



STATE OF HAWAII • DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM

Hawai'i's Creative Industries

Update Report 2024



RESEARCH & ECONOMIC ANALYSIS DIVISION
DBEDT • STATE OF HAWAII

**Department of Business, Economic
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FilmHawai'i

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Hawai'i Department of Business, Economic Development & Tourism
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Table of Contents

GLOSSARY	3
EXECUTIVE SUMMARY	5
I. INTRODUCTION.....	10
The Definition of the Creative Sector	10
Data Sources	11
II. OVERVIEW OF HAWAII’S CREATIVE SECTOR.....	12
Creative Sector Job Growth.....	13
National Competitiveness of the Creative Sector.....	14
Industry Concentration – Hawaii’s Creative Specialties.....	15
Performance Map Framework: Measuring Creative Industries.....	17
III. CREATIVE SECTOR PORTFOLIO PERFORMANCE.....	19
High-Performing Creative Sector Industry Groups.....	19
Other Creative Sector Industry Groups Performance.....	19
IV. CREATIVE SECTOR PERFORMANCE BY COUNTY	21
Honolulu County	21
Hawaii County.....	23
Maui County.....	25
Kauai County	27
V. CREATIVE SECTOR PERFORMANCE BY INDUSTRY GROUPS	30
Performing and Creative Arts.....	31
Engineering and Research and Development.....	31
Computer Services and Software Publishers.....	32
Marketing, Photography and Related.....	32
Business Consulting	33
Publishing and Information.....	33
Cultural Activities.....	33
Architecture.....	34
Design Services.....	34
Radio and Television Broadcasting.....	34
Film, TV, Video Production/Distribution, Cable & Media Streaming.....	35
Music.....	37
Arts Education	39
VI. CONCLUSIONS AND NEXT STEPS	41
APPENDIX.....	43
Table A. Detailed Industry Data, 2013-2023.....	43

GLOSSARY

Industry: a group of establishments that have the same production process and produce similar goods and services. Industries are defined using six-digit North American Industry Classification System (NAICS Coding System).

Industry Group: an aggregation of closely related industries that produce similar goods and services.

Sector: concentrations of industry groups related by knowledge, skills, inputs, demand, and/or other inter-linkages.

The Creative Sector: industry groups where the main inputs of production are Hawai'i's unique human capital, cultural diversity, and its host culture, as brand differentiators.

Concentration: Proportion of jobs in an economic activity of a region compared to the proportion of the same activity nationally.

CREATIVE INDUSTRIES HAWAI'I OVERVIEW

The State of Hawai'i's **Creative Industries Division (CID)** in the Department of Business, Economic Development and Tourism (DBEDT) is the lead state agency that promotes and expands business opportunities for the industry groups that comprise Hawai'i's creative economy.

The **Creative Industries Division (CID)** is comprised of the **Hawai'i Film Office (HFO)**, responsible for the overall management of the state's off-shore and local film industry development, and the **Arts and Culture Development Branch (ACDB)**.

CID is responsible for initiatives that support talent, infrastructure, policy development, and investment strategies for the statewide creative industries spectrum, increasing the capacity for entrepreneurial success while maintaining Hawai'i's global reputation as a premiere location filming destination.

Through CID/DBEDT initiatives such as the **Creative Lab**, the agency is further strengthening Hawai'i's creative sector in film, arts, culture, music, design, literary arts, publishing, creative and interactive media – all integral components of Hawai'i's creative and innovation economy.

CID/DBEDT is positioning Hawai'i to be a national and global leader in creative sector development as well as a hub for creative media and film production in the Pacific.

Hawai'i's Creative Industries Metrics 2023 (GDP Data in 2023):

- 55,619 jobs, 5,353 establishments
- 6.3% of the state's total civilian jobs
- \$5.6 billion Gross Domestic Product (GDP) = 5.3% of State of Hawai'i total civilian GDP
- 1.1% average annual job growth rate between 2013 and 2023, compared to 0.7% for the state

EXECUTIVE SUMMARY

Developing creative industries has become an important economic development strategy for Hawaii. The state's cultural diversity and its Hawaiian host culture are brand differentiators, helping to attract millions of visitors to the state while supporting thriving creative industries. Hawai'i's creative, artistic, and cultural industries occupy a unique niche that allows Hawai'i's creative products to compete in worldwide markets and support visitor spending while developing the foundation of Hawai'i's creative economy. In addition, the creative industries and their workforce represent key sources of ideas, create content for global export, and provide talent for Hawai'i's other industries.

In 2007, DBEDT Research and Economic Analysis, and Creative Industries Divisions collaborated on an update of data and industry definitions for the Creative Sector, based on a review of models nationally¹. The term and definition of "Creative Industries" in this report's title is consistent with the "Creative Sector" term and definition in DBEDT's Targeted and Emerging Industries reports. Similarly, the data used in this report are consistent with those used in the report Hawai'i's Targeted & Emerging Industries: 2024 Update.

Industry Groups in the Creative Sector

Table E1 provides an overview of the 13 industry groups in the updated Creative Sector based on the current definition of the sector. In 2023, the Hawai'i Creative Sector had 55,619 jobs² and average annual earnings of \$68,987. Jobs grew at an average annual growth rate of 1.1% over 2013-2023.

Table E1. Hawai'i's Jobs in the Creative Sector Industry Groups, 2023

Industry Groups	2023 Jobs
Total Creative Sector	55,619
Marketing, Photography and Related	12,344
Performing and Creative Arts	9,336
Business Consulting	7,184
Engineering and Research and Development	6,267
Computer Services and Software Publishers	6,073
Cultural Activities	3,208
Design Services	2,286
Film, TV, Video Production/Distrib, Cable & Media Streaming	2,247
Architecture	1,964
Publishing and Information	1,645
Music	1,301
Radio and Television Broadcasting	888
Art Education	876

Source: Lightcast™ and DBEDT calculation.

¹ DBEDT, *Hawai'i's Creative Industries: Update Report 2010*, June 2010.

http://dbedt.hawaii.gov/economic/reports_studies/hawaii-creative-report/. The definition of Hawai'i's creative industries used North American Industry Classification codes (NAICS).

² The jobs category includes wage and salary jobs, self-employed, and proprietors.

In 2023, the Creative Sector accounted for 6.3% of the state's total civilian jobs. Not only does this sector create jobs directly, but it also spawns innovations that drive job creation in other activities.

Table E2. Creative Sector Jobs Compared with Other Industry Groups, 2023

Economic Activities	2023 State Jobs	% of Civilian Jobs
Total Civilian	879,722	100.0%
Accommodation and Food Services	111,204	12.6%
State and Local Government	88,891	10.1%
Health Care and Social Assistance	88,070	10.0%
Retail Trade	84,076	9.6%
Real Estate and Rental and Leasing	55,816	6.3%
Creative Sector	55,619	6.3%
Administrative and Support and Waste Management and Remediation Services	51,410	5.8%
Construction	50,157	5.7%
Other Services (except Public Administration)	49,196	5.6%
Transportation and Warehousing	46,905	5.3%
Finance and Insurance	37,167	4.2%
Federal Government - Civilian	34,912	4.0%
Wholesale Trade	21,987	2.5%
Educational Services	20,244	2.3%
Manufacturing	16,279	1.9%
Agriculture, Forestry, Fishing and Hunting	15,731	1.8%
Professional, Scientific, and Technical Services	15,235	1.7%
Management of Companies and Enterprises	9,538	1.1%
Information	5,606	0.6%
Unclassified Industries	5,407	0.6%
Utilities	4,125	0.5%
Mining, Quarrying, and Oil and Gas Extraction	702	0.1%

Source: Lightcast™ and DBEDT calculation.

As shown in the following table, in 2023, the Creative Sector accounted for \$5.6 billion of GDP, or 5.3% of the state total.

Table E3. Creative Sector GDP Compared with Other Industry Groups, 2023

Industry groups	2023 GDP (\$M)	% of 2023 Civilian GDP
Total Civilian 1/	104,068	100.0%
Real Estate and Rental and Leasing	19,051	18.3%
Accommodation and Food Services	11,312	10.9%
State and Local Government	9,015	8.7%
Health Care and Social Assistance	8,210	7.9%
Retail Trade	8,093	7.8%
Construction	6,343	6.1%
Federal Government - Civilian	6,027	5.8%
Transportation and Warehousing	5,933	5.7%
Creative Sector	5,563	5.3%
Finance and Insurance	4,396	4.2%
Wholesale Trade	3,417	3.3%
Administrative and Support and Waste Management and Remediation Services	3,320	3.2%
Other Services (except Public Administration)	2,552	2.5%
Utilities	2,176	2.1%
Manufacturing	1,877	1.8%
Professional, Scientific, and Technical Services	1,639	1.6%
Management of Companies and Enterprises	1,368	1.3%
Information	1,256	1.2%
Educational Services	1,136	1.1%
Agriculture, Forestry, Fishing and Hunting	567	0.5%
Mining, Quarrying, and Oil and Gas Extraction	92	0.1%

1/ Lightcast's "Unclassified Industry", as seen in Table E2, is not defined to match BEA's GDP codes, so is excluded from GDP calculations.

Source: Lightcast™, BEA, and DBEDT calculation.

Performance of the Creative Industry Group Portfolio

The primary purpose of this report is to measure the performance of the industry groups within the Creative Sector. For each of the industry groups in the Creative Sector, a performance profile was constructed composed of three primary performance measures: job growth, change in competitive national industry share, and level of concentration (or specialization) in Hawai'i's economy. The first two measures help assess the strength and competitiveness of the activity, while the third identifies likely export industries in the portfolio.

Combining the measures into a Performance Map Framework allows the Creative Sector industry groups to be placed into four performance groups, known as quadrants.

Table E4: Creative Sector Industry Groups Mapped by Performance, 2013-2023

Total Creative Sector Jobs, 2023: 55,619					
Average Annual Earnings, 2023: \$68,987					
Average Annual Job Growth Rate, 2013-2023: 1.1%					
Emerging Group: 4.0% of Sector Jobs			Base-Growth Group: 0% of Sector Jobs		
Industry Group	Av. Ann. Job Growth Rate	Average Annual Earnings, 2023	Industry Group	Av. Ann. Job Growth Rate	Average Annual Earnings, 2023
Film, TV, Video Production/ Distribution, Cable & Media Streaming	2.1%	\$95,551			
Declining Group: 10.3% of Sector Jobs			Transitioning Group: 85.6% of Sector Jobs		
Industry Group	Av. Ann. Job Growth Rate	Average Annual Earnings, 2023	Industry Group	Av. Ann. Job Growth Rate	Average Annual Earnings, 2023
			Business Consulting	3.8%	\$77,474
Cultural Activities	-0.4%	\$65,423	Computer Services and Software Publishers	2.2%	\$125,161
Radio and Television Broadcasting	-1.5%	\$65,925	Art Education	1.1%	\$24,431
Publishing and Information	-1.7%	\$71,587	Music	0.2%	\$37,204
			Performing and Creative Arts	0.6%	\$33,167
			Marketing, Photography and Related	1.1%	\$38,546
			Engineering and Research and Development	1.0%	\$124,486
			Architecture	0.1%	\$99,421
			Design Services	1.0%	\$38,809

Source: Lightcast™ and DBEDT calculation.

Emerging and *Base-Growth* industry groups are considered high-performing economic industry groups. *Base-Growth* industry groups have not only grown jobs over the period but have outperformed the same comparable industry groups nationally. *Emerging* groups have also grown jobs over the period but have not yet outperformed the same comparable industry groups nationally. They are not as concentrated in Hawai'i's civilian economy as *Base-Growth* groups but remain candidates for becoming economic drivers in the future.

Declining and *Transitioning* industry groups face challenges. *Transitioning* industry groups are still growing or holding steady in terms of job count. However, they are growing more slowly than their national counterparts. This suggests that they have reached a plateau in terms of competitiveness. Finally, *Declining* industry groups have lost jobs during the period of the analysis. In some cases, this may be the result of unusual factors. In other cases, like information and broadcasting, it may reflect outsourcing of services beyond Hawai'i and/or significant increases in productivity arising from emerging technology, which reduces labor needs. In either case, these industry groups warrant closer study to understand the challenges and barriers to growth that they are facing.

Overall, the Creative Sector industry groups added 5,966 jobs to the state's civilian economy between 2013 and 2023. This amounted to an average annual job growth rate of 1.1% over the period. The leading performer of the Creative Sector was the Film, TV, Video Production/Distribution, Cable & Media Streaming group. The 2023 average annual earnings for the Creative Sector were \$68,987, compared to the state's civilian economy average of \$69,537.

