
| 27-3011* | Radio and Television Announcers | 150 | 140 | -10 | -6.7% | 1,710 | 1,310 | -400 | -23.4% |
| 27-3012* | Public Address System and Other Announcers | 0 | 0 | 0 | - | 180 | 260 | 80 | 44.4% |
| 27-3021 | Broadcast News Analysts | 0 | 0 | 0 | - | 190 | 150 | -40 | -21.1% |
| 27-3022 | Reporters and Correspondents | 340 | 240 | -100 | -29.4% | 2,590 | 2,150 | -440 | -17.0% |
| 27-3031 | Public Relations Specialists | 950 | 1,160 | 210 | 22.1% | 15,170 | 12,890 | -2,280 | -15.0% |
| 27-3041 | Editors | 450 | 440 | -10 | -2.2% | 6,660 | 5,970 | -690 | -10.4% |
| 27-3042 | Technical Writers | 50 | 100 | 50 | 100.0% | 3,880 | 3,420 | -460 | -11.9% |
| 27-3043* | Writers and Authors | 220 | 150 | -70 | -31.8% | 2,040 | 2,430 | 390 | 19.1% |
| 27-3099 | Media and Communication Workers, All Other | 0 | 0 | 0 | - | 650 | 90 | -560 | -86.2% |
| 27-4011 | Audio and Video Equipment Technicians | 110 | 90 | -20 | -18.2% | 2,410 | 3,440 | 1,030 | 42.7% |
| 27-4012 | Broadcast Technicians | 180 | 120 | -60 | -33.3% | 1,400 | 1,600 | 200 | 14.3% |
| 27-4014 | Sound Engineering Technicians | 0 | 0 | 0 | - | 440 | 590 | 150 | 34.1% |
| 27-4021* | Photographers | 240 | 150 | -90 | -37.5% | 3,390 | 2,420 | -970 | -28.6% |
| 27-4031 | Camera Operators, Television, Video, and Motion Picture | 80 | 140 | 60 | 75.0% | 990 | 1,170 | 180 | 18.2% |
| 27-4032 | Film and Video Editors | 80 | 60 | -20 | -25.0% | 480 | 790 | 310 | 64.6% |
| 27-4099 | Media and Communication Equipment Workers, All Other | 30 | 30 | 0 | 0.0% | 580 | 680 | 100 | 17.2% |
| 39-3021 | Motion Picture Projectionists | 70 | 40 | -30 | -42.9% | 410 | 240 | -170 | -41.5% |
| 39-3092 | Costume Attendants | 0 | 0 | 0 | - | 80 | 70 | -10 | -12.5% |
| 41-3011 | Advertising Sales Agents | 680 | 630 | -50 | -7.4% | 7,130 | 6,550 | -580 | -8.1% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43-4121 | Library Assistants, Clerical | 510 | 260 | -250 | -49.0% | 6,950 | 6,140 | -810 | -11.7% |
| 43-9031 | Desktop Publishers | 130 | 150 | 20 | 15.4% | 2,980 | 910 | -2,070 | -69.5% |
| 49-2097 | Electronic Home Entertainment Equipment Installers and Repairers | 0 | 80 | 80 | - | 1,100 | 1,170 | 70 | 6.4% |
| 49-9061 | Camera and Photographic Equipment Repairers | 0 | 0 | 0 | - | 310 | 0 | -310 | -100.0% |
| 49-9063 | Musical Instrument Repairers and Tuners | 0 | 0 | 0 | - | 180 | 210 | 30 | 16.7% |
| 51-5113 | Print Binding and Finishing Workers | 350 | 150 | -200 | -57.1% | 3,730 | 2,090 | -1,640 | -44.0% |
| 51-9071 | Jewelers and Precious Stone and Metal Workers | 220 | 120 | -100 | -45.5% | 2,070 | 1,530 | -540 | -26.1% |
| 51-9123 | Painting, Coating, and Decorating Workers | 0 | 100 | 100 | - | 900 | 400 | -500 | -55.6% |
| 51-9151 | Photographic Process Workers and Processing Machine Operators | 300 | 0 | -300 | -100.0% | 3,290 | 1,380 | -1,910 | -58.1% |
| 0 | Total, Creative Economy | 11,870 | 11,220 | -650 | -5.5% | 162,690 | 156,260 | -6,430 | -4.0% |
| 00-0000 | All Occupations | 600,020 | 591,520 | -8,500 | -1.4% | 6,909,680 | 7,057,990 | 148,310 | 2.1% |

*Indicates artistic occupations

| SOC Code | Growth in Creative Workforce Occupations | Massachusetts | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| 11-2011 | Advertising and Promotions Managers | 1,010 | 1,160 | 150 | 14.9% | 2,330 | 1,950 | -380 | -16.3% |
| 11-2031 | Public Relations and Fundraising Managers | 1,830 | 3,840 | 2,010 | 109.8% | 3,810 | 6,080 | 2,270 | 59.6% |
| 17-1011* | Architects, Except Landscape and Naval | 3,680 | 3,690 | 10 | 0.3% | 6,020 | 6,050 | 30 | 0.5% |
| 17-1012* | Landscape Architects | 760 | 640 | -120 | -15.8% | 1,420 | 970 | -450 | -31.7% |
| 17-3011 | Architectural and Civil Drafters | 2,740 | 2,360 | -380 | -13.9% | 5,550 | 4,530 | -1,020 | -18.4% |
| 19-3091 | Anthropologists and Archeologists | 0 | 30 | 30 | - | 30 | 30 | 0 | 0.0% |
| 19-3093 | Historians | 90 | 60 | -30 | -33.3% | 90 | 60 | -30 | -33.3% |
| 25-1031 | Architecture Teachers, Postsecondary | 170 | 470 | 300 | 176.5% | 170 | 600 | 430 | 252.9% |
| 25-1061 | Anthropology and Archeology Teachers, Postsecondary | 200 | 200 | 0 | 0.0% | 530 | 320 | -210 | -39.6% |
| 25-1062 | Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 540 | 330 | -210 | -38.9% | 640 | 860 | 220 | 34.4% |
| 25-1082 | Library Science Teachers, Postsecondary | 90 | 100 | 10 | 11.1% | 90 | 100 | 10 | 11.1% |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | 3,620 | 4,790 | 1,170 | 32.3% | 5,880 | 7,700 | 1,820 | 31.0% |
| 25-1122 | Communications Teachers, Postsecondary | 570 | 620 | 50 | 8.8% | 1,190 | 1,380 | 190 | 16.0% |
| 25-1123 | English Language and Literature Teachers, Postsecondary | 2,200 | 2,730 | 530 | 24.1% | 4,080 | 5,210 | 1,130 | 27.7% |
| 25-1124 | Foreign Language and Literature Teachers, Postsecondary | 930 | 1,000 | 70 | 7.5% | 1,390 | 1,840 | 450 | 32.4% |
| 25-1125 | History Teachers, Postsecondary | 820 | 960 | 140 | 17.1% | 2,180 | 1,980 | -200 | -9.2% |
| 25-4011 | Archivists | 270 | 270 | 0 | 0.0% | 460 | 490 | 30 | 6.5% |
| 25-4012 | Curators | 610 | 530 | -80 | -13.1% | 1,000 | 1,040 | 40 | 4.0% |
| 25-4013 | Museum Technicians and Conservators | 460 | 290 | -170 | -37.0% | 810 | 690 | -120 | -14.8% |
| 25-4021 | Librarians | 4,990 | 4,770 | -220 | -4.4% | 10,730 | 10,310 | -420 | -3.9% |
| 25-4031 | Library Technicians | 3,650 | 3,430 | -220 | -6.0% | 8,660 | 7,540 | -1,120 | -12.9% |
| 25-9011 | Audio-Visual and Multimedia Collections Specialists | 240 | 350 | 110 | 45.8% | 390 | 670 | 280 | 71.8% |
| 27-1011* | Art Directors | 1,280 | 780 | -500 | -39.1% | 2,070 | 1,680 | -390 | -18.8% |
| 27-1012* | Craft Artists | 250 | 90 | -160 | -64.0% | 310 | 170 | -140 | -45.2% |
| 27-1013* | Fine Artists, Including Painters, Sculptors, and Illustrators | 300 | 210 | -90 | -30.0% | 440 | 300 | -140 | -31.8% |
| 27-1014* | Multimedia Artists and Animators | 840 | 950 | 110 | 13.1% | 1,350 | 1,650 | 300 | 22.2% |
| 27-1019* | Artists and Related Workers, All Other | 330 | 130 | -200 | -60.6% | 540 | 200 | -340 | -63.0% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27-1021* | Commercial and Industrial Designers | 870 | 780 | -90 | -10.3% | 2,250 | 1,830 | -420 | -18.7% |
| 27-1022* | Fashion Designers | 310 | 310 | 0 | 0.0% | 550 | 470 | -80 | -14.5% |
| 27-1023* | Floral Designers | 1,780 | 840 | -940 | -52.8% | 3,730 | 2,050 | -1,680 | -45.0% |
| 27-1024* | Graphic Designers | 5,320 | 4,890 | -430 | -8.1% | 11,000 | 9,870 | -1,130 | -10.3% |
| 27-1025* | Interior Designers | 1,810 | 1,440 | -370 | -20.4% | 2,790 | 2,590 | -200 | -7.2% |
| 27-1026* | Merchandise Displayers and Window Trimmers | 1,080 | 1,560 | 480 | 44.4% | 2,240 | 4,470 | 2,230 | 99.6% |
| 27-1027* | Set and Exhibit Designers | 0 | 130 | 130 | - | 0 | 310 | 310 | #DIV/0! |
| 27-1029* | Designers, All Other | 190 | 90 | -100 | -52.6% | 480 | 190 | -290 | -60.4% |
| 27-2011* | Actors | 0 | 920 | 920 | - | 310 | 1,500 | 1,190 | 383.9% |
| 27-2012* | Producers and Directors | 1,720 | 2,230 | 510 | 29.7% | 2,670 | 5,240 | 2,570 | 96.3% |
| 27-2031* | Dancers | 0 | 0 | 0 | - | 50 | 40 | -10 | -20.0% |
| 27-2032 | Choreographers | 0 | 0 | 0 | - | 650 | 270 | -380 | -58.5% |
| 27-2041 | Music Directors and Composers | 160 | 570 | 410 | 256.3% | 310 | 1,310 | 1,000 | 322.6% |
| 27-2042* | Musicians and Singers | 740 | 650 | -90 | -12.2% | 1,320 | 1,390 | 70 | 5.3% |
| 27-2099* | Entertainers and Performers, Sports and Related Workers, All Other | 0 | 0 | 0 | - | 290 | 280 | -10 | -3.4% |
| 27-3011* | Radio and Television Announcers | 730 | 500 | -230 | -31.5% | 1,710 | 1,310 | -400 | -23.4% |
| 27-3012* | Public Address System and Other Announcers | 70 | 230 | 160 | 228.6% | 180 | 260 | 80 | 44.4% |
| 27-3021 | Broadcast News Analysts | 190 | 120 | -70 | -36.8% | 190 | 150 | -40 | -21.1% |
| 27-3022 | Reporters and Correspondents | 1,220 | 1,070 | -150 | -12.3% | 2,590 | 2,150 | -440 | -17.0% |
| 27-3031 | Public Relations Specialists | 8,460 | 7,190 | -1,270 | -15.0% | 15,170 | 12,890 | -2,280 | -15.0% |
| 27-3041 | Editors | 3,940 | 3,510 | -430 | -10.9% | 6,660 | 5,970 | -690 | -10.4% |
| 27-3042 | Technical Writers | 2,520 | 2,230 | -290 | -11.5% | 3,880 | 3,420 | -460 | -11.9% |
| 27-3043* | Writers and Authors | 860 | 1,180 | 320 | 37.2% | 2,040 | 2,430 | 390 | 19.1% |
| 27-3099 | Media and Communication Workers, All Other | 300 | 90 | -210 | -70.0% | 650 | 90 | -560 | -86.2% |
| 27-4011 | Audio and Video Equipment Technicians | 1,450 | 1,940 | 490 | 33.8% | 2,410 | 3,440 | 1,030 | 42.7% |
| 27-4012 | Broadcast Technicians | 630 | 730 | 100 | 15.9% | 1,400 | 1,600 | 200 | 14.3% |
| 27-4014 | Sound Engineering Technicians | 180 | 260 | 80 | 44.4% | 440 | 590 | 150 | 34.1% |
| 27-4021* | Photographers | 1,590 | 1,200 | -390 | -24.5% | 3,390 | 2,420 | -970 | -28.6% |
| 27-4031 | Camera Operators, Television, Video, and Motion Picture | 370 | 520 | 150 | 40.5% | 990 | 1,170 | 180 | 18.2% |
| 27-4032 | Film and Video Editors | 230 | 370 | 140 | 60.9% | 480 | 790 | 310 | 64.6% |
| 27-4099 | Media and Communication Equipment Workers, All Other | 270 | 120 | -150 | -55.6% | 580 | 680 | 100 | 17.2% |
| 39-3021 | Motion Picture Projectionists | 160 | 200 | 40 | 25.0% | 410 | 240 | -170 | -41.5% |
| 39-3092 | Costume Attendants | 80 | 30 | -50 | -62.5% | 80 | 70 | -10 | -12.5% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41-3011 | Advertising Sales Agents | 3,400 | 2,900 | -500 | -14.7% | 7,130 | 6,550 | -580 | -8.1% |
| 43-4121 | Library Assistants, Clerical | 3,060 | 2,740 | -320 | -10.5% | 6,950 | 6,140 | -810 | -11.7% |
| 43-9031 | Desktop Publishers | 2,130 | 550 | -1,580 | -74.2% | 2,980 | 910 | -2,070 | -69.5% |
| 49-2097 | Electronic Home Entertainment Equipment Installers and Repairers | 510 | 240 | -270 | -52.9% | 1,100 | 1,170 | 70 | 6.4% |
| 49-9061 | Camera and Photographic Equipment Repairers | 250 | 0 | -250 | -100.0% | 310 | 0 | -310 | -100.0% |
| 49-9063 | Musical Instrument Repairers and Tuners | 120 | 170 | 50 | 41.7% | 180 | 210 | 30 | 16.7% |
| 51-5113 | Print Binding and Finishing Workers | 2,180 | 920 | -1,260 | -57.8% | 3,730 | 2,090 | -1,640 | -44.0% |
| 51-9071 | Jewelers and Precious Stone and Metal Workers | 910 | 410 | -500 | -54.9% | 2,070 | 1,530 | -540 | -26.1% |
| 51-9123 | Painting, Coating, and Decorating Workers | 570 | 0 | -570 | -100.0% | 900 | 400 | -500 | -55.6% |
| 51-9151 | Photographic Process Workers and Processing Machine Operators | 1,470 | 660 | -810 | -55.1% | 3,290 | 1,380 | -1,910 | -58.1% |
| 0 | Total, Creative Economy | 84,300 | 79,270 | -5,030 | -6.0% | 162,690 | 156,260 | -6,430 | -4.0% |
| 00-0000 | All Occupations | 3,207,840 | 3,396,840 | 189,000 | 5.9% | 6,909,680 | 7,057,990 | 148,310 | 2.1% |

