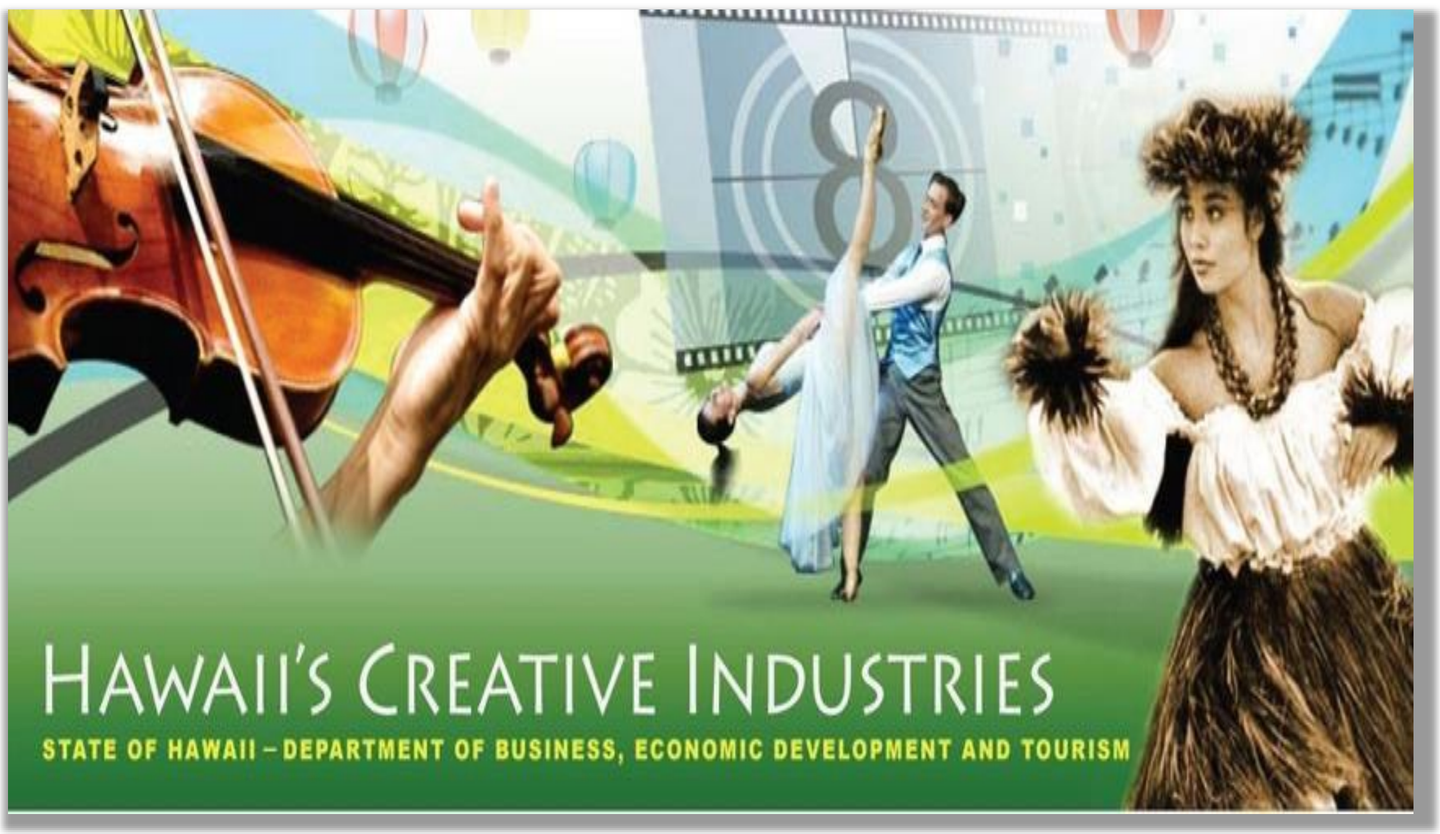
Hawaii's Creative Industries

Update Report 2015



Department of Business, Economic Development and Tourism

March 2015

research & economic analysis division

creative industries HAWAI'I

State of Hawai'i, Department of Business, Economic Development & Tourism

Hawaii Department of Business, Economic Development & Tourism

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Creative Industries Development State Priorities

The State of Hawaii's **Creative Industries Division** (CID) is the lead agency dedicated to advocating for and accelerating the growth of Hawaii's Creative Economy. Through initiatives, program development and strategic partnerships the division and its branches forge strategic partnerships to expand the business development capacity of Hawaii's arts, culture, music, film, literary, publishing, digital and new media industries.

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:

• The creative sector had a total of 3,525 businesses and employed 49,403 jobs in 2014, which was 5.9% of the state total civilian jobs.

• The creative sector's estimated GDP in 2014 was $3.3 billion, accounting for about 4.2% of total Hawaii GDP.

• Average annual earnings were $46,662 in 2014, lower than the state average of $51,875.

• The creative sector had a job growth rate of 11.1% since 2004, lower than the state total civilian job growth of 11.5%.

Through establishing these metrics and tracking performance of 13 relevant arts, culture, music, publishing, television, film, digital and new media sectors, CID and DBEDT's Research and Economic Analysis Division have defined the base, emerging, declining and transitioning sectors performance from 2004-2014 to further guide programmatic direction to further sector growth.

The performance of Hawaii's creative portfolio is strong and the state is well positioned to be a global leader in the creative economy. To enhance its global position, CID has established the following goals for the creative sector:

• Establish policies to support creative media infrastructure development.

• Develop cross platform collaborations with film, music, tech and new media industries to advance sector growth.

• Increase sector growth through programs and strategic partnerships that expand creative export.

• Expand business development activities around existing events in music, film, culture and new media.

• Establish creative lab accelerators to develop creative/tech companies.

• Establish a creative media fund to support Hawaii based content development across multiple disciplines and platforms.

• Manage statutory programs which support film industry development.

• Leverage tourism marketing resources to advance broadcast, web and mobile channels showcasing Hawaii's cultural and creative industries.

• Position Hawaii as the hub for cultural creative in the pacific economy.

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.

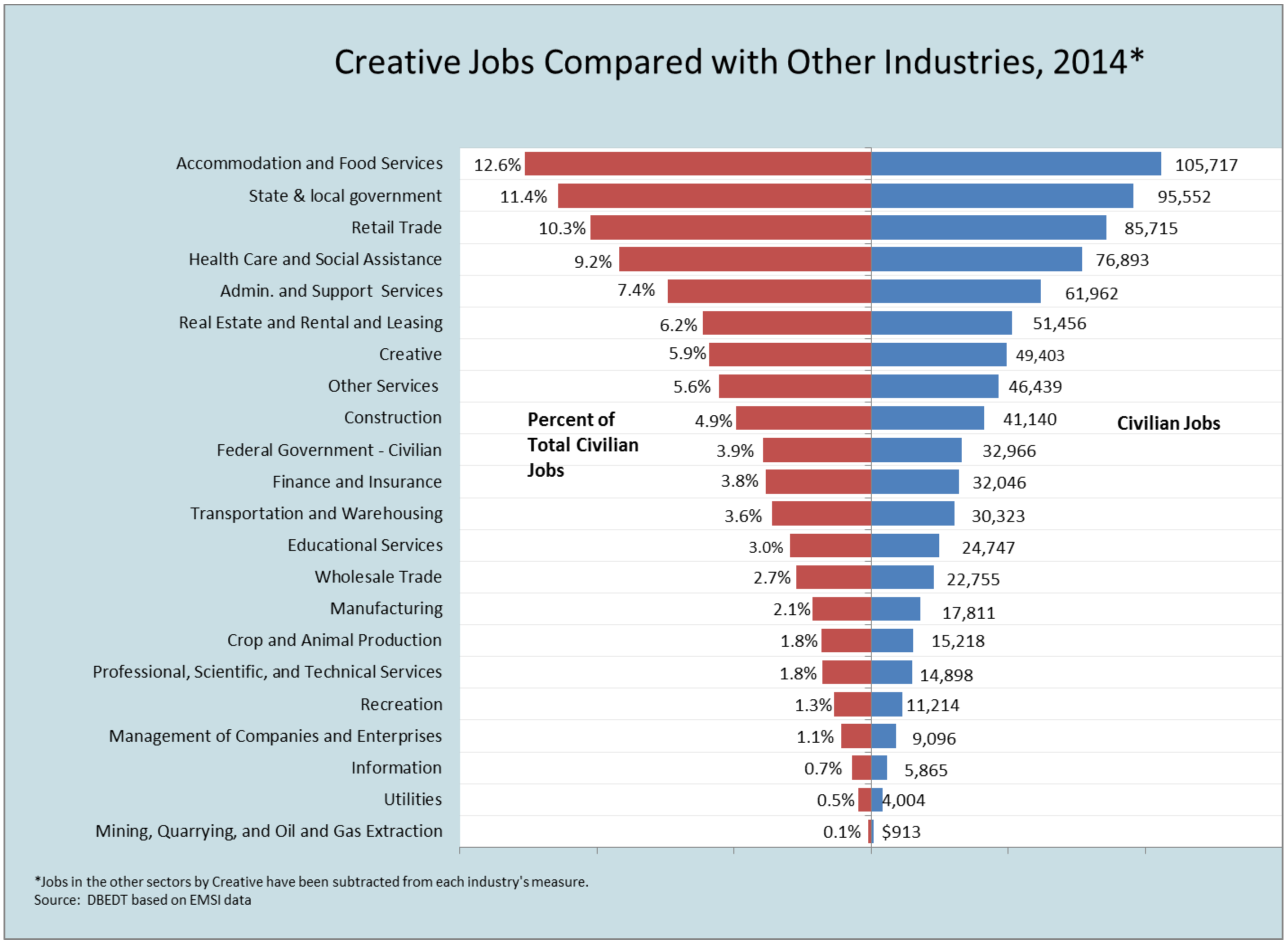
Industry Groups in the Creative Sector

The table below provides an overview of the 13 industry groups in the updated creative sector, and their 2014 job count, based on the current definition of the sector. In total, the creative industries accounted for about 49,403 jobs in Hawaii for 2014. This was up 11.1% from 2004, and up 1.2% from 2008. The earnings average was $46,662.