Creative Sector Industry Groups' Performance

Only one Creative Sector industry group, Film, TV, Video Production/Distribution, Cable & Media Streaming, registered as high-performing (Emerging) in Hawai'i for the 2013 to 2023 period.

Nine of the Creative Sector industry groups were in the Transitioning quadrant for the 2013 to 2023 period. These ranged from Architecture, which had a 0.1% average annual growth rate, to Business Consulting, which had a 3.8% rate. However, while these industry groups grew jobs, their growth rates were below the same industry groups nationally. As a result, they lost some ground to the nation in terms of competitive industry share.

Finally, the three Creative Sector industry groups that lost jobs during the 2013 to 2023 period fell into the Declining quadrant of the performance maps. These are: Cultural Activities, Radio and Television Broadcasting, and Publishing and Information.

Conclusions and Next Steps

Work should continue to flesh out the dimensions and opportunities of the commercial markets served by the Creative Sector industry groups. This is especially important for the digital media and the broader film industry group, which are only partially captured in the NAICS film production industry. Also needing closer study is the link between specific Creative Sector activity and emerging technologies in information, communications, entertainment, and the broad range of commercial applications that are being driven by innovation. Learning how Creative Sector activity supports and utilizes emerging technology can help clarify the skill sets and educational elements that will help make Hawai'i a leader in innovation.



Creative Lab Music Immersive Fellows Jenny Yim (L) and Stephen Henderson (R) co-writing and recording an original song to pitch for sync licensing for film, television, and advertising during the 2024 Creative Lab Hawai'i Music Immersive (CLMI), Hawai'i Island." Photo Credit: Sarah Anderson.

I. INTRODUCTION

The development of Hawai'i's key Creative Sector industries has become an important focus of the state's economic development efforts for several reasons in recent years. First, Hawai'i's cultural diversity and the unique heritage of its Hawaiian host culture are major attractions for the visitors who inject billions of dollars into Hawai'i's economy each year. Second, the depth of Hawai'i's creative and cultural talent and unique artistic content allow Hawai'i's creative products to compete in global markets. The visitor market helps arts and culture industries to maintain critical mass. Visitors absorb the creative products of Hawai'i and share their discoveries with others. Third, the Creative Sector industries and their workforce are key sources of ideas, content, and talent for Hawai'i's emerging technology sector. Advances in science and technology have made it possible the development and delivery of new and valuable intellectual property, such as computer animation, mini applications for mobile devices, and even 3D modeling of potential new products. While the property rights to new technologies like smartphones, tablets, and 3D TVs may be owned and licensed by a few companies, or even just one, content development stemming from or using these technologies has significant upside in terms of products and number of companies that can benefit from content development.

The Definition of the Creative Sector

In 2007 DBEDT's Research and Economic Analysis Division (READ), in conjunction with DBEDT's Creative Industries Division (CID), developed a measure for the Creative Sector that focused on key industry groups, highlighted by film and TV, music, and performing arts.³

Since that report, several emerging areas have been added to that focus, in particular emerging types of intellectual property based on new technologies for developing and delivering content through digital media and the internet. The Creative Sector's priority focus is now on several key industry groups for which it has an established competitive advantage as well as areas based on emerging technology that can generate valuable exports and high-paying jobs including:

- Film and TV
- Music
- Digital media products (such as games and mobile applications)
- Animation

To support the evolving development focus, CID and READ determined that a broader definition of the sector was needed. More current definitions of the Creative Sector were reviewed, and the scope of the industries was revised in large part based on a similar study in Massachusetts.⁴ The definition is also consistent with DBEDT's Targeted & Emerging Industries reports for the sector.

In addition to including more technology-based Creative Sector industries, the newer Massachusetts definition also broadens the scope of industries to include such industry groups as Advertising and Marketing, Design Services, Architecture, Engineering and Research and Development.

³ *The Creative Industry in Hawaii*, April 2007, DBEDT.

⁴ Specifically, the *North Shore Creative Economy, Market Analysis and Action Plan*, ConsultEcon, Inc., Economic Research and Management Consultants. Prepared for: the Enterprise Center at Salem State College, the Salem Partnership, and the Creative Economy Association of the North Shore, April 2009.

Reports based on that framework continue to be updated.⁵ This report is a continuation of a series of reports updating Hawai'i's Creative Industries Report with the latest data.

Data Sources

Two major features of Creative Sector reports are measurability and comparability. Industries have been defined using the North American Industrial Classification System, or *NAICS*, which provides a rich source of standard data at a detailed level and permits the comparison of Hawai'i industries against the same activities nationally, allowing for better measures of performance. Without that standard data, we would be faced with the need to do special surveys and compilations, which are costly and usually not comparable with similar activity elsewhere. Every five years the NAICS definitions are updated. The Office of Management and Budget (OMB) charges the Economic Classification Policy Committee (ECPC) with the maintenance and review of NAICS; this report uses the latest definitions from the 2022 update. See the Appendix for the full list of NAICS in this report and the conversion of 2017 NAICS to 2022 NAICS.

The data for this report were developed by DBEDT for Hawai'i's Targeted and Emerging Industries report, which includes the Creative Sector.⁶ Data consist primarily of jobs and labor earnings that are available annually for detailed industries.⁷ Other measures such as sales, output, and gross product are not available as frequently or in as much detail.



Noted Maori actor, Cliff Curtis, mentoring participants of the International Cultural Arts Network (ICAN) 2023-24 native Hawaiian actor's workshop cohort one, hosted at CID/DBEDT Creative Space Studio and Collaboration Space, Entrepreneurs Sandbox, in partnership with HTDC and HUB Coworking. Photo credit: @yourmug.

⁵ *Hawai'i's Creative Industries*. The Creative Industry in Hawai'i. https://dbedt.hawaii.gov/economic/reports_studies/hawaii-creative-report/.

⁶ The framework was developed by DBEDT for the evaluation of emerging industry performance. See *Hawai'i's Targeted and Emerging Industries*, https://dbedt.hawaii.gov/economic/reports_studies/emerging-industries/.

⁷ The basic data are compiled by Lightcast™ and processed by DBEDT. Lightcast™ supplements data from the Federal Departments of Labor and Commerce by including estimates of proprietors and self-employed jobs, and by estimating data for very small industries that are not reported by the Federal agencies due to disclosure issues.

II. OVERVIEW OF HAWAII'S CREATIVE SECTOR

Between 2013 and 2023, Hawai'i saw Creative Sector jobs spread across 13 industry groups increase by an annual average of 1.1%, reaching 55,619 jobs and average annual earnings of \$68,987 in 2023.

The estimate of jobs is based on NAICS classifications which tend to identify producers and their output. NAICS data is less focused on major commercial markets for Creative Sector products such as digital media, computer animation, and games. It doesn't measure many of the likely industries creating products for these markets, such as computer programming, engineering, and film and video production. While there are shortcomings with the NAICS data, it makes comparisons with national levels possible.

Table 1. Creative Sector Industry Group Jobs, 2023

Industry Groups	2023 Jobs
Total Creative Sector	55,619
Marketing, Photography and Related	12,344
Performing and Creative Arts	9,336
Business Consulting	7,184
Engineering and Research and Development	6,267
Computer Services and Software Publishers	6,073
Cultural Activities	3,208
Design Services	2,286
Film, TV, Video Production/Distribution, Cable & Media Streaming	2,247
Architecture	1,964
Publishing and Information	1,645
Music	1,301
Radio and Television Broadcasting	888
Art Education	876

Source: Lightcast™ and DBEDT calculation.

It should be noted that not all industry groups in the Creative Sector portfolio are the subject of active assistance by the state or local economic development organizations. Development interests include film/TV, music, cultural activities, performing arts, and computer services related to digital media.⁸

Other groups like Business Consulting, Publishing and Information, Broadcasting, and Architecture have not yet been the focus of development efforts. This is mainly because they were added to the portfolio through the adoption of the broad definition of the Creative Sector.

⁸ Film Hawai'i. State of Hawaii. Hawaii Film Office. <https://filmoffice.hawaii.gov/incentives-tax-credits/>.



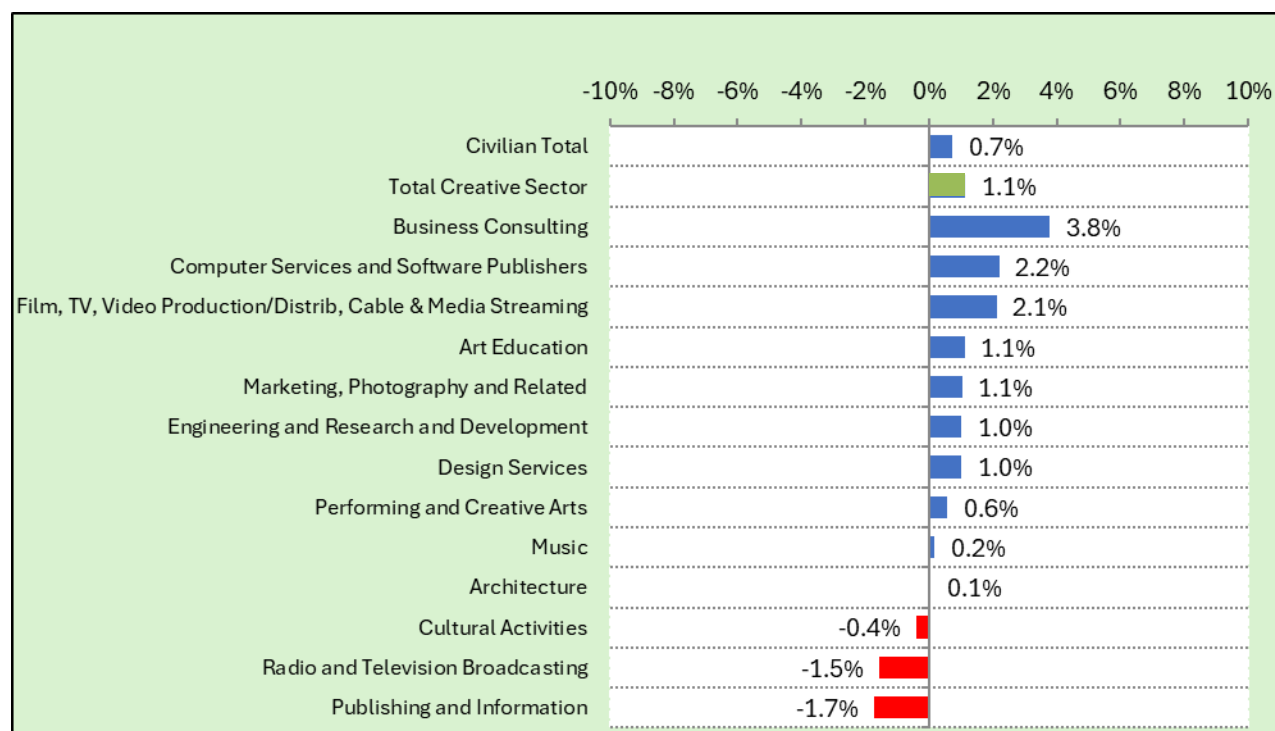
Brands Salvage Public and Jana Lam, fellows in the inaugural Creative Lab Hawaii Fashion Immersive, showcase their products at their respective shops in Hawaii and in boutiques throughout the world. Photo Credit: Nella Media Group.

Creative Sector Job Growth

In terms of job growth, most of the industry groups within the Creative Sector portfolio performed above the sector's average over the 2013 to 2023 period (Figure 1). Ten of the thirteen industry groups showed a positive average annual growth rate over the period. Seven groups outperformed the state's civilian jobs' average annual growth rate of 0.7%. Business Consulting topped the list with a 3.8% average annual growth rate⁹. This was followed by Computer Services and Software Publishers.

The three industry groups that lost jobs over the same period were Cultural Activities, Radio and TV Broadcasting, and Publishing and Information.

⁹ Average annual growth rates in this report were calculated using the compound annual growth rate formula.

Figure 1. Average Annual Growth in the Creative Sector, 2013-2023

Source: Lightcast™ and DBEDT calculation.

National Competitiveness of the Creative Sector

Job growth helps show the Creative Sector's competitiveness within Hawai'i's civilian economy. Note that "civilian economy" is defined as all industries in the economy minus federal military industries. Using the civilian economy makes our measurements and comparisons more concise.

Another measure is their performance compared to the comparable sector in the nation. If Hawai'i's Creative Sector job growth rate is higher than the comparable sector in the nation, Hawai'i's Creative Sector is effectively increasing its national competitive share. If the sector is increasing job growth more slowly in Hawai'i than its national share, then it is *decreasing* its competitive share.¹⁰ This methodology applies to industry groups and industries.