*Indicates artistic occupations

| SOC Code | Growth in Creative Workforce Occupations | New Hampshire | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| 11-2011 | Advertising and Promotions Managers | 130 | 150 | 20 | 15.4% | 2,330 | 1,950 | -380 | -16.3% |
| 11-2031 | Public Relations and Fundraising Managers | 210 | 400 | 190 | 90.5% | 3,810 | 6,080 | 2,270 | 59.6% |
| 17-1011* | Architects, Except Landscape and Naval | 330 | 270 | -60 | -18.2% | 6,020 | 6,050 | 30 | 0.5% |
| 17-1012* | Landscape Architects | 0 | 0 | 0 | - | 1,420 | 970 | -450 | -31.7% |
| 17-3011 | Architectural and Civil Drafters | 400 | 440 | 40 | 10.0% | 5,550 | 4,530 | -1,020 | -18.4% |
| 19-3091 | Anthropologists and Archeologists | 0 | 0 | 0 | - | 30 | 30 | 0 | 0.0% |
| 19-3093 | Historians | 0 | 0 | 0 | - | 90 | 60 | -30 | -33.3% |
| 25-1031 | Architecture Teachers, Postsecondary | 0 | 0 | 0 | - | 170 | 600 | 430 | 252.9% |
| 25-1061 | Anthropology and Archeology Teachers, Postsecondary | 40 | 0 | -40 | -100.0% | 530 | 320 | -210 | -39.6% |
| 25-1062 | Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 0 | 0 | 0 | - | 640 | 860 | 220 | 34.4% |
| 25-1082 | Library Science Teachers, Postsecondary | 0 | 0 | 0 | - | 90 | 100 | 10 | 11.1% |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | 290 | 570 | 280 | 96.6% | 5,880 | 7,700 | 1,820 | 31.0% |
| 25-1122 | Communications Teachers, Postsecondary | 60 | 80 | 20 | 33.3% | 1,190 | 1,380 | 190 | 16.0% |
| 25-1123 | English Language and Literature Teachers, Postsecondary | 310 | 340 | 30 | 9.7% | 4,080 | 5,210 | 1,130 | 27.7% |
| 25-1124 | Foreign Language and Literature Teachers, Postsecondary | 110 | 0 | -110 | -100.0% | 1,390 | 1,840 | 450 | 32.4% |
| 25-1125 | History Teachers, Postsecondary | 80 | 120 | 40 | 50.0% | 2,180 | 1,980 | -200 | -9.2% |
| 25-4011 | Archivists | 0 | 0 | 0 | - | 460 | 490 | 30 | 6.5% |
| 25-4012 | Curators | 40 | 130 | 90 | 225.0% | 1,000 | 1,040 | 40 | 4.0% |
| 25-4013 | Museum Technicians and Conservators | 0 | 0 | 0 | - | 810 | 690 | -120 | -14.8% |
| 25-4021 | Librarians | 1,050 | 950 | -100 | -9.5% | 10,730 | 10,310 | -420 | -3.9% |
| 25-4031 | Library Technicians | 840 | 620 | -220 | -26.2% | 8,660 | 7,540 | -1,120 | -12.9% |
| 25-9011 | Audio-Visual and Multimedia Collections Specialists | 0 | 40 | 40 | - | 390 | 670 | 280 | 71.8% |
| 27-1011* | Art Directors | 70 | 90 | 20 | 28.6% | 2,070 | 1,680 | -390 | -18.8% |
| 27-1012* | Craft Artists | 0 | 40 | 40 | - | 310 | 170 | -140 | -45.2% |
| 27-1013* | Fine Artists, Including Painters, Sculptors, and Illustrators | 0 | 0 | 0 | - | 440 | 300 | -140 | -31.8% |
| 27-1014* | Multimedia Artists and Animators | 0 | 60 | 60 | - | 1,350 | 1,650 | 300 | 22.2% |
| 27-1019* | Artists and Related Workers, All Other | 30 | 0 | -30 | -100.0% | 540 | 200 | -340 | -63.0% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27-1021* | Commercial and Industrial Designers | 110 | 150 | 40 | 36.4% | 2,250 | 1,830 | -420 | -18.7% |
| 27-1022* | Fashion Designers | 0 | 90 | 90 | - | 550 | 470 | -80 | -14.5% |
| 27-1023* | Floral Designers | 420 | 220 | -200 | -47.6% | 3,730 | 2,050 | -1,680 | -45.0% |
| 27-1024* | Graphic Designers | 880 | 870 | -10 | -1.1% | 11,000 | 9,870 | -1,130 | -10.3% |
| 27-1025* | Interior Designers | 220 | 150 | -70 | -31.8% | 2,790 | 2,590 | -200 | -7.2% |
| 27-1026* | Merchandise Displayers and Window Trimmers | 200 | 550 | 350 | 175.0% | 2,240 | 4,470 | 2,230 | 99.6% |
| 27-1027* | Set and Exhibit Designers | 0 | 0 | 0 | - | 0 | 310 | 310 | #DIV/0! |
| 27-1029* | Designers, All Other | 50 | 40 | -10 | -20.0% | 480 | 190 | -290 | -60.4% |
| 27-2011* | Actors | 0 | 0 | 0 | - | 310 | 1,500 | 1,190 | 383.9% |
| 27-2012* | Producers and Directors | 210 | 200 | -10 | -4.8% | 2,670 | 5,240 | 2,570 | 96.3% |
| 27-2031* | Dancers | 0 | 0 | 0 | - | 50 | 40 | -10 | -20.0% |
| 27-2032 | Choreographers | 0 | 0 | 0 | - | 650 | 270 | -380 | -58.5% |
| 27-2041 | Music Directors and Composers | 0 | 80 | 80 | - | 310 | 1,310 | 1,000 | 322.6% |
| 27-2042* | Musicians and Singers | 0 | 0 | 0 | - | 1,320 | 1,390 | 70 | 5.3% |
| 27-2099* | Entertainers and Performers, Sports and Related Workers, All Other | 0 | 80 | 80 | - | 290 | 280 | -10 | -3.4% |
| 27-3011* | Radio and Television Announcers | 130 | 90 | -40 | -30.8% | 1,710 | 1,310 | -400 | -23.4% |
| 27-3012* | Public Address System and Other Announcers | 0 | 0 | 0 | - | 180 | 260 | 80 | 44.4% |
| 27-3021 | Broadcast News Analysts | 0 | 0 | 0 | - | 190 | 150 | -40 | -21.1% |
| 27-3022 | Reporters and Correspondents | 210 | 270 | 60 | 28.6% | 2,590 | 2,150 | -440 | -17.0% |
| 27-3031 | Public Relations Specialists | 820 | 1,000 | 180 | 22.0% | 15,170 | 12,890 | -2,280 | -15.0% |
| 27-3041 | Editors | 440 | 480 | 40 | 9.1% | 6,660 | 5,970 | -690 | -10.4% |
| 27-3042 | Technical Writers | 190 | 220 | 30 | 15.8% | 3,880 | 3,420 | -460 | -11.9% |
| 27-3043* | Writers and Authors | 140 | 300 | 160 | 114.3% | 2,040 | 2,430 | 390 | 19.1% |
| 27-3099 | Media and Communication Workers, All Other | 90 | 0 | -90 | -100.0% | 650 | 90 | -560 | -86.2% |
| 27-4011 | Audio and Video Equipment Technicians | 40 | 110 | 70 | 175.0% | 2,410 | 3,440 | 1,030 | 42.7% |
| 27-4012 | Broadcast Technicians | 150 | 110 | -40 | -26.7% | 1,400 | 1,600 | 200 | 14.3% |
| 27-4014 | Sound Engineering Technicians | 0 | 0 | 0 | - | 440 | 590 | 150 | 34.1% |
| 27-4021* | Photographers | 250 | 160 | -90 | -36.0% | 3,390 | 2,420 | -970 | -28.6% |
| 27-4031 | Camera Operators, Television, Video, and Motion Picture | 70 | 0 | -70 | -100.0% | 990 | 1,170 | 180 | 18.2% |
| 27-4032 | Film and Video Editors | 0 | 40 | 40 | - | 480 | 790 | 310 | 64.6% |
| 27-4099 | Media and Communication Equipment Workers, All Other | 90 | 120 | 30 | 33.3% | 580 | 680 | 100 | 17.2% |
| 39-3021 | Motion Picture Projectionists | 60 | 0 | -60 | -100.0% | 410 | 240 | -170 | -41.5% |
| 39-3092 | Costume Attendants | 0 | 0 | 0 | - | 80 | 70 | -10 | -12.5% |
| 41-3011 | Advertising Sales Agents | 550 | 550 | 0 | 0.0% | 7,130 | 6,550 | -580 | -8.1% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43-4121 | Library Assistants, Clerical | 840 | 840 | 0 | 0.0% | 6,950 | 6,140 | -810 | -11.7% |
| 43-9031 | Desktop Publishers | 230 | 60 | -170 | -73.9% | 2,980 | 910 | -2,070 | -69.5% |
| 49-2097 | Electronic Home Entertainment Equipment Installers and Repairers | 220 | 240 | 20 | 9.1% | 1,100 | 1,170 | 70 | 6.4% |
| 49-9061 | Camera and Photographic Equipment Repairers | 0 | 0 | 0 | - | 310 | 0 | -310 | -100.0% |
| 49-9063 | Musical Instrument Repairers and Tuners | 0 | 0 | 0 | - | 180 | 210 | 30 | 16.7% |
| 51-5113 | Print Binding and Finishing Workers** | 140 | 170 | 30 | 21.4% | 3,730 | 2,090 | -1,640 | -44.0% |
| 51-9071 | Jewelers and Precious Stone and Metal Workers | 80 | 110 | 30 | 37.5% | 2,070 | 1,530 | -540 | -26.1% |
| 51-9123 | Painting, Coating, and Decorating Workers | 0 | 0 | 0 | - | 900 | 400 | -500 | -55.6% |
| 51-9151 | Photographic Process Workers and Processing Machine Operators** | 290 | 160 | -130 | -44.8% | 3,290 | 1,380 | -1,910 | -58.1% |
| 0 | Total, Creative Economy | 11,110 | 11,760 | 650 | 5.9% | 162,690 | 156,260 | -6,430 | -4.0% |
| 00-0000 | All Occupations | 632,590 | 635,360 | 2,770 | 0.4% | 6,909,680 | 7,057,990 | 148,310 | 2.1% |