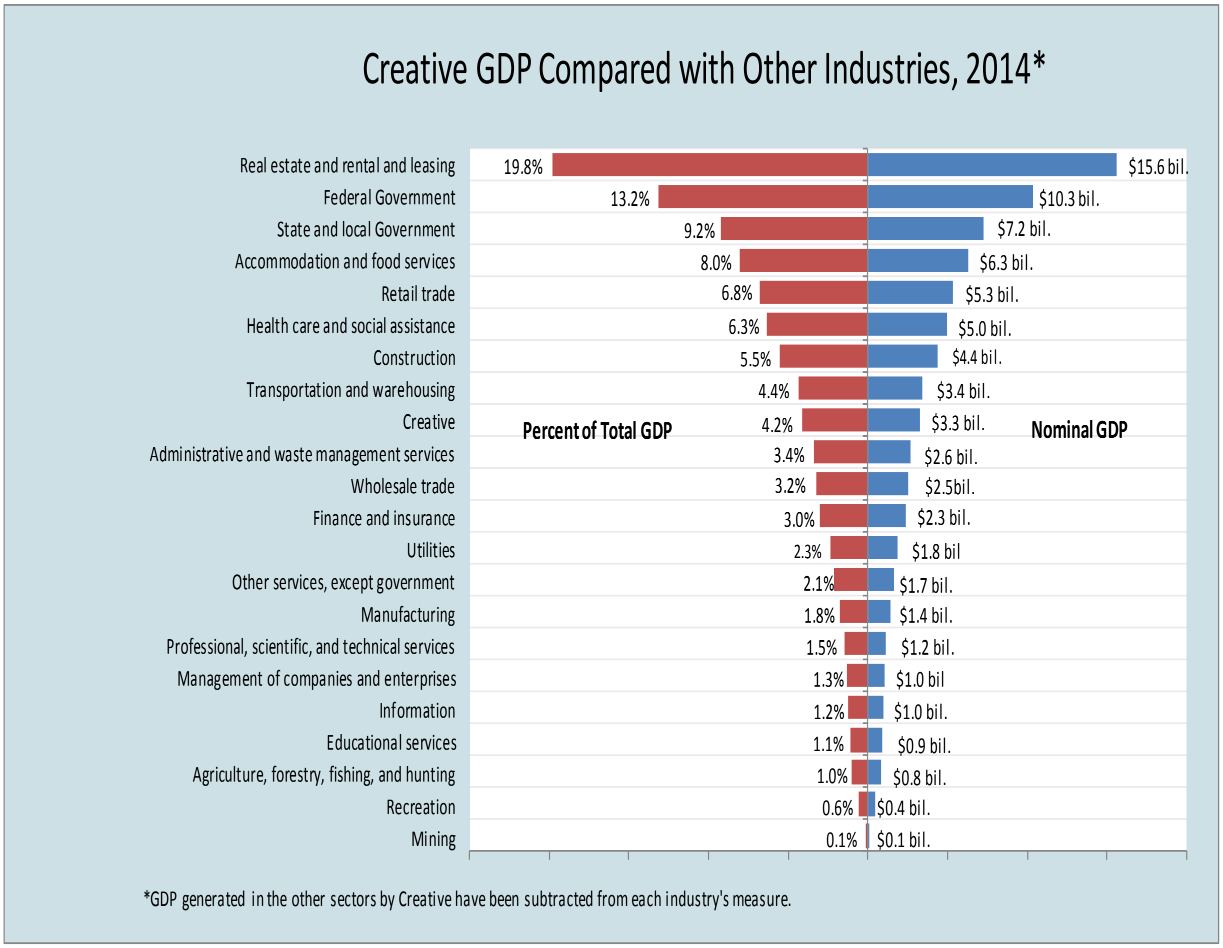
CREATIVE INDUSTRY PRODUCTION GROUPS	
Industry Group	**2014 Job**
Marketing, Photography & Related	10,693
Performing and Creative Arts	8,879
Engineering and Research & Development	5,767
Business Consulting	5,013
Computer and Digital Media Products	4,760
Cultural Activities	3,455
Publishing & Information	2,223
Design Services	1,979
Architecture	1,906
Film, TV, Video Production/Distrib	1,376
Music	1,327
Radio and TV Broadcasting	1,323
Art Education	704
Total Creative Industry	**49,403**
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.

The creative sector is a leading sector for job creation. In 2014, the sector had 49,403 jobs and accounted for 5.9 percent 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 sectors.



As shown in the figure below, the creative sector directly accounted for 4.2 percent of Hawaii's GDP in 2014, with a value added of $3.3 billion. If the tourism sector is consolidated with the tourist related portions of accommodation and food services, retail trade, transportation and warehousing and other industries, the creative sector is the 5th largest private sector in the economy. This would place it next to real estate, tourism, health care and social assistance, and construction. If the government sector is included and the tourism related sectors are not consolidated, then the creative industry is the 7th largest sector in the economy.



Source: DBEDT, READ

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, 2004-2014					
Total Jobs, 2014: 49,403					
Average Annual Earnings, 2014: $46,662					
Net Change in Jobs, 2004-2014: 11.1%					
Transitioning Group: 44.4% of Jobs			**Base-Growth Group: 9.7% of Jobs**		
Group	Change in Jobs	Average Earnings	Group	Change in Jobs	Average Earnings
Art Education	41.8%	$13,717	Cultural Activities	127.4%	$40,735
Engineering and Research & Development	13.8%	$90,979	Music	33.1%	$32,936
Marketing, Photography & Related	5.4%	$25,046			
Computer and Digital Media Products	9.6%	$88,051			
Declining Group: 31.8% of Jobs			**Emerging Group: 14.2% of Jobs**		
Group	Change in Jobs	Average Earnings	Group	Change in Jobs	Average Earnings
Performing and Creative Arts	-1.2%	$16,094	Business Consulting	67.2%	$60,386
Radio and TV Broadcasting	-4.4%	$58,455	Design Services	16.8%	$28,244
Architecture	-7.5%	$72,040			
Film, TV, Video Production/Distrib	-18.7%	$63,682			
Publishing & Information	-28.2%	$53,405			

Source: DBEDT compilation based on EMSI data.

The highest performing industries in the creative sector for the 2004 to 2014 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 4,925 jobs to the state's economy between 2004 and 2014. This amounted to a 11.1 percent increase in jobs, lower than the 11.5 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 2014 earnings average of the creative industry portfolio of $46,662 was lower than the statewide average of $51,875.

High Performing Creative Industry Groups

Only two creative industry groups, cultural activities and music, registered as high performing base-growth industries for the 2004 to 2014 period.

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

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Other Creative Industries' Performance

Four of the creative sector industry groups fell into the transitioning category for the 2004 to 2014 period. These ranged from the marketing, photography & related which increased 5.4% in jobs to arts education, which grew jobs by 41.8%. 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, five creative industry groups that lost jobs in the 2004 to 2014 period fell into the declining quadrant of the performance map. Radio & TV broadcasting, publishing & information, film, TV, video production/distribution, 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.

Recording artist Anuhea represents Hawaii at a panel session at the ASCAP "I Create Music" EXPO in L.A.

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.

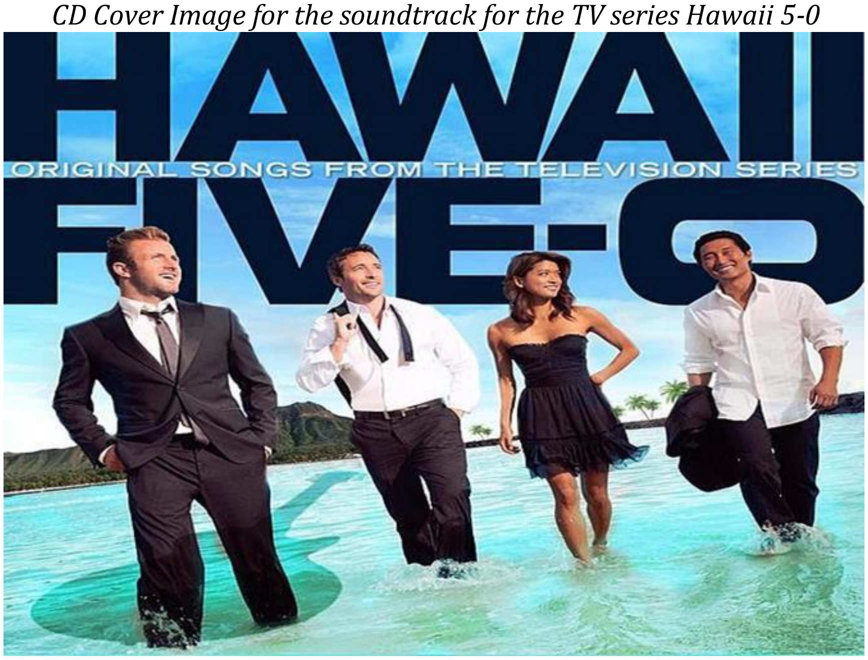
Second, the depth of Hawaii's creative and cultural talent and unique artistic content helps Hawaii's creative products compete in worldwide markets. Supporting this asset is a market of millions of visitors to the state each year, which helps the arts and culture sector maintain critical mass. Furthermore, 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]

CD Cover Image for the soundtrack for the TV series Hawaii 5-0



[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

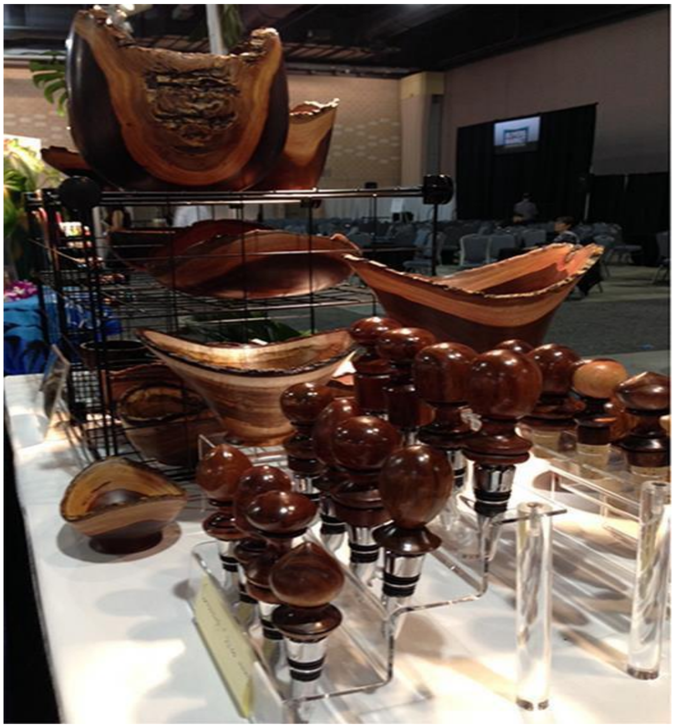
To support the evolving development focus, CID and READ determined that a broader definition of the sector was needed. More current definitions of the creative sector were reviewed and the scope of the activities was revised based in large part on a similar study in Massachusetts.[2]

Actress Jennifer Lawrence film a scene from the "The Hunger Games Catching Fire" in Hawaii

[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.

