Hawaii's Creative Industries

Update Report 2014

Department of Business, Economic Development and Tourism

July 2014

research & economic analysis division

creative industries HAWAI'I

State of Hawaii Department of Business, Economic Development & Tourism

July 2014

Table of Contents

EXECUTIVE SUMMARY

Developing Hawaii's creative industries has become an important economic development strategy. Hawaii's cultural diversity and its Hawaiian host culture are brand differentiators, attracting millions of visitors to our destination, while supporting a thriving creative industries cluster. The uniqueness of Hawaii's creative, artistic and cultural sectors helps Hawaii's creative products compete in worldwide markets, while also supporting visitor spending and developing the foundation of Hawaii's creative economy. In addition, the creative industries and their workforce represent key sources of ideas, content creation for global export and provide the talent for Hawaii's emerging technology and knowledge based industry sectors.

In order to capture and track data on the range of activities that can address the broader relationship between creative industries and emerging markets for technology and entertainment, the Research and Economic Analysis Division teamed up with the DBEDT Creative Industries Division to review more current definitions of creative industries and revise the scope of the activities in Hawaii's creative sector, based in larger part on similar work in Massachusetts. This update adopted the same definition of the creative industries as defined in the July 2012 report. The creative sector now overlaps some elements of the technology sector.

Industry Groups in the Creative Sector

The table below provides an overview of the 13 industry groups in the updated creative sector, and their 2013 job count, based on the current definition of the sector. In total, the creative industries accounted for about 48,170 jobs in Hawaii for 2013. This was up 14.2% from 2003, but down 2.5% from 2007. The earnings average was $45,912.

CREATIVE INDUSTRY PRODUCTION GROUPS	
Industry Group	**2013 Job**
Marketing, Photography & Related	10,744
Performing and Creative Arts	8,595
Engineering and Research & Development	5,656
Business Consulting	4,868
Computer and Digital Media Products	4,842
Cultural Activities	3,053
Publishing & Information	2,260
Architecture	1,915
Design Services	1,884
Film, TV, Video Production/Distrib	1,303
Radio and TV Broadcasting	1,211
Music	1185
Art Education	654
Total Creative Industry	**48,170**
Source: DBEDT, READ.	

These 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 on producing industries. 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.

Performance of the Creative Industries Portfolio

The primary purpose of this report is to measure the performance of the industry groups within the creative industries portfolio. For each of the NAICS-measurable groups in the creative sector industry portfolio, a performance profile was constructed that was composed of three primary performance measures: job growth, change in competitive national industry share, and level of concentration (or specialization) in Hawaii'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 common framework called a performance map allows the creative sector industry groups to be placed in four performance categories as show in the figure below (the full report explains this mapping process in more detail).

CREATIVE INDUSTRY GROUPS MAPPED BY PERFORMANCE, 2003-2013					
Total Jobs, 2013: 48,170					
Average Annual Earnings, 2013: $45,912					
Net Change in Jobs, 2003-2013: 14.2%					
Transitioning Group: 47.9% of Jobs			**Base-Growth Group: 6.3% of Jobs**		
Group	Change in Jobs	Average Earnings	Group	Change in Jobs	Average Earnings
Engineering and Research & Developm	17.1%	$92,763	Cultural Activities	94.1%	$42,950
Music	15.9%	$24,617			
Marketing, Photography & Related	14.2%	$22,809			
Art Education	31.6%	$9,287			
Computer and Digital Media Products	22.4%	$83,909			
Declining Group: 29.0% of Jobs			**Emerging Group: 16.7% of Jobs**		
Group	Change in Jobs	Average Earnings	Group	Change in Jobs	Average Earnings
Performing and Creative Arts	-1.5%	$15,572	Business Consulting	71.8%	$56,401
Radio and TV Broadcasting	-10.1%	$64,389	Design Services	25.4%	$23,532
Architecture	-11.4%	$69,150	Film, TV, Video Production/Distrib	4.2%	$62,984
Publishing & Information	-26.6%	$54,857			

Source: DBEDT compilation based on EMSI data.

The highest performing industries in the creative sector for the 2003 to 2013 period appear on the right side of the figure above. Industry groups on this side of the map have not only grown jobs over the period but have outperformed the same industries nationally, suggesting that they are gaining in competitiveness. In addition, the *Base-Growth* industries show a higher proportion of jobs in Hawaii's economy than is the case nationally. This suggests they are likely to be exporting some proportion of their output, either directly or indirectly. This also means that while relatively small, these industries are among the economic drivers in the economy. *Emerging* industry groups are not as concentrated in Hawaii's economy, but their otherwise high performance suggests they are candidates for becoming economic drivers in the future.

Industries on the left side of the performance map face some challenges. *Transitioning* industries are still growing or holding steady in terms of job count. However, they are growing slower than their national counterparts. This suggests that they have reached a plateau in terms of competitiveness. Finally, *declining* industries have lost jobs over the period under study. In some cases this may be the result of unusual factors. In other cases, like information and broadcasting, it may reflect outsourcing of service beyond Hawaii and/or significant increases in productivity, thanks to emerging technology that reduces labor needs. In either case, these industries warrant closer study to understand the challenges and barriers to growth that they are facing.

Overall, the creative industry groups added about 5,983 jobs to the state's economy between 2003 and 2013. This amounted to a 14.2 percent increase in jobs, above the 12.6 percent growth in Hawaii's civilian economy as a whole for the period. The leading performers of the overall portfolio were the cultural activities and business consulting groups. The 2013 earnings average of the creative industry portfolio of $45,912 was lower than the statewide average of $48,446.

High Performing Creative Industry Groups

Only one creative industry group, cultural activities, registered as high performing base-growth industries for the 2003 to 2013 period.

The industry groups in the emerging category were composed of business consulting, design services, and film/TV production. This group also performed well in job creation.

Other Creative Industries' Performance

Five of the creative sector industry groups fell into the transitioning category for the 2003 to 2013 period. These ranged from the marketing, photography & related which increased 14.2% in jobs to arts education, which grew jobs by 31.6%. However, while these industry groups grew, it was not as vigorous as the same industries nationally. As a result, they lost some ground to the nation in terms of competitive industry share.

Finally, four creative industry groups that lost jobs in the 2003 to 2013 period fell into the declining quadrant of the performance map. Radio & TV broadcasting, publishing & information, performing and creative arts, and architecture all lost jobs for the period.

It is important to note that the independence of these creative groups is not yet clear. The performance of some groups may reflect strong or weak markets driving other industries for which the creative target is simply a supplier. For instance the high performance of cultural activities in the performance map probably reflects 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.

Conclusions and Next Steps

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

I. INTRODUCTION

Development of Hawaii's key creative activities has become an important focus in the State's economic development efforts in recent years for several reasons. First, Hawaii's cultural diversity and the unique heritage of its Hawaiian host culture are major attractions for the millions of visitors that inject billions of dollars into Hawaii's economy each year. Without this cultural component to the visitor experience, Hawaii is mostly a sun and surf destination like many of its competitors.

Second, the depth of Hawaii's creative and cultural talent and unique artistic content helps Hawaii's creative products compete in worldwide markets. Supporting this asset is a market of millions of visitors to the state each year, which helps the arts and culture sector maintain critical mass. Furthermore, visitors absorb the creative products of Hawaii in context and share their discovery in the many markets from which they have come.

Third, the creative industries and their workforce are key sources of ideas, content and talent for Hawaii's emerging technology sector. Increasingly, science and technology are making 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 smart phone, tablet, and 3D TV may be owned and licensed by a few, or even just a single company, content development stemming from, or using these technologies has no limit 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 a number of key industry groups, highlighted by film and TV, music, and performing arts.[1]

[1] *The Creative Industry in Hawaii*, April 2007, DBEDT.

However, since that report, several emerging areas have been added to that focus of interest, particularly emerging types of intellectual property based on new technologies for developing and delivering content through digital media and the internet. The priority focus by the State on the creative sector is now on a number of key activities for which Hawaii 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
- Workforce development in these focus activities

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 activities was revised based in large part on a similar study in Massachusetts.[2] In addition to including more technology-based creative activity, the newer Massachusetts definition also broadens the scope of industries in the creative sector portfolio to include such activities as advertising and marketing, design services, architecture, engineering and research and development. A report based on that framework was done in June 2010. This report is the fourth in the series, an update of the July 2012 Hawaii's Creative Industries Report.

Photo credit to Lionsgate and Murray Close

[2] 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 2008.

Creative Industries Development
State Priorities

The State of Hawaii's **Creative Industries Division** (CID) is the lead agency focused on strengthening, advocating, and accelerating the growth of Hawaii's creative clusters. As the business advocate for Hawaii's arts and culture sector, CID supports policy, and infrastructure development to expand the capacity of local creative entrepreneurs working in film, visual arts, design, literary arts and publishing, interactive media, and performing arts and music.

Comprised of the **Hawaii Film Office (HFO**) also called the Film Industry Branch (FIB) and the **Arts and Culture Development Branch** (ACDB), CID connects creative communities locally and globally, to increase Hawaii's creative entrepreneur's capacity for export and monetization of their intellectual property creations.

Hawaii's Creative Industries Metrics:

- **48,170 jobs representing entrepreneurs = 5.9% of the State's civilian jobs**
- **3,416 businesses**
- **14.2% job growth rate since 2003 > 12.6% State job growth rate**
- **$45,912 average annual earnings < $48,446 State average annual earnings**
- **$3.4 Billion in GDP in 2013 = 4.5% of the State's total GDP**

Evaluation of these metrics have identified that the highest performing sectors of Hawaii's Creative Economy are in the areas of Cultural Activities, Business Consulting, Design Services, and Film/Television/Video Production and Distribution. Holding steady, yet growing at a slower pace, are the transitioning sectors of Music, Engineering & Research & Development, Marketing & Photography, Art Education, and Computer/Digital Media Products.

The high performing sectors identified above have grown jobs since 2003 and more importantly, <u>have outperformed the same industries nationally</u>, suggesting that these sectors are gaining in competitiveness and are candidates for becoming economic drivers in Hawaii's future. The performance of Hawaii's Creative economy shows the vibrancy of the State as a leader in the global creative economy movement. CID's strategic priorities include:

- Expand Creative Lab Incubator program to accelerate creation of locally developed web, television and film content.
- Collaborate with partners in DBEDT's HI Growth Initiative to expand business opportunities for creative and cultural entrepreneurs
- Increase infrastructure development such as the Hawaii Creative Collaboration center (HIC3), to provide broadband/giga hub facilities for creative entrepreneurs to support content / product development and export
- Develop e-permitting system to provide efficiencies in permit processing for film production
- Maintain existing studio complex and develop new state-of-the art creative media/film stages and co-working facilities

Data Sources

A major feature of the 2007, 2010, 2012 and current update of the creative sector is measurability and comparability. Where possible, the industries in the creative sector are selected from the very detailed North American Industrial Classification System (NAICS). A rich and reliable array of data is available on economic activity based on NAICS. NAICS data also permit the comparison of Hawaii industries against the same activities nationally, allowing better measures of performance.[3] The data for this report were developed for a recent DBEDT study on innovation industries which included the creative sector. They consist primarily of jobs and labor earnings that are available annually for very detailed industries.[4] Other measures such as sales, output and gross product are not available as frequently or in as much detail. More discussion on the data is contained in the following section.

---

[3] The framework was developed by DBEDT in another recent study for the evaluation of emerging industry performance See *Benchmarking Hawaii's Emerging Industries*, http://hawaii.gov/dbedt/info/economic/data_reports/emerging-industries/ .

[4] The basic data are compiled by Economic Modeling Specialists, Inc. (EMSI) and processed by DBEDT. EMSI 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 INDUSTRIES PORTFOLIO

Table 1 provides an overview of the 13 industry groups in the creative sector, and their 2013 job count, based on the current definition of the sector. In total, the creative industries accounted for about 48,170 jobs in Hawaii for 2013. This was up 14.2% from 2003, but down 2.5% from 2007. The earnings average was $45,912.