*Indicates artistic occupations

| SOC Code | Growth in Creative Workforce Occupations | Rhode Island | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| 11-2011 | Advertising and Promotions Managers | 140 | 170 | 30 | 21.4% | 2,330 | 1,950 | -380 | -16.3% |
| 11-2031 | Public Relations and Fundraising Managers | 310 | 240 | -70 | -22.6% | 3,810 | 6,080 | 2,270 | 59.6% |
| 17-1011* | Architects, Except Landscape and Naval | 300 | 350 | 50 | 16.7% | 6,020 | 6,050 | 30 | 0.5% |
| 17-1012* | Landscape Architects | 0 | 100 | 100 | - | 1,420 | 970 | -450 | -31.7% |
| 17-3011 | Architectural and Civil Drafters | 330 | 220 | -110 | -33.3% | 5,550 | 4,530 | -1,020 | -18.4% |
| 19-3091 | Anthropologists and Archeologists | 0 | 0 | 0 | - | 30 | 30 | 0 | 0.0% |
| 19-3093 | Historians | 0 | 0 | 0 | - | 90 | 60 | -30 | -33.3% |
| 25-1031 | Architecture Teachers, Postsecondary | 0 | 130 | 130 | - | 170 | 600 | 430 | 252.9% |
| 25-1061 | Anthropology and Archeology Teachers, Postsecondary | 50 | 0 | -50 | -100.0% | 530 | 320 | -210 | -39.6% |
| 25-1062 | Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 0 | 0 | 0 | - | 640 | 860 | 220 | 34.4% |
| 25-1082 | Library Science Teachers, Postsecondary | 0 | 0 | 0 | - | 90 | 100 | 10 | 11.1% |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | 520 | 630 | 110 | 21.2% | 5,880 | 7,700 | 1,820 | 31.0% |
| 25-1122 | Communications Teachers, Postsecondary | 120 | 110 | -10 | -8.3% | 1,190 | 1,380 | 190 | 16.0% |
| 25-1123 | English Language and Literature Teachers, Postsecondary | 430 | 350 | -80 | -18.6% | 4,080 | 5,210 | 1,130 | 27.7% |
| 25-1124 | Foreign Language and Literature Teachers, Postsecondary | 170 | 160 | -10 | -5.9% | 1,390 | 1,840 | 450 | 32.4% |
| 25-1125 | History Teachers, Postsecondary | 210 | 200 | -10 | -4.8% | 2,180 | 1,980 | -200 | -9.2% |
| 25-4011 | Archivists | 30 | 70 | 40 | 133.3% | 460 | 490 | 30 | 6.5% |
| 25-4012 | Curators | 70 | 60 | -10 | -14.3% | 1,000 | 1,040 | 40 | 4.0% |
| 25-4013 | Museum Technicians and Conservators | 70 | 50 | -20 | -28.6% | 810 | 690 | -120 | -14.8% |
| 25-4021 | Librarians | 670 | 740 | 70 | 10.4% | 10,730 | 10,310 | -420 | -3.9% |
| 25-4031 | Library Technicians | 620 | 380 | -240 | -38.7% | 8,660 | 7,540 | -1,120 | -12.9% |
| 25-9011 | Audio-Visual and Multimedia Collections Specialists | 0 | 0 | 0 | - | 390 | 670 | 280 | 71.8% |
| 27-1011* | Art Directors | 80 | 50 | -30 | -37.5% | 2,070 | 1,680 | -390 | -18.8% |
| 27-1012* | Craft Artists | 0 | 0 | 0 | - | 310 | 170 | -140 | -45.2% |
| 27-1013* | Fine Artists, Including Painters, Sculptors, and Illustrators | 40 | 0 | -40 | -100.0% | 440 | 300 | -140 | -31.8% |
| 27-1014* | Multimedia Artists and Animators | 60 | 30 | -30 | -50.0% | 1,350 | 1,650 | 300 | 22.2% |
| 27-1019* | Artists and Related Workers, All Other | 0 | 0 | 0 | - | 540 | 200 | -340 | -63.0% |
| 27-1021* | Commercial and Industrial Designers | 520 | 270 | -250 | -48.1% | 2,250 | 1,830 | -420 | -18.7% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27-1022* | Fashion Designers | 0 | 0 | 0 | - | 550 | 470 | -80 | -14.5% |
| 27-1023* | Floral Designers | 260 | 160 | -100 | -38.5% | 3,730 | 2,050 | -1,680 | -45.0% |
| 27-1024* | Graphic Designers | 720 | 650 | -70 | -9.7% | 11,000 | 9,870 | -1,130 | -10.3% |
| 27-1025* | Interior Designers | 0 | 190 | 190 | - | 2,790 | 2,590 | -200 | -7.2% |
| 27-1026* | Merchandise Displayers and Window Trimmers | 360 | 280 | -80 | -22.2% | 2,240 | 4,470 | 2,230 | 99.6% |
| 27-1027* | Set and Exhibit Designers | 0 | 0 | 0 | - | 0 | 310 | 310 | #DIV/0! |
| 27-1029* | Designers, All Other | 70 | 0 | -70 | -100.0% | 480 | 190 | -290 | -60.4% |
| 27-2011* | Actors | 0 | 0 | 0 | - | 310 | 1,500 | 1,190 | 383.9% |
| 27-2012* | Producers and Directors | 260 | 250 | -10 | -3.8% | 2,670 | 5,240 | 2,570 | 96.3% |
| 27-2031* | Dancers | 0 | 40 | 40 | - | 50 | 40 | -10 | -20.0% |
| 27-2032 | Choreographers | 0 | 0 | 0 | - | 650 | 270 | -380 | -58.5% |
| 27-2041 | Music Directors and Composers | 90 | 160 | 70 | 77.8% | 310 | 1,310 | 1,000 | 322.6% |
| 27-2042* | Musicians and Singers | 250 | 350 | 100 | 40.0% | 1,320 | 1,390 | 70 | 5.3% |
| 27-2099* | Entertainers and Performers, Sports and Related Workers, All Other | 190 | 0 | -190 | -100.0% | 290 | 280 | -10 | -3.4% |
| 27-3011* | Radio and Television Announcers | 0 | 90 | 90 | - | 1,710 | 1,310 | -400 | -23.4% |
| 27-3012* | Public Address System and Other Announcers | 0 | 0 | 0 | - | 180 | 260 | 80 | 44.4% |
| 27-3021 | Broadcast News Analysts | 0 | 30 | 30 | - | 190 | 150 | -40 | -21.1% |
| 27-3022 | Reporters and Correspondents | 140 | 130 | -10 | -7.1% | 2,590 | 2,150 | -440 | -17.0% |
| 27-3031 | Public Relations Specialists | 1,050 | 1,260 | 210 | 20.0% | 15,170 | 12,890 | -2,280 | -15.0% |
| 27-3041 | Editors | 230 | 230 | 0 | 0.0% | 6,660 | 5,970 | -690 | -10.4% |
| 27-3042 | Technical Writers | 220 | 150 | -70 | -31.8% | 3,880 | 3,420 | -460 | -11.9% |
| 27-3043* | Writers and Authors | 130 | 100 | -30 | -23.1% | 2,040 | 2,430 | 390 | 19.1% |
| 27-3099 | Media and Communication Workers, All Other | 50 | 0 | -50 | -100.0% | 650 | 90 | -560 | -86.2% |
| 27-4011 | Audio and Video Equipment Technicians | 50 | 160 | 110 | 220.0% | 2,410 | 3,440 | 1,030 | 42.7% |
| 27-4012 | Broadcast Technicians | 0 | 90 | 90 | - | 1,400 | 1,600 | 200 | 14.3% |
| 27-4014 | Sound Engineering Technicians | 0 | 0 | 0 | - | 440 | 590 | 150 | 34.1% |
| 27-4021* | Photographers | 270 | 220 | -50 | -18.5% | 3,390 | 2,420 | -970 | -28.6% |
| 27-4031 | Camera Operators, Television, Video, and Motion Picture | 40 | 0 | -40 | -100.0% | 990 | 1,170 | 180 | 18.2% |
| 27-4032 | Film and Video Editors | 0 | 0 | 0 | - | 480 | 790 | 310 | 64.6% |
| 27-4099 | Media and Communication Equipment Workers, All Other | 30 | 100 | 70 | 233.3% | 580 | 680 | 100 | 17.2% |
| 39-3021 | Motion Picture Projectionists | 40 | 0 | -40 | -100.0% | 410 | 240 | -170 | -41.5% |
| 39-3092 | Costume Attendants | 0 | 0 | 0 | - | 80 | 70 | -10 | -12.5% |
| 41-3011 | Advertising Sales Agents | 420 | 540 | 120 | 28.6% | 7,130 | 6,550 | -580 | -8.1% |
| 43-4121 | Library Assistants, Clerical | 400 | 430 | 30 | 7.5% | 6,950 | 6,140 | -810 | -11.7% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43-9031 | Desktop Publishers | 0 | 0 | 0 | - | 2,980 | 910 | -2,070 | -69.5% |
| 49-2097 | Electronic Home Entertainment Equipment Installers and Repairers | 0 | 0 | 0 | - | 1,100 | 1,170 | 70 | 6.4% |
| 49-9061 | Camera and Photographic Equipment Repairers | 0 | 0 | 0 | - | 310 | 0 | -310 | -100.0% |
| 49-9063 | Musical Instrument Repairers and Tuners | 0 | 0 | 0 | - | 180 | 210 | 30 | 16.7% |
| 51-5113 | Print Binding and Finishing Workers** | 110 | 160 | 50 | 45.5% | 3,730 | 2,090 | -1,640 | -44.0% |
| 51-9071 | Jewelers and Precious Stone and Metal Workers | 660 | 720 | 60 | 9.1% | 2,070 | 1,530 | -540 | -26.1% |
| 51-9123 | Painting, Coating, and Decorating Workers | 100 | 80 | -20 | -20.0% | 900 | 400 | -500 | -55.6% |
| 51-9151 | Photographic Process Workers and Processing Machine Operators** | 240 | 260 | 20 | 8.3% | 3,290 | 1,380 | -1,910 | -58.1% |
| 0 | Total, Creative Economy | 11,120 | 11,140 | 20 | 0.2% | 162,690 | 156,260 | -6,430 | -4.0% |
| 00-0000 | All Occupations | 485,870 | 635,360 | 149,490 | 30.8% | 6,909,680 | 7,057,990 | 148,310 | 2.1% |

*Indicates artistic occupations

| SOC Code | Growth in Creative Workforce Occupations | Vermont | | | | New England | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2007 | 2015 | Absolute Change | Percent Change | 2007 | 2015 | Absolute Change | Percent Change |
| 11-2011 | Advertising and Promotions Managers | 40 | 30 | -10 | -25.0% | 2,330 | 1,950 | -380 | -16.3% |
| 11-2031 | Public Relations and Fundraising Managers | 120 | 210 | 90 | 75.0% | 3,810 | 6,080 | 2,270 | 59.6% |
| 17-1011* | Architects, Except Landscape and Naval | 250 | 180 | -70 | -28.0% | 6,020 | 6,050 | 30 | 0.5% |
| 17-1012* | Landscape Architects | 100 | 0 | -100 | -100.0% | 1,420 | 970 | -450 | -31.7% |
| 17-3011 | Architectural and Civil Drafters | 250 | 200 | -50 | -20.0% | 5,550 | 4,530 | -1,020 | -18.4% |
| 19-3091 | Anthropologists and Archeologists | 30 | 0 | -30 | -100.0% | 30 | 30 | 0 | 0.0% |
| 19-3093 | Historians | 0 | 0 | 0 | - | 90 | 60 | -30 | -33.3% |
| 25-1031 | Architecture Teachers, Postsecondary | 0 | 0 | 0 | - | 170 | 600 | 430 | 252.9% |
| 25-1061 | Anthropology and Archeology Teachers, Postsecondary | 0 | 0 | 0 | - | 530 | 320 | -210 | -39.6% |
| 25-1062 | Area, Ethnic, and Cultural Studies Teachers, Postsecondary | 40 | 0 | -40 | -100.0% | 640 | 860 | 220 | 34.4% |
| 25-1082 | Library Science Teachers, Postsecondary | 0 | 0 | 0 | #DIV/0! | 90 | 100 | 10 | 11.1% |
| 25-1121 | Art, Drama, and Music Teachers, Postsecondary | 270 | 390 | 120 | 44.4% | 5,880 | 7,700 | 1,820 | 31.0% |
| 25-1122 | Communications Teachers, Postsecondary | 100 | 110 | 10 | 10.0% | 1,190 | 1,380 | 190 | 16.0% |
| 25-1123 | English Language and Literature Teachers, Postsecondary | 300 | 490 | 190 | 63.3% | 4,080 | 5,210 | 1,130 | 27.7% |
| 25-1124 | Foreign Language and Literature Teachers, Postsecondary | 70 | 320 | 250 | 357.1% | 1,390 | 1,840 | 450 | 32.4% |
| 25-1125 | History Teachers, Postsecondary | 90 | 250 | 160 | 177.8% | 2,180 | 1,980 | -200 | -9.2% |
| 25-4011 | Archivists | 40 | 40 | 0 | 0.0% | 460 | 490 | 30 | 6.5% |
| 25-4012 | Curators | 30 | 50 | 20 | 66.7% | 1,000 | 1,040 | 40 | 4.0% |
| 25-4013 | Museum Technicians and Conservators | 50 | 40 | -10 | -20.0% | 810 | 690 | -120 | -14.8% |
| 25-4021 | Librarians | 620 | 700 | 80 | 12.9% | 10,730 | 10,310 | -420 | -3.9% |
| 25-4031 | Library Technicians | 360 | 540 | 180 | 50.0% | 8,660 | 7,540 | -1,120 | -12.9% |
| 25-9011 | Audio-Visual and Multimedia Collections Specialists | 40 | 50 | 10 | 25.0% | 390 | 670 | 280 | 71.8% |
| 27-1011* | Art Directors | 80 | 70 | -10 | -12.5% | 2,070 | 1,680 | -390 | -18.8% |
| 27-1012* | Craft Artists | 0 | 0 | 0 | - | 310 | 170 | -140 | -45.2% |
| 27-1013* | Fine Artists, Including Painters, Sculptors, and Illustrators | 30 | 0 | -30 | -100.0% | 440 | 300 | -140 | -31.8% |
| 27-1014* | Multimedia Artists and Animators | 0 | 0 | 0 | - | 1,350 | 1,650 | 300 | 22.2% |
| 27-1019* | Artists and Related Workers, All Other | 0 | 0 | 0 | - | 540 | 200 | -340 | -63.0% |
| 27-1021* | Commercial and Industrial Designers | 150 | 180 | 30 | 20.0% | 2,250 | 1,830 | -420 | -18.7% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27-1022* | Fashion Designers | 0 | 0 | 0 | - | 550 | 470 | -80 | -14.5% |
| 27-1023* | Floral Designers | 180 | 130 | -50 | -27.8% | 3,730 | 2,050 | -1,680 | -45.0% |
| 27-1024* | Graphic Designers | 700 | 510 | -190 | -27.1% | 11,000 | 9,870 | -1,130 | -10.3% |
| 27-1025* | Interior Designers | 170 | 90 | -80 | -47.1% | 2,790 | 2,590 | -200 | -7.2% |
| 27-1026* | Merchandise Displayers and Window Trimmers | 160 | 170 | 10 | 6.3% | 2,240 | 4,470 | 2,230 | 99.6% |
| 27-1027* | Set and Exhibit Designers | 0 | 0 | 0 | - | 0 | 310 | 310 | #DIV/0! |
| 27-1029* | Designers, All Other | 0 | 0 | 0 | - | 480 | 190 | -290 | -60.4% |
| 27-2011* | Actors | 0 | 0 | 0 | - | 310 | 1,500 | 1,190 | 383.9% |
| 27-2012* | Producers and Directors | 270 | 290 | 20 | 7.4% | 2,670 | 5,240 | 2,570 | 96.3% |
| 27-2031* | Dancers | 0 | 0 | 0 | - | 50 | 40 | -10 | -20.0% |
| 27-2032 | Choreographers | 0 | 70 | 70 | - | 650 | 270 | -380 | -58.5% |
| 27-2041 | Music Directors and Composers | 0 | 70 | 70 | - | 310 | 1,310 | 1,000 | 322.6% |
| 27-2042* | Musicians and Singers | 0 | 0 | 0 | - | 1,320 | 1,390 | 70 | 5.3% |
| 27-2099* | Entertainers and Performers, Sports and Related Workers, All Other | 0 | 0 | 0 | - | 290 | 280 | -10 | -3.4% |
| 27-3011* | Radio and Television Announcers | 160 | 170 | 10 | 6.3% | 1,710 | 1,310 | -400 | -23.4% |
| 27-3012* | Public Address System and Other Announcers | 0 | 0 | 0 | - | 180 | 260 | 80 | 44.4% |
| 27-3021 | Broadcast News Analysts | 0 | 0 | 0 | - | 190 | 150 | -40 | -21.1% |
| 27-3022 | Reporters and Correspondents | 130 | 120 | -10 | -7.7% | 2,590 | 2,150 | -440 | -17.0% |
| 27-3031 | Public Relations Specialists | 1,110 | 840 | -270 | -24.3% | 15,170 | 12,890 | -2,280 | -15.0% |
| 27-3041 | Editors | 300 | 260 | -40 | -13.3% | 6,660 | 5,970 | -690 | -10.4% |
| 27-3042 | Technical Writers | 210 | 100 | -110 | -52.4% | 3,880 | 3,420 | -460 | -11.9% |
| 27-3043* | Writers and Authors | 200 | 110 | -90 | -45.0% | 2,040 | 2,430 | 390 | 19.1% |
| 27-3099 | Media and Communication Workers, All Other | 0 | 0 | 0 | - | 650 | 90 | -560 | -86.2% |
| 27-4011 | Audio and Video Equipment Technicians | 80 | 80 | 0 | 0.0% | 2,410 | 3,440 | 1,030 | 42.7% |
| 27-4012 | Broadcast Technicians | 80 | 50 | -30 | -37.5% | 1,400 | 1,600 | 200 | 14.3% |
| 27-4014 | Sound Engineering Technicians | 0 | 0 | 0 | - | 440 | 590 | 150 | 34.1% |
| 27-4021* | Photographers | 80 | 100 | 20 | 25.0% | 3,390 | 2,420 | -970 | -28.6% |
| 27-4031 | Camera Operators, Television, Video, and Motion Picture | 0 | 120 | 120 | - | 990 | 1,170 | 180 | 18.2% |
| 27-4032 | Film and Video Editors | 0 | 0 | 0 | - | 480 | 790 | 310 | 64.6% |
| 27-4099 | Media and Communication Equipment Workers, All Other | 0 | 0 | 0 | - | 580 | 680 | 100 | 17.2% |
| 39-3021 | Motion Picture Projectionists | 30 | 0 | -30 | -100.0% | 410 | 240 | -170 | -41.5% |
| 39-3092 | Costume Attendants | 0 | 0 | 0 | - | 80 | 70 | -10 | -12.5% |
| 41-3011 | Advertising Sales Agents | 470 | 270 | -200 | -42.6% | 7,130 | 6,550 | -580 | -8.1% |
| 43-4121 | Library Assistants, Clerical | 660 | 300 | -360 | -54.5% | 6,950 | 6,140 | -810 | -11.7% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43-9031 | Desktop Publishers | 160 | 70 | -90 | -56.3% | 2,980 | 910 | -2,070 | -69.5% |
| 49-2097 | Electronic Home Entertainment Equipment Installers and Repairers | 70 | 140 | 70 | 100.0% | 1,100 | 1,170 | 70 | 6.4% |
| 49-9061 | Camera and Photographic Equipment Repairers | 0 | 0 | 0 | - | 310 | 0 | -310 | -100.0% |
| 49-9063 | Musical Instrument Repairers and Tuners | 0 | 0 | 0 | - | 180 | 210 | 30 | 16.7% |
| 51-5113 | Print Binding and Finishing Workers** | 130 | 130 | 0 | 0.0% | 3,730 | 2,090 | -1,640 | -44.0% |
| 51-9071 | Jewelers and Precious Stone and Metal Workers | 50 | 170 | 120 | 240.0% | 2,070 | 1,530 | -540 | -26.1% |
| 51-9123 | Painting, Coating, and Decorating Workers | 0 | 80 | 80 | - | 900 | 400 | -500 | -55.6% |
| 51-9151 | Photographic Process Workers and Processing Machine Operators** | 100 | 0 | -100 | -100.0% | 3,290 | 1,380 | -1,910 | -58.1% |
| 0 | Total, Creative Economy | 8,560 | 8,290 | -270 | -3.2% | 162,690 | 156,260 | -6,430 | -4.0% |
| 00-0000 | All Occupations | 301,140 | 303,550 | 2,410 | 0.8% | 6,909,680 | 7,057,990 | 148,310 | 2.1% |