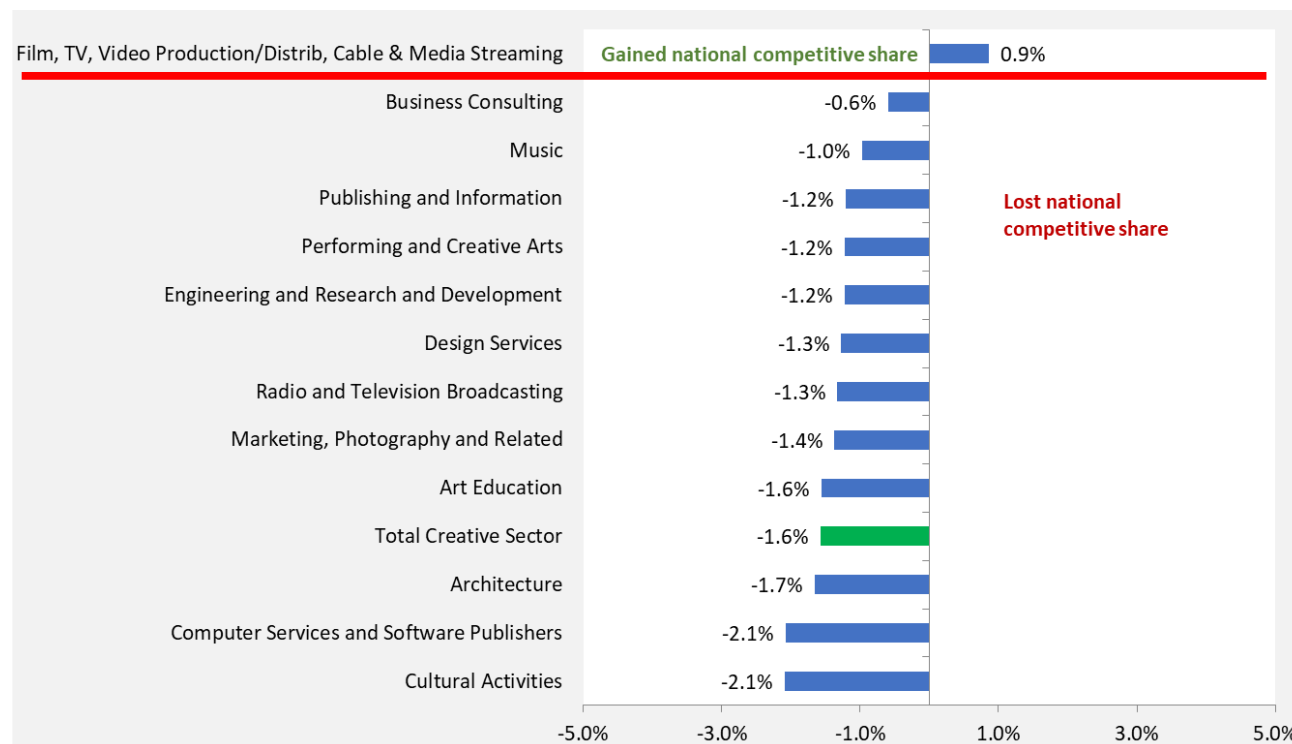
Figure 2 shows the average annual growth for Hawai'i's Creative Sector and industry groups compared to the same sector and industry groups in the nation. For instance, over the 2013 to 2023 period, jobs in the Film, TV, Video Production/Distribution, Cable & Media Streaming industry group in Hawai'i had an average annual growth rate of 0.9 percentage points above the nation. Thus, this industry group gained a competitive national share. On the other hand, even though the Computer Services and Software Publishers industry group's jobs increased over this period, it lost competitive national share due to an average annual growth rate that was 2.1 percentage points below the nation.

Ten industry groups lost competitive national share even though they increased their statewide job counts: Art Education, Music, Performing and Creative Arts, Business Consulting, Computer Services and

¹⁰ A more complete discussion of the performance metrics and framework for analysis is contained in the DBEDT report Benchmarking Hawai'i's Emerging Industries, available for download at http://hawaii.gov/dbedt/info/economic/data_reports/emerging-industries/.

Software Publishers, Design Services, Architecture, Engineering and Research and Development, and Marketing, Photography and Related. Industry groups that have both positive job growth and an increase in competitive national industry share represent the high-performing groups over a given period. Industry groups with a higher competitive share metric have a higher comparative advantage compared to the national industry groups over a given period.

Figure 2. Gain or Loss of National Competitive Industry Share, 2013-2023



Source: Lightcast™ and DBEDT calculation.

Industry Concentration – Hawai'i's Creative Specialties

A third performance metric that helps in the evaluation of the Creative Sector is job concentration (Figure 3). This is a measure of how much Hawai'i specializes and helps shed light on the export orientation.

Export activity brings new money into the state and provides a source of long-term industry growth. Unfortunately, estimates of industry exports are not part of standard industry data programs. Thus, it is not clear how much output in each industry is exported.

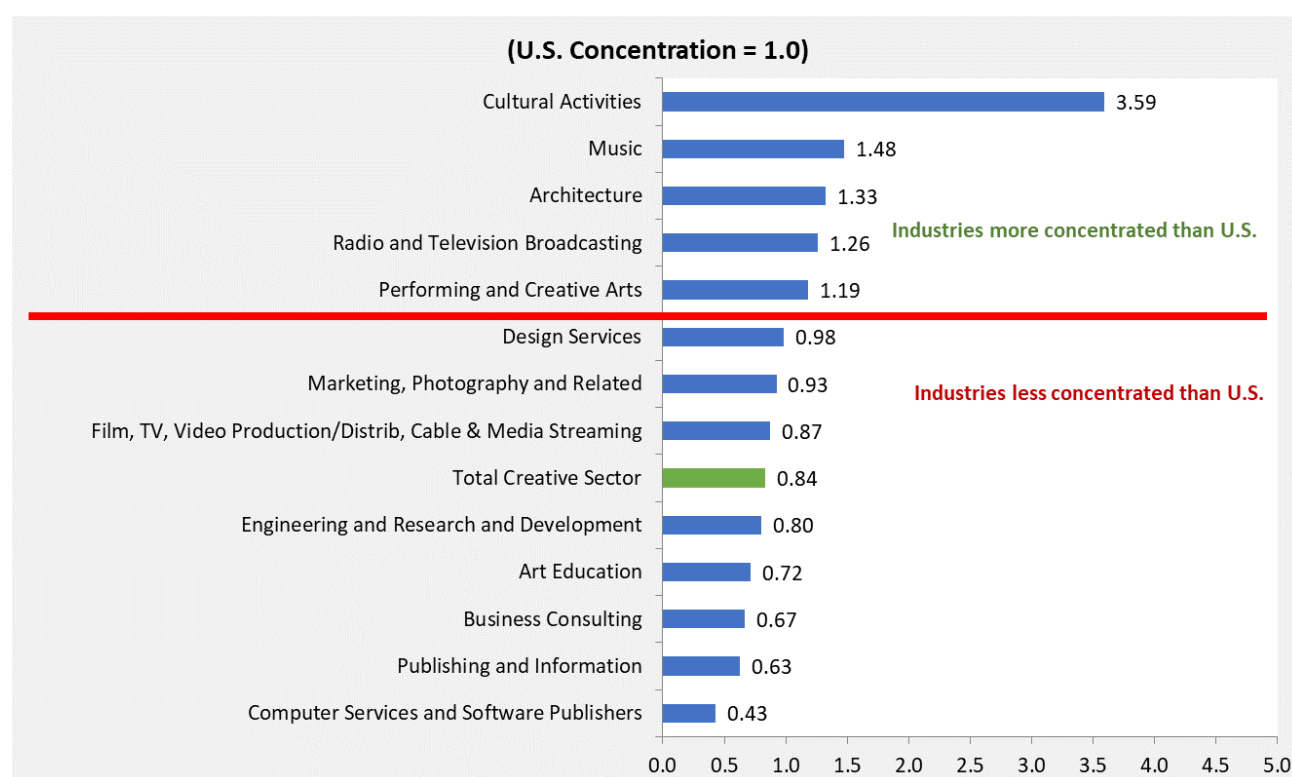
However, it is possible to identify *likely* export industries by measuring the concentration of their employment in the state's civilian economy. An industry that employs a significantly higher proportion of jobs in Hawai'i than does the same industry nationally is relatively more concentrated and is likely to be exporting at least some of its output.

Industry concentration is measured by a metric called the Location Quotient, or LQ for short. The LQ for an industry at the U.S. level is fixed at 1.0. Hawai'i industries with an LQ measure of more than 1.0 are more concentrated in the economy than the same industry for the U.S. as a whole. Those below 1.0 are less concentrated. This method works for industries, industry groups, and sectors.

For instance, the measure for Cultural Activities in Figure 3 shows that employment in Hawai'i's cultural industry group is 3.6 times more concentrated than the nation. This suggests that cultural activities are relatively more important in Hawai'i and may be exporting a significant amount of the industry's output. On the other hand, Computer Services and Software Publishers in Hawai'i have an LQ of just 0.4, which is less than half the employment concentration of the nation. While it is possible that business consulting may be exporting some of its output, it has a long way to go to demonstrate the strong comparative advantage shown by the more concentrated industries above the 1.0 level.

In addition to Cultural Activities, Music, Architecture, Radio and Television Broadcasting, and Performing and Creative Arts had concentrations in Hawai'i's civilian economy that were higher than the comparable groups for the nation. These more concentrated industry groups are likely helping to drive Hawai'i's economy. Industry groups that are not as concentrated in Hawai'i as they are nationally likely serve mainly local demand but may also export some of their output.

Figure 3. Concentration of Industry Group Employment Compared to U.S., 2023



Source: Lightcast™ and DBEDT calculation.



Creative Lab Hawai'i, founded by the Hawai'i State Department of Business, Economic Development and Tourism's Creative Industries Division (CID), is a key facet of DBEDT's HI Growth Initiative. Creative Lab fosters talent development in Hawai'i's innovation ecosystem to increase exports, attract investment, and build the state's creative entrepreneurial capacity.

Performance Map Framework: Measuring Creative Industries

A framework to better understand the overall implications of these key performance measures would be very helpful, especially one that can clarify the notion of emerging industries and how they can be measured. A closely related framework in the economic development research toolbox is the industry life cycle model. This model breaks industries in an economy into four generalized stages of life, starting with an *Emerging* phase, moving to a *Base-Growth* industry phase, a mature or *Transitioning* phase, and finally a *Declining* phase. Of course, not all industries fit nicely into this notion, especially over short periods. However, with some qualifications, this notion of development stages can help us evaluate the status of the Creative Sector portfolio.

Using the performance metrics from Figures 1, 2, and 3, the Creative Sector, industry groups, and industries can be placed into one of four life-cycle quadrants according to the criteria shown in Table 2.

Table 2. Performance Map Criteria (Industry Life Cycle)

Emerging industry groups		Base-Growth industry groups
Positive job growth. Lower concentration in Hawai'i than nationally. However, Increasing competitive national industry share.	➡	Positive job growth, and Higher concentration in Hawai'i than nationally, and Faster job growth than nationally with growing concentration.
		⬇
Declining industry groups		Transitioning industry groups
Negative job growth.	⬅	Positive job growth, but Losing competitive national industry share.

Emerging Quadrant: These are industry groups that are potentially in the early, take-off stage. They have been performing well by showing both job growth and an increase in their competitive share of the national industry. However, these industry groups have yet to achieve a concentration in the state's economy equal to the same industry in the U.S. as a whole. An *Emerging* creative industry is one that has found a competitive niche in the economy and is gaining in competitive national industry share. At some point, if the process continues, the industry's concentration will exceed the national level and the Emerging industry will graduate to a Base-Growth industry in the state's economy.

Base-Growth Quadrant: These are industry groups that have become potential economic drivers. They are growing their job counts and are increasing their competitive national industry share. Moreover, they have exceeded the national level of industry concentration in the economy and are likely exporting at least a proportion of their output.

Transitioning Quadrant: Transitioning creative industry groups are still maintaining or growing their workforces, however, they are losing competitive national industry share (growing more slowly than the same industry nationally). This is typical of mature industry groups that are still important to the economy but are having difficulty maintaining national market share. They are considered transitioning because they could either continue to lose industry share and eventually fall into decline or reinvigorate themselves and begin to regain industry share and continue growing. Also, in this quadrant may be former Emerging industry groups that never reached Base-Growth status before losing competitive national industry share and some previously Declining industry groups that are seeking to regain competitiveness.