TABLE 1

CREATIVE INDUSTRY PRODUCTION GROUPS	
Industry Group	**2013 Job**
Marketing, Photography & Related	10,744
Performing and Creative Arts	8,595
Engineering and Research & Development	5,656
Business Consulting	4,868
Computer and Digital Media Products	4,842
Cultural Activities	3,053
Publishing & Information	2,260
Architecture	1,915
Design Services	1,884
Film, TV, Video Production/Distrib	1,303
Radio and TV Broadcasting	1,211
Music	1185
Art Education	654
Total Creative Industry	**48,170**
Source: DBEDT, READ.	

These 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 on producing industries. 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.

Unfortunately, NAICS is strictly a production-oriented, supply-side classification system, meaning that it is focused on firms and industries not markets. For that reason NAICS data does not clearly identify major *commercial markets* for creative sector products such as digital media, computer animation and games. NAICS does measure many of the likely industries that produce products for these markets, such as computer programming, engineering and film & video production.

While the production-based NAICS data does not provide all the data we would like, it is high quality information and comparable with national data. Also, the jobs associated with the commercial market activity are contained, for the most part, in the production side industry groups. With the NAICS data as a base, further efforts can be made to better understand the commercial markets and Hawaii's competitiveness in serving them.

It should be noted that not all of the industry groups in the creative sector portfolio are the subject of active assistance by the State or local economic development organizations. The main groups of interest include film/TV, music, cultural activities, performing arts and computer services related to digital media.

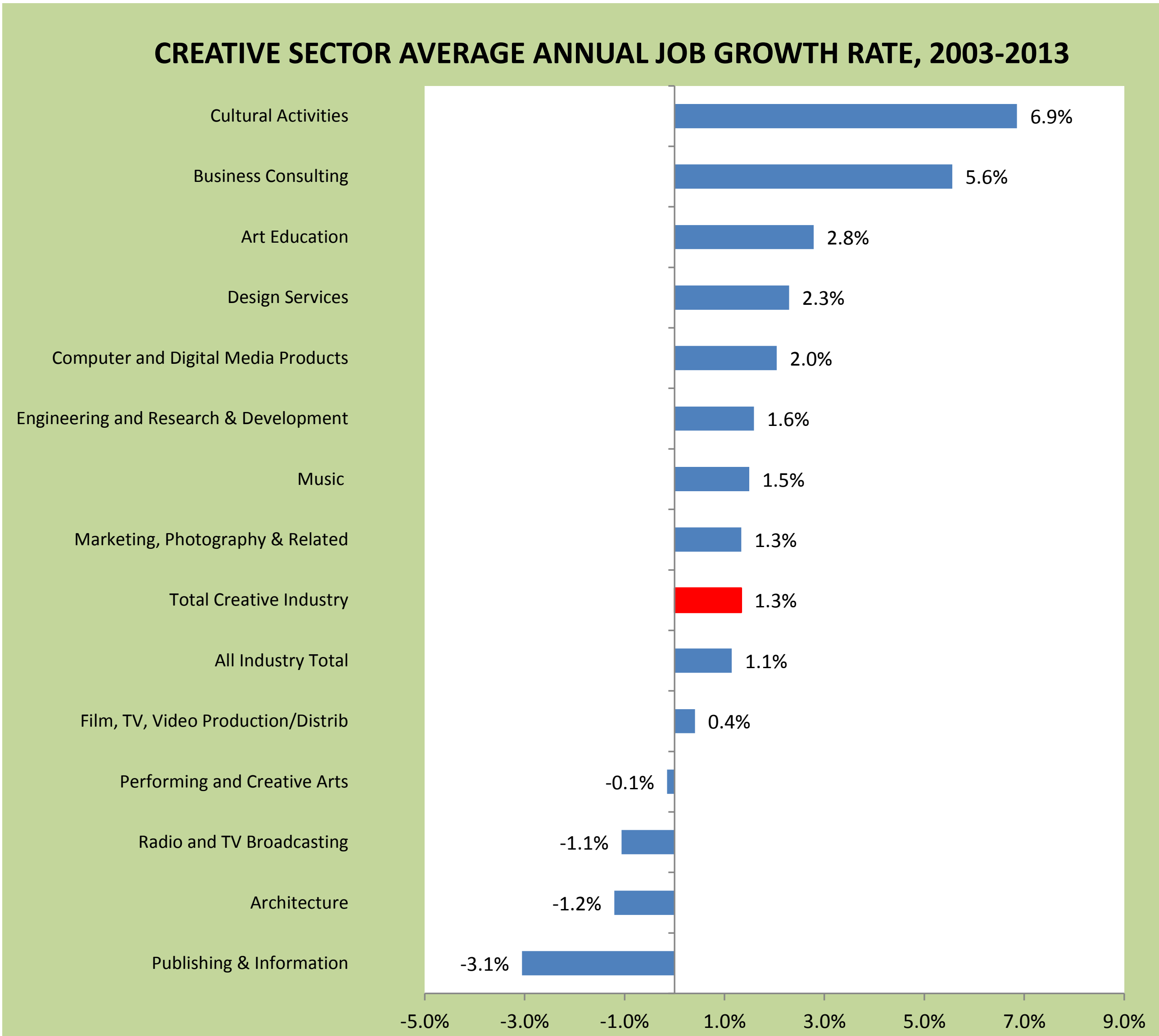
However, other groups like business consulting, publishing and information, broadcasting and architecture, to name a few, have not yet been the focus of development efforts. This is mainly because they have just recently been added to the creative industry portfolio through the adoption of the new, broader definition of the creative sector. The results of their performance in this study will need to be evaluated, as well as further investigated, to determine the intensity of development focus that would be appropriate for these additional creative industry groups.

Creative Sector Job Growth

In terms of job growth, the creative industries portfolio seems to have performed well over the 2003 to 2013 period (Figure 1). Nine of the thirteen NAICS-based, target industry groups showed net job growth over the period. Eight groups outperformed the overall state jobs annual growth rate of 1.1%. Cultural activities topped the list with 6.9% annual growth. This was followed by business consulting, art education, design services, computer and digital media products, engineering/R&D services, music, and marketing, photography and related.

The four industry groups that lost jobs over the period were performing and creative arts, radio/TV broadcasting, architecture, and publishing & information.

FIGURE 1



Source: DBEDT compilation based on EMSI data.

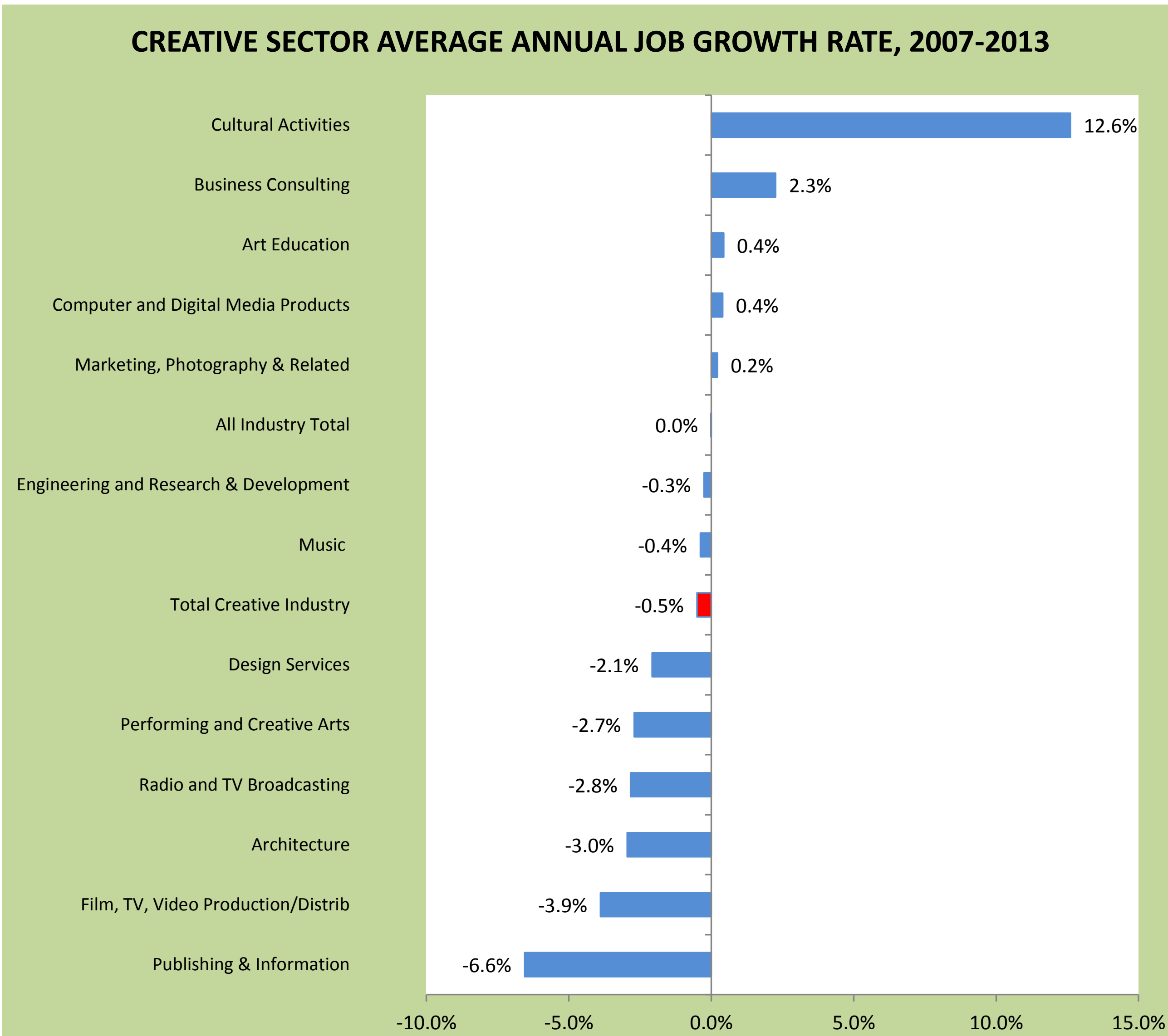
While this study is focused more on the longer term trends in the creative sector, it is of interest to look at how jobs in the sector have been impacted so far by the current economic downturn. Figure 2 shows how the creative industry groups performed in terms of job change for the 2007 to 2013 period.

The creative sector, like nearly all of Hawaii's industries, has experienced setbacks due to the very severe national recession that began in late 2007. Only five creative groups managed positive growth during 2007-2013 period, better than the state annual average growth rate of zero percent.

The strongest performers in terms of job growth during 2007-2013 period were cultural activities and business consulting.

Publishing and information experienced the most significant jobs loss in this period, followed by film, TV, video production/distribution, architecture, radio and TV broadcasting, performing and creative arts, and design services.

FIGURE 2



Source: DBEDT compilation based on EMSI data.