**Source:** U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

*Indicates artistic occupations

**Top Ten Creative Workforce Occupations by New England State, 2015**

| **CT** | |
|---|---|
| **Occupation** | **Employment** |
| Librarians | 2,370 |
| Graphic Designers | 2,190 |
| Producers and Directors | 2,040 |
| Library Technicians | 1,690 |
| Advertising Sales Agents | 1,660 |
| Library Assistants, Clerical | 1,570 |
| Public Relations Specialists | 1,440 |
| Architects, Except Landscape and Naval | 1,330 |
| Art, Drama, and Music Teachers, Postsecondary | 1,090 |
| Audio and Video Equipment Technicians | 1,060 |
| **Creative Economy Total** | **34,580** |
| **All Occupations** | **1,659,430** |
| **Creative Economy Share of All Occupations** | **2.1%** |

| ME | |
|---|---|
| **Occupation** | **Employment** |
| Public Relations Specialists | 1,160 |
| Merchandise Displayers and Window Trimmers | 1,010 |
| Library Technicians | 880 |
| Librarians | 780 |
| Graphic Designers | 760 |
| Advertising Sales Agents | 630 |
| Architectural and Civil Drafters | 520 |
| English Language and Literature Teachers, Postsecondary | 470 |
| Public Relations and Fundraising Managers | 470 |
| Editors | 440 |
| **Creative Economy Total** | **11,220** |
| **All Occupations** | **591,520** |
| **Creative Economy Share of All Occupations** | **1.9%** |

| MA | |
|---|---|
| **Occupation** | **Employment** |
| Public Relations Specialists | 7,190 |
| Graphic Designers | 4,890 |
| Art, Drama, and Music Teachers, Postsecondary | 4,790 |
| Librarians | 4,770 |
| Public Relations and Fundraising Managers | 3,840 |
| Architects, Except Landscape and Naval | 3,690 |
| Editors | 3,510 |
| Library Technicians | 3,430 |
| Advertising Sales Agents | 2,900 |
| Library Assistants, Clerical | 2,740 |
| **Creative Economy Total** | **79,270** |
| **All Occupations** | **3,396,840** |
| **Creative Economy Share of All Occupations** | **2.3%** |

| NH | |
|---|---|
| **Occupation** | **Employment** |
| Public Relations Specialists | 1,000 |
| Librarians | 950 |
| Graphic Designers | 870 |
| Library Assistants, Clerical | 840 |
| Library Technicians | 620 |
| Art, Drama, and Music Teachers, Postsecondary | 570 |
| Advertising Sales Agents | 550 |
| Merchandise Displayers and Window Trimmers | 550 |
| Editors | 480 |
| Architectural and Civil Drafters | 440 |
| **Creative Economy Total** | **11,760** |
| **All Occupations** | **635,360** |
| **Creative Economy Share of All Occupations** | **1.9%** |

| RI | |
|---|---|
| **Occupation** | **Employment** |
| Public Relations Specialists | 1,260 |
| Librarians | 740 |
| Jewelers and Precious Stone and Metal Workers | 720 |
| Graphic Designers | 650 |
| Art, Drama, and Music Teachers, Postsecondary | 630 |
| Advertising Sales Agents | 540 |
| Library Assistants, Clerical | 430 |
| Library Technicians | 380 |
| Architects, Except Landscape and Naval | 350 |
| Musicians and Singers | 350 |
| **Creative Economy Total** | **11,140** |
| **All Occupations** | **471,290** |
| **Creative Economy Share of All Occupations** | **2.4%** |

| VT | |
|---|---|
| **Occupation** | **Employment** |
| Public Relations Specialists | 840 |
| Librarians | 700 |
| Library Technicians | 540 |
| Graphic Designers | 510 |
| English Language and Literature Teachers, Postsecondary | 490 |
| Art, Drama, and Music Teachers, Postsecondary | 390 |
| Foreign Language and Literature Teachers, Postsecondary | 320 |
| Library Assistants, Clerical | 300 |
| Producers and Directors | 290 |
| Advertising Sales Agents | 270 |
| **Creative Economy Total** | **8,290** |
| **All Occupations** | **303,550** |
| **Creative Economy Share of All Occupations** | **2.7%** |

**Source:** U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

### Top Ten Industries for Creative Workforce Occupations by New England State, 2015

| CT | |
|---|---|
| **Industry** | **Employment** |
| Educational Services | 7,100 |
| Professional, Scientific, and Technical Services | 5,590 |
| Colleges, Universities, and Professional Schools | 4,430 |
| Broadcasting (except Internet) | 3,490 |
| Federal, State, and Local Government (excluding state and local schools and hospitals) | 2,950 |
| Local Government (OES Designation) | 2,720 |
| Architectural, Engineering, and Related Services | 1,980 |
| Publishing Industries (except Internet) | 1,850 |
| Newspaper, Periodical, Book, and Directory Publishers | 1,810 |
| Cable and Other Subscription Programming | 1,690 |
| **Creative Economy Total** | **55,560** |

| ME | |
|---|---|
| **Industry** | **Employment** |
| Educational Services | 2,180 |
| Professional, Scientific, and Technical Services | 1,490 |
| Colleges, Universities, and Professional Schools | 1,160 |
| Newspaper, Periodical, Book, and Directory Publishers | 1,030 |
| Publishing Industries (except Internet) | 1,030 |
| Elementary and Secondary Schools | 700 |
| Newspaper Publishers | 690 |
| Broadcasting (except Internet) | 680 |
| Radio and Television Broadcasting | 680 |
| Federal, State, and Local Government (excluding state and local schools and hospitals) | 650 |
| **Creative Economy Total** | **16,020** |

| MA | |
|---|---|
| **Industry** | **Employment** |
| Educational Services | 20,990 |
| Professional, Scientific, and Technical Services | 17,060 |
| Colleges, Universities, and Professional Schools | 14,430 |
| Architectural, Engineering, and Related Services | 6,630 |
| Federal, State, and Local Government (excluding state and local schools and hospitals) | 6,120 |
| Publishing Industries (except Internet) | 5,730 |
| Local Government (OES Designation) | 5,370 |
| Newspaper, Periodical, Book, and Directory Publishers | 4,600 |
| Advertising, Public Relations, and Related Services | 4,090 |
| Broadcasting (except Internet) | 3,650 |
| **Creative Economy Total** | **143,210** |

| NH | |
|---|---|
| **Industry** | **Employment** |
| Educational Services | 2,730 |
| Colleges, Universities, and Professional Schools | 1,750 |
| Professional, Scientific, and Technical Services | 1,530 |
| Federal, State, and Local Government (excluding state and local schools and hospitals) | 1,440 |
| Local Government (OES Designation) | 1,310 |
| Publishing Industries (except Internet) | 930 |
| Newspaper, Periodical, Book, and Directory Publishers | 900 |
| Elementary and Secondary Schools | 620 |
| Newspaper Publishers | 550 |
| Architectural, Engineering, and Related Services | 450 |
| **Creative Economy Total** | **16,530** |

| RI | |
|---|---|
| **Industry** | **Employment** |
| Educational Services | 2,460 |
| Colleges, Universities, and Professional Schools | 1,760 |
| Professional, Scientific, and Technical Services | 1,340 |
| Miscellaneous Manufacturing | 790 |
| Other Miscellaneous Manufacturing | 790 |
| Religious, Grantmaking, Civic, Professional, and Similar Organizations | 710 |
| Federal, State, and Local Government (excluding state and local schools and hospitals) | 670 |
| Jewelry and Silverware Manufacturing | 670 |
| Local Government (OES Designation) | 580 |
| Architectural, Engineering, and Related Services | 520 |
| **Creative Economy Total** | **16,500** |

| VT | |
|---|---|
| **Industry** | **Employment** |
| Educational Services | 2600 |
| Colleges, Universities, and Professional Schools | 1670 |
| Professional, Scientific, and Technical Services | 790 |
| Federal, State, and Local Government (excluding state and local schools and hospitals) | 660 |
| Local Government (OES Designation) | 590 |
| Publishing Industries (except Internet) | 520 |
| Broadcasting (except Internet) | 490 |
| Newspaper, Periodical, Book, and Directory Publishers | 470 |
| Elementary and Secondary Schools | 430 |
| Radio and Television Broadcasting | 430 |
| **Creative Economy Total** | **12,710** |

**Source:** U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES).

## Creative Economy Nonemployers

## Creative Economy Nonemployer Establishments by New England State, 2007-2015

| Industry | CT | | | | | New England | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) |
| Glass and Glass Product Manufacturing | 19 | 24 | 5 | 26.3% | $1,036 | 180 | 149 | -31 | -17.2% | $5,047 |
| Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers | 285 | 263 | -22 | -7.7% | $23,609 | 1,176 | 1,130 | -46 | -3.9% | $99,526 |
| Book, Periodical, and Newspaper Merchant | 192 | 149 | -43 | -22.4% | $4,325 | 863 | 694 | -169 | -19.6% | $19,010 |
| Electronics and Appliance Stores | 407 | 235 | -172 | -42.3% | $12,533 | 1,502 | 963 | -539 | -35.9% | $59,666 |
| Jewelry Stores | 636 | 529 | -107 | -16.8% | $19,079 | 2,468 | 1,946 | -522 | -21.2% | $84,935 |
| Sewing, Needlework, and Piece Goods Stores | 158 | 150 | -8 | -5.1% | $5,107 | 780 | 777 | -3 | -0.4% | $21,004 |
| Musical Instrument and Supplies Stores | 105 | 112 | 7 | 6.7% | $7,545 | 360 | 419 | 59 | 16.4% | $23,222 |
| Book Stores and News Dealers | 275 | 200 | -75 | -27.3% | $6,776 | 1,294 | 948 | -346 | -26.7% | $30,758 |
| Art Dealers | 317 | 251 | -66 | -20.8% | $28,940 | 1,282 | 1,182 | -100 | -7.8% | $79,687 |
| Video Tape and Disc Rental | 21 | 7 | -14 | -66.7% | $108 | 145 | 36 | -109 | -75.2% | $1,390 |
| Architectural Services | 902 | 869 | -33 | -3.7% | $61,514 | 3,432 | 3,528 | 96 | 2.8% | $213,480 |
| Landscape Architectural Services | 580 | 567 | -13 | -2.2% | $30,562 | 2,372 | 2,306 | -66 | -2.8% | $107,190 |
| Drafting Services | 288 | 247 | -41 | -14.2% | $7,438 | 1,223 | 976 | -247 | -20.2% | $26,208 |
| Photographic Services | 1,426 | 1,783 | 357 | 25.0% | $52,797 | 6,248 | 8,091 | 1,843 | 29.5% | $207,476 |
| Independent Artists, Writers, and Performers | 9,526 | 9,869 | 343 | 3.6% | $232,283 | 44,364 | 46,974 | 2,610 | 5.9% | $915,299 |
| Photofinishing | 173 | 173 | 0 | 0.0% | $5,380 | 708 | 678 | -30 | -4.2% | $16,343 |
| **Nonemployers, Creative Economy Total** | **15,310** | **15,428** | **118** | **0.8%** | **$499,032** | **68,397** | **70,797** | **2,400** | **3.5%** | **$1,910,241** |
| **Nonemployers, All Industries Total** | **260,305** | **269,845** | **9,540** | **3.7%** | **$15,819,574** | **1,086,184** | **1,122,645** | **36,461** | **3.4%** | **$59,212,071** |

| Industry | MA | | | | | New England | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) |
| Glass and Glass Product Manufacturing | 73 | 73 | 0 | 0.0% | $2,831 | 180 | 149 | -31 | -17.2% | $5,047 |
| Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers | 479 | 471 | -8 | -1.7% | $45,101 | 1,176 | 1,130 | -46 | -3.9% | $99,526 |
| Book, Periodical, and Newspaper Merchant | 348 | 309 | -39 | -11.2% | $9,129 | 863 | 694 | -169 | -19.6% | $19,010 |
| Electronics and Appliance Stores | 627 | 416 | -211 | -33.7% | $24,682 | 1,502 | 963 | -539 | -35.9% | $59,666 |
| Jewelry Stores | 1,088 | 829 | -259 | -23.8% | $41,682 | 2,468 | 1,946 | -522 | -21.2% | $84,935 |
| Sewing, Needlework, and Piece Goods Stores | 289 | 276 | -13 | -4.5% | $7,795 | 780 | 777 | -3 | -0.4% | $21,004 |
| Musical Instrument and Supplies Stores | 138 | 183 | 45 | 32.6% | $8,306 | 360 | 419 | 59 | 16.4% | $23,222 |
| Book Stores and News Dealers | 540 | 423 | -117 | -21.7% | $13,447 | 1,294 | 948 | -346 | -26.7% | $30,758 |
| Art Dealers | 518 | 514 | -4 | -0.8% | $31,634 | 1,282 | 1,182 | -100 | -7.8% | $79,687 |
| Video Tape and Disc Rental | 71 | 26 | -45 | -63.4% | $1,069 | 145 | 36 | -109 | -75.2% | $1,390 |
| Architectural Services | 1,674 | 1,822 | 148 | 8.8% | $111,063 | 3,432 | 3,528 | 96 | 2.8% | $213,480 |
| Landscape Architectural Services | 1,069 | 1,054 | -15 | -1.4% | $49,954 | 2,372 | 2,306 | -66 | -2.8% | $107,190 |
| Drafting Services | 472 | 391 | -81 | -17.2% | $10,100 | 1,223 | 976 | -247 | -20.2% | $26,208 |
| Photographic Services | 2,870 | 3,697 | 827 | 28.8% | $100,081 | 6,248 | 8,091 | 1,843 | 29.5% | $207,476 |
| Independent Artists, Writers, and Performers | 21,412 | 22,773 | 1,361 | 6.4% | $438,627 | 44,364 | 46,974 | 2,610 | 5.9% | $915,299 |
| Photofinishing | 338 | 299 | -39 | -11.5% | $6,741 | 708 | 678 | -30 | -4.2% | $16,343 |
| **Nonemployers, Creative Economy Total** | **32,006** | **33,556** | **1,550** | **4.8%** | **$902,242** | **68,397** | **70,797** | **2,400** | **3.5%** | **$1,910,241** |
| **Nonemployers, All Industries Total** | **465,019** | **502,274** | **37,255** | **8.0%** | **$26,790,769** | **1,086,184** | **1,122,645** | **36,461** | **3.4%** | **$59,212,071** |