In addition to including more technology-based creative activities, 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 fifth in the series, an update of the April 2014 Hawaii's Creative Industries Report.

Wooden bowls & wine stoppers by Hawaii artist Aaron Hammond featured at the Made in America Show in Philadelphia



Data Sources

A major feature of the 2007, 2010, 2012, 2014 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 2014 job count, based on the current definition of the sector. In total, the creative industries accounted for about 49,403 jobs in Hawaii for 2014. This was up 11.1% from 2004, and up 1.2% from 2008. The earnings average was $46,662.

TABLE 1

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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.

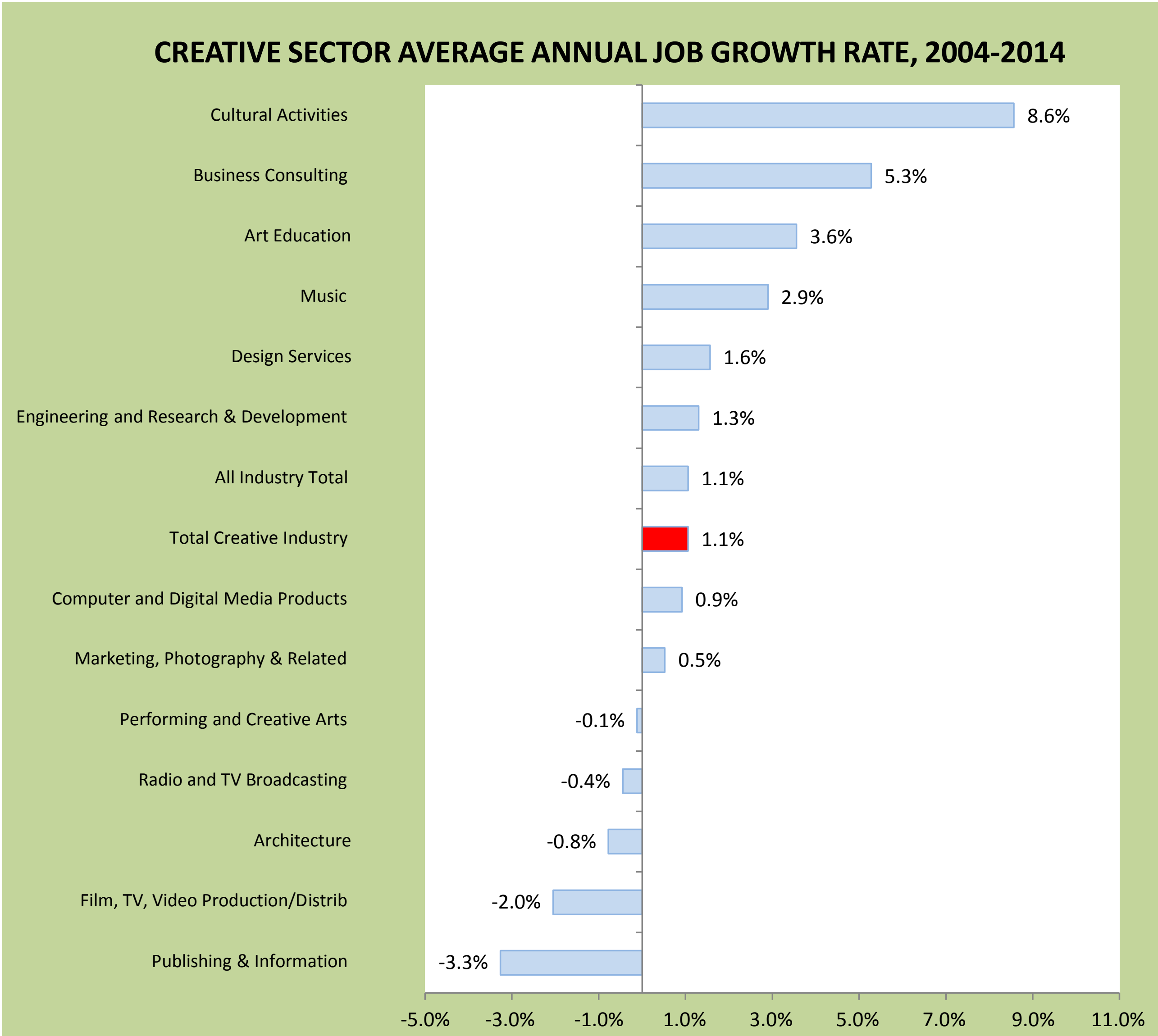
Creative Sector Job Growth

In terms of job growth, the creative industries portfolio seems to have performed about the average over the 2004 to 2014 period (Figure 1). Eight of the thirteen NAICS-based, target industry groups showed net job growth over the period. Six groups outperformed the overall state jobs annual growth rate of 1.1%. Cultural activities topped the list with 8.6% annual growth. This was followed by business consulting, art education, music, design services, and engineering/R&D services.

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

Emmy Award Winning Web Series Producer Bernie Su, Writer/Creator of "The Lizzie Bennett Diaries" Broadband Mentor and Keynote for Creative Lab 2014

FIGURE 1



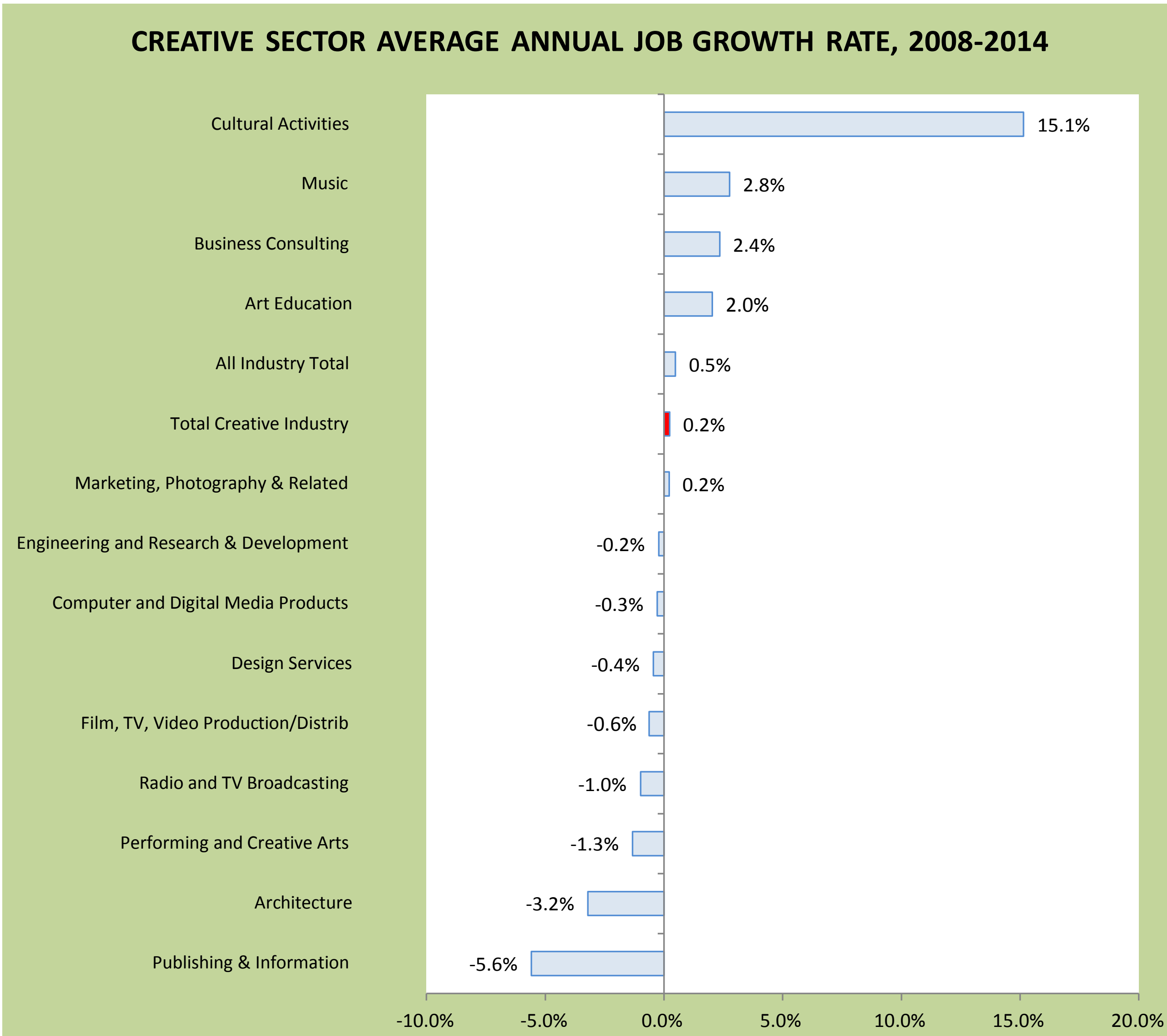
Source: DBEDT compilation based on EMSI data.

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 2008 to 2014 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 six creative groups managed positive growth during 2008-2014 period. The strongest performers in terms of job growth during 2008-2014 period were cultural activities, music, business consulting, and art education.

Publishing and information experienced the most significant jobs loss in this period, followed by architecture, performing and creative arts, radio and TV broadcasting, film, TV, video production/distribution, design services, computer and digital media products, and engineering and R&D.

FIGURE 2



Source: DBEDT compilation based on EMSI data.