Declining Quadrant: The Declining quadrant contains industry groups showing job losses over the period. All these Creative industry groups have lost jobs to some extent between 2013 and 2023. Most industry groups losing jobs are also losing competitive national industry share. However, while experiencing losses in jobs over the period, these industry groups are not necessarily dying industry groups. Some temporary circumstances may have put some of Hawai'i's creative industry groups into the Declining quadrant over the period studied. Their appearance in the Declining quadrant is a red flag that warrants more careful analysis to understand the problem.

It must be emphasized that the performance map framework is more of a guide to understanding an industry's situation rather than a verdict regarding the value of the industry to the state. It provides a starting point for assessing the strengths and weaknesses of the industry groups in the portfolio. Also, within industry groups that are experiencing mixed or poor performance, there may be pockets of very successful firms.

III. CREATIVE SECTOR PORTFOLIO PERFORMANCE

Table 3 shows how the individual Creative Sector industry groups fell on the performance map based on the 2013 to 2023 period performance measures. Overall, the Creative Sector had 55,619 jobs in 2023.

Table 3: Creative Sector Industry Groups in Hawai'i Mapped by Performance, 2013-2023

Total Creative Sector Jobs, 2023: 55,619					
Average Annual Earnings, 2023: \$68,987					
Average Annual Job Growth Rate, 2013-2023: 1.1%					
Emerging Group: 4.0% of Sector Jobs			Base-Growth Group: 0% of Sector Jobs		
Industry Group	Av. Ann. Job Growth Rate	Average Annual Earnings, 2023	Industry Group	Av. Ann. Job Growth Rate	Average Annual Earnings, 2023
Film, TV, Video Production/Distribution, Cable & Media Streaming	2.1%	\$95,551			
Declining Group: 10.3% of Sector Jobs			Transitioning Group: 85.6% of Sector Jobs		
Industry Group	Av. Ann. Job Growth Rate	Average Annual Earnings, 2023	Industry Group	Av. Ann. Job Growth Rate	Average Annual Earnings, 2023
			Business Consulting	3.8%	\$77,474
Cultural Activities	-0.4%	\$65,423	Computer Services and Software Publishers	2.2%	\$125,161
Radio and Television Broadcasting	-1.5%	\$65,925	Art Education	1.1%	\$24,431
Publishing and Information	-1.7%	\$71,587	Music	0.2%	\$37,204
			Performing and Creative Arts	0.6%	\$33,167
			Marketing, Photography and Related	1.1%	\$38,546
			Engineering and Research and Development	1.0%	\$124,486
			Architecture	0.1%	\$99,421
			Design Services	1.0%	\$38,809

Source: Lightcast™ and DBEDT calculation.

The Creative Sector industry groups added 5,966 jobs to the state's civilian economy between 2013 and 2023. This amounted to an average annual job growth rate of 1.1% over the period. The 2023 average annual earnings for the Creative Sector were \$68,987, compared to the state's civilian economy average of \$69,537.

High-Performing Creative Sector Industry Groups

Only one Creative Sector industry group, Film, TV, Video Production/Distribution, Cable & Media Streaming, qualified as a high-performing industry for the 2013 to 2023 period. The group had a 2.1% average annual growth rate, from 1,820 jobs in 2013 to 2,247 jobs in 2023, and had average annual earnings of \$95,551 in 2023.

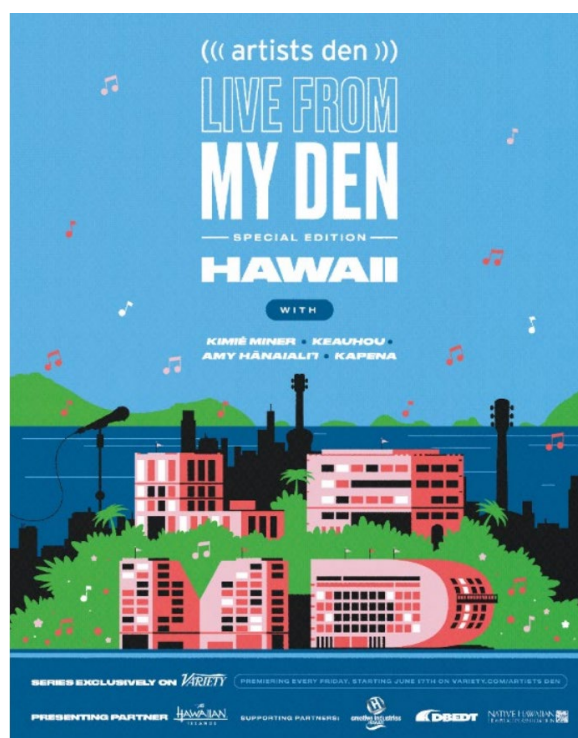
Other Creative Sector Industry Groups Performance

Nine of the Creative Sector industry groups were in the Transitioning quadrant for the 2013 to 2023 period. These ranged from Architecture, which had a 0.1% average annual growth rate, to Business

Consulting, which had a 3.8% rate. However, while these industry groups added jobs, their growth rates were below the same industry groups nationally. As a result, they lost some ground to the nation in terms of competitive industry share.

Finally, the three Creative Sector industry groups that lost jobs during the 2013 to 2023 period fell into the Declining quadrant of the performance maps. These are Cultural Activities, Radio and Television Broadcasting, and Publishing and Information.

It is important to note that the autonomy of these groups is not yet clear. The performance of some groups may reflect strong or weak markets driving other industry groups for which the target is simply a supplier. For instance, the high performance of cultural industry groups in the performance map could reflect the strong tourism demand over the period, rather than a specific local or export market for cultural products. Likewise, some targets may perform poorly because they are tied to another industry that has experienced difficulties.



In coordination with Hawaii Tourism Authority (HTA), Native Hawaiian Hospitality Association (NaHHA), the Creative Industries Division worked with the public television acclaimed “Artists Den” producers on a 4-part digital Live From My Den (LFMD) Special Edition Hawaii series, streamed on Daily Variety Digital, featuring Kimié Miner, Kapena, Amy Hānaiali’i, and Keauhou. Image Credit: Artists Den.

IV. CREATIVE SECTOR PERFORMANCE BY COUNTY

The following tables summarize county performance for Creative Sector industry groups, measured by paid employment and self-employed/sole proprietors, during the 2013 to 2023 period.

Honolulu County

Honolulu County accounted for 39,750 of the state's Creative Sector jobs in 2023, a 1% average annual increase from 2013. As shown in Table 4, two Creative Sector industry groups were high performing in Honolulu County in the 2013 to 2023 period. These high-performing groups not only added jobs during the period but also increased their competitive share of the activity by exceeding the national growth rate for the industry. These included Film, TV, Video Production/ Distribution, Cable & Media Streaming, and Music. Four groups lost jobs in Honolulu County over the 2013 to 2023 period: Architecture, Cultural Activities, Publishing and Information, and Radio and Television Broadcasting.

Table 4. Creative Sector and Industry Group Jobs, Honolulu County, 2013-2023

Industry Group	Quadrant	Jobs			Average Annual Job Growth Rate		
		2013	2021	2023	2013-2021	2021-2023	2013-2023
Total Creative Sector	Transitioning	35,870	37,274	39,750	0.5%	3.3%	1.0%
Music	Base-Growth	608	682	843	1.4%	11.1%	3.3%
Film, TV, Video Production/Distribution, Cable & Media Streaming	Base-Growth	1,553	2,173	1,924	4.3%	-5.9%	2.2%
Art Education	Transitioning	585	529	654	-1.3%	11.3%	1.1%
Performing and Creative Arts	Transitioning	4,684	4,662	4,816	-0.1%	1.6%	0.3%
Business Consulting	Transitioning	3,903	5,001	5,284	3.1%	2.8%	3.1%
Computer Services and Software Publishers	Transitioning	4,088	4,439	4,702	1.0%	2.9%	1.4%
Design Services	Transitioning	1,332	1,366	1,477	0.3%	4.0%	1.0%
Engineering and Research and Development	Transitioning	4,503	5,063	5,224	1.5%	1.6%	1.5%
Marketing, Photography and Related	Transitioning	7,699	7,859	8,481	0.3%	3.9%	1.0%
Publishing and Information	Declining	1,364	1,124	1,158	-2.4%	1.5%	-1.6%
Radio and Television Broadcasting	Declining	866	674	708	-3.1%	2.5%	-2.0%
Architecture	Declining	1,576	1,515	1,534	-0.5%	0.6%	-0.3%
Cultural Activities	Declining	3,108	2,188	2,944	-4.3%	16.0%	-0.5%

Source: Lightcast™ and DBEDT calculation.

Comparisons of the Honolulu County Creative Sector's job growth and earnings with the comparable sectors in the state and nation are listed in Table 5. For Creative Sector job growth, Honolulu County's 1% average annual growth rate was lower than the state's 1.1% rate and well below the nation's 2.7% rate. For average annual earnings in 2023 for the Creative Sector, Honolulu County was higher than the comparable sector in the state, but much lower than the comparable sector in the nation.

Table 5. Performance of Honolulu County Creative Sector and Industry Groups Compared with State and Nation, 2013-2023

Industry Group	Quadrant	Job Change 2013-2023	Average Annual Job Growth Rate			Average Annual Earnings, 2023		
			County	State	U.S.	County	State	U.S.
Total Creative Sector	Transitioning	3,879	1.0%	1.1%	2.7%	\$75,016	\$68,987	\$103,233
Music	Base-Growth	234	3.3%	0.2%	1.1%	\$42,325	\$37,204	\$51,978
Film, TV, Video Production/Distrib, Cable & Media Streaming	Base-Growth	371	2.2%	2.1%	1.3%	\$99,007	\$95,551	\$164,200
Art Education	Transitioning	69	1.1%	1.1%	2.7%	\$23,328	\$24,431	\$18,306
Performing and Creative Arts	Transitioning	132	0.3%	0.6%	1.8%	\$34,571	\$33,167	\$33,200
Business Consulting	Transitioning	1,381	3.1%	3.8%	4.4%	\$85,829	\$77,474	\$101,942
Computer Services and Software Publishers	Transitioning	613	1.4%	2.2%	4.3%	\$126,673	\$125,161	\$161,834
Design Services	Transitioning	145	1.0%	1.0%	2.3%	\$39,350	\$38,809	\$55,454
Engineering and Research and Development	Transitioning	721	1.5%	1.0%	2.3%	\$125,337	\$124,486	\$136,472
Marketing, Photography and Related	Transitioning	783	1.0%	1.1%	2.4%	\$39,516	\$38,546	\$69,098
Publishing and Information	Declining	-207	-1.6%	-1.7%	-0.5%	\$63,226	\$71,587	\$138,896
Radio and Television Broadcasting	Declining	-159	-2.0%	-1.5%	-0.2%	\$68,281	\$65,925	\$84,906
Architecture	Declining	-42	-0.3%	0.1%	1.7%	\$105,246	\$99,421	\$93,786
Cultural Activities	Declining	-164	-0.5%	-0.4%	1.7%	\$65,801	\$65,423	\$73,504

Source: Lightcast™ and DBEDT calculation.

Hawai'i County

Hawai'i County accounted for 6,188 of the state's Creative Sector jobs in 2023, achieving a 1.9% average annual growth rate from 2013. As shown in Table 6, six Creative Sector industry groups were high-performing in Hawai'i County during the 2013 to 2023 period. These high-performing groups not only grew jobs during the period but also increased their competitive share by exceeding the national job growth rate for the comparable group. Base-Growth industry groups included Cultural Activities, and Music. Emerging industry groups included Business Consulting, Computer Services and Software Publishers, Film, TV, Video Production/ Distribution, Cable & Media Streaming, and Radio and Television Broadcasting. Three Creative Sector industry groups lost jobs in Hawai'i County over the 2013 to 2023 period.