| Industry | ME | | | | | New England | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) |
| Glass and Glass Product Manufacturing | 30 | 19 | -11 | -36.7% | $245 | 180 | 149 | -31 | -17.2% | $5,047 |
| Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers | 99 | 96 | -3 | -3.0% | $3,702 | 1,176 | 1,130 | -46 | -3.9% | $99,526 |
| Book, Periodical, and Newspaper Merchant | 107 | 77 | -30 | -28.0% | $1,503 | 863 | 694 | -169 | -19.6% | $19,010 |
| Electronics and Appliance Stores | 131 | 75 | -56 | -42.7% | $3,591 | 1,502 | 963 | -539 | -35.9% | $59,666 |
| Jewelry Stores | 172 | 159 | -13 | -7.6% | $4,216 | 2,468 | 1,946 | -522 | -21.2% | $84,935 |
| Sewing, Needlework, and Piece Goods Stores | 131 | 142 | 11 | 8.4% | $2,967 | 780 | 777 | -3 | -0.4% | $21,004 |
| Musical Instrument and Supplies Stores | 33 | 36 | 3 | 9.1% | $2,384 | 360 | 419 | 59 | 16.4% | $23,222 |
| Book Stores and News Dealers | 157 | 120 | -37 | -23.6% | $3,937 | 1,294 | 948 | -346 | -26.7% | $30,758 |
| Art Dealers | 187 | 173 | -14 | -7.5% | $5,481 | 1,282 | 1,182 | -100 | -7.8% | $79,687 |
| Video Tape and Disc Rental | 17 | 0 | -17 | -100.0% | $0 | 145 | 36 | -109 | -75.2% | $1,390 |
| Architectural Services | 224 | 232 | 8 | 3.6% | $8,529 | 3,432 | 3,528 | 96 | 2.8% | $213,480 |
| Landscape Architectural Services | 245 | 246 | 1 | 0.4% | $8,912 | 2,372 | 2,306 | -66 | -2.8% | $107,190 |
| Drafting Services | 151 | 125 | -26 | -17.2% | $3,005 | 1,223 | 976 | -247 | -20.2% | $26,208 |
| Photographic Services | 571 | 801 | 230 | 40.3% | $15,879 | 6,248 | 8,091 | 1,843 | 29.5% | $207,476 |
| Independent Artists, Writers, and Performers | 4,225 | 4,538 | 313 | 7.4% | $73,329 | 44,364 | 46,974 | 2,610 | 5.9% | $915,299 |
| Photofinishing | 67 | 80 | 13 | 19.4% | $1,171 | 708 | 678 | -30 | -4.2% | $16,343 |
| **Nonemployers, Creative Economy Total** | **6,547** | **6,919** | **372** | **5.7%** | **$138,851** | **68,397** | **70,797** | **2,400** | **3.5%** | **$1,910,241** |
| **Nonemployers, All Industries Total** | **118,500** | **111,777** | **-6,723** | **-5.7%** | **$4,921,631** | **1,086,184** | **1,122,645** | **36,461** | **3.4%** | **$59,212,071** |

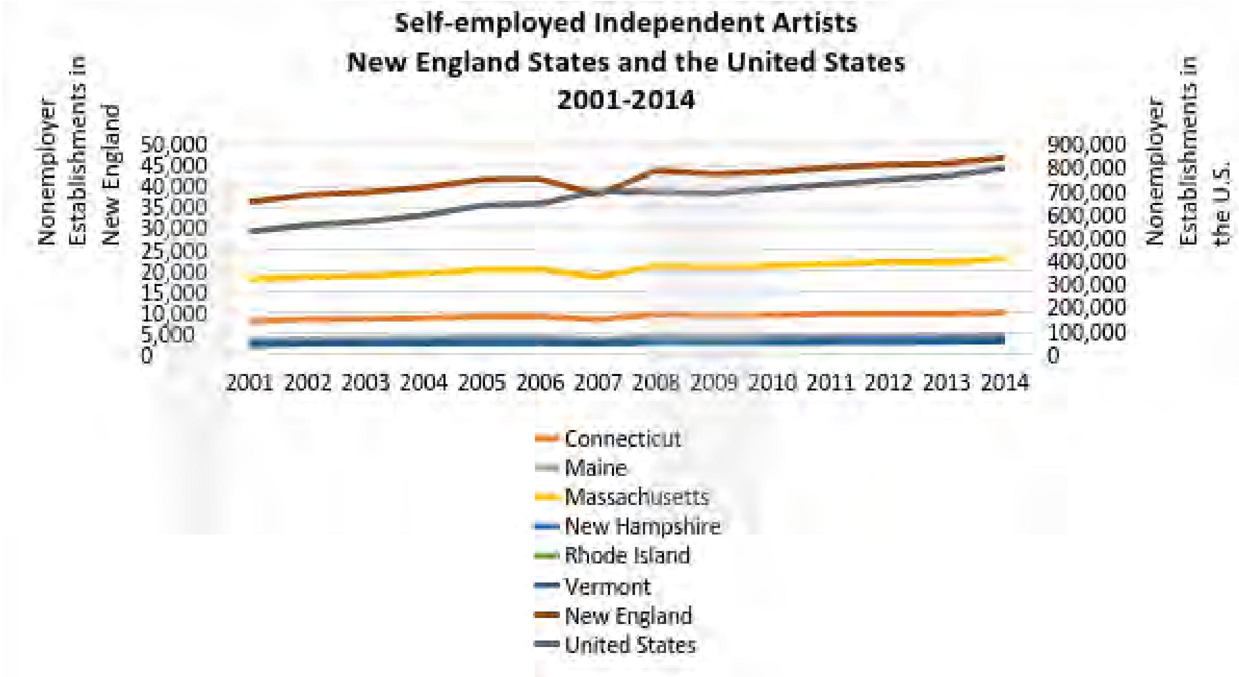
| Industry | NH | | | | | New England | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) |
| Glass and Glass Product Manufacturing | 21 | 15 | -6 | -28.6% | $373 | 180 | 149 | -31 | -17.2% | $5,047 |
| Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers | 123 | 115 | -8 | -6.5% | $13,826 | 1,176 | 1,130 | -46 | -3.9% | $99,526 |
| Book, Periodical, and Newspaper Merchant | 101 | 82 | -19 | -18.8% | $2,432 | 863 | 694 | -169 | -19.6% | $19,010 |
| Electronics and Appliance Stores | 169 | 113 | -56 | -33.1% | $11,232 | 1,502 | 963 | -539 | -35.9% | $59,666 |
| Jewelry Stores | 202 | 161 | -41 | -20.3% | $8,785 | 2,468 | 1,946 | -522 | -21.2% | $84,935 |
| Sewing, Needlework, and Piece Goods Stores | 109 | 109 | 0 | 0.0% | $2,772 | 780 | 777 | -3 | -0.4% | $21,004 |
| Musical Instrument and Supplies Stores | 36 | 30 | -6 | -16.7% | $909 | 360 | 419 | 59 | 16.4% | $23,222 |
| Book Stores and News Dealers | 153 | 95 | -58 | -37.9% | $3,046 | 1,294 | 948 | -346 | -26.7% | $30,758 |
| Art Dealers | 93 | 89 | -4 | -4.3% | $7,338 | 1,282 | 1,182 | -100 | -7.8% | $79,687 |
| Video Tape and Disc Rental | 17 | 3 | -14 | -82.4% | $213 | 145 | 36 | -109 | -75.2% | $1,390 |
| Architectural Services | 216 | 202 | -14 | -6.5% | $11,387 | 3,432 | 3,528 | 96 | 2.8% | $213,480 |
| Landscape Architectural Services | 215 | 184 | -31 | -14.4% | $8,392 | 2,372 | 2,306 | -66 | -2.8% | $107,190 |
| Drafting Services | 167 | 88 | -79 | -47.3% | $3,046 | 1,223 | 976 | -247 | -20.2% | $26,208 |
| Photographic Services | 617 | 796 | 179 | 29.0% | $17,669 | 6,248 | 8,091 | 1,843 | 29.5% | $207,476 |
| Independent Artists, Writers, and Performers | 3,512 | 3,724 | 212 | 6.0% | $69,349 | 44,364 | 46,974 | 2,610 | 5.9% | $915,299 |
| Photofinishing | 56 | 56 | 0 | 0.0% | $1,222 | 708 | 678 | -30 | -4.2% | $16,343 |
| **Nonemployers, Creative Economy Total** | **5,807** | **5,862** | **55** | **0.9%** | **$161,991** | **68,397** | **70,797** | **2,400** | **3.5%** | **$1,910,241** |
| **Nonemployers, All Industries Total** | **108,506** | **103,345** | **-5,161** | **-4.8%** | **$5,762,192** | **1,086,184** | **1,122,645** | **36,461** | **3.4%** | **$59,212,071** |

| Industry | RI | | | | | New England | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) |
| Glass and Glass Product Manufacturing | 18 | 0 | -18 | -100.0% | $0 | 180 | 149 | -31 | -17.2% | $5,047 |
| Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers | 152 | 129 | -23 | -15.1% | $11,780 | 1,176 | 1,130 | -46 | -3.9% | $99,526 |
| Book, Periodical, and Newspaper Merchant | 78 | 43 | -35 | -44.9% | $842 | 863 | 694 | -169 | -19.6% | $19,010 |
| Electronics and Appliance Stores | 111 | 83 | -28 | -25.2% | $4,279 | 1,502 | 963 | -539 | -35.9% | $59,666 |
| Jewelry Stores | 278 | 197 | -81 | -29.1% | $7,908 | 2,468 | 1,946 | -522 | -21.2% | $84,935 |
| Sewing, Needlework, and Piece Goods Stores | 29 | 31 | 2 | 6.9% | $995 | 780 | 777 | -3 | -0.4% | $21,004 |
| Musical Instrument and Supplies Stores | 23 | 31 | 8 | 34.8% | $3,066 | 360 | 419 | 59 | 16.4% | $23,222 |
| Book Stores and News Dealers | 103 | 64 | -39 | -37.9% | $2,038 | 1,294 | 948 | -346 | -26.7% | $30,758 |
| Art Dealers | 83 | 76 | -7 | -8.4% | $3,253 | 1,282 | 1,182 | -100 | -7.8% | $79,687 |
| Video Tape and Disc Rental | 10 | 0 | -10 | -100.0% | $0 | 145 | 36 | -109 | -75.2% | $1,390 |
| Architectural Services | 220 | 214 | -6 | -2.7% | $12,075 | 3,432 | 3,528 | 96 | 2.8% | $213,480 |
| Landscape Architectural Services | 129 | 133 | 4 | 3.1% | $5,192 | 2,372 | 2,306 | -66 | -2.8% | $107,190 |
| Drafting Services | 79 | 65 | -14 | -17.7% | $1,544 | 1,223 | 976 | -247 | -20.2% | $26,208 |
| Photographic Services | 417 | 548 | 131 | 31.4% | $12,643 | 6,248 | 8,091 | 1,843 | 29.5% | $207,476 |
| Independent Artists, Writers, and Performers | 2,871 | 3,060 | 189 | 6.6% | $49,944 | 44,364 | 46,974 | 2,610 | 5.9% | $915,299 |
| Photofinishing | 39 | 35 | -4 | -10.3% | $826 | 708 | 678 | -30 | -4.2% | $16,343 |
| **Nonemployers, Creative Economy Total** | **4,640** | **4,709** | **69** | **1.5%** | **$116,385** | **68,397** | **70,797** | **2,400** | **3.5%** | **$1,910,241** |
| **Nonemployers, All Industries Total** | **72,389** | **75,223** | **2,834** | **3.9%** | **$3,381,886** | **1,086,184** | **1,122,645** | **36,461** | **3.4%** | **$59,212,071** |

| Industry | VT | | | | | New England | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) | 2007 Establishments | 2014 Establishments | Absolute Change | Percent Change | 2014 Receipts (in $1,000s) |
| Glass and Glass Product Manufacturing | 19 | 18 | -1 | -5.3% | $562 | 180 | 149 | -31 | -17.2% | $5,047 |
| Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers | 38 | 56 | 18 | 47.4% | $1,508 | 1,176 | 1,130 | -46 | -3.9% | $99,526 |
| Book, Periodical, and Newspaper Merchant | 37 | 34 | -3 | -8.1% | $779 | 863 | 694 | -169 | -19.6% | $19,010 |
| Electronics and Appliance Stores | 57 | 41 | -16 | -28.1% | $3,349 | 1,502 | 963 | -539 | -35.9% | $59,666 |
| Jewelry Stores | 92 | 71 | -21 | -22.8% | $3,265 | 2,468 | 1,946 | -522 | -21.2% | $84,935 |
| Sewing, Needlework, and Piece Goods Stores | 64 | 69 | 5 | 7.8% | $1,368 | 780 | 777 | -3 | -0.4% | $21,004 |
| Musical Instrument and Supplies Stores | 25 | 27 | 2 | 8.0% | $1,012 | 360 | 419 | 59 | 16.4% | $23,222 |
| Book Stores and News Dealers | 66 | 46 | -20 | -30.3% | $1,514 | 1,294 | 948 | -346 | -26.7% | $30,758 |
| Art Dealers | 84 | 79 | -5 | -6.0% | $3,041 | 1,282 | 1,182 | -100 | -7.8% | $79,687 |
| Video Tape and Disc Rental | 9 | 0 | -9 | -100.0% | $0 | 145 | 36 | -109 | -75.2% | $1,390 |
| Architectural Services | 196 | 189 | -7 | -3.6% | $8,912 | 3,432 | 3,528 | 96 | 2.8% | $213,480 |
| Landscape Architectural Services | 134 | 122 | -12 | -9.0% | $4,178 | 2,372 | 2,306 | -66 | -2.8% | $107,190 |
| Drafting Services | 66 | 60 | -6 | -9.1% | $1,075 | 1,223 | 976 | -247 | -20.2% | $26,208 |
| Photographic Services | 347 | 466 | 119 | 34.3% | $8,407 | 6,248 | 8,091 | 1,843 | 29.5% | $207,476 |
| Independent Artists, Writers, and Performers | 2,818 | 3,010 | 192 | 6.8% | $51,767 | 44,364 | 46,974 | 2,610 | 5.9% | $915,299 |
| Photofinishing | 35 | 35 | 0 | 0.0% | $1,003 | 708 | 678 | -30 | -4.2% | $16,343 |
| **Nonemployers, Creative Economy Total** | **4,087** | **4,323** | **236** | **5.8%** | **$91,740** | **68,397** | **70,797** | **2,400** | **3.5%** | **$1,910,241** |
| **Nonemployers, All Industries Total** | **61,465** | **60,181** | **-1,284** | **-2.1%** | **$2,536,019** | **1,086,184** | **1,122,645** | **36,461** | **3.4%** | **$59,212,071** |