National Competitiveness of the Creative Sector

Job growth helps show the creative industries' competitiveness within Hawaii's economy. Another measure that can help shed light on creative sector industries is their performance compared to the same national industry. If Hawaii's creative industry growth rate is higher than the national growth rate, Hawaii's creative industry is effectively increasing its competitive share of the national industry. If the industry is growing more slowly in Hawaii its national industry share is declining. [5]

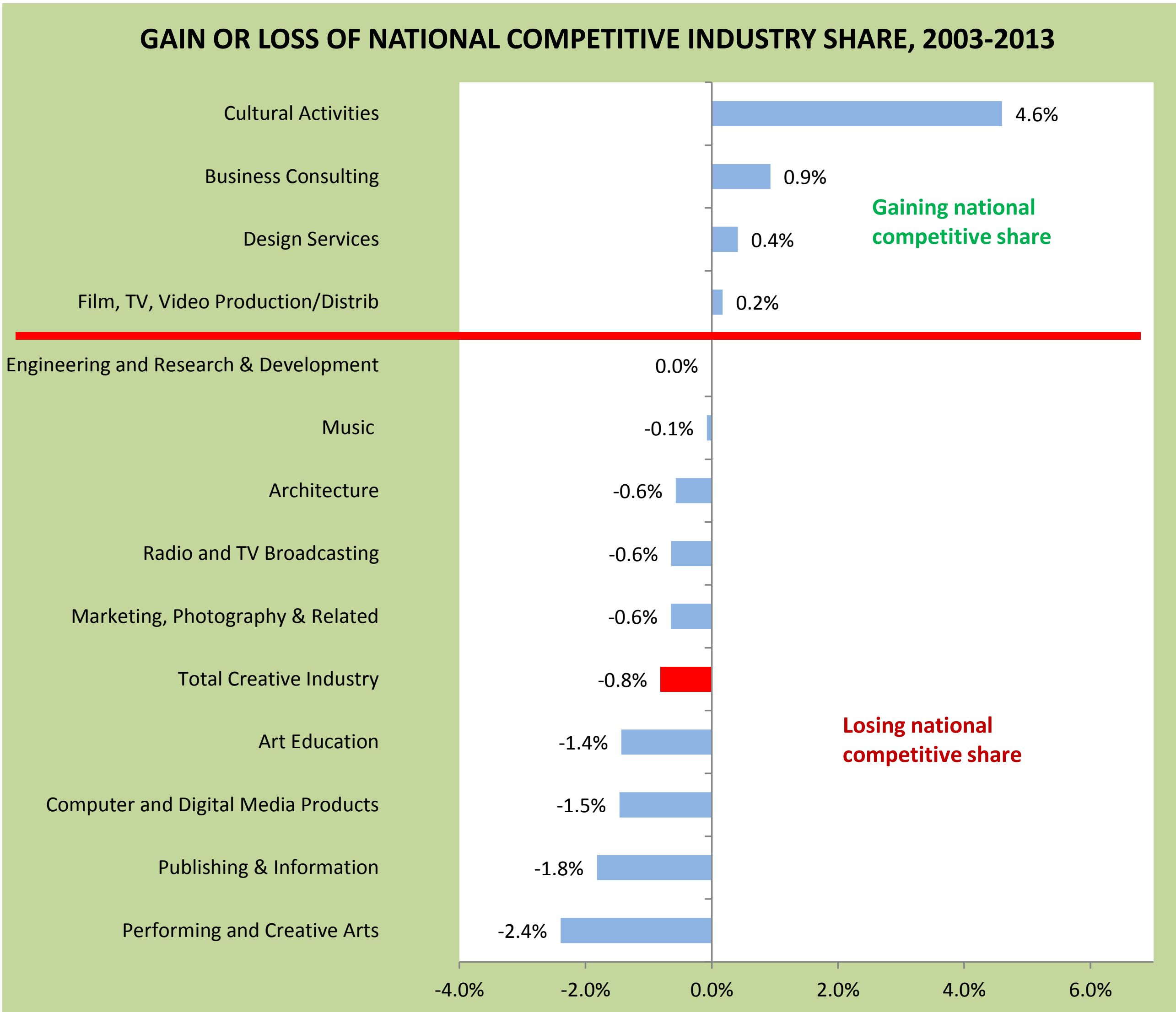
Figure 3 shows how much more or less Hawaii's creative industries grew per year on average than the same industries nationally. For instance, over the 2003 to 2013 period, jobs in the cultural activities industry group grew an average of 4.6% more annually in Hawaii than the same industry nationwide. Thus, Hawaii's cultural activities industry group gained competitive national industry share. On the other hand, even though the Art Education industry group grew jobs over this period, it lost national industry share due to an average annual growth rate that was 1.4% below the national industry growth rate.

Industries like computer and digital media products, music, and marketing, photography & related also lost competitive national market share even though they increased their statewide job counts.

Industries that have both positive job growth and an increase in competitive national industry share, represent the best performing industry groups over a given period of time. Industry groups with the higher competitive share metric are probably showing a higher comparative advantage compared with the national industry.

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

FIGURE 3



Source: DBEDT compilation based on EMSI data.

Industry Concentration – Hawaii's Creative Specialties

A third performance metric that helps in the evaluation of the creative industry portfolio is industry job concentration (Figure 4). This is a measure of how much Hawaii specializes in the industry and it helps shed light on the industries' export orientation.

Export activity brings new money into the state and is a basis for 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 a given creative industry is exported.

However, it is possible to identify *likely* export industries by measuring the concentration of their employment in the state's economy. An industry that employs a significantly higher proportion of jobs in Hawaii 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. Hawaii industries with an LQ measure 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.

For instance, the measure for cultural activities in Figure 4 means that employment in Hawaii's cultural industry group is 3.5 times more concentrated than for the U.S. as a whole. This suggests that cultural activities are relatively more important to Hawaii and that the state may be exporting a significant amount of the industry's output. On the other hand, business consulting in Hawaii with, an LQ of just 0.6, has only about half the employment concentration of the same industry group for the U.S. as a whole. It is possible that business consulting may be exporting some of its output. But 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, and performing/creative arts had concentrations in Hawaii's economy that were higher than the same industries nationally. These more concentrated industries are probably helping to drive Hawaii's economy. Industries that are not as concentrated in Hawaii as they are nationally may also be exporting some of their output. However, they are probably serving mainly local demand.

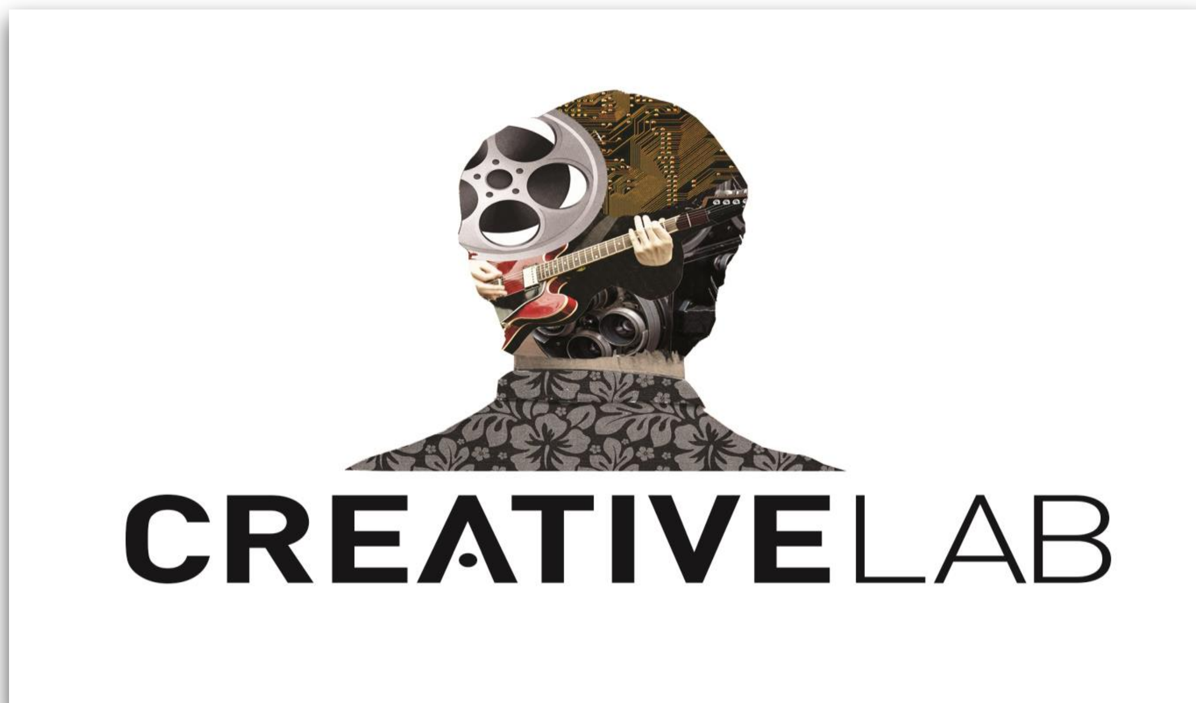
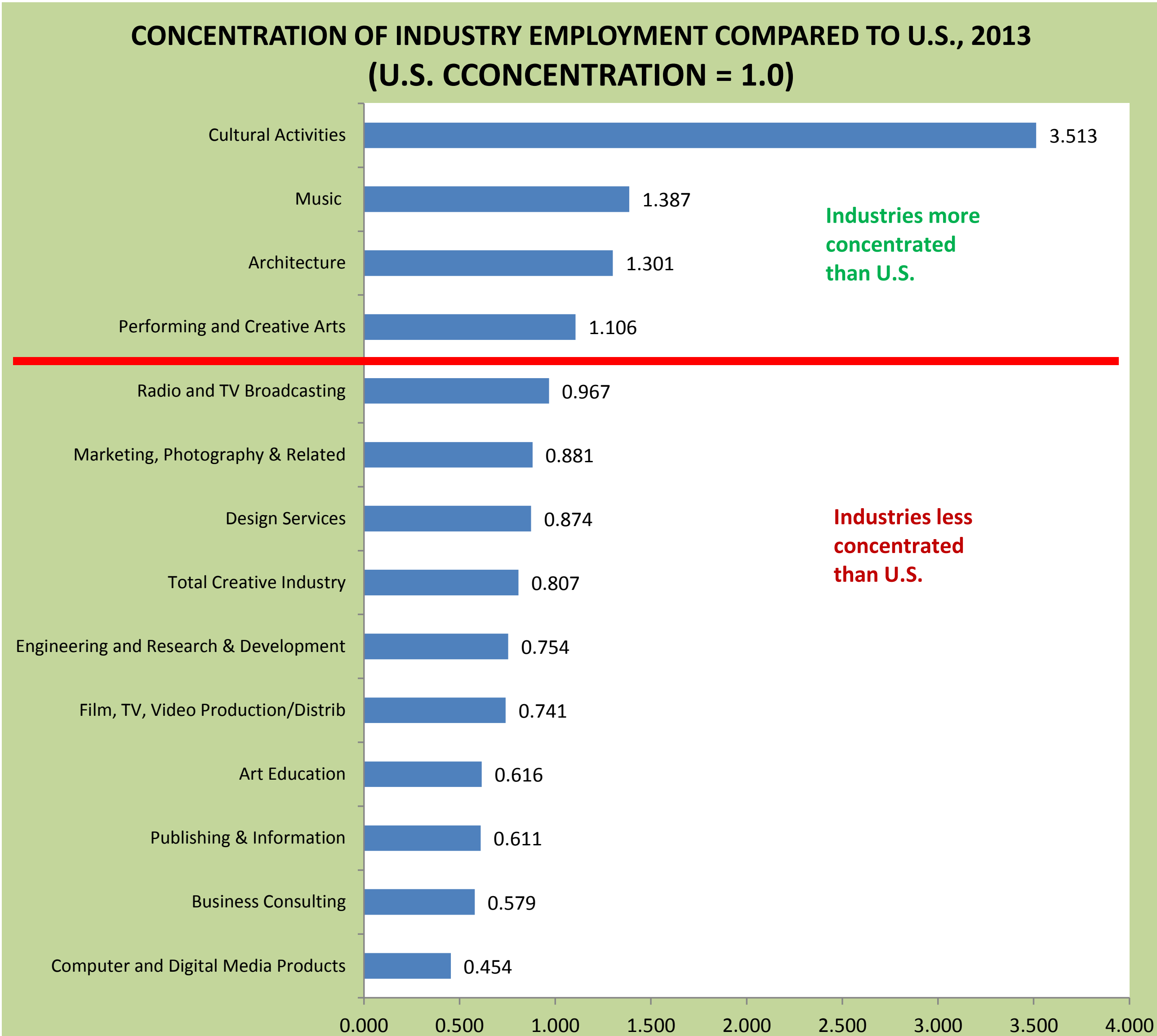


FIGURE 4



Source: DBEDT compilation based on EMSI data.