Table 6. Creative Sector and Industry Group Jobs, Hawai'i County, 2013-2023

Industry Group	Quadrant	Jobs			Average Annual Job Growth Rate		
		2013	2021	2023	2013-2021	2021-2023	2013-2023
Total Creative Sector	Transitioning	5,134	5,630	6,188	1.2%	4.8%	1.9%
Music	Base-Growth	165	183	253	1.3%	17.5%	4.4%
Cultural Activities	Base-Growth	85	121	144	4.5%	9.2%	5.4%
Radio and Television Broadcasting	Emerging	53	62	70	1.8%	6.4%	2.7%
Business Consulting	Emerging	508	663	850	3.4%	13.2%	5.3%
Computer Services and Software Publishers	Emerging	282	425	517	5.3%	10.3%	6.3%
Film, TV, Video Production/Distrib, Cable & Media Streaming	Emerging	68	112	113	6.4%	0.5%	5.2%
Performing and Creative Arts	Transitioning	1,332	1,510	1,535	1.6%	0.8%	1.4%
Architecture	Transitioning	155	153	170	-0.2%	5.4%	0.9%
Design Services	Transitioning	290	310	330	0.8%	3.1%	1.3%
Marketing, Photography and Related	Transitioning	1,270	1,319	1,407	0.5%	3.3%	1.0%
Art Education	Declining	74	62	70	-2.3%	6.5%	-0.6%
Publishing and Information	Declining	227	154	144	-4.7%	-3.2%	-4.4%
Engineering and Research and Development	Declining	625	557	587	-1.4%	2.7%	-0.6%

Source: Lightcast™ and DBEDT calculation.

Table 7 compares the Hawai'i County Creative Sector's job growth and earnings with the comparable sectors in the state and nation. For Creative Sector job growth, Hawai'i County's 1.9% average annual growth rate was above the state's rate but lower than the nation's 2.7% rate. For average annual earnings in 2023 for the Creative Sector, Hawai'i County was above the comparable sector in the state, however, much lower than the comparable sector for the nation.

Table 7. Performance of Hawai'i County Creative Sector and Industry Groups Compared with State and Nation, 2013-2023

Industry Group	Quadrant	Job Change 2013-2023	Average Annual Job Growth Rate			Average Annual Earnings, 2023		
			County	State	U.S.	County	State	U.S.
Total Creative Sector	Transitioning	1,054	1.9%	1.1%	2.7%	\$50,133	\$68,987	\$103,233
Music	Base-Growth	88	4.4%	0.2%	1.1%	\$24,974	\$37,204	\$51,978
Cultural Activities	Base-Growth	59	5.4%	-0.4%	1.7%	\$65,714	\$65,423	\$73,504
Radio and Television Broadcasting	Emerging	17	2.7%	-1.5%	-0.2%	\$49,614	\$65,925	\$84,906
Business Consulting	Emerging	342	5.3%	3.8%	4.4%	\$46,875	\$77,474	\$101,942
Computer Services and Software Publishers	Emerging	235	6.3%	2.2%	4.3%	\$93,239	\$125,161	\$161,834
Film, TV, Video Production/Distrib, Cable & Media Streaming	Emerging	45	5.2%	2.1%	1.3%	\$81,920	\$95,551	\$164,200
Performing and Creative Arts	Transitioning	203	1.4%	0.6%	1.8%	\$28,513	\$33,167	\$33,200
Architecture	Transitioning	15	0.9%	0.1%	1.7%	\$76,285	\$99,421	\$93,786
Design Services	Transitioning	39	1.3%	1.0%	2.3%	\$38,144	\$38,809	\$55,454
Marketing, Photography and Related	Transitioning	137	1.0%	1.1%	2.4%	\$33,957	\$38,546	\$69,098
Art Education	Declining	-4	-0.6%	1.1%	2.7%	\$25,998	\$24,431	\$18,306
Publishing and Information	Declining	-83	-4.4%	-1.7%	-0.5%	\$40,821	\$71,587	\$138,896
Engineering and Research and Development	Declining	-38	-0.6%	1.0%	2.3%	\$117,446	\$124,486	\$136,472

Source: Lightcast™ and DBEDT calculation.

Maui County

Maui County accounted for 6,802 of the state's Creative Sector jobs in 2023, equivalent to a 0.9% average annual growth rate increase from 2013. As shown in Table 8, three Creative Sector industry groups were high performing in Maui County in the 2013 to 2023 period. These high-performing groups not only grew jobs during the period but also increased their competitive share by exceeding the national job growth rate for the comparable group. The Emerging industry groups included Computer Services and Software Publishers, Cultural Activities, and Film, TV, Video Production/ Distribution, Cable & Media Streaming. Three industry groups lost jobs in Maui County over the 2013 to 2023 period.

Table 8. Creative Sector and Industry Group Jobs, Maui County, 2013-2023

Industry Group	Quadrant	Jobs			Average Annual Job Growth Rate		
		2013	2021	2023	2013-2021	2021-2023	2013-2023
Total Creative Sector	Transitioning	6,215	6,321	6,802	0.2%	3.7%	0.9%
Radio and Television Broadcasting	Emerging	68	42	69	-5.9%	29.2%	0.3%
Computer Services and Software Publishers	Emerging	348	497	590	4.6%	9.0%	5.4%
Cultural Activities	Emerging	52	50	65	-0.4%	13.6%	2.2%
Art Education	Transitioning	95	96	104	0.2%	3.9%	0.9%
Performing and Creative Arts	Transitioning	2,173	2,187	2,261	0.1%	1.7%	0.4%
Architecture	Transitioning	154	170	173	1.3%	0.9%	1.2%
Business Consulting	Transitioning	387	511	545	3.5%	3.3%	3.5%
Design Services	Transitioning	330	334	356	0.2%	3.1%	0.7%
Film, TV, Video Production/Distrib, Cable & Media Streaming	Transitioning	120	138	134	1.8%	-1.6%	1.1%
Marketing, Photography and Related	Transitioning	1,407	1,620	1,751	1.8%	4.0%	2.2%
Music	Declining	446	130	157	-14.3%	10.1%	-9.9%
Publishing and Information	Declining	277	210	269	-3.4%	13.1%	-0.3%
Engineering and Research and Development	Declining	358	336	327	-0.8%	-1.4%	-0.9%

Source: Lightcast™ and DBEDT calculation.

Comparisons of the Maui County Creative Sector's job growth and earnings with the comparable sectors in the state and nation are listed in Table 9. For Creative Sector job growth, Maui County's 0.9% average annual growth rate was below the state's rate and lower than the nation's 2.7% rate. For average annual earnings in 2023 for the Creative Sector, Maui County was lower than the comparable sector in the state, however, considerably lower than the comparable sector for the nation.

Table 9. Performance of Maui County Creative Sector and Industry Groups Compared with State and Nation, 2013-2023

Industry Group	Quadrant	Job Change 2013-2023	Average Annual Job Growth Rate			Average Annual Earnings, 2023		
			County	State	U.S.	County	State	U.S.
Total Creative Sector	Transitioning	587	0.9%	1.1%	2.7%	\$53,902	\$68,987	\$103,233
Radio and Television Broadcasting	Emerging	2	0.3%	-1.5%	-0.2%	\$73,100	\$65,925	\$84,906
Computer Services and Software Publishers	Emerging	242	5.4%	2.2%	4.3%	\$133,435	\$125,161	\$161,834
Cultural Activities	Emerging	13	2.2%	-0.4%	1.7%	\$61,498	\$65,423	\$73,504
Art Education	Transitioning	9	0.9%	1.1%	2.7%	\$29,538	\$24,431	\$18,306
Performing and Creative Arts	Transitioning	89	0.4%	0.6%	1.8%	\$33,848	\$33,167	\$33,200
Architecture	Transitioning	20	1.2%	0.1%	1.7%	\$65,435	\$99,421	\$93,786
Business Consulting	Transitioning	159	3.5%	3.8%	4.4%	\$40,637	\$77,474	\$101,942
Design Services	Transitioning	25	0.7%	1.0%	2.3%	\$37,860	\$38,809	\$55,454
Film, TV, Video Production/Distrib, Cable & Media Streaming	Transitioning	14	1.1%	2.1%	1.3%	\$78,729	\$95,551	\$164,200
Marketing, Photography and Related	Transitioning	344	2.2%	1.1%	2.4%	\$36,846	\$38,546	\$69,098
Music	Declining	-289	-9.9%	0.2%	1.1%	\$33,725	\$37,204	\$51,978
Publishing and Information	Declining	-8	-0.3%	-1.7%	-0.5%	\$131,800	\$71,587	\$138,896
Engineering and Research and Development	Declining	-31	-0.9%	1.0%	2.3%	\$111,505	\$124,486	\$136,472

Source: Lightcast™ and DBEDT calculation.



The Maui Film Festival's Celestial Cinema showcases the work of Hollywood and Hawai'i Filmmakers and attracts hundreds of celebrities, filmmakers, and global media. It is now held at the Maui Arts and Cultural Center.



In partnership with the Hawaii Academy of Recording Arts (HARA), and the High Technology Development Corporation (HTDC), the Creative Industries Division kicked off Hoku Nights, a new 1-Hour Monthly Series aired on K5 and filmed by all local crew at the Entrepreneur's Sandbox featuring performances by Hawaii's music legends and emerging recording artists.

Kaua'i County

Kaua'i County accounted for 2,528 of the state's Creative Sector jobs in 2023, translating to a 0.9% average annual growth rate from 2013. As shown in Table 10, three Creative Sector industry groups were high-performing in Kaua'i County during the 2013 to 2023 period. These high-performing groups not only grew jobs during the period but also increased their competitive share by exceeding the national job growth rate for the comparable group. The Base-Growth industry group included Architecture. Emerging industry groups included Art Education and Business Consulting. Seven industry groups lost jobs in Kaua'i County over the 2013 to 2023 period.

Table 10. Creative Sector and Industry Group Jobs, Kaua'i County, 2013-2023

Industry Group	Quadrant	Jobs			Average Annual Job Growth Rate		
		2013	2021	2023	2013-2021	2021-2023	2013-2023
Total Creative Sector	Transitioning	2,320	2,366	2,528	0.2%	3.4%	0.9%
Architecture	Base-Growth	68	77	86	1.6%	5.9%	2.5%
Art Education	Emerging	30	46	48	5.8%	1.7%	4.9%
Business Consulting	Emerging	152	261	311	7.0%	9.2%	7.4%
Performing and Creative Arts	Transitioning	628	675	724	0.9%	3.6%	1.4%
Computer Services and Software Publishers	Transitioning	134	141	183	0.7%	13.8%	3.2%
Design Services	Transitioning	112	114	124	0.1%	4.4%	1.0%
Music	Declining	59	44	48	-3.5%	4.7%	-1.9%
Publishing and Information	Declining	78	64	65	-2.5%	0.8%	-1.8%
Radio and Television Broadcasting	Declining	50	34	41	-4.6%	8.8%	-2.0%
Cultural Activities	Declining	94	44	56	-9.1%	13.7%	-5.0%
Engineering and Research and Development	Declining	149	170	110	1.7%	-19.8%	-3.0%
Film, TV, Video Production/Distrib, Cable & Media Streaming	Declining	77	64	70	-2.3%	4.6%	-1.0%
Marketing, Photography and Related	Declining	691	632	663	-1.1%	2.4%	-0.4%

Source: Lightcast™ and DBEDT calculation.

Comparisons of the Kaua'i County Creative Sector's job growth and earnings with the comparable sectors in the state and nation are shown in Table 11. For Creative Sector job growth, Kaua'i County's 0.9% average annual growth rate was lower than the state's rate and lower than the nation's 2.7% rate. In 2023, the average annual earnings for the Creative Sector in Kaua'i County lagged both the comparable sectors in the state and the nation.

Table 11. Performance of Kaua'i County Creative Sector and Industry Groups Compared with State and Nation, 2013-2023

Industry Group	Quadrant	Job Change 2013-2023	Average Annual Job Growth Rate			Average Annual Earnings, 2023		
			County	State	U.S.	County	State	U.S.
Total Creative Sector	Transitioning	208	0.9%	1.1%	2.7%	\$48,227	\$68,987	\$103,233
Architecture	Base-Growth	19	2.5%	0.1%	1.7%	\$109,839	\$99,421	\$93,786
Art Education	Emerging	18	4.9%	1.1%	2.7%	\$26,123	\$24,431	\$18,306
Business Consulting	Emerging	159	7.4%	3.8%	4.4%	\$45,580	\$77,474	\$101,942
Performing and Creative Arts	Transitioning	96	1.4%	0.6%	1.8%	\$31,564	\$33,167	\$33,200
Computer Services and Software Publishers	Transitioning	49	3.2%	2.2%	4.3%	\$120,240	\$125,161	\$161,834
Design Services	Transitioning	11	1.0%	1.0%	2.3%	\$36,840	\$38,809	\$55,454
Music	Declining	-10	-1.9%	0.2%	1.1%	\$23,172	\$37,204	\$51,978
Publishing and Information	Declining	-13	-1.8%	-1.7%	-0.5%	\$39,115	\$71,587	\$138,896
Radio and Television Broadcasting	Declining	-9	-2.0%	-1.5%	-0.2%	\$40,690	\$65,925	\$84,906
Cultural Activities	Declining	-37	-5.0%	-0.4%	1.7%	\$49,427	\$65,423	\$73,504
Engineering and Research and Development	Declining	-39	-3.0%	1.0%	2.3%	\$119,607	\$124,486	\$136,472
Film, TV, Video Production/Distrib, Cable & Media Streaming	Declining	-7	-1.0%	2.1%	1.3%	\$50,541	\$95,551	\$164,200
Marketing, Photography and Related	Declining	-28	-0.4%	1.1%	2.4%	\$34,511	\$38,546	\$69,098

Source: Lightcast™ and DBEDT calculation.