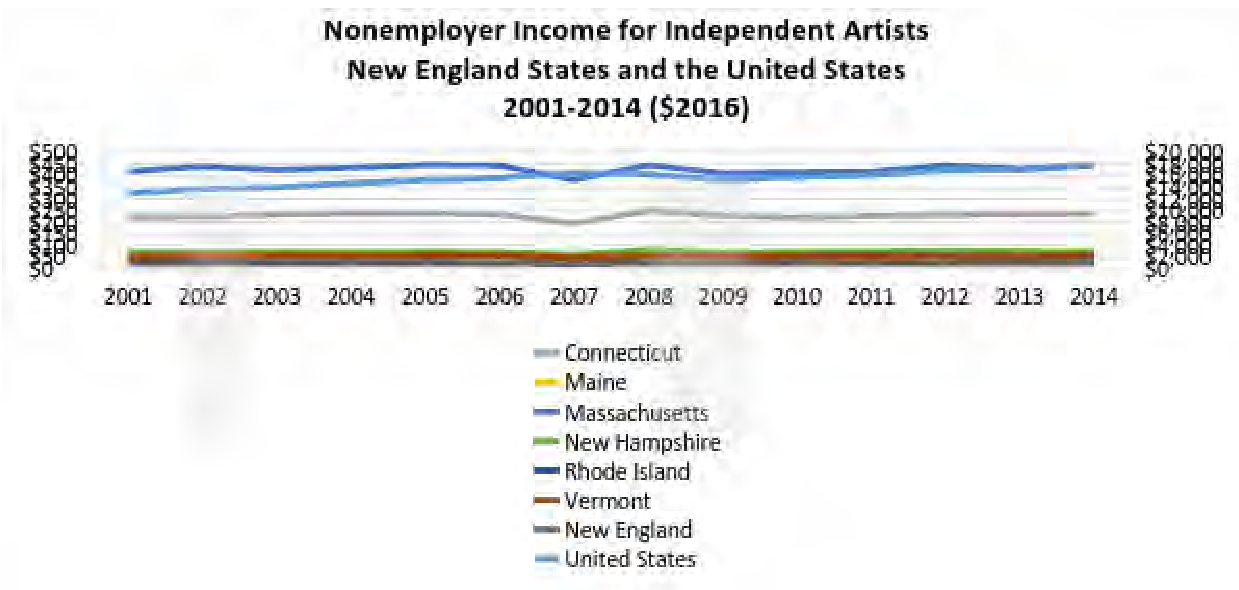
**Source:** U.S. Census Bureau, Nonemployer Statistics.

**Time Series of Self-employed Independent Artists in the New England States, 2001-2014**




**Source:** U.S. Census Bureau, Nonemployer Statistics.

*Note: Shaded areas indicate periods of recession.




**Source:** U.S. Census Bureau, Nonemployer Statistics.

*Note: Shaded areas indicate periods of recession.

**Employment Data Summary**

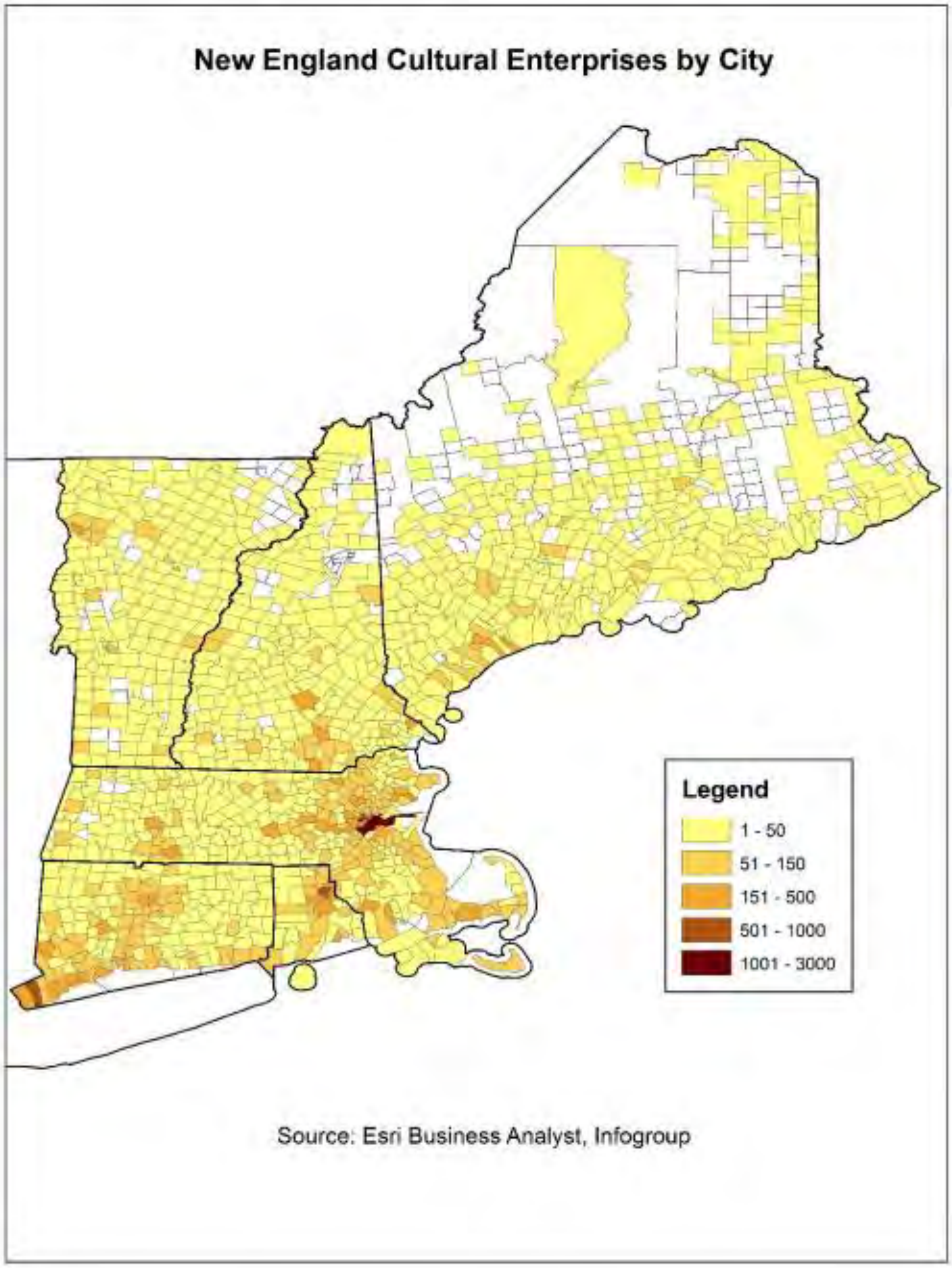
**Creative Economy Data Summary for the New England States**

| 2014/2015 | CT | ME | MA | NH | RI | VT |
|---|---|---|---|---|---|---|
| **Creative Enterprise Covered Employment** | 59,543 | 15,149 | 115,882 | 21,109 | 17,692 | 9,130 |
| **Creative Enterprise Nonemployers** | 15,428 | 6,919 | 33,556 | 5,862 | 4,709 | 4,323 |
| **Total Creative Enterprise Employment** | 74,971 | 22,068 | 149,438 | 26,971 | 22,401 | 13,453 |
| **Total Covered Employment** | 1,662,825 | 595,889 | 3,428,020 | 636,806 | 469,981 | 307,058 |
| **Total Nonemployers** | 269,845 | 111,777 | 502,274 | 103,345 | 75,223 | 60,181 |
| **Total Employment, All Industries** | 1,932,670 | 707,666 | 3,930,294 | 740,151 | 545,204 | 367,239 |
| **Share of Creative Enterprise Employment** | 3.9% | 3.1% | 3.8% | 3.6% | 4.1% | 3.7% |

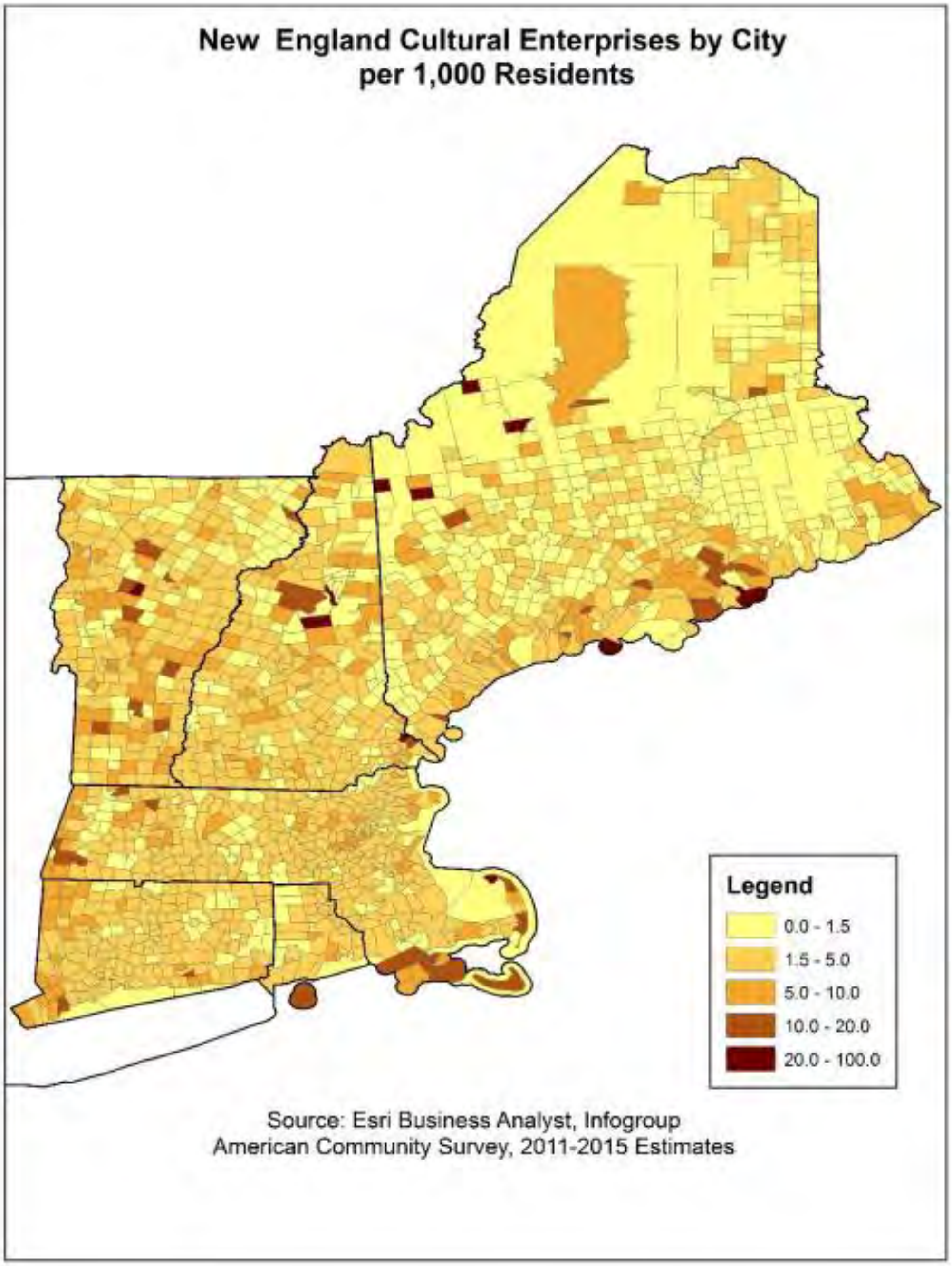
**Source:** U.S. Bureau of Labor Statistics, QCEW; U.S. Census Bureau, Nonemployer Statistics and County Business Patterns (for suppressed values)