The Performance Map Framework: Identifying Emerging 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 tool box is the industry life cycle model. This model breaks industries in the economy into four generalized stages of life, starting with an *emerging* phase, moving to a *base-growth* industry phase, followed by a mature or *transitioning* phase and finally a *declining* phase. Of course, not all industries fit nicely into this notion, especially over short periods of time. However, with some qualifications, this notion of development stages can help us evaluate the status of the creative industry portfolio.

Using the three performance metrics from Figures 1, 3 and 4, the creative industry groups can be placed into one of four life-cycle quadrants according to the criteria shown in Table 2.

TABLE 2. PERFORMANCE MAP CRITERIA

TRANSITIONING	BASE-GROWTH
• Positive job growth • Losing competitive national industry share	• Positive job growth • Highly concentrated in the economy • Increasing competitive national industry share
DECLINING	**EMERGING**
• Losing jobs over period	• Positive job growth • Current low concentration in the economy • Increasing competitive national industry share

Emerging Quadrant: These are industries 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 industries have yet to achieve a concentration in the state's economy equal to the same industry for 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 industries 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 probably exporting at least a proportion of their output.

Transitioning Quadrant: Transitioning creative industries are still maintaining or growing their workforce, however they are losing competitive national industry share (growing more slowly than the same industry nationally). This is typical of mature industries 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 industries that never reached base-growth status before losing competitive national industry share and some previously declining industries that are fighting back into competitiveness.

Declining Quadrant: The declining quadrant contains industry groups showing job losses over the period. All of these creative industry groups have lost jobs to some extent between 2003 and 2013. Most industries that are losing jobs are also losing competitive national industry share. However, while they are declining in jobs for the period, these industries are not necessarily dying industries. A number of temporary circumstances may have put some of Hawaii's creative industries into the declining quadrant for 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 understand an industry's situation rather than a conclusion about the value of the industry to the state. It provides a starting point for assessing the strengths and weaknesses of the industries in the portfolio. Also, within industries that are experiencing mixed or poor performance there may be pockets of very successful firms.

III. CREATIVE INDUSTRY PORTFOLIO PERFORMANCE

Table 3 shows how the individual, NAICS-based creative industry groups fell on the performance map based on the 2003 to 2013 performance measures. Combined, the NAICS-based creative industry groups accounted for about 48,170 jobs in Hawaii's economy during 2013.

TABLE 3

CREATIVE INDUSTRY GROUPS MAPPED BY PERFORMANCE, 2003-2013					
Total Jobs, 2013: 48,170					
Average Annual Earnings, 2013: $45,912					
Net Change in Jobs, 2003-2013: 14.2%					
Transitioning Group: 47.9% of Jobs			**Base-Growth Group: 6.3% of Jobs**		
Group	Change in Jobs	Average Earnings	Group	Change in Jobs	Average Earnings
Engineering and Research & Development	17.1%	$92,763	Cultural Activities	94.1%	$42,950
Music	15.9%	$24,617			
Marketing, Photography & Related	14.2%	$22,809			
Art Education	31.6%	$9,287			
Computer and Digital Media Products	22.4%	$83,909			
Declining Group: 29.0% of Jobs			**Emerging Group: 16.7% of Jobs**		
Group	Change in Jobs	Average Earnings	Group	Change in Jobs	Average Earnings
Performing and Creative Arts	-1.5%	$15,572	Business Consulting	71.8%	$56,401
Radio and TV Broadcasting	-10.1%	$64,389	Design Services	25.4%	$23,532
Architecture	-11.4%	$69,150	Film, TV, Video Production/Distrib	4.2%	$62,984
Publishing & Information	-26.6%	$54,857			

Source: DBEDT compilation based on EMSI data.

Overall, the creative industry groups added about 5,983 jobs to the state's economy between 2003 and 2013. This amounted to a 14.2 percent increase in jobs, above the 12.6 percent growth in Hawaii's civilian economy as a whole for the period. The leading performers of the overall portfolio were the cultural activities and business consulting groups. The 2013 earnings average of the creative industry portfolio of $45,912 was lower than the statewide average of $48,446.

High Performing Creative Industry Groups

Only one creative industry group, cultural activities, registered as high performing base-growth industries for the 2003 to 2013 period.

The industry groups in the emerging category were composed of business consulting, design services, and film/TV production. This group also performed well in job creation.

Other Creative Industries' Performance

Five of the creative sector industry groups fell into the transitioning category for the 2003 to 2013 period. These ranged from the marketing, photography & related which increased 14.2% in jobs to arts education, which grew jobs by 31.6%. However, while these industry groups grew, it was not as vigorous as the same industries nationally. As a result, they lost some ground to the nation in terms of competitive industry share.

Finally, four creative industry groups that lost jobs in the 2003 to 2013 period fell into the declining quadrant of the performance map. Radio & TV broadcasting, publishing & information, performing and creative arts, and architecture all lost jobs for the period.

It is important to note that the independence of these creative groups is not yet clear. The performance of some groups may reflect strong or weak markets driving other industries for which the creative target is simply a supplier. For instance the high performance of cultural activities in the performance map probably reflects 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.

Hard-to-Measure Creative Activities

As discussed earlier, a number of creative activities cannot be easily or meaningfully defined in the NAICS industry system. These activities — mainly the digital media and broader film industry — represent either markets, or a series of partial NAICS industries. In Section V, the available information for these hard-to-measure activities will be presented to the extent available. However, most of the employment engaged in these market activities is probably captured in one or more of the producing industries that we are able to define and measure. The goal will be to eventually parse the producing industry employment into the important market sectors they support.

IV. CREATIVE INDUSTRY PERFORMANCE BY COUNTY

The following tables summarize the 2003 to 2013 county performance of the statewide creative industries (paid employment and self-employed/sole proprietors). Performance has been organized by *Best Performing Targets* (registering as base-growth & emerging industry groups) and *Other Targeted Industry Performance* (those that fell into the transitioning and declining categories).

City & County of Honolulu

Honolulu accounted for 34,949 of the state's creative industry jobs in 2013, a 1.1% annual increase from 2003. The average annual job growth was 3.1% from 2003 to 2007. After experiencing severe setbacks due to the national economic recession that began in late 2007, the average annual growth rate was down to -0.2% during 2007-2013. As shown in Table 4, only three creative industry groups were high performing in Honolulu County in the 2003 to 2013 period. These high performing groups not only grew jobs during the period, but also increased their competitive share of the activity by exceeding the national growth rate for the industry. These included: Cultural Activities, Business Consulting, and Engineering and R&D. Six creative industry groups lost jobs in Honolulu County over the 2003 to 2013 period: Architecture, Performing and Creative Arts, Radio and Television Broadcasting, Music, Publishing & Information, and Film, TV, Video Production/Distribution.

TABLE 4. CREATIVE INDUSTRY JOBS, HONOLULU

Industry Group	Performance Class	Jobs				Average Annual Job Growth (%)			
		2003	2007	2012	2013	2003-2007	2007-2013	2012-2013	2003-2013
Cultural Activities	Base-Growth	1,395	1,481	2,811	2,828	1.5%	11.4%	0.6%	7.3%
Business Consulting	Emerging	2,205	3,331	3,720	3,828	10.9%	2.3%	2.9%	5.7%
Engineering and R&D	Emerging	3,862	4,503	4,668	4,566	3.9%	0.2%	-2.2%	1.7%
Design Services	Transitioning	1,072	1,404	1,224	1,244	7.0%	-2.0%	1.6%	1.5%
Marketing, Photography & Related	Transitioning	6,935	7,502	7,408	7,485	2.0%	0.0%	1.0%	0.8%
Computer and Digital Media Products	Transitioning	3,444	4,124	3,978	4,150	4.6%	0.1%	4.3%	1.9%
Art Education	Transitioning	383	472	476	493	5.4%	0.7%	3.6%	2.6%
Film, TV, Video Production/Distrib	Declining	1,092	1,371	1,285	1,088	5.9%	-3.8%	-15.3%	0.0%
Performing and Creative Arts	Declining	4,820	5,264	4,587	4,615	2.2%	-2.2%	0.6%	-0.4%
Architecture	Declining	1,759	1,793	1,560	1,562	0.5%	-2.3%	0.1%	-1.2%
Radio and TV Broadcasting	Declining	1,157	1,138	932	954	-0.4%	-2.9%	2.4%	-1.9%
Music	Declining	800	603	588	573	-6.8%	-0.8%	-2.6%	-3.3%
Publishing & Information	Declining	2,406	2,410	1,509	1,563	0.0%	-7.0%	3.6%	-4.2%
Total Creative Industry	Transitioning	31,330	35,396	34,746	34,949	3.1%	-0.2%	0.6%	1.1%

Source: DBEDT compilation based on EMSI data.

The comparisons of Honolulu County creative industry's job and earnings growth with the state and nation are listed in Table 5. For job growth, Honolulu County's 1.1% annual growth rate was lower than the state's 1.3%, and also lower than the national average of 2.1%. For average earnings, Honolulu County was higher than the state, but much lower than the national average.

TABLE 5. HONOLULU COUNTY CREATIVE INDUSTRY PERFORMANCE COMPARED WITH NATION AND STATE, 2003-2013

Industry Group	Performance Class	Job Change 2003-2013	Average Annual Job Growth (%)			Ave. Annual Earnings (2013)		
			County	State	U.S.	County	State	U.S.
Cultural Activities	Base-Growth	1,433	7.3%	6.9%	2.3%	43,703	42,950	48,316
Business Consulting	Emerging	1,623	5.7%	5.6%	4.6%	61,598	56,401	74,171
Engineering and R&D	Emerging	704	1.7%	1.6%	1.6%	96,125	92,763	102,083
Design Services	Transitioning	172	1.5%	2.3%	1.9%	23,741	23,532	35,452
Marketing, Photography & Related	Transitioning	550	0.8%	1.3%	2.0%	25,439	22,809	45,638
Computer and Digital Media Products	Transitioning	706	1.9%	2.0%	3.5%	87,606	83,909	108,630
Art Education	Transitioning	110	2.6%	2.8%	4.2%	9,503	9,287	11,107
Film, TV, Video Production/Distrib	Declining	-4	0.0%	0.4%	0.2%	67,948	62,984	94,975
Performing and Creative Arts	Declining	-205	-0.4%	-0.1%	2.2%	15,383	15,572	23,921
Architecture	Declining	-197	-1.2%	-1.2%	-0.6%	75,873	69,150	62,778
Radio and TV Broadcasting	Declining	-203	-1.9%	-1.1%	-0.4%	69,783	64,389	77,105
Music	Declining	-227	-3.3%	1.5%	1.6%	26,263	24,617	40,544
Publishing & Information	Declining	-843	-4.2%	-3.1%	-1.2%	58,456	54,857	81,242
Total Creative Industry	Transitioning	3,619	1.1%	1.3%	2.1%	52,159	45,912	68,918

Source: DBEDT compilation based on EMSI data.

Hawaii County

Hawaii County accounted for 4,938 of the state's creative industry jobs in 2013, a 3.0% average annual increase from 2003. The average annual job growth was 7.6% from 2003 to 2007, but it has declined from the 2007 level for the last 6 years since the national economic recession started. As shown in Table 6, nine creative industry groups were high performing in Hawaii County in the 2003 to 2013 period. These high performing groups not only grew jobs during the period but also increased their competitive share of the activity by exceeding the national growth rate for the industry. These included: Music, Design Services, Architecture, Marketing, Photography & Related, Engineering and R&D, Publishing & Information, Business Consulting, Radio and TV Broadcasting, and Film, TV, Video Production/Distribution. No creative industry group lost jobs in Hawaii County over the 2003 to 2013 period.