National Competitiveness of the Creative Sector

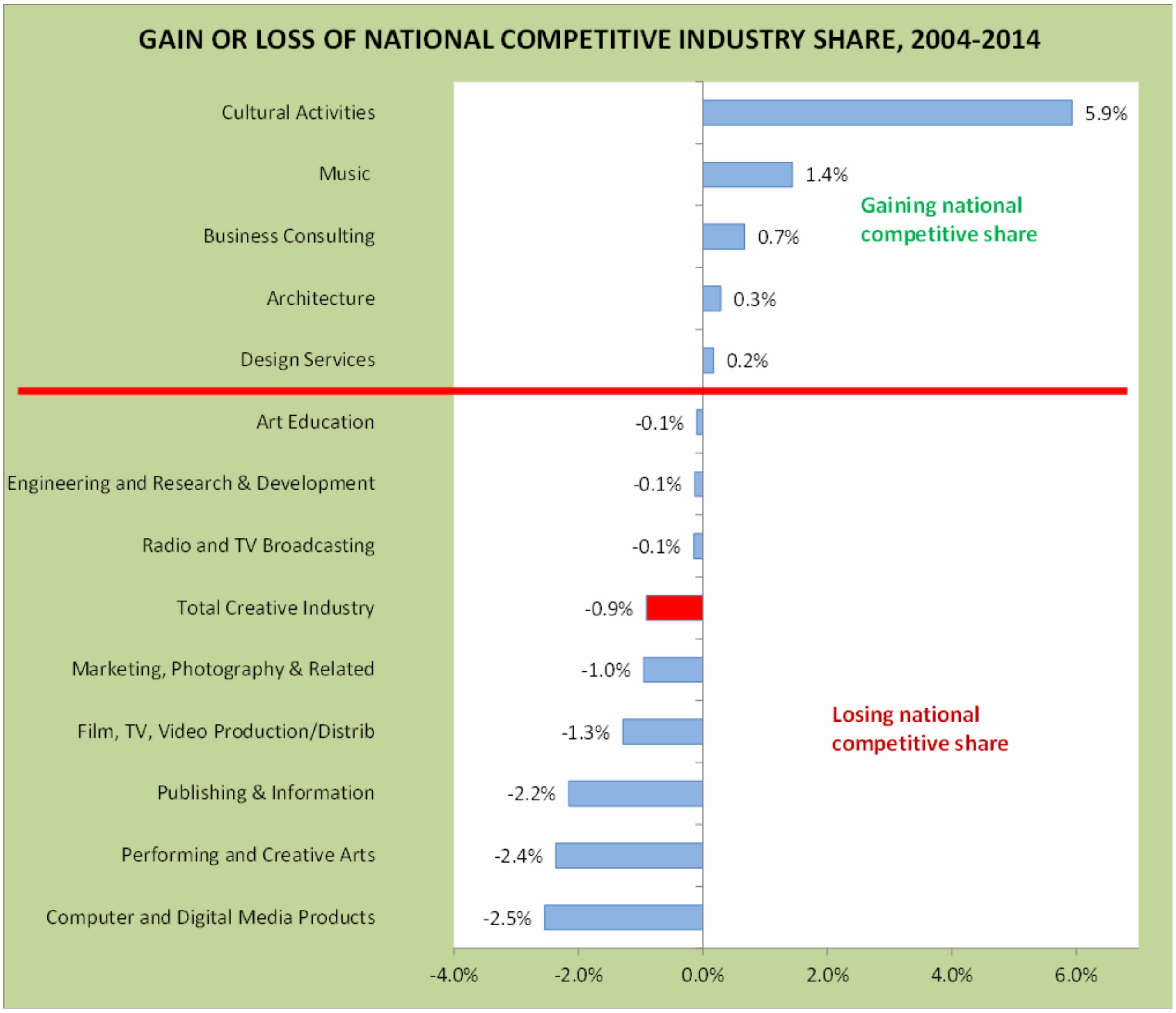
Job growth helps show the creative industries' competitiveness within Hawaii's economy. Another measure that can help shed light on creative sector industries is their performance compared to the same national industry. If Hawaii's creative industry growth rate is higher than the national growth rate, 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 2004 to 2014 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 computer and digital media products industry group grew jobs over this period, it lost national industry share due to an average annual growth rate that was 2.5% below the national industry growth rate.

Industries like art education, engineering and research & development, 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.

Film & TV production, 2014 estimated annual expenditures of $223M with an economic impact of $390M

[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 3.8 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, performing/creative arts, and radio and TV broadcasting 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.

CID's Creative Lab Accelerator connects entrepreneurs to investment and export opportunities

CREATIVE LAB

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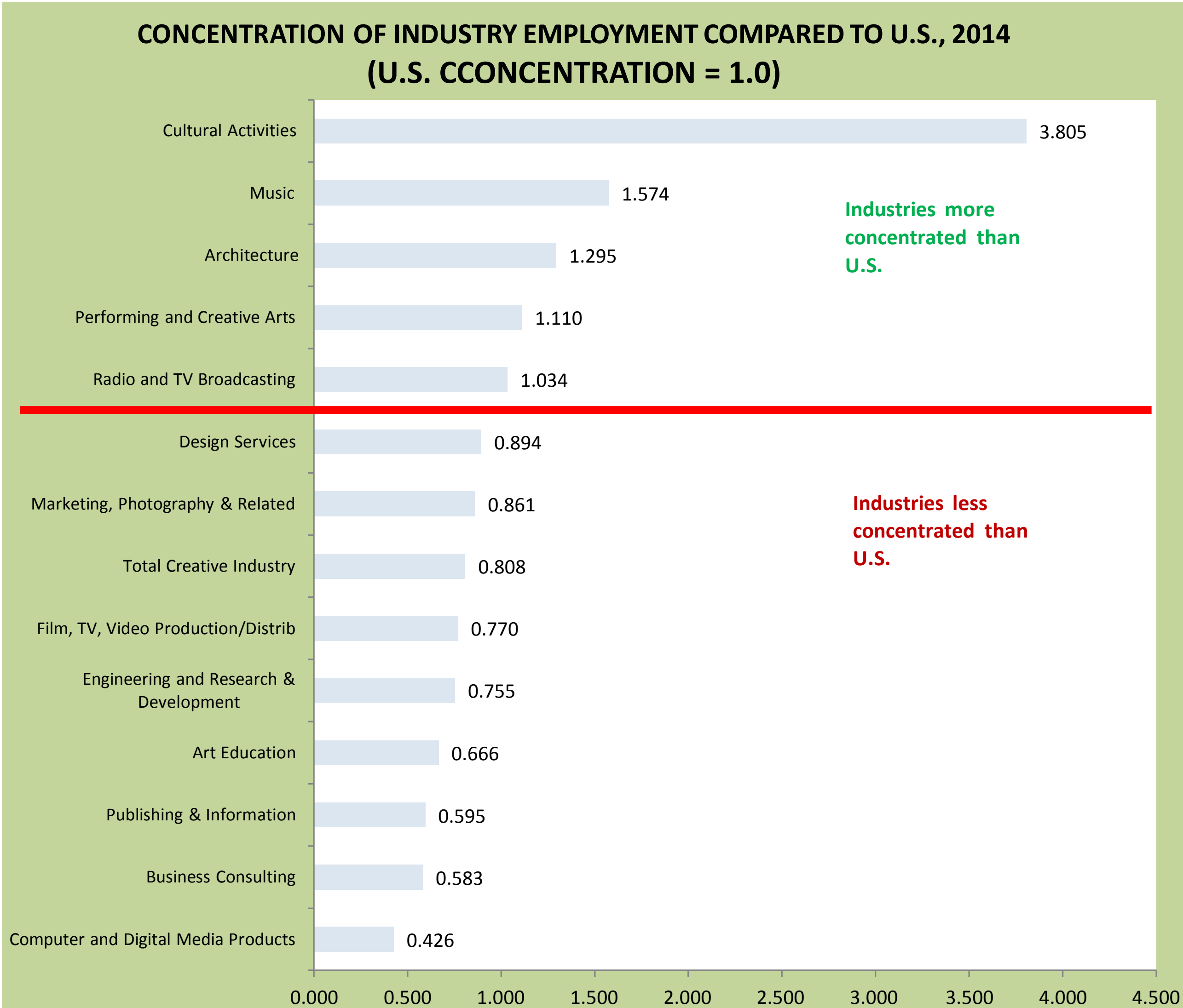
Academy Award Nominee, Screenwriter Lucy Alibar, Mentor CL2014 @ HIFF

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 2004 and 2014. 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 2004 to 2014 performance measures. Combined, the NAICS-based creative industry groups accounted for about 49,403 jobs in Hawaii's economy during 2014.

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Radio and TV Broadcasting	-4.4%	$58,455	Design Services	16.8%	$28,244
Architecture	-7.5%	$72,040			
Film, TV, Video Production/Distrib	-18.7%	$63,682			
Publishing & Information	-28.2%	$53,405			

Source: DBEDT compilation based on EMSI data.

Overall, the creative industry groups added about 4,925 jobs to the state's economy between 2004 and 2014. This amounted to a 11.1 percent increase in jobs, lower than the 11.5 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 2014 earnings average of the creative industry portfolio of $46,662 was lower than the statewide average of $51,875.

High Performing Creative Industry Groups

Only two creative industry group, cultural activities and music, registered as high performing base-growth industries for the 2004 to 2014 period.

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

Other Creative Industries' Performance

Four of the creative sector industry groups fell into the transitioning category for the 2004 to 2014 period. These ranged from the marketing, photography & related which increased 5.4% in jobs to arts education, which grew jobs by 41.8%. 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, five creative industry groups that lost jobs in the 2004 to 2014 period fell into the declining quadrant of the performance map. Radio & TV broadcasting, publishing & information, film, TV, video production/distribution, 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.

Hawaii boasts locations which attract feature films and television series

IV. CREATIVE INDUSTRY PERFORMANCE BY COUNTY

The following tables summarize the 2004 to 2014 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 35,747 of the state's creative industry jobs in 2014, a 0.9% annual increase from 2004. The average annual job growth was 1.7% from 2004 to 2008. After experiencing severe setbacks due to the national economic recession that began in late 2007, the average annual growth rate was down to 0.3% during 2008-2014. As shown in Table 4, only two creative industry groups were high performing in Honolulu County in the 2004 to 2014 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 and Business Consulting. Seven creative industry groups lost jobs in Honolulu County over the 2004 to 2014 period: Performing and Creative Arts, Marketing, Photography & Related, Architecture, Radio and Television Broadcasting, Film, TV, Video Production/Distribution, Music, and Publishing & Information.