# Appendix C – Geographic Analysis of Creative Economy Enterprises, 2014

**New England Creative Enterprises by City, 2014**



**New England Creative Enterprises by City (per 1,000 Residents), 2014**



## Appendix D – Methodology: Creative Enterprises, Industry Codes

### NEFA CORE Industries by Creative Category

| NAICS 2012 Code | NEFA Core Industry and NAICS Description |
|---|---|
| **Architecture and Design** | |
| 541310 | Architectural Services |
| 541320 | Landscape Architectural Services |
| 541340 | Drafting Services |
| 541410 | Interior Design Services |
| 541420 | Industrial Design Services |
| 541430 | Graphic Design Services |
| 541490 | Other Specialized Design Services |
| **Art and electronics-related Retail** | |
| 443142 | Radio, Television, and Other Electronics Stores |
| 448310 | Jewelry Stores |
| 451130 | Sewing, Needlework, and Piece Goods Stores |
| 451140 | Musical Instrument and Supplies Stores |
| 451211 | Book Stores |
| 453920 | Art Dealers |
| 812921 | Photofinishing Laboratories (except One-Hour) |
| 812922 | One-Hour Photofinishing |
| **Arts and architectural manufacturing** | |
| 332323 | Ornamental and Architectural Metal Work Manufacturing |
| 337212 | Custom Architectural Woodwork and Millwork Manufacturing |
| 339910 | Jewelry (except Costume) Manufacturing |
| 339992 | Musical Instrument Manufacturing |
| **Culture and Preservation** | |
| 712110 | Museums |
| 712120 | Historical Sites |
| 712130 | Zoos and Botanical Gardens |
| 712190 | Nature Parks and Other Similar Institutions |
| **Machinery and communications manufacturing** | |
| 333244 | Printing Machinery and Equipment Manufacturing |
| 334310 | Audio and Video Equipment Manufacturing |
| 334614 | Prerecorded Compact Disc (except Software), Tape, and Record Reproducing |
| **Marketing** | |
| 541810 | Advertising Agencies |
| 541830 | Media Buying Agencies |
| 541840 | Media Representatives |

| | |
|---|---|
| 541850 | Display Advertising |
| **Materials manufacturing** | |
| 325992 | Photographic Film, Paper, Plate, and Chemical Manufacturing |
| 327110 | Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing |
| 327212 | Other Pressed and Blown Glass and Glassware Manufacturing |
| 339940 | Lead Pencil and Art Good Manufacturing |
| **Media** | |
| 515111 | Radio Networks |
| 515112 | Radio Stations |
| 515120 | Television Broadcasting |
| 515210 | Cable and Other Subscription Programming |
| 517110 | Cable and Other Program Distribution |
| 519110 | News Syndicates |
| 519120 | Libraries and Archives |
| 519130 | Internet Publishing and Broadcasting |
| 532230 | Video Tape and Disc Rental |
| **Motion picture and teleproduction** | |
| 512110 | Motion Picture and Video Production |
| 512120 | Motion Picture and Video Distribution |
| 512131 | Motion Picture Theaters (except Drive-Ins) |
| 512132 | Drive-In Motion Picture Theaters |
| 512191 | Teleproduction and Other Postproduction Services |
| 512199 | Other Motion Picture and Video Industries |
| **Music Recording** | |
| 512210 | Record Production |
| 512220 | Integrated Record Production/Distribution |
| 512230 | Music Publishers |
| 512240 | Sound Recording Studios |
| 512290 | Other Sound Recording Industries |
| **Printing** | |
| 323111 | Commercial Lithographic Printing |
| 323113 | Commercial Screen Printing |
| 323117 | Books Printing |
| 323120 | Tradebinding and Related Work |
| **Publishing** | |
| 511110 | Newspaper Publishers |
| 511120 | Periodical Publishers |
| 511130 | Book Publishers |
| 511191 | Greeting Card Publishers |
| 511199 | All Other Publishers |

| | |
|---|---|
| **Visual Arts, Music and Other Performing Arts** | |
| 541921 | Photography Studios, Portrait |
| 541922 | Commercial Photography |
| 611610 | Fine Arts Schools |
| 711110 | Theater Companies and Dinner Theaters |
| 711120 | Dance Companies |
| 711130 | Musical Groups and Artists |
| 711190 | Other Performing Arts Companies |
| 711510 | Independent Artists, Writers, and Performers |
| **Wholesale art stores** | |
| 423410 | Photographic Equipment and Supplies Merchant Wholesalers |
| 423940 | Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers |
| 424110 | Printing and Writing Paper Merchant Wholesalers |
| 424920 | Book, Periodical, and Newspaper Merchant Wholesalers |

**NEFA Core Industries by 2-Digit NAICS Supersector**

| 2 Digit NAICS | NEFA Core Industry and NAICS Description | |
|---|---|---|
| **31-33** | **Manufacturing** | |
| | 323111 | Commercial Lithographic Printing |
| | 323113 | Commercial Screen Printing |
| | 323117 | Books Printing |
| | 323120 | Tradebinding and Related Work |
| | 325992 | Photographic Film, Paper, Plate, and Chemical Manufacturing |
| | 327110 | Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing |
| | 327212 | Other Pressed and Blown Glass and Glassware Manufacturing |
| | 332323 | Ornamental and Architectural Metal Work Manufacturing |
| | 333244 | Printing Machinery and Equipment Manufacturing |
| | 334310 | Audio and Video Equipment Manufacturing |
| | 334614 | Prerecorded Compact Disc (except Software), Tape, and Record Reproducing |
| | 337212 | Custom Architectural Woodwork and Millwork Manufacturing |
| | 339910 | Jewelry (except Costume) Manufacturing |
| | 339940 | Lead Pencil and Art Good Manufacturing |
| | 339992 | Musical Instrument Manufacturing |
| **42** | **Wholesale Trade** | |
| | 423410 | Photographic Equipment and Supplies Merchant Wholesalers |
| | 423940 | Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers |
| | 424110 | Printing and Writing Paper Merchant Wholesalers |
| | 424920 | Book, Periodical, and Newspaper Merchant Wholesalers |
| **44-45** | **Retail Trade** | |
| | 443142 | Radio, Television, and Other Electronics Stores |
| | 448310 | Jewelry Stores |
| | 451130 | Sewing, Needlework, and Piece Goods Stores |
| | 451140 | Musical Instrument and Supplies Stores |
| | 451211 | Book Stores |
| | 453920 | Art Dealers |
| **51** | **Information** | |
| | 511110 | Newspaper Publishers |
| | 511120 | Periodical Publishers |
| | 511130 | Book Publishers |
| | 511191 | Greeting Card Publishers |
| | 511199 | All Other Publishers |
| | 512110 | Motion Picture and Video Production |
| | 512120 | Motion Picture and Video Distribution |

| | | |
|---|---|---|
| | 512131 | Motion Picture Theaters (except Drive-Ins) |
| | 512132 | Drive-In Motion Picture Theaters |
| | 512191 | Teleproduction and Other Postproduction Services |
| | 512199 | Other Motion Picture and Video Industries |
| | 512210 | Record Production |
| | 512220 | Integrated Record Production/Distribution |
| | 512230 | Music Publishers |
| | 512240 | Sound Recording Studios |
| | 512290 | Other Sound Recording Industries |
| | 515111 | Radio Networks |
| | 515112 | Radio Stations |
| | 515120 | Television Broadcasting |
| | 515210 | Cable and Other Subscription Programming |
| | 517110 | Cable and Other Program Distribution |
| | 519110 | News Syndicates |
| | 519120 | Libraries and Archives |
| | 519130 | Internet Publishing and Broadcasting |
| **53** | **Real Estate and Rental and Leasing** | |
| | 532230 | Video Tape and Disc Rental |
| **54** | **Professional, Scientific, and Technical Services** | |
| | 541310 | Architectural Services |
| | 541320 | Landscape Architectural Services |
| | 541340 | Drafting Services |
| | 541410 | Interior Design Services |
| | 541420 | Industrial Design Services |
| | 541430 | Graphic Design Services |
| | 541490 | Other Specialized Design Services |
| | 541810 | Advertising Agencies |
| | 541830 | Media Buying Agencies |
| | 541840 | Media Representatives |
| | 541850 | Display Advertising |
| | 541921 | Photography Studios, Portrait |
| | 541922 | Commercial Photography |
| **61** | **Educational Services** | |
| | 611610 | Fine Arts Schools |
| **71** | **Arts, Entertainment, and Recreation** | |
| | 711110 | Theater Companies and Dinner Theaters |
| | 711120 | Dance Companies |
| | 711130 | Musical Groups and Artists |
| | 711190 | Other Performing Arts Companies |

| | | |
|---|---|---|
| | 711510 | Independent Artists, Writers, and Performers |
| | 712110 | Museums |
| | 712120 | Historical Sites |
| | 712130 | Zoos and Botanical Gardens |
| | 712190 | Nature Parks and Other Similar Institutions |
| **81** | **Other Services (except Public Administration)** | |
| | 812921 | Photofinishing Laboratories (except One-Hour) |
| | 812922 | One-Hour Photofinishing |

**CORE National Taxonomy of Exempt Entities (NTEE) Codes**

| NTEE | Description |
|---|---|
| A01 | Alliances & Advocacy |
| A02 | Management & Technical Assistance |
| A03 | Professional Societies & Associations |
| A05 | Research Institutes & Public Policy Analysis |
| A11 | Single Organization Support |
| A12 | Fund Raising & Fund Distribution |
| A19 | Support N.E.C. |
| A20 | Arts & Culture |
| A23 | Cultural & Ethnic Awareness |
| A25 | Arts Education |
| A26 | Arts Councils & Agencies |
| A30 | Media & Communications |
| A31 | Film & Video |
| A32 | Television |
| A33 | Printing & Publishing |
| A34 | Radio |
| A40 | Visual Arts |
| A50 | Museums |
| A51 | Art Museums |
| A52 | Children's Museums |
| A54 | History Museums |
| A56 | Natural History & Natural Science Museums |
| A57 | Science & Technology Museums |
| A60 | Performing Arts |
| A61 | Performing Arts Centers |
| A62 | Dance |
| A63 | Ballet |
| A65 | Theater |
| A68 | Music |
| A69 | Symphony Orchestras |
| A6A | Opera |
| A6B | Singing & Choral Groups |
| A6C | Bands & Ensembles |
| A6E | Performing Arts Schools |
| A70 | Humanities |
| A80 | Historical Societies & Related Historical Activities |
| A84 | Commemorative Events |

| | |
|---|---|
| A90 | Arts Services |
| A99 | Arts, Culture & Humanities N.E.C. |
| B70 | Libraries |
| C41 | Botanical Gardens & Arboreta |
| D32 | Bird Sanctuaries |
| D34 | Wildlife Sanctuaries |
| D50 | Zoos & Aquariums |
| N52 | Fairs |
| Q21 | International Cultural Exchange |
| V31 | Black Studies |
| V32 | Women's Studies |
| V33 | Ethnic Studies |
| V35 | International Studies |
| X80 | Religious Media & Communications |
| X81 | Religious Film & Video |
| X82 | Religious Television |
| X83 | Religious Printing & Publishing |
| X84 | Religious Radio |

**Creative Economy Industry Definition based on industry codes (NAICS): Crosswalk Tables**

Code definitions translate original 2007 NEFA definitions from 2007 NAICS to 2012 NAICS codes.

**NEFA CORE Industries**

2017 report based on NEFA CORE industries listed below.

| 2007 NAICS | 2012 NAICS | Industry |
|---|---|---|
| **Group 1 Cultural Goods Production** | | |
| 323110 | 323111 | Commercial Lithographic Printing |
| 323111 | 323111 | Commercial Gravure Printing |
| 323112 | 323111 | Commercial Flexographic Printing |
| 323113 | 323113 | Commercial Screen Printing |
| 323115 | 323111 | Digital Printing |
| 323117 | 323117 | Books Printing |
| 323119 | 323111 | Other Commercial Printing |
| 323121 | 323120 | Tradebinding and Related Work |
| 323122 | 323120 | Prepress Services |
| 325992 | 325992 | Photographic Film, Paper, Plate, and Chemical Manufacturing |
| 327112 | 327110 | Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing |
| 327212 | 327212 | Other Pressed and Blown Glass and Glassware Manufacturing |
| 332323 | 332323 | Ornamental and Architectural Metal Work Manufacturing |
| 333293 | 333244 | Printing Machinery and Equipment Manufacturing |
| 334310 | 334310 | Audio and Video Equipment Manufacturing |
| 334612 | 334614 | Prerecorded Compact Disc (except Software), Tape, and Record Reproducing |
| 337212 | 337212 | Custom Architectural Woodwork and Millwork Manufacturing |
| 339911 | 339910 | Jewelry (except Costume) Manufacturing |
| 339912 | 339910 | Silverware and Hollowware Manufacturing |
| 339913 | 339910 | Jewelers' Material and Lapidary Work Manufacturing |
| 339914 | 339910 | Costume Jewelry and Novelty Manufacturing |
| 339942 | 339940 | Lead Pencil and Art Good Manufacturing |
| 339992 | 339992 | Musical Instrument Manufacturing |
| **Group 2 Cultural Goods Distribution** | | |
| 423410 | 423410 | Photographic Equipment and Supplies Merchant Wholesalers |
| 423940 | 423940 | Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers |
| 424110 | 424110 | Printing and Writing Paper Merchant Wholesalers |
| 424920 | 424920 | Book, Periodical, and Newspaper Merchant Wholesalers |
| 443112 | 443142 | Radio, Television, and Other Electronics Stores |

| | | |
|---|---|---|
| 443130 | 443142 | Camera and Photographic Supplies Stores |
| 448310 | 448310 | Jewelry Stores |
| 451130 | 451130 | Sewing, Needlework, and Piece Goods Stores |
| 451140 | 451140 | Musical Instrument and Supplies Stores |
| 451211 | 451211 | Book Stores |
| 451220 | 443142 | Prerecorded Tape, Compact Disc, and Record Stores |
| 453920 | 453920 | Art Dealers |
| 812921 | 812921 | Photofinishing Laboratories (except One-Hour) |
| 812922 | 812922 | One-Hour Photofinishing |
| **Group 3 Intellectual Property Production & Distribution** | | |
| 511110 | 511110 | Newspaper Publishers |
| 511120 | 511120 | Periodical Publishers |
| 511130 | 511130 | Book Publishers |
| 511191 | 511191 | Greeting Card Publishers |
| 511199 | 511199 | All Other Publishers |
| 512110 | 512110 | Motion Picture and Video Production |
| 512120 | 512120 | Motion Picture and Video Distribution |
| 512131 | 512131 | Motion Picture Theaters (except Drive-Ins) |
| 512132 | 512132 | Drive-In Motion Picture Theaters |
| 512191 | 512191 | Teleproduction and Other Postproduction Services |
| 512199 | 512199 | Other Motion Picture and Video Industries |
| 512210 | 512210 | Record Production |
| 512220 | 512220 | Integrated Record Production/Distribution |
| 512230 | 512230 | Music Publishers |
| 512240 | 512240 | Sound Recording Studios |
| 512290 | 512290 | Other Sound Recording Industries |
| 515111 | 515111 | Radio Networks |
| 515112 | 515112 | Radio Stations |
| 515120 | 515120 | Television Broadcasting |
| 515210 | 515210 | Cable and Other Subscription Programming |
| 516110 | 519130 | Internet Publishing and Broadcasting |
| 517510 | 517110 | Cable and Other Program Distribution |
| 519110 | 519110 | News Syndicates |
| 519120 | 519120 | Libraries and Archives |
| 532230 | 532230 | Video Tape and Disc Rental |
| 541310 | 541310 | Architectural Services |
| 541320 | 541320 | Landscape Architectural Services |
| 541340 | 541340 | Drafting Services |
| 541410 | 541410 | Interior Design Services |
| 541420 | 541420 | Industrial Design Services |

| | | |
|---|---|---|
| 541430 | 541430 | Graphic Design Services |
| 541490 | 541490 | Other Specialized Design Services |
| 541810 | 541810 | Advertising Agencies |
| 541830 | 541830 | Media Buying Agencies |
| 541840 | 541840 | Media Representatives |
| 541850 | 541850 | Display Advertising |
| 541921 | 541921 | Photography Studios, Portrait |
| 541922 | 541922 | Commercial Photography |
| 611610 | 611610 | Fine Arts Schools |
| 711110 | 711110 | Theater Companies and Dinner Theaters |
| 711120 | 711120 | Dance Companies |
| 711130 | 711130 | Musical Groups and Artists |
| 711190 | 711190 | Other Performing Arts Companies |
| 711510 | 711510 | Independent Artists, Writers, and Performers |
| 712120 | 712120 | Historical Sites |
| 712130 | 712130 | Zoos and Botanical Gardens |
| 712190 | 712190 | Nature Parks and Other Similar Institutions |
| 712110 | 712110 | Museums* |

*Note: Museums were moved from Group 2 to Group 3.