TABLE 6. CREATIVE INDUSTRY JOBS, HAWAII COUNTY

Industry Group	Performance Class	Jobs				Average Annual Job Growth (%)			
		2003	2007	2012	2013	2003-2007	2007-2013	2012-2013	2003-2013
Music	Base-Growth	63	152	150	157	24.6%	0.5%	4.7%	9.6%
Design Services	Base-Growth	166	280	241	248	14.0%	-2.0%	2.9%	4.1%
Architecture	Emerging	119	157	139	152	7.2%	-0.5%	9.4%	2.5%
Marketing, Photography & Related	Emerging	835	1,138	1,213	1,246	8.0%	1.5%	2.7%	4.1%
Engineering and R&D	Emerging	503	558	573	604	2.6%	1.3%	5.4%	1.8%
Publishing & Information	Emerging	211	305	276	295	9.6%	-0.6%	6.9%	3.4%
Business Consulting	Emerging	274	486	487	516	15.4%	1.0%	6.0%	6.5%
Radio and TV Broadcasting	Emerging	57	87	51	58	11.2%	-6.5%	13.7%	0.2%
Film, TV, Video Production/Distrib	Emerging	34	86	69	74	26.1%	-2.5%	7.2%	8.1%
Computer and Digital Media Products	Transitioning	170	235	224	240	8.4%	0.4%	7.1%	3.5%
Performing and Creative Arts	Transitioning	1,110	1,250	1,182	1,217	3.0%	-0.4%	3.0%	0.9%
Art Education	Transitioning	29	51	39	37	15.2%	-5.2%	-5.1%	2.5%
Cultural Activities	Transitioning	91	115	94	94	6.0%	-3.3%	0.0%	0.3%
Total Creative Industry	Emerging	3,662	4,900	4,738	4,938	7.6%	0.1%	4.2%	3.0%

Source: DBEDT compilation based on EMSI data.

The comparisons of Hawaii County creative industry's job and earnings growth with the state and nation are listed in Table 7. For job growth, Hawaii County's 3.0% annual growth rate was higher than the state's 1.3% and the national average of 2.1%. For average earnings, Hawaii County was lower than the state, and much lower than the national average.

TABLE 7. HAWAII COUNTY CREATIVE INDUSTRY PERFORMANCE COMPARED WITH NATION AND STATE, 2003-2013

Industry Group	Performance Class	Job Change 2003-2013	Average Annual Job Growth (%)			Ave. Annual Earnings (2013)		
			County	State	U.S.	County	State	U.S.
Music	Base-Growth	94	9.6%	1.5%	1.6%	18,264	24,617	40,544
Design Services	Base-Growth	82	4.1%	2.3%	1.9%	19,826	23,532	35,452
Architecture	Emerging	33	2.5%	-1.2%	-0.6%	44,257	69,150	62,778
Marketing, Photography & Related	Emerging	411	4.1%	1.3%	2.0%	16,308	22,809	45,638
Engineering and R&D	Emerging	101	1.8%	1.6%	1.6%	76,740	92,763	102,083
Publishing & Information	Emerging	84	3.4%	-3.1%	-1.2%	38,487	54,857	81,242
Business Consulting	Emerging	242	6.5%	5.6%	4.6%	30,709	56,401	74,171
Radio and TV Broadcasting	Emerging	1	0.2%	-1.1%	-0.4%	26,960	64,389	77,105
Film, TV, Video Production/Distrib	Emerging	40	8.1%	0.4%	0.2%	42,828	62,984	94,975
Computer and Digital Media Products	Transitioning	70	3.5%	2.0%	3.5%	58,814	83,909	108,630
Performing and Creative Arts	Transitioning	107	0.9%	-0.1%	2.2%	12,560	15,572	23,921
Art Education	Transitioning	8	2.5%	2.8%	4.2%	7,775	9,287	11,107
Cultural Activities	Transitioning	3	0.3%	6.9%	2.3%	30,363	42,950	48,316
Total Creative Industry	Emerging	1,276	3.0%	1.3%	2.1%	29,497	45,912	68,918

Source: DBEDT compilation based on EMSI data.

Maui County

Maui County accounted for 5,965 of the state's creative industry jobs in 2013, a 1.3% average annual increase from 2003. The average annual job growth was 6.2% from 2003 to 2007. After experiencing severe setbacks due to the national economic recession that began in late 2007, the average annual growth rate was down to negative 1.9% during 2007-2013. As shown in Table 8, five creative industry groups were high performing in Maui County in the 2003 to 2013 period. These high performing groups not only grew jobs during the period but also increased their competitive share of the activity by exceeding national growth for the industry. These included: Music, Design Services, Radio and Television Broadcasting, Cultural Activities, and Film, TV, Video Production/Distribution. Four creative industry groups lost jobs in Maui County over the 2003 to 2013 period, Performing and Creative Arts, Engineering and R&D, , Architecture, and Publishing & Information.

TABLE 8. CREATIVE INDUSTRY JOBS, MAUI COUNTY

Industry Group	Performance Class	Jobs				Average Annual Job Growth (%)			
		2003	2007	2012	2013	2003-2007	2007-2013	2012-2013	2003-2013
Music	Base-Growth	101	423	372	398	43.1%	-1.0%	7.0%	14.7%
Design Services	Base-Growth	190	289	281	299	11.1%	0.6%	6.4%	4.6%
Radio and TV Broadcasting	Base-Growth	86	108	138	153	5.9%	6.0%	10.9%	5.9%
Cultural Activities	Emerging	37	40	56	57	2.0%	6.1%	1.8%	4.4%
Film, TV, Video Production/Distrib	Emerging	48	66	55	59	8.3%	-1.9%	7.3%	2.1%
Computer and Digital Media Products	Transitioning	228	240	314	314	1.3%	4.6%	0.0%	3.3%
Marketing, Photography & Related	Transitioning	1,157	1,386	1,351	1,363	4.6%	-0.3%	0.9%	1.7%
Business Consulting	Transitioning	267	375	377	370	8.9%	-0.2%	-1.9%	3.3%
Art Education	Transitioning	67	90	78	87	7.7%	-0.6%	11.5%	2.6%
Performing and Creative Arts	Declining	2,168	2,667	2,144	2,143	5.3%	-3.6%	0.0%	-0.1%
Engineering and R&D	Declining	359	456	329	319	6.2%	-5.8%	-3.0%	-1.2%
Publishing & Information	Declining	340	346	236	258	0.4%	-4.8%	9.3%	-2.7%
Architecture	Declining	219	223	143	145	0.5%	-6.9%	1.4%	-4.0%
Total Creative Industry	Transitioning	5,267	6,709	5,874	5,965	6.2%	-1.9%	1.5%	1.3%

Source: DBEDT compilation based on EMSI data.

The comparisons of Maui County creative industry's job and earnings growth with the state and nation are listed in Table 9. For job growth, Maui County's 1.3% annual growth rate was the same as the state's 1.3% but below the national average of 2.1%. For average earnings, Maui County was lower than the state, and much lower than the national average.

TABLE 9. MAUI COUNTY CREATIVE INDUSTRY PERFORMANCE COMPARED WITH NATION AND STATE, 2003-2013

Industry Group	Performance Class	Job Change 2003-2013	Average Annual Job Growth (%)			Ave. Annual Earnings (2013)		
			County	State	U.S.	County	State	U.S.
Music	Base-Growth	297	14.7%	1.5%	1.6%	26,974	24,617	40,544
Design Services	Base-Growth	109	4.6%	2.3%	1.9%	23,319	23,532	35,452
Radio and TV Broadcasting	Base-Growth	67	5.9%	-1.1%	-0.4%	40,637	64,389	77,105
Cultural Activities	Emerging	20	4.4%	6.9%	2.3%	45,754	42,950	48,316
Film, TV, Video Production/Distrib	Emerging	11	2.1%	0.4%	0.2%	28,785	62,984	94,975
Computer and Digital Media Products	Transitioning	86	3.3%	2.0%	3.5%	65,733	83,909	108,630
Marketing, Photography & Related	Transitioning	206	1.7%	1.3%	2.0%	17,171	22,809	45,638
Business Consulting	Transitioning	103	3.3%	5.6%	4.6%	45,405	56,401	74,171
Art Education	Transitioning	20	2.6%	2.8%	4.2%	10,326	9,287	11,107
Performing and Creative Arts	Declining	-25	-0.1%	-0.1%	2.2%	17,893	15,572	23,921
Engineering and R&D	Declining	-40	-1.2%	1.6%	1.6%	78,120	92,763	102,083
Publishing & Information	Declining	-82	-2.7%	-3.1%	-1.2%	55,080	54,857	81,242
Architecture	Declining	-74	-4.0%	-1.2%	-0.6%	38,050	69,150	62,778
Total Creative Industry	Transitioning	698	1.3%	1.3%	2.1%	28,997	45,912	68,918

Source: DBEDT compilation based on EMSI data.

Kauai County

Kauai County accounted for 2,240 of the state's creative industry jobs in 2013, a 1.8% annual increase from 2003. The average annual job growth was 5.7% from 2003 to 2007. After experiencing setbacks due to the national economic recession that began in late 2007, the average annual growth rate was down to negative 0.7% during 2007-2013. As shown in Table 10, ten creative industry groups were high performing in Kauai County in the 2003 to 2013 period. These high performing groups not only grew jobs during the period but also increased their competitive share of the activity by exceeding the national growth rate for the industry. These included: Cultural Activities, Music, Marketing, Photography & Related, Film, TV, Video Production/Distribution, Design Services, Radio and Television Broadcasting, Publishing & Information, Art Education, Engineering and R&D, and Business Consulting. Only Architecture lost jobs in Kauai County over the 2003 to 2013 period.

TABLE 10. CREATIVE INDUSTRY JOBS, KAUAI COUNTY

Industry Group	Performance Class	Jobs				Average Annual Job Growth (%)			
		2003	2007	2012	2013	2003-2007	2007-2013	2012-2013	2003-2013
Cultural Activities	Base-Growth	51	50	81	77	-0.5%	7.5%	-4.9%	4.2%
Music	Base-Growth	51	33	57	63	-10.3%	11.4%	10.5%	2.1%
Marketing, Photography & Related	Base-Growth	468	588	594	629	5.9%	1.1%	5.9%	3.0%
Film, TV, Video Production/Distrib	Emerging	79	67	95	82	-4.0%	3.4%	-13.7%	0.4%
Design Services	Emerging	75	121	90	94	12.7%	-4.1%	4.4%	2.3%
Radio and TV Broadcasting	Emerging	47	63	37	47	7.6%	-4.8%	27.0%	0.0%
Publishing & Information	Emerging	105	105	120	137	0.0%	4.5%	14.2%	2.7%
Art Education	Emerging	18	27	35	36	10.7%	4.9%	2.9%	7.2%
Engineering and R&D	Emerging	90	183	144	136	19.4%	-4.8%	-5.6%	4.2%
Business Consulting	Emerging	91	156	153	151	14.4%	-0.5%	-1.3%	5.2%
Performing and Creative Arts	Transitioning	618	680	587	619	2.4%	-1.6%	5.5%	0.0%
Computer and Digital Media Products	Transitioning	111	144	112	113	6.7%	-4.0%	0.9%	0.2%
Architecture	Declining	65	120	56	56	16.6%	-11.9%	0.0%	-1.5%
Total Creative Industry	Transitioning	1,869	2,337	2,161	2,240	5.7%	-0.7%	3.7%	1.8%

Source: DBEDT compilation based on EMSI data.