TABLE 4. CREATIVE INDUSTRY JOBS, HONOLULU

Industry Group	Performance Class	Jobs				Average Annual Job Growth (%)			
		2004	2008	2013	2014	2004-2008	2008-2014	2013-2014	2004-2014
Cultural Activities	Base-Growth	1,327	1,503	3,060	3,232	3.2%	13.6%	5.6%	9.3%
Business Consulting	Emerging	2,333	3,453	3,906	3,946	10.3%	2.2%	1.0%	5.4%
Art Education	Transitioning	383	470	549	539	5.2%	2.3%	-1.7%	3.5%
Engineering and R&D	Transitioning	4,016	4,620	4,571	4,547	3.6%	-0.3%	-0.5%	1.2%
Design Services	Transitioning	1,177	1,349	1,275	1,269	3.5%	-1.0%	-0.5%	0.7%
Computer and Digital Media Products	Transitioning	3,726	4,132	4,037	4,000	2.6%	-0.5%	-0.9%	0.7%
Performing and Creative Arts	Declining	4,877	5,140	4,898	4,857	1.3%	-0.9%	-0.8%	0.0%
Marketing, Photography & Related	Declining	7,409	7,446	7,397	7,352	0.1%	-0.2%	-0.6%	-0.1%
Architecture	Declining	1,630	1,802	1,585	1,554	2.5%	-2.4%	-1.9%	-0.5%
Radio and TV Broadcasting	Declining	1,183	1,116	941	1,077	-1.4%	-0.6%	14.5%	-0.9%
Film, TV, Video Production/Distrib	Declining	1,556	1,262	1,387	1,201	-5.1%	-0.8%	-13.4%	-2.6%
Music	Declining	779	586	580	591	-6.9%	0.1%	1.8%	-2.7%
Publishing & Information	Declining	2,404	2,215	1,416	1,582	-2.0%	-5.5%	11.7%	-4.1%
Total Creative Industry	Transitioning	32,800	35,094	35,602	35,747	1.7%	0.3%	0.4%	0.9%

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 0.9% annual growth rate was lower than the state's 1.1%, and also lower than the national average of 2.0%. 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, 2004-2014

Industry Group	Performance Class	Job Change 2004-2014	Average Annual Job Growth (%)			Ave. Annual Earnings (2014)		
			County	State	U.S.	County	State	U.S.
Cultural Activities	Base-Growth	1,905	9.3%	8.6%	2.6%	43,341	40,735	50,095
Business Consulting	Emerging	1,613	5.4%	5.3%	4.6%	65,413	60,386	74,118
Art Education	Transitioning	156	3.5%	3.6%	3.6%	13,130	13,717	13,874
Engineering and R&D	Transitioning	531	1.2%	1.3%	1.4%	95,286	90,979	103,736
Design Services	Transitioning	91	0.7%	1.6%	1.4%	28,867	28,244	36,203
Computer and Digital Media Products	Transitioning	274	0.7%	0.9%	3.5%	90,561	88,051	107,438
Performing and Creative Arts	Declining	-20	0.0%	-0.1%	2.2%	14,936	16,094	26,098
Marketing, Photography & Related	Declining	-57	-0.1%	0.5%	1.5%	27,772	25,046	46,231
Architecture	Declining	-76	-0.5%	-0.8%	-1.1%	77,056	72,040	64,511
Radio and TV Broadcasting	Declining	-106	-0.9%	-0.4%	-0.3%	68,942	58,455	77,458
Film, TV, Video Production/Distrib	Declining	-355	-2.6%	-2.0%	-0.8%	58,829	63,682	96,946
Music	Declining	-188	-2.7%	2.9%	1.5%	54,090	32,936	40,295
Publishing & Information	Declining	-823	-4.1%	-3.3%	-1.1%	61,907	53,405	96,232
Total Creative Industry	Transitioning	2,947	0.9%	1.1%	2.0%	53,136	46,662	70,572

Source: DBEDT compilation based on EMSI data.

Hawaii County

Hawaii County accounted for 5,053 of the state's creative industry jobs in 2014, a 2.2% average annual increase from 2004. The average annual job growth was 5.1% from 2004 to 2008, but it has decreased to only 0.3% from 2008 to 2014. As shown in Table 6, eight creative industry groups were high performing in Hawaii County in the 2004 to 2014 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, Business Consulting, Art Education, and Film, TV, Video Production/Distribution. Three creative industry groups lost jobs in Hawaii County over the 2004 to 2014 period.

TABLE 6. CREATIVE INDUSTRY JOBS, HAWAII COUNTY

Industry Group	Performance Class	Jobs				Average Annual Job Growth (%)			
		2004	2008	2013	2014	2004-2008	2008-2014	2013-2014	2004-2014
Music	Base-Growth	72	164	164	178	23.1%	1.3%	8.4%	9.5%
Design Services	Base-Growth	205	276	279	281	7.8%	0.3%	0.8%	3.2%
Architecture	Emerging	140	174	144	148	5.7%	-2.7%	2.6%	0.6%
Marketing, Photography & Related	Emerging	966	1,159	1,177	1,226	4.7%	0.9%	4.1%	2.4%
Engineering and R&D	Emerging	487	572	627	673	4.1%	2.8%	7.4%	3.3%
Business Consulting	Emerging	303	510	478	495	13.9%	-0.5%	3.6%	5.0%
Art Education	Emerging	31	53	49	48	14.6%	-1.9%	-2.6%	4.4%
Film, TV, Video Production/Distrib	Emerging	38	68	66	63	15.6%	-1.3%	-3.5%	5.2%
Computer and Digital Media Products	Transitioning	204	249	252	264	5.1%	1.0%	4.5%	2.6%
Performing and Creative Arts	Transitioning	1,197	1,247	1,267	1,282	1.0%	0.5%	1.2%	0.7%
Publishing & Information	Declining	245	298	228	242	5.0%	-3.4%	6.1%	-0.1%
Cultural Activities	Declining	100	106	90	92	1.4%	-2.3%	2.1%	-0.8%
Radio and TV Broadcasting	Declining	68	78	59	62	3.4%	-3.8%	4.7%	-1.0%
Total Creative Industry	Emerging	4,055	4,954	4,879	5,053	5.1%	0.3%	3.6%	2.2%

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 2.2% annual growth rate was higher than the state's 1.1% and the national average of 2.0%. 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, 2004-2014

Industry Group	Performance Class	Job Change 2004-2014	Average Annual Job Growth (%)			Ave. Annual Earnings (2014)		
			County	State	U.S.	County	State	U.S.
Music	Base-Growth	106	9.5%	2.9%	1.5%	22,777	32,936	40,295
Design Services	Base-Growth	76	3.2%	1.6%	1.4%	23,196	28,244	36,203
Architecture	Emerging	9	0.6%	-0.8%	-1.1%	50,863	72,040	64,511
Marketing, Photography & Related	Emerging	259	2.4%	0.5%	1.5%	18,765	25,046	46,231
Engineering and R&D	Emerging	187	3.3%	1.3%	1.4%	76,730	90,979	103,736
Business Consulting	Emerging	192	5.0%	5.3%	4.6%	40,386	60,386	74,118
Art Education	Emerging	17	4.4%	3.6%	3.6%	19,197	13,717	13,874
Film, TV, Video Production/Distrib	Emerging	25	5.2%	-2.0%	-0.8%	37,559	63,682	96,946
Computer and Digital Media Products	Transitioning	60	2.6%	0.9%	3.5%	74,744	88,051	107,438
Performing and Creative Arts	Transitioning	85	0.7%	-0.1%	2.2%	13,916	16,094	26,098
Publishing & Information	Declining	-3	-0.1%	-3.3%	-1.1%	46,110	53,405	96,232
Cultural Activities	Declining	-8	-0.8%	8.6%	2.6%	26,024	40,735	50,095
Radio and TV Broadcasting	Declining	-6	-1.0%	-0.4%	-0.3%	36,158	58,455	77,458
Total Creative Industry	Emerging	999	2.2%	1.1%	2.0%	32,034	46,662	70,572

Source: DBEDT compilation based on EMSI data.

Maui County

Maui County accounted for 6,173 of the state's creative industry jobs in 2014, a 0.8% average annual increase from 2004. The average annual job growth was 3.1% from 2004 to 2008. After experiencing severe setbacks due to the national economic recession that began in late 2007, the average annual growth rate was down to negative 0.7% during 2008-2014. As shown in Table 8, only three creative industry groups were high performing in Maui County in the 2004 to 2014 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, and Radio and Television Broadcasting. Five creative industry groups lost jobs in Maui County over the 2004 to 2014 period, Performing and Creative Arts, Engineering and R&D, Publishing & Information, Film, TV, Video Production/Distribution, and Architecture.

TABLE 8. CREATIVE INDUSTRY JOBS, MAUI COUNTY

Industry Group	Performance Class	Jobs				Average Annual Job Growth (%)			
		2004	2008	2013	2014	2004-2008	2008-2014	2013-2014	2004-2014
Music	Base-Growth	105	399	466	516	39.7%	4.4%	10.7%	17.3%
Design Services	Base-Growth	229	297	319	317	6.7%	1.1%	-0.7%	3.3%
Radio and TV Broadcasting	Emerging	93	140	130	138	10.8%	-0.3%	6.2%	4.0%
Cultural Activities	Transitioning	42	41	53	54	-0.5%	4.6%	3.0%	2.6%
Business Consulting	Transitioning	265	353	392	405	7.4%	2.3%	3.5%	4.3%
Marketing, Photography & Related	Transitioning	1,275	1,349	1,378	1,405	1.4%	0.7%	2.0%	1.0%
Computer and Digital Media Products	Transitioning	281	276	349	361	-0.5%	4.6%	3.5%	2.5%
Art Education	Transitioning	65	88	80	80	8.0%	-1.7%	-1.1%	2.1%
Performing and Creative Arts	Declining	2,266	2,427	2,027	2,061	1.7%	-2.7%	1.6%	-0.9%
Engineering and R&D	Declining	438	434	345	355	-0.2%	-3.3%	2.8%	-2.1%
Publishing & Information	Declining	346	344	282	280	-0.2%	-3.3%	-0.5%	-2.1%
Film, TV, Video Production/Distrib	Declining	66	53	55	51	-5.0%	-0.9%	-8.2%	-2.5%
Architecture	Declining	223	228	157	151	0.6%	-6.6%	-3.5%	-3.8%
Total Creative Industry	Transitioning	5,695	6,429	6,032	6,173	3.1%	-0.7%	2.3%	0.8%

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 0.8% annual growth rate was lower than the state's 1.1% and below the national average of 2.0%. 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, 2004-2014

Industry Group	Performance Class	Job Change 2004-2014	Average Annual Job Growth (%)			Ave. Annual Earnings (2014)		
			County	State	U.S.	County	State	U.S.
Music	Base-Growth	412	17.3%	2.9%	1.5%	20,830	32,936	40,295
Design Services	Base-Growth	89	3.3%	1.6%	1.4%	28,147	28,244	36,203
Radio and TV Broadcasting	Emerging	44	4.0%	-0.4%	-0.3%	39,813	58,455	77,458
Cultural Activities	Transitioning	12	2.6%	8.6%	2.6%	37,401	40,735	50,095
Business Consulting	Transitioning	140	4.3%	5.3%	4.6%	56,024	60,386	74,118
Marketing, Photography & Related	Transitioning	130	1.0%	0.5%	1.5%	20,103	25,046	46,231
Computer and Digital Media Products	Transitioning	80	2.5%	0.9%	3.5%	70,944	88,051	107,438
Art Education	Transitioning	15	2.1%	3.6%	3.6%	14,231	13,717	13,874
Performing and Creative Arts	Declining	-206	-0.9%	-0.1%	2.2%	21,513	16,094	26,098
Engineering and R&D	Declining	-84	-2.1%	1.3%	1.4%	73,915	90,979	103,736
Publishing & Information	Declining	-66	-2.1%	-3.3%	-1.1%	50,739	53,405	96,232
Film, TV, Video Production/Distrib	Declining	-15	-2.5%	-2.0%	-0.8%	37,997	63,682	96,946
Architecture	Declining	-72	-3.8%	-0.8%	-1.1%	38,716	72,040	64,511
Total Creative Industry	Transitioning	479	0.8%	1.1%	2.0%	31,250	46,662	70,572

Source: DBEDT compilation based on EMSI data.