V. CREATIVE SECTOR PERFORMANCE BY INDUSTRY GROUPS

This section takes a closer look at the performance of the Creative Sector industry groups. Detailed data are shown for selected groups in this section. Complete data for all groups are in the Appendix.

States have increasingly come to realize that solely promoting technology does not necessarily generate the creative innovation upon which technology depends. It is the creative input that helps focus the commercial development and application technology, as well as providing content, such as in digital entertainment. Beyond technology, creative activity generates major export products and services and is essential to differentiating Hawai'i's visitor products from those of other sun and surf destinations.

The diversity of creative activity has made the sector a difficult one to define for measurement purposes. As discussed earlier, to establish an improved definition, the DBEDT Research and Economic Analysis Division worked with the Creative Industries Division to better measure the sector by taking into consideration similar efforts in other states. Based on this collaboration, an updated measurement for the sector was developed using the definition established in Massachusetts as a model. Table 12 shows the Creative Sector industry groups and their primary performance metrics.

Table 12. Job Growth in Hawai'i's Creative Sector and Industry Groups, 2013-2023

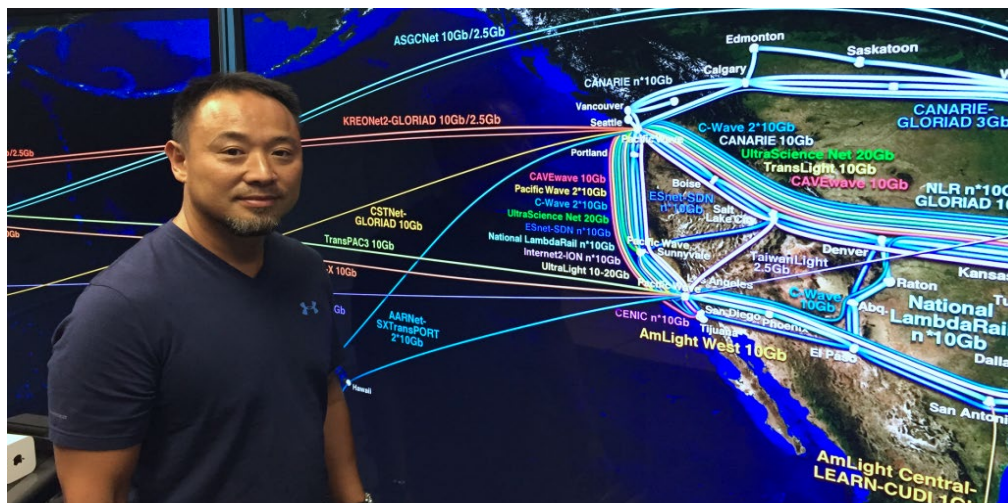
Industry Group	Hawai'i Jobs		Average Annual Job Growth Rate, 2013-2023		Average Annual Earnings, 2023		Performance Metrics		
	2013	2023	Hawai'i	U.S.	Hawai'i	U.S.	Competitive Share 2013-2023	Location Quotient (LQ), 2023	Change in LQ, 2013-2023
Total Creative Sector	49,653	55,619	1.1%	2.7%	\$68,987	\$103,233	-1.6%	0.84	-0.05
Marketing, Photography and Related	11,117	12,344	1.1%	2.4%	\$38,546	\$69,098	-1.4%	0.93	-0.03
Performing and Creative Arts	8,816	9,336	0.6%	1.8%	\$33,167	\$33,200	-1.2%	1.19	-0.03
Business Consulting	4,951	7,184	3.8%	4.4%	\$77,474	\$101,942	-0.6%	0.67	0.03
Engineering and Research and Development	5,659	6,267	1.0%	2.3%	\$124,486	\$136,472	-1.2%	0.80	-0.02
Computer Services and Software Publishers	4,876	6,073	2.2%	4.3%	\$125,161	\$161,834	-2.1%	0.43	-0.05
Cultural Activities	3,339	3,208	-0.4%	1.7%	\$65,423	\$73,504	-2.1%	3.59	-0.41
Design Services	2,065	2,286	1.0%	2.3%	\$38,809	\$55,454	-1.3%	0.98	-0.03
Film, TV, Video Production/Distrib, Cable & Media Streaming	1,820	2,247	2.1%	1.3%	\$95,551	\$164,200	0.9%	0.87	0.15
Architecture	1,953	1,964	0.1%	1.7%	\$99,421	\$93,786	-1.7%	1.33	-0.09
Publishing and Information	1,955	1,645	-1.7%	-0.5%	\$71,587	\$138,896	-1.2%	0.63	-0.01
Music	1,279	1,301	0.2%	1.1%	\$37,204	\$51,978	-1.0%	1.48	0.01
Radio and Television Broadcasting	1,037	888	-1.5%	-0.2%	\$65,925	\$84,906	-1.3%	1.26	-0.04
Art Education	784	876	1.1%	2.7%	\$24,431	\$18,306	-1.6%	0.72	-0.04

Source: Lightcast™ and DBEDT calculation.

This industry group is composed of several areas of the arts including selected performing arts, creative arts (visual and literary), and supporting industries such as promoters, agents, managers, and art dealers. The group does not include musicians, who are included in the Music industry group, and museums, which are included in the Cultural Activities group. Both groups are discussed later.

The Performing and Creative Arts group is very concentrated in Hawai'i, with 19% more jobs proportionately than for the group nationally. This reflects the interdependence between Hawai'i's rich artistic and cultural resources and the tourism sector. That interdependence also explains part of the under-performance of the industry group in the last several years, during which the tourism cycle peaked and began to decline. The sector was also drastically affected during the pandemic. Beyond tourism, this sector also provides a channel for the input of artistic creativity to a range of other innovative activities, including film, various forms of digital media, architecture, and applied design.

One of the leading groups in Hawai‘i’s Creative Sector is Engineering and Research and Development, which had 6,267 jobs in 2023. It is included in the Creative Sector because innovation and creativity are major drivers in the application of engineering and in transforming emerging technologies into commercial products and services.



Co-Principal Investigator Jason Leigh, director of the University of Hawai'i at Mānoa's Laboratory for Advanced Visualization and Applications (LAVA). Photo credit LAVA, UH Mānoa.

December 2024

Computer Services and Software Publishers

The Creative Sector places heavy emphasis on the marriage of new digital technology and traditional entertainment, cultural, and artistic content. The result is variously referred to as *digital media*, *creative media*, and sometimes *new media*. Evolving digital technology not only revolutionizes the delivery of traditional content such as music and movies, but it also pushes the bounds of possible content well beyond those traditional formats into animation, games, and a myriad of internet-based services. This in turn creates new commercial opportunities for programmers, artists, designers, musicians, and authors.

As Table 13 shows, the Computer Services and Software Publishers industry group includes both programming and software activities and support activities such as systems design and computer facilities.

Table 13. Computer Services and Software Publishers Industry Group, 2013-2023

Industry Group / Industry	Hawai'i Jobs		Average Annual Job Growth Rate, 2013-2023		Average Annual Earnings, 2023		Performance Metrics		
	2013	2023	Hawai'i	U.S.	Hawai'i	U.S.	Competitive Share 2013-2023	Location Quotient (LQ), 2023	Change in LQ, 2013-2023
Computer Services and Software Publishers	4,876	6,073	2.2%	4.3%	\$125,161	\$161,834	-2.1%	0.43	-0.05
Software Publishers	219	719	12.6%	7.9%	\$142,325	\$199,479	4.7%	0.24	0.10
Custom Computer Programming Services	1,918	1,702	-1.2%	3.6%	\$134,346	\$161,516	-4.7%	0.31	-0.14
Computer Systems Design Services	2,739	3,652	2.9%	3.5%	\$117,504	\$141,621	-0.5%	0.66	0.03

Source: Lightcast™ and DBEDT calculation.

Jobs in this industry group grew at an average annual growth rate of 2.2% over the 2013 to 2023 period. Overall, the group declined in terms of competitive national share, with Custom Computer Programming Services explaining the decline in terms of competitive national share.

The average annual earnings in the industry group were relatively high, at \$125,161 in 2023. The highest-paying industry in the group, Software Publishers, averaged \$142,325, while the lowest paying industry in the group, Computer Systems Design Services, averaged \$117,504.

Marketing, Photography and Related

The Marketing, Photography and Related industry group plays an important role in bringing Hawai'i's goods and services to the attention of national and international markets. Photography studios, portrait, marketing, advertising, public relations, media specialists, and other professional, scientific, and technical services account for most of this sector's workforce of 12,344 in 2023. As the largest sector in Hawai'i's Creative Sector, this group's job growth rate increased by 1.1% average annually from 2013 to 2023, lower than the 2.4% rate in the nation for this group. From 2013 to 2023, this industry group added 1,227 jobs; the Marketing Consulting Services industry had the largest job gain in this industry group, at 826 jobs.

The average annual earnings for the Marketing, Photography and Related industry group were \$38,546 in 2023, significantly lower than the average for the Creative Sector. Average annual earnings ranged from \$226,043 in Media Buying Agencies to \$25,175 in Other Services Related to Advertising.

The Marketing, Photography and Related industry group is a very competitive business from both creative and business development perspectives. Since geography is less of an advantage in these industry groups, Hawai'i companies in the industry group must prove that their creativity and knowledge of Hawai'i's products outweigh the greater reach and possible economies held by nationwide advertising and related firms.

Business Consulting

The Business Consulting industry group was a thriving industry group over the 2013 to 2023 period with 2,223 jobs in 2023 and an average annual jobs growth rate of 3.8% over the period.

Administrative Management and General Management Consulting Services, Environmental Consulting Services, and Other Scientific and Technical Consulting Services are the three largest components of the Business Consulting industry group, accounting for 85% of the group's jobs in 2023.

The average annual earnings for Business Consulting were \$77,474. This ranged from \$95,364 for Other Management Consulting Services to \$62,061 for Process, Physical Distribution, and Logistics Consulting Services.

Publishing and Information

The Publishing and Information industry group showed a 1.7% average annual decline in jobs from 2013 to 2023, which was worse than the national level. This industry group is dominated by Newspaper Publishing, which accounted for 33.1% of the industry group's jobs in 2023. Newspaper Publishing showed a 4.9% average annual decline in jobs over the period, which was better than the 5.0% average annual decline nationally. The rise of the internet as a source of information is certainly a major factor in the decline of traditional publishing. In Hawai'i, internet publishing and broadcasting (NAICS 519290, Web Search Portals and All Other Information Services) increased jobs by 5.3% annually from 2013 to 2023 and had 297 jobs in 2023.

The annual earnings average for the Publishing and Information industry group in Hawai'i was \$71,587 in 2023. This ranged from \$157,295 for Web Search Portals and All Other Information Services to \$36,236 for Periodical Publishers. The Newspaper Publishing average was \$64,222 in 2023.

Cultural Activities

The Cultural Activities industry group had 3,208 jobs in 2023 and included museums, historical sites, nature parks and other similar institutions, and grantmaking foundations. Cultural Activities registered a 0.4% average annual decline in jobs over the 2013 to 2023 period, a figure slightly lower than the comparable industry groups in the nation. As a result, the Cultural Activities industry group lost competitive national industry share.

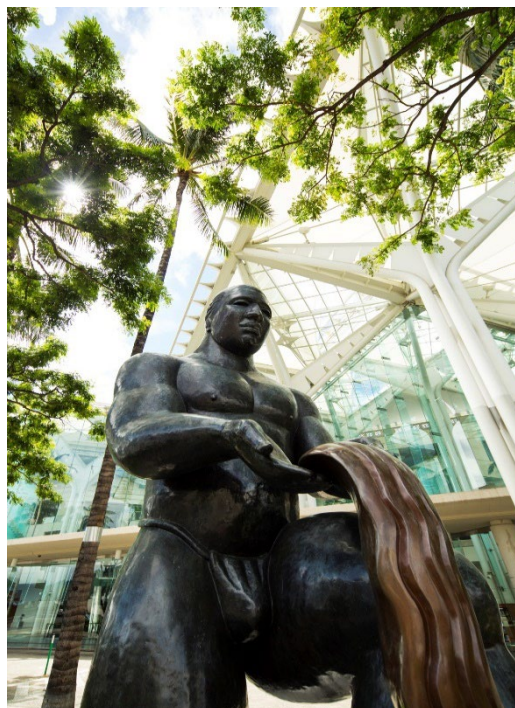
The average annual earnings for Cultural Activities were \$65,423 in 2023. This ranged from \$120,882 for Grantmaking Foundations to \$38,144 for Museums.