The comparisons of Kauai County creative industry's job and earnings growth with the state and nation are listed in Table 11. For job growth, Kauai County's 1.8 average annual growth rate was higher than the state's 1.3% but lower than the national average of 2.1%. For average earnings, Kauai County was lower than the state and much lower than the national average.

TABLE 11. KAUAI COUNTY CREATIVE INDUSTRY PERFORMANCE COMPARED WITH NATION AND STATE, 2003-2013

Industry Group	Performance Class	Job Change 2003-2013	Average Annual Job Growth (%)			Ave. Annual Earnings (2013)		
			County	State	U.S.	County	State	U.S.
Cultural Activities	Base-Growth	26	4.2%	6.9%	2.3%	28,469	42,950	48,316
Music	Base-Growth	12	2.1%	1.5%	1.6%	11,516	24,617	40,544
Marketing, Photography & Related	Base-Growth	161	3.0%	1.3%	2.0%	14,338	22,809	45,638
Film, TV, Video Production/Distrib	Emerging	3	0.4%	0.4%	0.2%	40,742	62,984	94,975
Design Services	Emerging	19	2.3%	2.3%	1.9%	31,031	23,532	35,452
Radio and TV Broadcasting	Emerging	0	0.0%	-1.1%	-0.4%	79,234	64,389	77,105
Publishing & Information	Emerging	32	2.7%	-3.1%	-1.2%	44,120	54,857	81,242
Art Education	Emerging	18	7.2%	2.8%	4.2%	5,398	9,287	11,107
Engineering and R&D	Emerging	46	4.2%	1.6%	1.6%	85,297	92,763	102,083
Business Consulting	Emerging	60	5.2%	5.6%	4.6%	39,373	56,401	74,171
Performing and Creative Arts	Transitioning	1	0.0%	-0.1%	2.2%	14,151	15,572	23,921
Computer and Digital Media Products	Transitioning	2	0.2%	2.0%	3.5%	47,564	83,909	108,630
Architecture	Declining	-9	-1.5%	-1.2%	-0.6%	29,629	69,150	62,778
Total Creative Industry	Transitioning	371	1.8%	1.3%	2.1%	27,454	45,912	68,918

Source: DBEDT compilation based on EMSI data.

V. CREATIVE INDUSTRY PERFORMANCE BY MAJOR GROUPS

This section takes a closer look at the performance of the industry groups in the creative industries portfolio. Detailed data are shown for selected industry groups in this section. However, complete data for all groups may be found in the appendix to this report.

States have increasingly come to realize in recent years 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 in its own right and is essential to differentiating Hawaii's visitor product from 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, an effort to establish an improved definition, the DBEDT Research Division worked with the Creative Industries Division in 2009 to better measure the sector in light of 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 major industry groups of the creative sector and their primary performance metrics.

TABLE 12. EMPLOYMENT AND GROWTH IN HAWAII'S CREATIVE INDUSTRY

Group & Industry	Hawaii Jobs		Ave. Job Growth Rate, 2003-2013		Annual Earnings 2013		Performance Metrics		
	2003	2013	Hawaii	U.S.	Hawaii	U.S.	Competitive Share 2003-2013	Location Quotient (LQ), 2013	Change in LQ, 2003-2013
TOTAL HAWAII CREATIVE INDUSTRY	**42,187**	**48,170**	**1.3%**	**2.1%**	**45,912**	**68,918**	**-0.8%**	**0.81**	**-0.08**
Marketing, Photography & Related	9,409	10,744	1.3%	2.0%	22,809	45,638	-0.6%	0.88	-0.07
Performing and Creative Arts	8,723	8,595	-0.1%	2.2%	15,572	23,921	-2.4%	1.11	-0.32
Engineering and Research & Development	4,831	5,656	1.6%	1.6%	92,763	102,083	0.0%	0.75	-0.01
Business Consulting	2,834	4,868	5.6%	4.6%	56,401	74,171	0.9%	0.58	0.04
Computer and Digital Media Products	3,955	4,842	2.0%	3.5%	83,909	108,630	-1.5%	0.45	-0.08
Cultural Activities	1,573	3,053	6.9%	2.3%	42,950	48,316	4.6%	3.51	1.21
Publishing & Information	3,081	2,260	-3.1%	-1.2%	54,857	81,242	-1.8%	0.61	-0.14
Architecture	2,162	1,915	-1.2%	-0.6%	69,150	62,778	-0.6%	1.30	-0.10
Design Services	1,502	1,884	2.3%	1.9%	23,532	35,452	0.4%	0.87	0.02
Film, TV, Video Production/Distrib	1,251	1,303	0.4%	0.2%	62,984	94,975	0.2%	0.74	0.00
Radio and TV Broadcasting	1,347	1,211	-1.1%	-0.4%	64,389	77,105	-0.6%	0.97	-0.08
Music	1,022	1,185	1.5%	1.6%	24,617	40,544	-0.1%	1.39	-0.03
Art Education	497	654	2.8%	4.2%	9,287	11,107	-1.4%	0.62	-0.10

Source: DBEDT compilation based on EMSI data.

As discussed in Section III, the creative sector includes about 48,170 jobs in 13 industry groups. The average annual earnings for the sector was $45,912 in 2013. Most of the 13 industry groups are composed of several smaller industries that are shown in more detail in the following subsections.

Performing and Creative Arts

This 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 with the music industry group and museums, which are included in cultural activities group. Both of these groups are discussed later on.

Performing and creative arts is the second largest single industry group in the creative sector with about 8,595 employees and self-employed people in 2013. Declines in jobs were centered among agents and managers, art dealers, theater groups, and other performing arts companies. Gains in jobs over the period were made in promoters and independent artists. The earnings average for workers in the performing and creative arts group was only $15,572 in 2013. Since many of the jobs in this group are part time, the average earnings do not represent a full-time labor force.

The performing and creative arts group is very concentrated in Hawaii, with about 11% more jobs proportionately than for the industry nationally. This probably reflects the interdependence between Hawaii's rich artistic and cultural resources and the tourism sector. That interdependence probably 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. Beyond tourism, this sector also provides a channel for the input of artistic creativity to a range of other innovation activities, including film, various forms of digital media, architecture and applied design.

Engineering/Scientific Research and Development

One of the leading components of Hawaii's creative sector is engineering and scientific research and development, with about 5,656 jobs. This group overlaps the technology and the creative sectors. 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. As in technology, social science research is also an activity in creative R&D.

As in the technology sector, engineering/R&D as a creative group performed very well over the 2003 to 2013 period. Jobs increased by 1.6% annually and the group gained in competitive national market share. The only lagging activity in the industry group was social science and humanities research, in which jobs declined. The average annual earnings of this group was $92,763, the highest among the whole creative industry sector. Detailed data can be found in the Appendix.

Computer and Digital Media

The computer and digital media industry group also includes many of the same activities as in the computer services group in the technology sector. However, in addition to the core computer technology services, the creative sector places heavy emphasis on the rapidly developing and evolving marriage of digital technology with traditional entertainment, cultural and artistic content. This marriage 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, 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 and digital media sector overlaps the similar group in the technology sector, varying by only the inclusion of software publishers. The group includes both programming and software activities and support activities such as systems design and computer facilities.

TABLE 13. COMPUTER AND DIGITAL MEDIA INDUSTRY GROUP EMPLOYMENT

Group & Industry	Hawaii Jobs		Ave. Job Growth Rate, 2003-2013		Annual Earnings, 2013		Performance Metrics		
	2003	2013	Hawaii	U.S.	Hawaii	U.S.	Competitive Share 2003-2013	Location Quotient (LQ), 2013	Change in LQ, 2001-2013
Computer and Digital Media Products	3,955	4,842	2.0%	3.2%	83,909	108,630	-1.2%	0.47	-0.07
Software Publishers	134	180	3.0%	1.7%	67,845	141,081	1.2%	0.12	0.01
Custom Computer Programming Services	1,842	1,697	-0.8%	2.9%	86,058	98,704	-3.7%	0.39	-0.18
Computer Systems Design Services	1,979	2,965	4.1%	4.2%	83,654	107,144	-0.1%	0.66	-0.02

Source: DBEDT compilation based on EMSI data.

As a whole, jobs in this sector grew at an average annual rate of 2.0% over the 2003 to 2013 period. Overall, the group lost in terms of competitive national market share. Declines in computer programming services more than offset the gains in software publishing jobs.

The average earnings in the sector were relatively high, at $83,909 in 2013. The lowest paying activity, software publishers, averaged $67,845, while the highest, custom computer programming services, averaged $86,058.

While not a measurable activity within this industry group, digital media is a direct and indirect product of computer activity. Directly, computer programming and support activities integrate content from various sources into entertainment and information packages. Indirectly, computer activity provides specialized input into other products like film and sound recordings.

As will be noted in the music industry group section, evolving digital technology is an opportunity for artists and small programming/content developers to compete in a market that has been usually dominated by large firms. Using digital technology, video, music, speech, literature, historical documentation, games, educational instruction, as well as computer programs and data, can share a similar, digitized format and be distributed and consumed on common platforms. These platforms are quickly evolving beyond computers to smart phones, tablets, smart TV and direct internet broadcasts. New products for this market are evolving as fast as new platforms are developed. Examples of such products are shown in Table 14.

TABLE 14. EXAMPLES OF DIGITAL MEDIA PRODUCTS

Video games and interactive virtual worlds	Blogs and social websites
Multimedia CD-ROM publishing	Email and attachments
Digital music publishing and distribution	Podcasting New media
Mobile devices and content	Internet Art
Software for the various devices and content	Interactive television
Web sites including 'brochure ware'	Hypertext fiction
Electronic books	Mash ups (combining bits and pieces of existing digital content into original content.)

Measuring digital media is similar in difficulty to measuring emerging energy activity. There are a multitude of firms in numerous industries that dedicate some fraction of their work to that particular market. It is likely that the NAICS computer services industry will contain more of these firms than other industries. But there are probably firms serving this market in other NAICS industries such as the music, film production, and information industries. Work is needed to better identify and measure the mix and scope of these firms across industries and digital markets.

Marketing, Photography and Related Activities

Marketing, photography and related activities in Hawaii play an important role in bringing Hawaii's goods and services to the attention of national and international markets. Marketing, advertising, public relations and media specialists account for most of this sector's workforce of about 10,744. This represented about a 1.3% annual increase from 2003 and compares to a 1.9% annual increase in the national workforce of this industry group. Jobs in some areas such as public relations firms and display advertising grew faster than their national counterparts and faster than Hawaii's economy as a whole. However, losses of jobs in advertising, (especially direct mail) marketing research/polling and commercial photography brought the overall growth rate down.

The slower growth for Hawaii's marketing and related activities compared with the same activities nationally resulted in a decline in overall competitive national industry share. However, thanks to their higher growth, public relations, commercial photography and display advertising showed gains in national industry share.

The annual earnings average for the industry group was $22,809, below the state average. Earnings ranged from an average $104,683 in advertising material distribution services to $12,815 in the commercial photography.

The marketing and related activities group is a very competitive business from both a creative and business development perspective. Since geography is less of an advantage in these activities, Hawaii companies in the marketing and related group must continuously show that their creativity and knowledge of the Hawaii product outweighs the greater reach and possible economies held by nationwide advertising and related firms.

Business Consulting

Business consulting was a thriving activity over the 2003 to 2013 period with 4,868 jobs in 2013, up 5.6% annually from 2003. This was more than four times the growth rate of Hawaii's overall job count and exceeded the growth rate for business consulting nationally.

Management, environmental consulting, and other scientific and technical consulting services are the three largest components of the business consulting industry group, accounting for about 81% of the group's jobs. Other management consulting was one of the fastest growing activities in the group, with job growth of 14.7% for the period. Administrative management and general management consulting services and other scientific and technical consulting services both grew more than 6.0% annually in jobs over the period, while process and logistical consulting showed negative 2.4% growth in its workforce over the period. The reason for this decline is not clear and it is possible that the decline may have resulted from some companies changing their NAICS classification over the period to another consulting specialty.