Kauai County

Kauai County accounted for 2,367 of the state's creative industry jobs in 2014, a 1.8% annual increase from 2004. The average annual job growth was 4.4% from 2004 to 2008. After experiencing setbacks due to the national economic recession that began in late 2007, the average annual growth rate was down to 0.1% during 2008-2014. As shown in Table 10, nine creative industry groups were high performing in Kauai County in the 2004 to 2014 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, Marketing, Photography & Related, Design Services, Radio and Television Broadcasting, Film, TV, Video Production/Distribution, Art Education, Publishing & Information, Business Consulting, and Engineering and R&D. Three creative industry groups lost jobs in Kauai County over the 2004 to 2014 period, Music, Computer and Digital Media Products, and Architecture.

TABLE 10. CREATIVE INDUSTRY JOBS, KAUAI COUNTY

Industry Group	Performance Class	Jobs				Average Annual Job Growth (%)			
		2004	2008	2013	2014	2004-2008	2008-2014	2013-2014	2004-2014
Cultural Activities	Base-Growth	54	57	76	82	1.7%	6.2%	8.0%	4.4%
Marketing, Photography & Related	Base-Growth	496	627	654	668	6.0%	1.1%	2.2%	3.0%
Design Services	Base-Growth	87	103	117	115	4.5%	1.7%	-2.1%	2.9%
Radio and TV Broadcasting	Emerging	46	56	56	58	4.6%	0.8%	4.2%	2.3%
Film, TV, Video Production/Distrib	Emerging	43	54	74	69	6.2%	4.1%	-6.8%	4.9%
Art Education	Emerging	18	25	36	37	9.2%	6.8%	5.1%	7.8%
Publishing & Information	Emerging	113	104	114	122	-2.1%	2.7%	7.5%	0.8%
Business Consulting	Emerging	98	142	158	167	9.6%	2.8%	6.2%	5.5%
Engineering and R&D	Emerging	110	187	139	146	14.3%	-4.1%	5.0%	2.9%
Performing and Creative Arts	Transitioning	653	678	687	680	1.0%	0.0%	-1.0%	0.4%
Music	Declining	67	36	59	58	-14.3%	8.4%	-0.3%	-1.3%
Computer and Digital Media Products	Declining	129	169	107	111	7.1%	-6.7%	4.5%	-1.4%
Architecture	Declining	67	112	53	52	13.4%	-12.0%	-2.2%	-2.6%
Total Creative Industry	Transitioning	1,981	2,351	2,328	2,367	4.4%	0.1%	1.7%	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 1.1% but lower than the national average of 2.0%. 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, 2004-2014

Industry Group	Performance Class	Job Change 2004-2014	Average Annual Job Growth (%)			Ave. Annual Earnings (2014)		
			County	State	U.S.	County	State	U.S.
Cultural Activities	Base-Growth	29	4.4%	8.6%	2.6%	32,289	40,735	50,095
Marketing, Photography & Related	Base-Growth	172	3.0%	0.5%	1.5%	15,526	25,046	46,231
Design Services	Base-Growth	28	2.9%	1.6%	1.4%	30,638	28,244	36,203
Radio and TV Broadcasting	Emerging	12	2.3%	-0.4%	-0.3%	88,402	58,455	77,458
Film, TV, Video Production/Distrib	Emerging	26	4.9%	-2.0%	-0.8%	35,114	63,682	96,946
Art Education	Emerging	20	7.8%	3.6%	3.6%	14,101	13,717	13,874
Publishing & Information	Emerging	9	0.8%	-3.3%	-1.1%	51,512	53,405	96,232
Business Consulting	Emerging	69	5.5%	5.3%	4.6%	46,983	60,386	74,118
Engineering and R&D	Emerging	36	2.9%	1.3%	1.4%	79,091	90,979	103,736
Performing and Creative Arts	Transitioning	27	0.4%	-0.1%	2.2%	12,167	16,094	26,098
Music	Declining	-8	-1.3%	2.9%	1.5%	19,409	32,936	40,295
Computer and Digital Media Products	Declining	-17	-1.4%	0.9%	3.5%	63,667	88,051	107,438
Architecture	Declining	-16	-2.6%	-0.8%	-1.1%	33,248	72,040	64,511
Total Creative Industry	Transitioning	386	1.8%	1.1%	2.0%	28,106	46,662	70,572

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, 2004-2014		Annual Earnings 2014		Performance Metrics		
	2004	2014	Hawaii	U.S.	Hawaii	U.S.	Competitive Share 2004-2014	Location Quotient (LQ), 2014	Change in LQ, 2004-2014
TOTAL HAWAII CREATIVE INDUSTRY	**44,478**	**49,403**	**1.1%**	**2.0%**	**46,662**	**70,572**	**-0.9%**	**0.81**	**-0.08**
Marketing, Photography & Related	10,148	10,693	0.5%	1.5%	25,046	46,231	-1.0%	0.86	-0.09
Performing and Creative Arts	8,983	8,879	-0.1%	2.2%	16,094	26,098	-2.4%	1.11	-0.30
Engineering and Research & Development	5,066	5,767	1.3%	1.4%	90,979	103,736	-0.1%	0.75	-0.01
Business Consulting	2,997	5,013	5.3%	4.6%	60,386	74,118	0.7%	0.58	0.03
Computer and Digital Media Products	4,342	4,760	0.9%	3.5%	88,051	107,438	-2.5%	0.43	-0.12
Cultural Activities	1,519	3,455	8.6%	2.6%	40,735	50,095	5.9%	3.81	1.63
Publishing & Information	3,097	2,223	-3.3%	-1.1%	53,405	96,232	-2.2%	0.60	-0.15
Design Services	1,695	1,979	1.6%	1.4%	28,244	36,203	0.2%	0.89	0.01
Architecture	2,060	1,906	-0.8%	-1.1%	72,040	64,511	0.3%	1.30	0.03
Film, TV, Video Production/Distrib	1,693	1,376	-2.0%	-0.8%	63,682	96,946	-1.3%	0.77	-0.11
Music	997	1,327	2.9%	1.5%	32,936	40,295	1.4%	1.57	0.20
Radio and TV Broadcasting	1,384	1,323	-0.4%	-0.3%	58,455	77,458	-0.1%	1.03	-0.02
Art Education	496	704	3.6%	3.6%	13,717	13,874	-0.1%	0.67	-0.01

Source: DBEDT compilation based on EMSI data.

As discussed in Section III, the creative sector includes about 49,403 jobs in 13 industry groups. The average annual earnings for the sector was $46,662 in 2014. 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 8,879 employees in 2014, including self-employed workers. Declines in jobs were centered among agents and managers for artists, athletes, and entertainers, theater companies and dinner theaters, art dealers, and dance companies. Gains in jobs over the period were made in promoters, other performing arts companies, and independent artists. The earnings average for workers in the performing and creative arts group was only $16,094 in 2014. 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 5,767 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 2004 to 2014 period. Jobs increased by 1.3% annually. 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 $90,979, 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, 2004-2014		Annual Earnings, 2014		Performance Metrics		
	2004	2014	Hawaii	U.S.	Hawaii	U.S.	Competitive Share 2004-2014	Location Quotient (LQ), 2014	Change in LQ, 2004-2014
Computer and Digital Media Products	4,342	4,760	0.9%	3.5%	88,051	107,438	-2.5%	0.43	-0.12
Software Publishers	150	212	3.5%	2.6%	80,518	143,150	0.9%	0.13	0.01
Custom Computer Programming Services	1,991	1,787	-1.1%	3.3%	87,735	99,473	-4.4%	0.37	-0.21
Computer Systems Design Services	2,201	2,762	2.3%	3.9%	88,448	102,822	-1.6%	0.59	-0.10

Source: DBEDT compilation based on EMSI data.

As a whole, jobs in this sector grew at an average annual rate of 0.9% over the 2004 to 2014 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 $88,051 in 2014. The lowest paying activity, software publishers, averaged $80,518, while the highest, computer system design services, averaged $88,448.

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 media (including alternative reality games, augmented & virtual reality)	Internet of things (wearables, appliances, connected cars, food tech)
Mobile & social games	Video content for online sharing
Digital music publishing and distribution	Social media content
Application development for mobile and web	Transmedia content
Electronic books	Podcasting and episodic content
Computer animation and graphics	Hypertext fiction
Digital marketing and communications	Multimedia publishing
Medical imaging /animation	Live streaming events
Location/GPS and venue-based interactive media	Digital & motion comics/graphic novels
Digital first-run series	iTV (interactive TV, second screen synched content)
Mobile videography/filmmaking (e.g. smartphone, drone-based)	Web site development and design
Rendering services	Visual effects

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 10,693. This represented about a 0.5% annual increase from 2004 and compares to a 1.5% annual increase in the national workforce of this industry group. Jobs in some areas such as display advertising and commercial photography grew faster than their national counterparts and faster than Hawaii's economy as a whole. However, losses of jobs in advertising (especially direct mail) and marketing research reduced the overall growth rate.

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 $25,046, below the state average. Earnings ranged from an average $84,712 in media representatives to $12,646 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 2004 to 2014 period with 5,013 jobs in 2014, up 5.3% annually from 2004. 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 79% of the group's jobs. Other management consulting was one of the fastest growing activities in the group, with job growth of 9.4% for the period. Administrative management and general management consulting services and other scientific and technical consulting services both grew more than 5.0% annually in jobs over the period.

The annual earnings average for business consulting was $60,386. This ranged from $74,340 for other scientific and technical consulting services to $30,344 for logistics consulting.

Publishing and Information

As a whole, publishing and information showed a 3.3% annual decline in jobs from 2004 to 2014, 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 2014. Newspaper publishing showed a 6.9% annual decline in jobs over the period, and this was below the 5.3% 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 10.2% annually from 2004 to 2014, with 264 employees in 2014.

The annual earnings average for publishing and information in Hawaii was $53,405 in 2014. This ranged from $85,974 for directory and mailing list publishing firms, to $44,842 for jobs among periodical publishers. The newspaper publishing earnings average was $66,475 in 2014, while the average for internet broadcasting was $55,074.