Architecture

Architecture is one of the more visible industry groups in the Creative Sector. A unique style of Hawaiian architecture has developed over the last several decades, weaving themes from old and new Hawai'i into designs suited to the state's climate and lifestyle. More recently, architecture has become a leading source of creativity in addressing the need to conserve energy and provide alternative energy sources in Hawai'i's residential and commercial structures.

Architecture employed 1,964 people in 2023. Since 2013 it has experienced a 0.1% average annual growth. This was below the average growth for the civilian economy in the state and below the 1.7% average growth for the comparable industry group in the nation. Most of the industry group's jobs were in Architectural Services, while the remainder of the jobs were in Landscape Architectural Services. Both industries registered modest job growth from 2013 to 2023.

The average annual earnings in architecture were \$99,421 in 2023, with Architectural Services at \$105,796 and Landscape Architectural Services at \$71,449.



"The Water Giver" by Maui artist Shige Yamada at Hawai'i Convention Center. Photo credit HVCB

Design Services

Design services had 2,286 jobs in 2023. Half of these jobs were in Graphic Design Services, while another 32% were in Interior Design Services. Since 2013, the average annual job growth in this industry group was 1.0%. Industrial Design Services jobs *declined* 22.7% annually and Other Specialized Design Services jobs grew 6.9% on average annually.

The average annual earnings for the industry group were \$38,809 in 2023. Drafting Services had the highest average annual earnings at \$48,008 while Other Specialized Design Services had the lowest at \$27,455.

Radio and Television Broadcasting

Like publishing, broadcasting has been impacted by the rise of the internet as an information and entertainment alternative. Radio and TV Broadcasting jobs declined by 1.5% on average annually over the 2013 to 2023 period to 888 jobs in 2023; nationally, the decline was 0.2%.

The Television Broadcasting Stations sector lost 1.3% of its workforce on average annually over the 2013 to 2023 period, declining to 442 jobs in 2023. It had average annual earnings of \$85,574 in 2023.

Radio Broadcasting Stations lost 1.8% of its workforce on average annually over the 2013 to 2023 period, with 446 jobs in 2023. It had average annual earnings of \$46,426 in 2023.

Film, TV, Video Production/Distribution, Cable & Media Streaming

Filmmakers from Hollywood and around the world use Hawai'i as a location for film, television, commercial, and digital media production. For decades, Hawai'i's natural beauty has been the backdrop for popular films such as "From Here to Eternity," "South Pacific," "Jumanji", and "Jurassic Park."

The state has established tax incentives to attract productions to Hawai'i. Since 2007, Act 88/89 incentives have continued to lure a wave of major feature films to the state. These include Disney's "Pirates of the Caribbean: At World's End," Lionsgate's "The Hunger Games: Catching Fire", Paramount's "Indiana Jones and the Kingdom of the Crystal Skull", Warner Bros. Pictures' "Godzilla", and the fourth installment of the successful franchise, "Jurassic World." Hawai'i ranks among the top filming destinations in the United States.

Film and television production in Hawai'i has been an important contributor to both jobs and income in the state, as well as to the visitor industry through the global exposure these productions have enjoyed.

The NAICS industries for film and TV production do not include creative and business services beyond direct production jobs and certain production support services. As a result, the employment data represent only the core jobs in film/TV and video activity. Other industry jobs such as actors, musicians, writers, food service, and other specialties are compiled in statistics for other NAICS industries. However, the data does not differentiate film/TV project jobs from other activities. Many jobs are only for the short duration of the production.

The 2022 NAICS update now defines Media Streaming Distribution Services, Social Networks, and Other Media Networks and Content Providers in the industry group. Jobs recorded for the industry group in the statistics are shown in Table 14.

The overall industry group Film, TV, Video Production/Distribution, Cable & Media Streaming involved 2,247 jobs in 2023, with an annual average increase of 2.1% from 2013.

The number of jobs in the industry group grew at a faster rate in Hawai'i than the nation over the 2013 to 2023 period; however, average annual earnings were below the comparable group in the nation in 2023.

Table 14. Film, TV, Video Production/Distribution, Cable & Media Streaming Industry Group, 2013-2023

Industry Group / Industry	Hawai'i Jobs		Average Annual Job Growth Rate, 2013-2023		Average Annual Earnings, 2023		Performance Metrics		
	2013	2023	Hawai'i	U.S.	Hawai'i	U.S.	Competitive Share 2013-2023	Location Quotient (LQ), 2023	Change in LQ, 2013-2023
Film, TV, Video Production/Distribution, Cable & Media Streaming	1,820	2,247	2.1%	1.3%	\$95,551	\$164,200	0.9%	0.87	0.15
Manufacturing and Reproducing Magnetic and Optical Media	14	33	9.1%	-4.5%	\$87,513	\$158,400	13.6%	0.61	0.47
Motion Picture and Video Production	1,473	1,821	2.1%	1.2%	\$69,523	\$113,119	0.9%	1.47	0.25
Motion Picture and Video Distribution	9	10	1.0%	3.0%	\$105,242	\$159,198	-2.0%	0.25	-0.02
Teleproduction and Other Postproduction Services	58	63	0.7%	2.3%	\$56,463	\$98,260	-1.6%	0.51	-0.03
Media Streaming Distribution Services, Social Networks, and Other Media Networks and Content Providers	266	320	1.9%	1.5%	\$251,762	\$228,640	0.3%	0.29	0.04

Source: Lightcast™ and DBEDT calculation.

Year-to-year volatility in film production employment is a defining factor in this industry. The combination of limited data and changing production schedules make this a very difficult industry to assess over a short period.



NCIS: Hawai'i was cancelled by CBS in 2024, and sunset the series in its fourth season. This signaled a pullout of CBS Productions from the islands. A new Fox series, Rescue: HI Surf, is the sole series in production as of 2024, with 90% of its staff being local hires. Photo courtesy of CBS ©2024 CBS Broadcasting, Inc. All Rights Reserved.

Music

Hawai'i has always had a unique music arts culture based on Hawaiian heritage but has expanded to embrace trends in music worldwide. The range of talented musicians in Hawai'i has been an important attraction for visitors as well as a staple of the island's culture. Until the digital age, the problem of taking Hawai'i's unique music to the world at large had been the difficulties of breaking into a national recording industry that was mainstream-oriented and the high investment cost of producing and distributing recorded music without the backing of major music labels.



The Hawai'i Songwriting Festival attracts artists, musicians, songwriters, and music supervisors from around the world to Hawai'i Island. It hosted the first Creative Lab Music Immersive.



Creative Lab Music Immersive Fellow Aolani Yukie Silva and Mentor/Professional Producer Bobby Campbell record an original song that will be pitched for sync licensing for film, television and advertising at the 2023 Creative Lab Hawaii Music Immersive (CLMI). Photo Credit: Sarah Anderson.

Music industry dynamics changed with the digital age, which has made the production of high-quality recordings affordable to individual artists. New distribution systems allow artists to promote and sell their music through the internet and music downloading services.

There were 1,301 employed and self-employed workers in Hawai'i's Music industry group in 2023, most of them performers. As Table 15 shows, employment in Hawai'i's Music industry group increased by 0.2% per year on average over the 2013 to 2023 period. By contrast, jobs in this industry group nationally grew annually by 1.1% over the same period.

Table 15. Music Industry Group, 2013-2023

Industry Group / Industry	Hawai'i Jobs		Average Annual Job Growth Rate, 2013-2023		Average Annual Earnings, 2023		Performance Metrics		
	2013	2023	Hawai'i	U.S.	Hawai'i	U.S.	Competitive Share 2013-2023	Location Quotient (LQ), 2023	Change in LQ, 2013-2023
Music	1,279	1,301	0.2%	1.1%	\$37,204	\$51,978	-1.0%	1.48	0.01
Musical Instrument and Supplies Retailers	208	256	2.1%	1.2%	\$32,820	\$33,075	0.9%	0.99	0.17
Music Publishers	6	64	27.1%	3.7%	\$25,326	\$93,900	23.4%	1.33	1.17
Sound Recording Studios	29	83	11.0%	4.1%	\$26,842	\$46,026	6.8%	0.86	0.45
Record Production and Distribution	62	90	3.8%	4.3%	\$28,802	\$117,216	-0.5%	1.58	0.08
Other Sound Recording Industries	34	19	-5.6%	2.4%	\$25,795	\$62,582	-8.0%	0.68	-0.71
Musical Groups and Artists	939	789	-1.7%	-0.2%	\$41,924	\$50,554	-1.6%	2.01	-0.12

Source: Lightcast™ and DBEDT calculation.

The centerpiece of this industry group — Musical Groups and Artists — showed an average job growth rate decline of 1.7% over the 2013 to 2023 period. Among the industries, only Other Sound Recording Industries showed a larger decline in jobs.

Earnings in the Music industry group generally reflect part-time professions. The average annual earnings for the industry group were \$37,204 in 2023, below the state's overall Creative Sector and the state's civilian economy.



Opening day at the 2023 Creative Lab Music Immersive. This five-day intensive program, which takes place on the Big Island of Hawaii provides participants with the opportunity to co-write and produce music for specific film or TV projects with a team of professional mentors.

Photo credit: Sarah Anderson.

Arts Education

The Arts Education industry group, comprised of music, theater, dance, visual and literary art, is pervasive in public and private elementary and secondary schools and in institutions of higher education. Within the public sector, the size and trends in arts are difficult to discern due to a lack of information. However, in the private sector, there are 77 small establishments and numerous self-employed educators in the state specializing in various forms of arts education. The total number of jobs in this small industry was 876 in 2023, up from 784 in 2013, equivalent to a 1.1% average annual growth rate over the 2013 to 2023 period. Nationally, the comparable group showed a 2.7% average annual growth rate in jobs over the period. Average annual earnings amounted to only \$24,431 for Hawai'i in 2023 and \$18,306 nationally. This suggests that part-time work is the norm in the industry. Until more can be learned about the extent and trends in education serving the arts and other creative disciplines, this small industry group may serve as a barometer for interest in education supporting the Creative Sector.



SFCA Hawai'i is one of the state organizations providing arts education through a collaboration with Department of Education, the Hawaii Arts Alliance, and the University of Hawaii as part of the ARTS First Program. DBEDT/CID has been a collaborator on various initiatives and projects of SFCA, including "Live From the Lawn" events which showcased Grammy nominees in concert. It was broadcast on K5 and streamed online.



At Creative Lab Hawai'i, creative entrepreneurs are coached by professional mentors in the business aspects of the creative industries and learn how to accelerate new business and monetization opportunities. Photo Credit: Sarah Anderson.



VI. CONCLUSIONS AND NEXT STEPS

Developing Hawai'i's key creative industry groups is a valuable economic development strategy. Hawai'i's cultural diversity and its Hawaiian host culture are major attractions for millions of visitors and their spending. The uniqueness of Hawai'i's creative, artistic, and cultural content helps Hawai'i's creative products compete in worldwide markets. Additionally, the creative sector and its workforce are key sources of ideas, content, and talent for Hawai'i's other industries.

The four-quadrant performance map has helped to organize the industry groups of the updated Creative Sector by their growth, competitiveness, and concentration in the state's economy over the 2013 to 2023 period.

One Creative Sector industry group, Film, TV, Video Production/Distribution, Cable & Media Streaming, registered as Emerging (high performing).

Nine of the Creative Sector industry groups were in the Transitioning quadrant. These ranged from Architecture with a 0.1% average annual job growth rate to Business Consulting with a 3.8% average annual job growth rate. However, while these industry groups grew, their growth rates were below the industry groups in the nation. As a result, they lost some ground to the nation in terms of competitive industry share.

Three Creative Sector industry groups that lost jobs fell into the Declining quadrant of the performance map; these were Publishing and Information, Radio and Television Broadcasting, and Cultural Activities. Productivity may be playing a role in reducing the need for labor to deliver the same level of service as in years past.

Future research should examine digital media and the broader film industry, which are currently only partially captured in the NAICS-defined film production industry. Learning how creative activity utilizes and supports emerging technology can serve to clarify the skill sets and educational elements that will help make Hawai'i a leader in innovation.