The annual earnings average for business consulting was $56,401. This ranged from $77,297 among other management consulting to $33,911 for logistics consulting.

Publishing and Information

As a whole, publishing and information showed a 3.1% annual decline in jobs from 2003 to 2013, which was worse than the national level. This industry group is dominated by newspaper publishing, which accounted for almost one-half of the industry group's jobs in 2013. Newspaper publishing showed a 6.6% annual decline in jobs over the period, and this was below the 4.7% 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 Hawaii, internet publishing and broadcasting increased jobs by 10.1% annually from 2003 to 2013, with 266 employees in 2013.

The annual earnings average for publishing and information in Hawaii was $54,857 in 2013. This ranged from $76,844 for directory and mailing list publishing firms, to $29,125 for jobs among all other information services. The newspaper publishing earnings average was $65,941 in 2013, while the average for internet broadcasting was $68,195.

Cultural Activities

The cultural activities industry group accounted for 3,053 jobs in 2013 and included museums, historical sites, zoos, botanical gardens and grant making foundations. As a group, cultural activities registered a 6.9% annual increase in jobs over the 2003 to 2013 period, better than the state's economy as a whole and the same set of activities nationally. As a result the cultural industry group gained some competitive national industry share. The annual earnings average for the cultural activities group was $42,950 in 2013. This ranged from $24,714 for museums to $88,207 for grant making establishments.

Architecture

Architecture is one of the more visible examples of the creative sector. In particular, a unique style of Hawaiian architecture has developed over the last several decades, weaving themes from old and new Hawaii into designs suited for the state's climate and life style. More recently, architecture has become a leading source of creativity in addressing the need to conserve energy and provide for alternative energy sources in Hawaii's residential and commercial structures.

Architecture employed 1,915 people in 2013, a negative 1.2% annual growth since 2003. This is worse than the average growth for the state's workforce as a whole, and also worse than the negative

0.8% annual growth for the architecture industry nationally. Most of the industry group's jobs were among structural architectural services, while the remainder of the jobs was in landscape architecture. Landscape architecture registered a negative 1.7% annual job growth from 2003 to 2013.

The annual earnings average in architecture was $69,150 in 2013 with structural architecture at $74,453 and landscape architecture averaging $45,603.

Design Services

Design services employed about 1,884 people in 2013. About 55% of these jobs were among graphic design firms, while another 25% were in interior design. Overall, jobs grew by 2.3% annually in the design industry group. Interior design jobs grew 3.3% and graphic design jobs grew 3.0% annually.

The annual earnings average for the design group was $23,532 in 2013. Other specialized design services had the lowest average at $11,212, followed by drafting services at $17,012, and graphic design services at an average of $22,153.

Radio & TV Broadcasting

Like publishing, broadcasting has been impacted by the rise of the internet as an information and entertainment alternative. Radio and TV broadcasting shrank by 1.1% annually to about 1,211 jobs over the 2003 to 2013 period. Nationally, the industry group did only marginally better, managing a 0.6% annual decline in jobs. Television broadcasting lost 1.8% of its workforce annually over the period to just 561 jobs in 2013. Radio stations gained 0.9% annually over the period with about 558 jobs in 2013. Radio networks, the only other activity in the industry group lost 5.9% per year. The annual earnings average for broadcasting was about $64,389 in 2013. This ranged from $90,648 for radio networks, to $43,776 for radio stations.

Film, TV, and Video Production

Film and television production in Hawaii has been an important contributor to both jobs and income in the state, as well as to the visitor industry through the worldwide exposure these productions have enjoyed. Filmmakers from Hollywood and around the world are discovering Hawai`i is an exciting location for film, television, commercial, and digital media production.

The industry is growing, thanks to some new and globally competitive state tax incentives. These incentives have already lured a wave of major feature films to the Islands including Disney's "Pirates of the Caribbean: At World's End," Universal's "Forgetting Sarah Marshall", DreamWorks' "Tropic Thunder", and Warner Bros. Pictures' Godzilla. Producers for the "Indiana Jones" movies returned to shoot another sequel Paramount's fourth installment of the successful franchise, "Indiana Jones and the Kingdom of the Crystal Skull." Hawai`i now ranks among the top ten film destinations in the United States.

For decades, Hawaii's natural beauty has been the backdrop for popular films such as "From Here to Eternity," "South Pacific" and "Jurassic Park." Millions have also been captivated by iconic television shows like the original "Hawaii Five-O", "Magnum P.I.," and most recently the fresh remake of "Hawaii Five-O", all of which were shot entirely in the Islands.

TABLE 15. FILM & TV PRODUCTION INDUSTRY PERFORMANCE, 2001 TO 2013

Group & Industry	Hawaii Jobs		Ave. Job Growth Rate, 2003-2013		Annual Earnings, 2013		Performance Metrics		
	2003	2013	Hawaii	U.S.	Hawaii	U.S.	Competitive Share 2001-2013	Location Quotient (LQ), 2013	Change in LQ, 2001-2013
Film, TV, Video Production/Distrib	1,251	1,303	0.4%	0.5%	62,984	94,975	-0.1%	0.72	-0.02
Prerecorded Compact Disc (except Software), Tape, and Record Reproducing	5	13	10.0%	-8.9%	34,313	68,824	18.9%	0.28	0.24
Motion Picture and Video Production	1,159	1,111	-0.4%	1.8%	63,537	88,907	-2.2%	0.91	-0.24
Motion Picture and Video Distribution	16	13	-2.1%	-3.9%	52,802	124,297	1.8%	0.36	0.06
Teleproduction and Other Postproduction Services	37	60	5.0%	1.6%	66,260	94,044	3.3%	0.54	0.14
Cable and Other Subscription Programming	34	106	12.0%	-1.2%	60,098	114,331	13.3%	0.28	0.20

Source: DBEDT compilation based on EMSI data.

The NAICS industries for film and TV production do not include creative and business services beyond the 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 sources of industry jobs such as actors, musicians, writers, food service and other specialties are compiled in statistics for other NAICS industries. However, the data do not differentiate film/TV project jobs from other activities. (Many jobs may be short in duration as some projects require only a few weeks of production in the islands. Jobs recorded for the industry in the NAICS-based statistics are shown in Table 15).

These represent jobs among Hawaii companies and enterprises involved in the direct production of Hawaii film and TV products. Direct film and TV production activities involved about 1,303 jobs in 2013 and increased 0.4% annually from 2003. Some gains were made over the period in the development of programming for cable and subscription distribution and in teleproduction and other post production services. Nationally, this group of industries showed a 0.5% annual increase in jobs over the period, with motion picture and TV production showing a 1.8% gain.

However, volatility in the year to year film production employment is a major factor clouding the long term trend. The combination of limited data and extreme volatility from year to year make this a very difficult industry to assess over a short period of time.

Music

Hawaii has always had a unique music arts culture based on Hawaiian heritage, but it has expanded to embrace trends in music worldwide. The range of talented musicians in Hawaii 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 Hawaii'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 dynamics changed with the digital age, which has made production of high quality recording affordable to individual artists and new distribution systems that allow artists to promote and sell their music through the internet and music downloading services.

There were about 1,185 employed and self-employed workers in Hawaii's music industry in 2013, most of them performers. As Table 16 shows, employment in Hawaii's music industry increased 1.5% per year on average over the 2003 to 2013 period. By contrast, jobs in this industry group nationally grew by 1.0%.

KAUA'I MUSIC FESTIVAL

TABLE 16. EMPLOYMENT IN MUSIC INDUSTRY GROUP

Group & Industry	Hawaii Jobs		Ave. Job Growth Rate, 2003-2013		Annual Earnings, 2013		Performance Metrics		
	2003	2013	Hawaii	U.S.	Hawaii	U.S.	Competitive Share 2001-2013	Location Quotient (LQ), 2013	Change in LQ, 2001-2013
Music	1,022	1,185	1.5%	1.0%	24,617	40,544	0.5%	1.46	0.04
Musical Instrument and Supplies Stores	180	138	-2.6%	-0.6%	31,354	29,535	-2.0%	0.67	-0.16
Record Production	19	51	10.4%	-0.9%	26,524	62,509	11.3%	2.86	1.87
Integrated Record Production/Distributio	34	1	-29.7%	-0.9%	40,993	119,068	-28.9%	0.04	-1.17
Music Publishers	2	2	0.0%	1.6%	49,566	64,330	-1.6%	0.05	-0.01
Sound Recording Studios	57	50	-1.3%	-0.2%	22,963	35,631	-1.1%	0.64	-0.09
Other Sound Recording Industries	11	24	8.1%	-5.3%	79,028	48,657	13.4%	1.07	0.78
Musical Groups and Artists	719	919	2.5%	3.0%	22,097	37,916	-0.5%	2.20	-0.15

Source: DBEDT compilation based on EMSI data.

The centerpiece of this industry group — musical groups and artists — increased by about 2.5%. Record production and other sound recording showed some increase, although the small size of these activities means that changes in these industries are difficult to interpret. Retail activity devoted to musical instruments and supplies showed a small decline in jobs.

Annual earnings in the music industry generally reflect part-time professions. The average for the industry group as a whole was $24,617 in 2013. Earnings for the same industry groups nationally were higher than in Hawaii, but generally below the average for the economy as a whole.

Arts Education

Arts education — 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 more than 40 small establishments and numerous self-employed educators in the state specializing in various forms of arts education. The total number of persons engaged in this small industry was nearly 700 in 2013, up about 2.8% annually from 2003. These activities grew faster (4.7%) at the national level for the period. Average annual earnings amounted to only $9,287 for Hawaii in 2013 and just $11,107 at the national level. 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 may serve as a barometer for interest in education supporting the creative sector.

VI. CONCLUSIONS AND NEXT STEPS

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

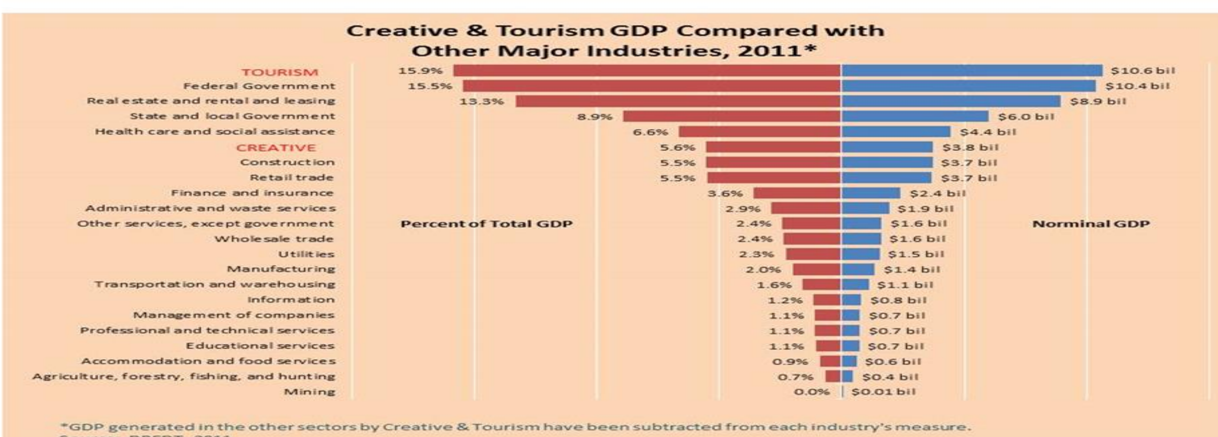
The four-quadrant performance map has helped to organize the industry groups of the updated creative sector by their growth, competitiveness, and concentration in the economy.

Four industry groups ranked as emerging and base-growth activities in the creative sector, including: cultural activities, business consulting, design services, and film/TV production.