Peripheral Industries

| 2007 NAICS | 2012 NAICS | Industry |
|---|---|---|
| **Group 1 Cultural Goods Production** | | |
| 323114 | 323111 | Quick Printing |
| 325910 | 325910 | Printing Ink Manufacturing |
| 327215 | 327215 | Glass Product Manufacturing Made of Purchased Glass |
| 327420 | 327420 | Gypsum Product Manufacturing |
| 327991 | 327991 | Cut Stone and Stone Product Manufacturing |
| 327999 | 327999 | All Other Miscellaneous Nonmetallic Mineral Product Manufacturing |
| 333315 | 333316 | Photographic and Photocopying Equipment Manufacturing |
| 334220 | 334220 | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing |
| 334613 | 334613 | Magnetic and Optical Recording Media Manufacturing |
| 336612 | 336612 | Boat Building |
| **Group 2 Cultural Goods Distribution** | | |
| 423620 | 423620 | Electrical and Electronic Appliance, Television, and Radio Set Merchant Wholesalers |
| 423920 | 423920 | Toy and Hobby Goods and Supplies Merchant Wholesalers |
| 424990 | 424990 | Other Miscellaneous Nondurable Goods Merchant Wholesalers |
| 451120 | 451120 | Hobby, Toy, and Game Stores |
| 451212 | 451212 | News Dealers and Newsstands |
| 453220 | 453220 | Gift, Novelty, and Souvenir Stores |
| 453998 | 453998 | All Other Miscellaneous Store Retailers (except Tobacco Stores) |
| **Group 3 Intellectual Property Production & Distribution** | | |
| 511210 | 511210 | Software Publishers |
| 532220 | 532220 | Formal Wear and Costume Rental |
| 532299 | 532299 | All Other Consumer Goods Rental |
| 541820 | 541820 | Public Relations Agencies |
| 541860 | 541860 | Direct Mail Advertising |
| 541890 | 541890 | Other Services Related to Advertising |
| 611519 | 611519 | Other Technical and Trade Schools |
| 711310 | 711310 | Promoters of Performing Arts, Sports, and Similar Events with Facilities |
| 711320 | 711320 | Promoters of Performing Arts, Sports, and Similar Events without Facilities |
| 711410 | 711410 | Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures |

## Appendix E – Methodology: Creative and Artistic Occupations, Occupational Codes

### Crosswalk Tables

#### NEFA CORE Occupations

| SOC 2000 | SOC 2010 | Census | Occupation |
|---|---|---|---|
| 11-2011 | 11-2011 | 0040 | Advertising and Promotions Managers |
| 11-2031 | 11-2031 | 0060 | Public Relations Managers |
| 17-1011 | 17-1011 | 1300 | *Architects, Except Landscape and Naval |
| 17-1012 | 17-1012 | 1300 | *Landscape Architects |
| 17-3011 | 17-3011 | [Part of 1540] | Architectural and Civil Drafters |
| 19-3091 | 19-3091 | [Part of 1860] | Anthropologists and Archeologists |
| 19-3093 | 19-3093 | [Part of 1860] | Historians |
| 25-1031 | 25-1031 | [Part of 2200] | Architecture Teachers, Postsecondary |
| 25-1061 | 25-1061 | [Part of 2200] | Anthropology and Archeology Teachers, Postsecondary |
| 25-1062 | 25-1062 | [Part of 2200] | Area, Ethnic, and Cultural Studies Teachers, Postsecondary |
| 25-1082 | 25-1082 | [Part of 2200] | Library Science Teachers, Postsecondary |
| 25-1121 | 25-1121 | [Part of 2200] | Art, Drama, and Music Teachers, Postsecondary |
| 25-1122 | 25-1122 | [Part of 2200] | Communications Teachers, Postsecondary |
| 25-1123 | 25-1123 | [Part of 2200] | English Language and Literature Teachers, Postsecondary |
| 25-1124 | 25-1124 | [Part of 2200] | Foreign Language and Literature Teachers, Postsecondary |
| 25-1125 | 25-1125 | [Part of 2200] | History Teachers, Postsecondary |
| 25-4011 | 25-4011 | 2400 | Archivists |
| 25-4012 | 25-4012 | 2400 | Curators |
| 25-4013 | 25-4013 | 2400 | Museum Technicians and Conservators |
| 25-4021 | 25-4021 | 2430 | Librarians |
| 25-4031 | 25-4031 | 2440 | Library Technicians |
| 25-9011 | 25-9011 | [Part of 2550] | Audio-Visual Collections Specialists |
| 27-1011 | 27-1011 | 2600 | *Art Directors |
| 27-1012 | 27-1012 | 2600 | *Craft Artists |
| 27-1013 | 27-1013 | 2600 | *Fine Artists, Including Painters, Sculptors, and Illustrators |
| 27-1014 | 27-1014 | 2600 | *Multi-Media Artists and Animators |
| 27-1019 | 27-1019 | 2600 | *Artists and Related Workers, All Other |
| 27-1021 | 27-1021 | 2630 | *Commercial and Industrial Designers |

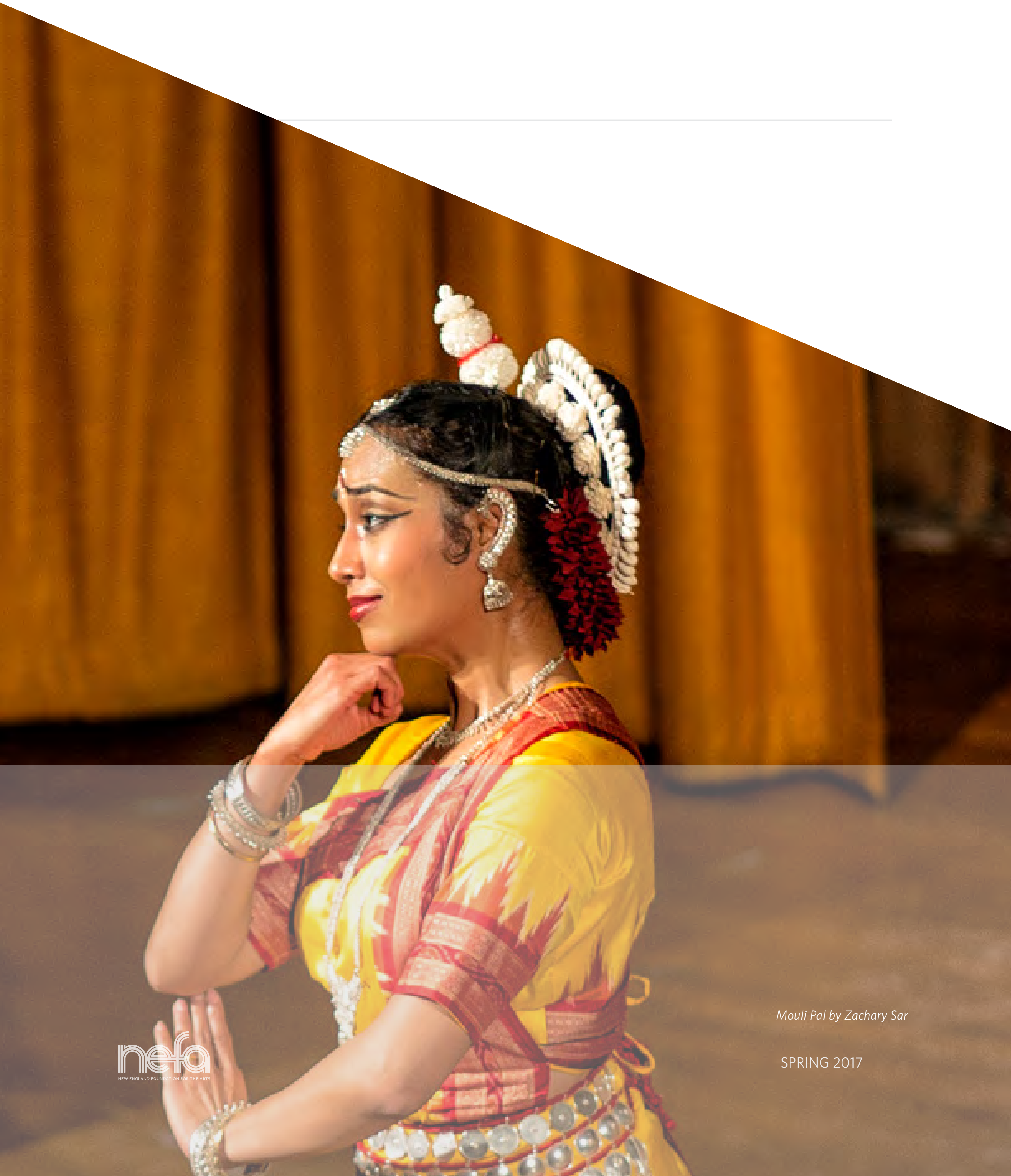
| | | | |
|---|---|---|---|
| 27-1022 | 27-1022 | 2630 | *Fashion Designers |
| 27-1023 | 27-1023 | 2630 | *Floral Designers |
| 27-1024 | 27-1024 | 2630 | *Graphic Designers |
| 27-1025 | 27-1025 | 2630 | *Interior Designers |
| 27-1026 | 27-1026 | 2630 | *Merchandise Displayers and Window Trimmers |
| 27-1027 | 27-1027 | 2630 | *Set and Exhibit Designers |
| 27-1029 | 27-1029 | 2630 | *Designers, All Other |
| 27-2011 | 27-2011 | 2700 | *Actors |
| 27-2012 | 27-2012 | 2710 | *Producers and Directors |
| 27-2031 | 27-2031 | 2740 | *Dancers |
| 27-2032 | 27-2032 | 2740 | Choreographers |
| 27-2041 | 27-2041 | 2750 | Music Directors and Composers |
| 27-2042 | 27-2042 | 2750 | *Musicians and Singers |
| 27-2099 | 27-2099 | 2760 | *Entertainers, Performers, Sports and Related Workers, All Other |
| 27-3011 | 27-3011 | 2800 | *Radio and Television Announcers |
| 27-3012 | 27-3012 | 2800 | *Public Address System and Other Announcers |
| 27-3021 | 27-3021 | 2810 | Broadcast News Analysts |
| 27-3022 | 27-3022 | 2810 | Reporters and Correspondents |
| 27-3031 | 27-3031 | 2820 | Public Relations Specialists |
| 27-3041 | 27-3041 | 2830 | Editors |
| 27-3042 | 27-3042 | 2840 | Technical Writers |
| 27-3043 | 27-3043 | 2850 | *Writers and Authors |
| 27-3099 | 27-3099 | 2860 | Media and Communication Workers, All Other |
| 27-4011 | 27-4011 | 2900 | Audio and Video Equipment Technicians |
| 27-4012 | 27-4012 | 2900 | Broadcast Technicians |
| 27-4013 | 27-4013 | 2900 | Radio Operators |
| 27-4014 | 27-4014 | 2900 | Sound Engineering Technicians |
| 27-4021 | 27-4021 | 2910 | *Photographers |
| 27-4031 | 27-4031 | 2920 | Camera Operators, Television, Video, and Motion Picture |
| 27-4032 | 27-4032 | 2920 | Film and Video Editors |
| 27-4099 | 27-4099 | 2960 | Media and Communication Equipment Workers, All Other |
| 39-3021 | 39-3021 | 4410 | Motion Picture Projectionists |
| 39-3092 | 39-3092 | [Part of 4430] | Costume Attendants |
| 39-5091 | 39-5091 | [Part of 4520] | Makeup Artists, Theatrical and Performance |
| 41-3011 | 41-3011 | 4800 | Advertising Sales Agents |
| 43-4121 | 43-4121 | 5320 | Library Assistants, Clerical |

| | | | |
|---|---|---|---|
| 43-9031 | 43-9031 | 5830 | Desktop Publishers |
| 49-2097 | 49-2097 | 7120 | Electronic Home Entertainment Equipment Installers and Repairers |
| 49-9061 | 49-9061 | [Part of 7430] | Camera and Photographic Equipment Repairers |
| 49-9063 | 49-9063 | [Part of 7430] | Musical Instrument Repairers and Tuners |
| 49-9064 | 49-9064 | [Part of 7430] | Watch Repairers |
| 51-5011 | 51-5113 | 8230 | Bindery workers |
| 51-5012 | 51-5113 | 8230 | Bookbinders |
| 51-9071 | 51-9071 | 8750 | Jewelers and Precious Stone and Metal Workers |
| 51-9123 | 51-9123 | [Part of 8810] | Painting, Coating, and Decorating Workers |
| 51-9131 | 51-9151 | 8830 | Photographic Process Workers |
| 51-9132 | 51-9151 | 8830 | Photographic Processing Machine Operators |

**Peripheral Occupations**

| SOC 2000 | SOC 2010 | Census | Occupation |
|---|---|---|---|
| 13-1011 | 13-1011 | 0500 | Agents and Business Managers of Artists, Performers, and Athletes |
| 29-1125 | 29-1125 | 3210 | Recreational Therapists |
| 35-1011 | 35-1011 | 4000 | Chefs and Head Cooks |
| 35-2013 | 35-2013 | [Part of 4020] | Private Household Cooks |
| 35-2014 | 35-2014 | [Part of 4020] | Cooks, Restaurant |
| 39-3031 | 39-3031 | 4420 | Ushers, Lobby Attendants, and Ticket Takers |
| 39-6021 | 39-7011 | 4540 | Tour Guides and Escorts |
| 39-6022 | 39-7012 | 4540 | Travel Guides |
| 39-9032 | 39-9032 | [Part of 4620] | Recreation Workers |
| 51-3011 | 51-3011 | 7800 | Bakers |
| 51-4061 | 51-4061 | 8060 | Model Makers, Metal and Plastic |
| 51-4062 | 51-4062 | 8060 | Patternmakers, Metal and Plastic |
| 51-5021 | 51-5112 | 8240 | Job Printers |
| 51-5022 | 51-5111 | 8250 | Prepress Technicians and Workers |
| 51-5023 | 51-5112 | 8260 | Printing Machine Operators |
| 51-6050 | 51-6052 | 8350 | Tailors, Dressmakers, and Custom Sewers |
| 51-6051 | 51-6051 | 8350 | Sewers, Hand |
| 51-6092 | 51-6092 | 8440 | Fabric and Apparel Patternmakers |
| 51-7011 | 51-7011 | 8500 | Cabinetmakers and Bench Carpenters |
| 51-7021 | 51-7021 | 8510 | Furniture Finishers |
| 51-7031 | 51-7031 | 8520 | Model Makers, Wood |
| 51-7032 | 51-7032 | 8520 | Patternmakers, Wood |
| 51-7099 | 51-7099 | 8550 | Woodworkers, All Other |
| 51-9195 | 51-9195 | 8920 | Molders, Shapers, and Casters, Except Metal and Plastic |

*Indicates artistic occupations



*Mouli Pal by Zachary Sar*

SPRING 2017