INNOVATION — is — CREATIVITY WITH A JOB TO DO

John Emmerling

Creative Industries, Hawai'i Film Office, Creative Lab Hawai'i, and infrastructure such as Creative Space Studio facilities are key facets of the State's Creative and Innovation Industry Development ecosystem development strategy, building a continuum of talent, infrastructure, and investment to transform Hawai'i's economy into one based on innovation and creative economy.

APPENDIX

Table A. Detailed Industry Data, 2013-2023

NAICS Code	Sector / Industry Group / Industry	Hawai'i Jobs and Earnings				Performance Metrics			U.S. Comparable	
		Jobs 2013	Jobs 2023	Avg. Ann. Job Growth Rate, 2013-2023	Ave. Ann. Earnings, 2023	Competitive Share 2013-2023	Location Quotient (LQ), 2023	Change in LQ, 2013-2023	Ave. Ann. Job Growth Rate, 2013-2023	Ave. Ann. Earnings, 2023
	Hawai'i Creative Sector	49,653	55,619	1.1%	\$68,987	-1.6%	0.84	-0.05	2.7%	\$103,233
	Art Education	784	876	1.1%	\$24,431	-1.6%	0.72	-0.04	2.7%	\$18,306
611610	Fine Arts Schools	784	876	1.1%	\$24,431	-1.6%	0.72	-0.04	2.7%	\$18,306
	Architecture	1,953	1,964	0.1%	\$99,421	-1.7%	1.33	-0.09	1.7%	\$93,786
541310	Architectural Services	1,587	1,599	0.1%	\$105,796	-1.8%	1.44	-0.12	1.9%	\$105,307
541320	Landscape Architectural Services	366	365	0.0%	\$71,449	-1.2%	0.98	-0.02	1.2%	\$59,460
	Business Consulting	4,951	7,184	3.8%	\$77,474	-0.6%	0.67	0.03	4.4%	\$101,942
541611	Administrative Management and General Management Consulting Services	2,651	3,774	3.6%	\$86,039	-2.1%	0.63	-0.07	5.7%	\$111,086
541620	Environmental Consulting Services	717	1,164	5.0%	\$67,552	2.6%	1.70	0.50	2.4%	\$78,634
541612	Human Resources Consulting Services	341	377	1.0%	\$70,085	-1.4%	0.60	-0.03	2.5%	\$97,710
541618	Other Management Consulting Services	193	162	-1.7%	\$95,364	-6.6%	0.19	-0.14	4.8%	\$96,577
541690	Other Scientific and Technical Consulting Services	728	1,178	4.9%	\$66,688	3.1%	0.70	0.23	1.8%	\$92,564
541614	Process, Physical Distribution, and Logistics Consulting Services	322	530	5.1%	\$62,061	0.3%	0.57	0.07	4.8%	\$84,918
	Computer Services and Software Publishers	4,876	6,073	2.2%	\$125,161	-2.1%	0.43	-0.05	4.3%	\$161,834
541512	Computer Systems Design Services	2,739	3,652	2.9%	\$117,504	-0.5%	0.66	0.03	3.5%	\$141,621
541511	Custom Computer Programming Services	1,918	1,702	-1.2%	\$134,346	-4.7%	0.31	-0.14	3.6%	\$161,516
513210	Software Publishers	219	719	12.6%	\$142,325	4.7%	0.24	0.10	7.9%	\$199,479
	Cultural Activities	3,339	3,208	-0.4%	\$65,423	-2.1%	3.59	-0.41	1.7%	\$73,504
813211	Grantmaking Foundations	908	1,010	1.1%	\$120,882	-1.0%	2.81	0.01	2.0%	\$102,377
712120	Historical Sites	348	270	-2.5%	\$52,698	-1.7%	4.30	-0.33	-0.8%	\$45,806
712110	Museums	2,047	1,901	-0.7%	\$38,144	-2.2%	4.61	-0.60	1.5%	\$56,504
712190	Nature Parks and Other Similar Institutions	36	27	-2.6%	\$38,997	-7.0%	0.47	-0.39	4.5%	\$45,523
	Design Services	2,065	2,286	1.0%	\$38,809	-1.3%	0.98	-0.03	2.3%	\$55,454
541340	Drafting Services	329	285	-1.4%	\$48,008	-1.2%	1.95	-0.05	-0.2%	\$44,819
541430	Graphic Design Services	1,028	1,135	1.0%	\$35,054	-0.4%	1.14	0.06	1.4%	\$53,117
541420	Industrial Design Services	52	4	-22.7%	\$32,938	-25.1%	0.03	-0.39	2.4%	\$93,668
541410	Interior Design Services	592	737	2.2%	\$42,995	-1.4%	0.87	-0.03	3.6%	\$50,195
541490	Other Specialized Design Services	64	125	6.9%	\$27,455	3.3%	0.66	0.22	3.7%	\$70,357
	Engineering and Research and Development	5,659	6,267	1.0%	\$124,486	-1.2%	0.80	-0.02	2.3%	\$136,472
541330	Engineering Services	3,882	4,929	2.4%	\$128,208	0.4%	0.97	0.12	2.0%	\$125,758
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	1,404	1,175	-1.8%	\$117,303	-4.6%	0.49	-0.21	2.8%	\$164,831
541720	Research and Development in the Social Sciences and Humanities	373	164	-7.9%	\$63,917	-9.6%	0.52	-0.76	1.7%	\$95,371
	Film, TV, Video Production/Distrib, Cable & Media Streaming	1,820	2,247	2.1%	\$95,551	0.9%	0.87	0.15	1.3%	\$164,200
334610	Manufacturing and Reproducing Magnetic and Optical Media	14	33	9.1%	\$87,513	13.6%	0.61	0.47	-4.5%	\$158,400
516210	Media Streaming Distribution Services, Social Networks, and Other Media Networks and Content Providers	266	320	1.9%	\$251,762	0.3%	0.29	0.04	1.5%	\$228,640
512120	Motion Picture and Video Distribution	9	10	1.0%	\$105,242	-2.0%	0.25	-0.02	3.0%	\$159,198
512110	Motion Picture and Video Production	1,473	1,821	2.1%	\$69,523	0.9%	1.47	0.25	1.2%	\$113,119
512191	Teleproduction and Other Postproduction Services	58	63	0.7%	\$56,463	-1.6%	0.51	-0.03	2.3%	\$98,260
	Marketing, Photography and Related	11,117	12,344	1.1%	\$38,546	-1.4%	0.93	-0.03	2.4%	\$69,098
541810	Advertising Agencies	566	503	-1.2%	\$63,814	-3.4%	0.39	-0.10	2.2%	\$120,465
541870	Advertising Material Distribution Services	20	11	-5.6%	\$33,315	-9.6%	0.12	-0.16	4.0%	\$82,648
541990	All Other Professional, Scientific, and Technical Services	5,595	5,571	0.0%	\$38,521	-2.2%	0.99	-0.12	2.1%	\$55,506
541922	Commercial Photography	350	567	4.9%	\$26,965	-1.0%	1.40	0.00	6.0%	\$39,570
541860	Direct Mail Advertising	66	37	-5.7%	\$33,763	-3.7%	0.18	-0.06	-2.0%	\$75,615
541613	Marketing Consulting Services	997	1,823	6.2%	\$42,364	1.3%	0.71	0.14	4.9%	\$81,154
541910	Marketing Research and Public Opinion Polling	370	355	-0.4%	\$44,474	0.9%	0.67	0.12	-1.4%	\$90,195
541830	Media Buying Agencies	16	25	4.6%	\$226,043	2.1%	0.26	0.07	2.5%	\$127,051
541840	Media Representatives	91	124	3.1%	\$47,575	4.5%	0.99	0.42	-1.4%	\$113,456
541890	Other Services Related to Advertising	560	582	0.4%	\$25,175	-1.5%	1.01	-0.05	1.9%	\$54,077
541850	Outdoor Advertising	209	243	1.5%	\$48,935	1.5%	1.23	0.27	0.0%	\$80,764
541921	Photography Studios, Portrait	1,833	2,178	1.7%	\$27,328	-0.8%	2.01	0.05	2.5%	\$21,207
541820	Public Relations Agencies	443	325	-3.0%	\$66,430	-5.5%	0.63	-0.36	2.5%	\$115,650
	Music	1,279	1,301	0.2%	\$37,204	-1.0%	1.48	0.01	1.1%	\$51,978
512230	Music Publishers	6	64	27.1%	\$25,326	23.4%	1.33	1.17	3.7%	\$93,900
711130	Musical Groups and Artists	939	789	-1.7%	\$41,924	-1.6%	2.01	-0.12	-0.2%	\$50,554
459140	Musical Instrument and Supplies Retailers	208	256	2.1%	\$32,820	0.9%	0.99	0.17	1.2%	\$33,075
512290	Other Sound Recording Industries	34	19	-5.6%	\$25,795	-8.0%	0.68	-0.71	2.4%	\$62,582
512250	Record Production and Distribution	62	90	3.8%	\$28,802	-0.5%	1.58	0.08	4.3%	\$117,216
512240	Sound Recording Studios	29	83	11.0%	\$26,842	6.8%	0.86	0.45	4.1%	\$46,026
	Performing and Creative Arts	8,816	9,336	0.6%	\$33,167	-1.2%	1.19	-0.03	1.8%	\$33,200
711410	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	308	219	-3.4%	\$24,192	-3.9%	0.67	-0.23	0.5%	\$81,639
459920	Art Dealers	873	807	-0.8%	\$37,681	-0.8%	2.81	0.06	0.0%	\$44,268
711120	Dance Companies	178	298	5.3%	\$22,537	3.9%	3.31	1.27	1.4%	\$35,306
711510	Independent Artists, Writers, and Performers	6,097	6,924	1.3%	\$32,083	-0.6%	1.22	0.05	1.9%	\$26,234
711190	Other Performing Arts Companies	66	11	-16.7%	\$18,090	-18.0%	0.19	-1.04	1.3%	\$49,528
711310	Promoters of Performing Arts, Sports, and Similar Events with Facilities	297	307	0.3%	\$40,982	-3.2%	0.50	-0.12	3.5%	\$49,510
711320	Promoters of Performing Arts, Sports, and Similar Events without Facilities	526	403	-2.6%	\$42,702	-4.8%	1.01	-0.46	2.1%	\$49,877
711110	Theater Companies and Dinner Theaters	471	367	-2.5%	\$41,114	-2.9%	0.88	-0.19	0.4%	\$40,166

Table A. Detailed Industry Data, 2013-2023 (cont'd)

NAICS Code	Industry Groups and Industries	Hawai'i Jobs and Earnings				Performance Metrics			U.S. Comparable	
		Jobs 2013	Jobs 2023	Ave. Ann. Job Growth Rate, 2013-2023	Ave. Ann. Earnings, 2023	Competitive Share 2013-2023	Location Quotient (LQ), 2023	Change in LQ, 2013-2023	Ave. Ann. Job Growth Rate, 2013-2023	Ave. Ann. Earnings, 2023
	Publishing and Information	1,955	1,645	-1.7%	\$71,587	-1.2%	0.63	-0.01	-0.5%	\$138,896
513199	All Other Publishers	36	67	6.3%	\$62,372	2.0%	0.27	0.07	4.3%	\$143,552
513130	Book Publishers	129	137	0.6%	\$37,107	0.9%	0.39	0.07	-0.3%	\$83,493
513140	Directory and Mailing List Publishers	99	63	-4.5%	\$114,618	-0.4%	0.61	0.03	-4.0%	\$102,473
513191	Greeting Card Publishers	6	9	4.5%	\$49,466	9.9%	0.60	0.40	-5.4%	\$61,026
513110	Newspaper Publishers	902	545	-4.9%	\$64,222	0.0%	0.87	0.09	-5.0%	\$61,122
513120	Periodical Publishers	605	527	-1.4%	\$36,236	0.3%	0.99	0.12	-1.6%	\$79,603
519290	Web Search Portals and All Other Information Services	178	297	5.3%	\$157,295	-1.6%	0.40	-0.02	6.9%	\$276,487
	Radio and Television Broadcasting	1,037	888	-1.5%	\$65,925	-1.3%	1.26	-0.04	-0.2%	\$84,906
516110	Radio Broadcasting Stations	535	446	-1.8%	\$46,426	-0.8%	1.19	0.02	-1.0%	\$62,295
516120	Television Broadcasting Stations	502	442	-1.3%	\$85,574	-2.0%	1.35	-0.15	0.8%	\$110,902