Five other industry groups ranked as transitioning, meaning that, while they have been growing jobs, there could be performance issues that are affecting the competitiveness of these activities. These groups were: engineering/scientific R&D, music, art education, marketing, and computer and digital media products.

Finally, three industry groups lost jobs over the 2003-2013 period and consequently fell into the declining quadrant for this time period. These were radio and TV broadcasting, architecture, and publishing & information. In broadcasting and information, 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 the dimensions and opportunities of the commercial markets served by the NAICS-based creative industry groups. This particularly includes digital media and the broader film industry, which is only partially captured in the NAICS film production industry. Also needing closer study is the link between specific creative activity and emerging technologies in information, communications, entertainment, and the broad range of commercial applications that are being driven by innovation. Learning how creative activity utilizes and supports emerging technology can help clarify the skill sets and educational elements that will help make Hawaii a leader in innovation.



APPENDIX: DETAILED INDUSTRY DATA

NAICS Code	Group & Industry	Hawaii Jobs and Earnings				Performance Metrics			US Comparable	
		2003	2013	Ave. Job Growth Rate, 03-13	Annual Earnings, 2013	Compet.Share 03-13	Location Quotient (LQ)	Change in LQ, 03-13	Ave. Job Growth Rate, 03-13	Annual Earnings, 2013
	TOTAL HAWAII CREATIVE INDUSTRY	**42,187**	**48,170**	**1.3%**	**45,912**	**-0.01**	**0.81**	**-0.08**	**2.1%**	**68,918**
	Architecture	2,162	1,915	-1.2%	69,150	0.00	1.32	-0.08	-0.8%	62,778
541310	Architectural Services	1,856	1,563	-1.7%	74,453	-0.01	1.48	-0.14	-0.9%	72,189
541320	Landscape Architectural Services	306	352	1.4%	45,603	0.02	0.91	0.14	-0.4%	36,953
	Art Education	497	654	2.8%	9,287	-0.02	0.59	-0.13	4.7%	11,107
611610	Fine Arts Schools (Private)	497	654	2.8%	9,287	-0.02	0.59	-0.13	4.7%	11,107
	Business Consulting	2,834	4,868	5.6%	56,401	0.01	0.60	0.06	4.2%	74,171
541611	Admi. Management and General Manag. Consulting	1,207	2,349	6.9%	57,860	0.02	0.60	0.11	4.5%	79,896
541612	Human Resources Consulting Services	272	441	5.0%	38,441	0.05	0.76	0.31	-0.4%	73,972
541614	Process, Physical Distri., and Logistics Consulting	282	221	-2.4%	33,911	-0.06	0.33	-0.26	3.2%	66,993
541618	Other Management Consulting Services	68	267	14.7%	77,297	0.13	0.40	0.28	1.5%	79,631
541620	Environmental Consulting Services	558	774	3.3%	62,826	0.01	1.22	0.07	2.6%	62,174
541690	Other Scientific and Technical Consulting Services	447	816	6.2%	55,068	-0.03	0.51	-0.17	9.2%	65,888
	Computer and Digital Media Products	3,955	4,842	2.0%	83,909	-0.01	0.47	-0.07	3.2%	108,630
511210	Software Publishers	134	180	3.0%	67,845	0.01	0.12	0.01	1.7%	141,081
541511	Custom Computer Programming Services	1,842	1,697	-0.8%	86,058	-0.04	0.39	-0.18	2.9%	98,704
541512	Computer Systems Design Services	1,979	2,965	4.1%	83,654	0.00	0.66	-0.02	4.2%	107,144
	Cultural Activities	1,573	3,053	6.9%	42,950	0.05	3.60	1.30	2.0%	48,316
712110	Museums	675	1,902	10.9%	24,714	0.10	4.80	2.83	1.3%	38,947
712120	Historical Sites	193	286	4.0%	31,022	0.02	3.69	0.73	1.6%	36,789
712190	Nature Parks and Other Similar Institutions	12	22	6.2%	40,399	0.05	0.51	0.18	1.5%	34,173
813211	Grantmaking Foundations	693	843	2.0%	88,207	-0.01	2.55	-0.35	3.1%	63,903
	Design Services	1,502	1,884	2.3%	23,532	0.01	0.89	0.04	1.6%	35,452
541340	Drafting Services	314	304	-0.3%	17,012	0.02	1.79	0.31	-2.3%	27,441
541410	Interior Design Services	344	475	3.3%	31,926	0.01	0.72	0.06	2.2%	29,855
541420	Industrial Design Services	9	4	-7.8%	84,866	-0.10	0.03	-0.06	2.4%	61,069
541430	Graphic Design Services	772	1,034	3.0%	22,153	0.01	1.03	0.10	1.7%	35,806
541490	Other Specialized Design Services	63	67	0.6%	11,212	-0.03	0.45	-0.18	3.9%	43,979
	Engineering and Research & Development	4,831	5,656	1.6%	92,763	0.00	0.76	0.00	1.5%	102,083
541330	Engineering Services	3,234	3,832	1.7%	95,628	0.00	0.79	0.01	1.4%	95,420
541712	R&D in the Physical, Engineering, and Life Sciences	1,096	1,444	2.8%	98,172	0.01	0.65	0.03	2.2%	120,659
541720	R&D in the Social Sciences and Humanities	501	380	-2.7%	43,315	-0.02	1.21	-0.24	-1.1%	75,661
	Film, TV, Video Production/Distrib	1,251	1,303	0.4%	62,984	0.00	0.72	-0.02	0.5%	94,975
334612	Prerecorded Compact Disc, Tape, and Record Reprod.	5	13	10.0%	34,313	0.19	0.28	0.24	-8.9%	68,824
512110	Motion Picture and Video Production	1,159	1,111	-0.4%	63,537	-0.02	0.91	-0.24	1.8%	88,907
512120	Motion Picture and Video Distribution	16	13	-2.1%	52,802	0.02	0.36	0.06	-3.9%	124,297
512191	Teleproduction and Other Postproduction Services	37	60	5.0%	66,260	0.03	0.54	0.14	1.6%	94,044
515210	Cable and Other Subscription Programming	34	106	12.0%	60,098	0.13	0.28	0.20	-1.2%	114,331
	Marketing, Photography & Related	9,409	10,744	1.3%	22,809	-0.01	0.89	-0.06	1.9%	45,638
541613	Marketing Consulting Services	600	937	4.6%	34,472	-0.02	0.55	-0.10	6.2%	57,785
541810	Advertising Agencies	903	607	-3.9%	57,418	-0.05	0.49	-0.31	0.9%	88,024
541820	Public Relations Agencies	284	448	4.7%	54,139	0.02	0.93	0.17	2.5%	78,910
541830	Media Buying Agencies	37	38	0.3%	40,766	-0.04	0.41	-0.20	4.2%	99,855
541840	Media Representatives	114	86	-2.8%	51,311	-0.01	0.48	-0.07	-1.6%	86,723
541850	Display Advertising	79	173	8.2%	35,590	0.07	0.74	0.34	1.6%	54,907
541860	Direct Mail Advertising	92	68	-3.0%	34,620	0.01	0.21	0.01	-3.5%	54,292
541870	Advertising Material Distribution Services	62	46	-2.9%	104,683	-0.03	0.52	-0.17	-0.4%	50,654
541890	Other Services Related to Advertising	595	512	-1.5%	17,422	-0.02	0.97	-0.25	0.6%	33,232
541910	Marketing Research and Public Opinion Polling	454	362	-2.2%	22,834	-0.03	0.51	-0.19	0.8%	55,963
541921	Photography Studios, Portrait	1,235	1,722	3.4%	15,318	0.00	1.75	0.01	3.2%	14,117
541922	Commercial Photography	210	363	5.6%	12,815	0.02	1.40	0.18	4.0%	27,211
541990	All Other Professional, Scientific, and Technical	4,744	5,382	1.3%	16,007	0.00	1.03	-0.04	1.5%	31,763
	Music	1,022	1,185	1.5%	24,617	0.00	1.46	0.04	1.0%	40,544
451140	Musical Instrument and Supplies Stores	180	138	-2.6%	31,354	-0.02	0.67	-0.16	-0.6%	29,535
512210	Record Production	19	51	10.4%	26,524	0.11	2.86	1.87	-0.9%	62,509
512220	Integrated Record Production/Distribution	34	1	-29.7%	40,993	-0.29	0.04	-1.17	-0.9%	119,068
512230	Music Publishers	2	2	0.0%	49,566	-0.02	0.05	-0.01	1.6%	64,330
512240	Sound Recording Studios	57	50	-1.3%	22,963	-0.01	0.64	-0.09	-0.2%	35,631
512290	Other Sound Recording Industries	11	24	8.1%	79,028	0.13	1.07	0.78	-5.3%	48,657
711130	Musical Groups and Artists	719	919	2.5%	22,097	-0.01	2.20	-0.15	3.0%	37,916
	Performing and Creative Arts	8,723	8,595	-0.1%	15,572	-0.02	1.15	-0.28	1.9%	23,921
453920	Art Dealers	894	840	-0.6%	32,050	-0.01	2.70	-0.39	0.6%	28,479
711110	Theater Companies and Dinner Theaters	519	357	-3.7%	26,666	-0.05	0.82	-0.56	1.3%	28,842
711120	Dance Companies	199	181	-0.9%	19,385	-0.06	2.16	-1.82	5.2%	27,235
711190	Other Performing Arts Companies	10	12	1.8%	32,190	-0.02	0.21	-0.05	3.8%	37,188
711310	Prom. of Arts, Sports, and Similar with Facilities	203	282	3.3%	22,987	-0.01	0.59	-0.05	4.0%	33,205
711320	Prom. of Arts, Sports, and Similar without Facilities	386	520	3.0%	22,162	0.00	1.48	0.02	2.7%	38,848
711410	Agents and Managers for Artists, Athletes, Entertainer	466	332	-3.3%	14,769	-0.05	0.91	-0.65	1.9%	49,814
711510	Independent Artists, Writers, and Performers	6,046	6,071	0.0%	11,628	-0.02	1.12	-0.23	1.7%	19,556
	Publishing & Information	3,081	2,260	-3.1%	54,857	-0.02	0.62	-0.13	-1.3%	81,242
511110	Newspaper Publishers	1,896	955	-6.6%	65,941	-0.02	0.78	-0.19	-4.7%	51,158
511120	Periodical Publishers	542	696	2.5%	35,412	0.04	0.95	0.30	-1.5%	75,410
511130	Book Publishers	118	107	-1.0%	40,931	0.00	0.25	-0.01	-0.9%	71,343
511140	Directory and Mailing List Publishers	121	123	0.2%	76,844	0.04	0.70	0.23	-3.9%	73,186
511191	Greeting Card Publishers	45	4	-21.5%	46,230	-0.14	0.12	-0.50	-7.8%	57,906
511199	All Other Publishers	127	17	-18.2%	72,497	-0.15	0.21	-0.95	-3.0%	45,479
519110	News Syndicates	67	44	-4.1%	35,697	-0.05	0.59	-0.40	0.8%	96,520
519130	Internet Pub. and Broad. and Web Search Portals	102	266	10.1%	68,195	-0.01	0.32	-0.05	11.5%	139,355
519190	All Other Information Services	63	48	-2.7%	29,125	-0.03	0.53	-0.18	0.0%	56,868
	Radio and Television Broadcasting	1,347	1,211	-1.1%	64,389	0.00	0.99	-0.06	-0.6%	77,105
515111	Radio Networks	169	92	-5.9%	90,648	-0.06	0.69	-0.62	0.2%	62,328
515112	Radio Stations	508	558	0.9%	43,776	0.02	1.20	0.22	-1.3%	54,010
515120	Television Broadcasting	670	561	-1.8%	80,585	-0.01	0.90	-0.16	-0.3%	97,634
	Source: DBEDT compilation based on EMSI data.									