Cultural Activities

The cultural activities industry group accounted for 3,455 jobs in 2014 and included museums, historical sites, zoos, botanical gardens and grant making foundations. As a group, cultural activities registered an 8.6% annual increase in jobs over the 2004 to 2014 period, much better than the state's economy as a whole and the same set of activities nationally. As a result the cultural industry group gained competitive national industry share. The annual earnings average for the cultural activities group was $40,735 in 2014. This ranged from $25,075 for museums to $86,815 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 1,906 people in 2014 and had a negative 0.8% annual growth since 2004. This was below the average growth for the state's workforce as a whole, but better than the negative 1.1% 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 1.4% annual job growth from 2004 to 2014.

The annual earnings average in architecture was $72,040 in 2014, with structural architecture at $75,050 and landscape architecture averaging $52,815.

Design Services

Design services employed about 1,979 people in 2014. About 53% of these jobs were among graphic design firms, while another 27% were in interior design. Overall, jobs grew by 1.6% annually in the design industry group. Interior design jobs grew 2.6% and graphic design jobs grew 2.3% annually.

The annual earnings average for the design group was $28,244 in 2014. Drafting services had the lowest average at $17,547, followed by other specialized design services at $24,395, and graphic design services at an average of $25,458.

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 0.4% annually to about 1,323 jobs over the 2004 to 2014 period. Nationally, the industry group did only marginally better, managing a 0.3% annual decline in jobs. Television broadcasting lost 0.7% of its workforce annually over the period to just 641 jobs in 2014. Radio stations gained 1.2% annually over the period with about 581 jobs in 2014. Radio networks, the only other activity in the industry group lost 5.8% per year. The annual earnings average for broadcasting was about $58,455 in 2014. This ranged from $86,237 for radio networks, to $46,103 for radio stations.

Film, TV, and Video Production

Filmmakers from Hollywood and around the world are using Hawaii as a location for film, television, commercial, and digital media production. 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 CBS Productions "Hawaii Five-O", all of which were shot entirely in the Islands.

The state has established tax incentives to attract productions to Hawaii. Since 2006, Act 88/89 incentives continue to lure a wave of major feature films to the Islands including 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" and Warner Bros. Pictures' "Godzilla". Most recently, producers of

"Jurassic Park" returned to shoot the fourth installment of the successful franchise, "Jurassic World." Hawai`i now ranks among the top ten film destinations in the United States.

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 global exposure these productions have enjoyed.

TABLE 15. FILM & TV PRODUCTION INDUSTRY PERFORMANCE, 2004 TO 2014

Group & Industry	Hawaii Jobs		Ave. Job Growth Rate, 2004-2014		Annual Earnings, 2014		Performance Metrics		
	2004	2014	Hawaii	U.S.	Hawaii	U.S.	Competitive Share 2004-2014	Location Quotient (LQ), 2014	Change in LQ, 2004-2014
Film, TV, Video Production/Distrib	1,693	1,376	-2.0%	-0.8%	63,682	96,946	-1.3%	0.77	-0.11
Prerecorded Compact Disc (except Software), Tape, and Record Reproducing	5	10	7.5%	-8.4%	30,048	111,649	16.0%	0.11	0.09
Motion Picture and Video Production	1,601	1,199	-2.9%	0.6%	54,964	90,114	-3.5%	1.00	-0.43
Motion Picture and Video Distribution	16	5	-11.0%	-5.8%	54,964	137,559	-5.1%	0.17	-0.13
Teleproduction and Other Postproduction Services	39	60	4.2%	1.1%	61,287	91,658	3.1%	0.56	0.14
Cable and Other Subscription Programming	31	102	12.8%	-1.7%	64,974	113,986	14.5%	0.28	0.21

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 does not differentiate film/TV project jobs from other activities. (Many jobs are short in duration and hiring is done only for the duration of the production, not full time. 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 1,376 jobs in 2014 and decreased 2.0% annually from 2004. Nationally, this group of industries showed a 0.8% annual decrease in jobs over the period, with motion picture and TV production showing a 0.6% gain.

Volatility in the year to year film production employment is a major factor. 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. Based on film permits and tax credit applications, and additional data from the Hawaii Film Office, Table 16 shows the estimated jobs generated, as well as economic impacts of the industry based from 2006 to 2014.

TABLE 16. ESTIMATED FILM AND TELEVISION PRODUCTION: ECONOMIC IMPACT 2007 TO 2014
[In millions of dollars, except for employment which is in number of jobs]

Category	2007	2008	2009	2010	2011	2012	2013	2014
Total production expenditures	224.2	168.3	173.2	384.1	184.3	245.6	228.7	223
Expenditures qualified for tax credit	128.2	81.2	86.2	292.1	127.7	189.1	163.8	163
Expenditures not qualified for tax credit	96.8	87.0	87.0	92.0	57.2	56.5	64.9	59.0
Economic Impact								
Output	392.4	294.5	303.1	672.2	322.5	429.8	400.2	390.3
Earnings	94.2	70.7	72.7	161.3	77.4	103.2	96.1	93.7
State taxes	26.9	20.2	20.8	46.1	22.1	29.5	27.4	26.8
Employment	2,735	1,986	1,974	4,225	1,954	2,530	2,264	2,141

* 2015 numbers are calculated as of end of 2nd Quarter on 12/31/14
Source: DBEDT Research and Economic Analysis Division and Creative Industry Division, records

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.

Hawaii Grammy Nominees including Jeff Petersen, Amy Hanaialii and Daniel Ho at the Grammy Museum in Los Angeles

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 1,327 employed and self-employed workers in Hawaii's music industry in 2014, most of them performers. As Table 17 shows, employment in Hawaii's music industry increased 2.9% per year on average over the 2004 to 2014 period. By contrast, jobs in this industry group nationally grew by 1.5%.

TABLE 17. EMPLOYMENT IN MUSIC INDUSTRY GROUP

Group & Industry	Hawaii Jobs		Ave. Job Growth Rate, 2004-2014		Annual Earnings, 2014		Performance Metrics		
	2004	2014	Hawaii	U.S.	Hawaii	U.S.	Competitive Share 2004-2014	Location Quotient (LQ), 2014	Change in LQ, 2004-2014
Music	997	1,327	2.9%	1.5%	32,936	40,295	1.4%	1.57	0.20
Musical Instrument and Supplies Stores	186	140	-2.8%	-0.6%	29,326	30,388	-2.2%	0.66	-0.17
Record Production	24	45	6.5%	-2.6%	44,575	61,499	9.0%	2.85	1.67
Integrated Record Production/Distributio	30	5	-16.4%	-2.0%	44,575	93,505	-14.4%	0.22	-0.85
Music Publishers	0	17	NA	0.2%	50,725	62,861	NA	0.49	0.49
Sound Recording Studios	57	51	-1.1%	-1.1%	24,362	32,754	0.0%	0.73	0.00
Other Sound Recording Industries	15	39	10.4%	-3.5%	76,262	43,250	13.9%	1.86	1.37
Musical Groups and Artists	685	1,029	4.1%	4.0%	34,040	40,750	0.1%	2.20	0.02

Source: DBEDT compilation based on EMSI data.

The centerpiece of this industry group — musical groups and artists — increased by about 4.1%. 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 some decline in jobs.

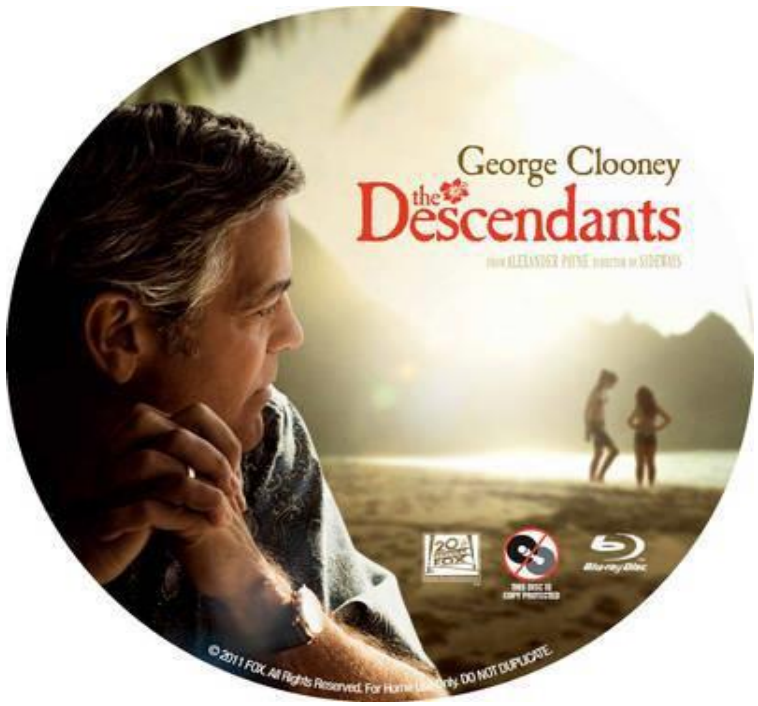
Annual earnings in the music industry generally reflect part-time professions. The average for the industry group as a whole was $32,936 in 2014. Earnings for the same industry groups nationally were higher than in Hawaii, but generally below the average for the economy as a whole.

Music & Entertainment Learning Experience

Arts Education

Music education in Hawaii's schools

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 about 704 in 2014, up about 3.6% annually from 2004. These activities grew about the same at the national level for the period. Average annual earnings amounted to only $13,717 for Hawaii in 2014 and $13,874 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.



Fox Searchlight's Motion Picture, "The Descendants" is a prime example of creative sector integration. The film was based on a book by Kauai author Kaui Hart Hemming, shot entirely in Hawaii and integrated an all original Hawaiian Music soundtrack. The film was nominated for major awards and won the Oscar for Best Adapted Screenplay and the film's soundtrack was nominated for a Grammy Award for Best Motion Picture Soundtrack.

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. These growth industries included cultural activities, music, business consulting, and design services.

Four other industry groups were ranked as transitioning. These groups have been growing jobs but at a slower rate than the nation. This indicates there could be performance issues hindering the competitiveness of these activities. The transitioning groups were art education, engineering/scientific R&D, marketing, and computer and digital media products.

Finally, five industry groups lost jobs over the 2004-2014 period and consequently fell into the declining quadrant for this time period. These were performing and creative arts, radio and TV broadcasting, architecture, film, TV, video production and distribution, 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	
		2004	2014	Ave. Job Growth Rate, 04-14	Annual Earnings, 2014	Compet.Share 04-14	Location Quotient (LQ)	Change in LQ, 04-14	Ave. Job Growth Rate, 04-14	Annual Earnings, 2014
	TOTAL HAWAII CREATIVE INDUSTRY	44,478	49,403	1.1%	46,662	-0.01	0.81	-0.08	2.0%	70,572
	Architecture	2,060	1,906	-0.8%	72,040	0.00	1.30	0.03	-1.1%	64,511
541310	Architectural Services	1,743	1,540	-1.2%	75,050	0.00	1.42	-0.03	-1.1%	73,883
541320	Landscape Architectural Services	318	366	1.4%	52,815	0.03	0.95	0.21	-1.1%	38,244
	Art Education	496	704	3.6%	13,717	0.00	0.67	-0.01	3.6%	13,874
611610	Fine Arts Schools (Private)	496	704	3.6%	13,717	0.00	0.67	-0.01	3.6%	13,874
	Business Consulting	2,997	5,013	5.3%	60,386	0.01	0.58	0.03	4.6%	74,118
541611	Admi. Management and General Manag. Consulting	1,330	2,488	6.5%	62,030	0.01	0.58	0.06	5.3%	78,846
541612	Human Resources Consulting Services	315	509	4.9%	50,789	0.05	0.84	0.32	0.0%	72,329
541614	Process, Physical Distri., and Logistics Consulting	252	339	3.0%	30,344	-0.01	0.47	-0.04	3.8%	65,244
541618	Other Management Consulting Services	77	189	9.4%	62,122	0.09	0.31	0.17	0.9%	81,254
541620	Environmental Consulting Services	555	709	2.5%	68,302	-0.01	1.07	-0.06	3.0%	61,561
541690	Other Scientific and Technical Consulting Services	469	778	5.2%	74,340	-0.03	0.46	-0.17	8.5%	68,934
	Computer and Digital Media Products	4,342	4,760	0.9%	88,051	-0.03	0.43	-0.12	3.5%	107,438
511210	Software Publishers	150	212	3.5%	80,518	0.01	0.13	0.01	2.6%	143,150
541511	Custom Computer Programming Services	1,991	1,787	-1.1%	87,735	-0.04	0.37	-0.21	3.3%	99,473
541512	Computer Systems Design Services	2,201	2,762	2.3%	88,448	-0.02	0.59	-0.10	3.9%	102,822
	Cultural Activities	1,519	3,455	8.6%	40,735	0.06	3.81	1.63	2.6%	50,095
712110	Museums	692	2,143	12.0%	25,075	0.10	5.07	3.10	1.8%	39,962
712120	Historical Sites	190	355	6.5%	31,014	0.05	4.61	1.86	1.0%	37,927
712190	Nature Parks and Other Similar Institutions	16	18	0.9%	44,945	-0.01	0.40	-0.04	2.0%	33,788
813211	Grantmaking Foundations	621	938	4.2%	86,815	0.00	2.58	0.00	4.2%	66,452
	Design Services	1,695	1,979	1.6%	28,244	0.00	0.89	0.01	1.4%	36,203
541340	Drafting Services	372	301	-2.1%	17,547	0.01	1.83	0.22	-3.4%	28,605
541410	Interior Design Services	418	540	2.6%	37,904	0.01	0.77	0.06	1.7%	30,462
541420	Industrial Design Services	10	31	11.8%	56,852	0.09	0.22	0.13	2.7%	62,488
541430	Graphic Design Services	836	1,046	2.3%	25,458	0.01	1.01	0.06	1.6%	36,350
541490	Other Specialized Design Services	58	60	0.4%	24,395	-0.04	0.36	-0.15	4.0%	44,497
	Engineering and Research & Development	5,066	5,767	1.3%	90,979	0.00	0.75	-0.01	1.4%	103,736
541330	Engineering Services	3,435	3,949	1.4%	95,402	0.00	0.78	0.00	1.4%	96,695
541712	R&D in the Physical, Engineering, and Life Sciences	1,169	1,444	2.1%	95,682	0.00	0.64	0.01	2.0%	123,297
541720	R&D in the Social Sciences and Humanities	463	374	-2.1%	38,589	-0.01	1.22	-0.14	-1.1%	75,168
	Film, TV, Video Production/Distrib	1,693	1,376	-2.0%	63,682	-0.01	0.77	-0.11	-0.8%	96,946
334612	Prerecorded Compact Disc, Tape, and Record Reprod.	5	10	7.5%	30,048	0.16	0.11	0.09	-8.4%	111,649
512110	Motion Picture and Video Production	1,601	1,199	-2.9%	54,964	-0.03	1.00	-0.43	0.6%	90,114
512120	Motion Picture and Video Distribution	16	5	-11.0%	54,964	-0.05	0.17	-0.13	-5.8%	137,559
512191	Teleproduction and Other Postproduction Services	39	60	4.2%	61,287	0.03	0.56	0.14	1.1%	91,658
515210	Cable and Other Subscription Programming	31	102	12.8%	64,974	0.14	0.28	0.21	-1.7%	113,986
	Marketing, Photography & Related	10,148	10,693	0.5%	25,046	-0.01	0.86	-0.09	1.5%	46,231
541613	Marketing Consulting Services	613	853	3.4%	37,977	-0.03	0.46	-0.15	6.3%	58,510
541810	Advertising Agencies	876	518	-5.1%	72,780	-0.06	0.40	-0.36	1.1%	88,657
541820	Public Relations Agencies	332	449	3.1%	72,186	0.01	0.91	0.06	2.3%	79,627
541830	Media Buying Agencies	26	5	-15.3%	72,186	-0.20	0.05	-0.36	4.2%	102,642
541840	Media Representatives	98	103	0.5%	84,712	0.03	0.60	0.16	-2.5%	88,727
541850	Display Advertising	120	239	7.1%	41,044	0.06	0.98	0.42	1.3%	53,598
541860	Direct Mail Advertising	81	66	-2.0%	45,049	0.02	0.22	0.03	-3.7%	54,391
541870	Advertising Material Distribution Services	72	22	-11.0%	77,527	-0.08	0.29	-0.39	-3.1%	49,760
541890	Other Services Related to Advertising	575	585	0.2%	23,558	-0.01	1.00	-0.10	1.1%	32,691
541910	Marketing Research and Public Opinion Polling	469	319	-3.8%	21,182	-0.04	0.45	-0.24	0.4%	57,533
541921	Photography Studios, Portrait	1,361	1,757	2.6%	14,671	0.00	1.73	-0.04	2.8%	13,603
541922	Commercial Photography	200	399	7.2%	12,646	0.03	1.43	0.36	4.0%	27,651
541990	All Other Professional, Scientific, and Technical	5,325	5,379	0.1%	16,918	-0.01	1.01	-0.06	0.7%	32,515
	Music	997	1,327	2.9%	32,936	0.01	1.57	0.20	1.5%	40,295
451140	Musical Instrument and Supplies Stores	186	140	-2.8%	29,326	-0.02	0.66	-0.17	-0.6%	30,388
512210	Record Production	24	45	6.5%	44,575	0.09	2.85	1.67	-2.6%	61,499
512220	Integrated Record Production/Distribution	30	5	-16.4%	44,575	-0.14	0.22	-0.85	-2.0%	93,505
512230	Music Publishers	0	17	NA	50,725	NA	0.49	0.49	0.2%	62,861
512240	Sound Recording Studios	57	51	-1.1%	24,362	0.00	0.73	0.00	-1.1%	32,754
512290	Other Sound Recording Industries	15	39	10.4%	76,262	0.14	1.86	1.37	-3.5%	43,250
711130	Musical Groups and Artists	685	1,029	4.1%	34,040	0.00	2.20	0.02	4.0%	40,750
	Performing and Creative Arts	8,983	8,879	-0.1%	16,094	-0.02	1.11	-0.30	2.2%	26,098
453920	Art Dealers	936	836	-1.1%	31,813	-0.02	2.62	-0.53	0.7%	29,646
711110	Theater Companies and Dinner Theaters	535	423	-2.3%	24,828	-0.05	0.90	-0.53	2.3%	29,683
711120	Dance Companies	224	132	-5.1%	12,787	-0.10	1.55	-2.54	4.5%	30,126
711190	Other Performing Arts Companies	14	90	20.3%	21,133	0.16	1.54	1.17	4.2%	37,114
711310	Prom. of Arts, Sports, and Similar with Facilities	250	284	1.3%	19,409	-0.04	0.52	-0.21	4.8%	33,503
711320	Prom. of Arts, Sports, and Similar without Facilities	387	541	3.4%	27,640	0.00	1.34	-0.05	3.8%	42,859
711410	Agents and Managers for Artists, Athletes, Entertainer	452	332	-3.0%	15,764	-0.05	0.86	-0.60	2.2%	53,317
711510	Independent Artists, Writers, and Performers	6,186	6,241	0.1%	12,260	-0.02	1.09	-0.23	2.0%	21,719
	Publishing & Information	3,097	2,223	-3.3%	53,405	-0.02	0.60	-0.15	-1.1%	96,232
511110	Newspaper Publishers	1,883	926	-6.9%	66,475	-0.02	0.81	-0.15	-5.3%	50,920
511120	Periodical Publishers	536	726	3.1%	44,842	0.04	1.00	0.35	-1.4%	78,400
511130	Book Publishers	119	121	0.1%	49,569	0.01	0.29	0.03	-1.0%	75,776
511140	Directory and Mailing List Publishers	133	112	-1.7%	85,974	0.03	0.71	0.19	-4.7%	78,350
511191	Greeting Card Publishers	45	5	-19.8%	80,518	-0.13	0.17	-0.55	-7.1%	59,868
511199	All Other Publishers	159	15	-21.1%	66,181	-0.18	0.19	-1.28	-3.2%	49,985
519110	News Syndicates	70	17	-13.3%	62,806	-0.12	0.24	-0.64	-1.2%	104,697
519130	Internet Pub. and Broad. and Web Search Portals	100	264	10.2%	55,074	-0.03	0.26	-0.07	12.9%	178,474
519190	All Other Information Services	51	37	-3.3%	48,197	-0.03	0.37	-0.13	-0.2%	66,444
	Radio and Television Broadcasting	1,384	1,323	-0.4%	58,455	0.00	1.03	-0.02	-0.3%	77,458
515111	Radio Networks	183	101	-5.8%	86,237	-0.06	0.74	-0.64	0.2%	63,252
515112	Radio Stations	515	581	1.2%	46,103	0.02	1.19	0.24	-1.1%	53,717
515120	Television Broadcasting	686	641	-0.7%	80,182	-0.01	0.98	-0.09	0.2%	98,144
	Source: DBEDT compilation based on EMSI data.									