The Role of the Innovation Workforce & Creative Sector in the Texas Economy

Prepared for

Texas Cultural Trust

Produced January 2009 by

TXP, Inc.
1310 South 1st Street; Suite 105
Austin, Texas 78704
(512) 328-8300 phone
(512) 462-1240 fax
www.txp.com

Table of Contents

List of Figures

List of Tables

Introduction

Traditional economic thought holds that the factors of production are land, labor, and capital. Regional economic performance is a function of some combination of these three inputs. However, more recent analyses indicate an emergent fourth dimension of production function. Business management expert Peter Drucker explains its importance, “the basic economic resources – ‘the means of production,’ to use the economist’s term, is no longer capital, nor natural resources…nor labor. It is and will be knowledge.” [1] The concept of knowledge in the workplace is shorthand for innovation, imagination, and critical thinking. Economists increasingly use the term “creative sector” to describe the collection of occupations that require mastery of these skills.

The modern economy has only reinforced the division between occupations that design new products and services versus those who produce the physical good. This is especially true in light of globalization, as lower cost locations in Asia and Latin America undermine the United States’ ability to compete based on the traditional production factors. As a result, national comparative advantage has shifted toward sectors of the economy where imagination and innovation are the building blocks of adding value and creating wealth. Nowhere is the trend more concisely encapsulated than the inscription on the back of an iPod: “Designed by Apple in California. Assembled in China.”

A number of high-profile national studies examined the importance of the creative sector to overall economic health. An overarching theme that emerged from this body of work is that successful communities will possess three attributes: 1) an innovative workforce, 2) diverse cultural amenities such as nonprofit arts organizations, and 3) economic development efforts that place as much emphasis on quality of place and talent attraction as business recruitment. At its core, the creative sector is about nurturing, retaining, and growing an innovation workforce. These talented individuals work across industry sectors, but share a common trait: the ability to consistently translate ideas into exciting new products and services.

No area has benefited more from the transition to a creative economy than the State of Texas. The current economic downturn, however, might force state and local governments to reassess priorities, evaluate revenue allocation, and rethink public policy. City and county governments will struggle to fund downtown redevelopment programs, maintain the level of financial resources needed by nonprofit cultural arts organizations, and equip children with the well-rounded education needed to enter and compete in the creative economy. This in turn will have a negative impact on a community’s cultural vitality, quality of life, and ultimate economic development success.

---

[1] Peter Drucker, *Post-Capitalist Society* (New York: Harper Business, 1993).

It is likely the State of Texas will need to do more in these difficult times to protect the millions of dollars already invested in cultural arts organizations, education programs, and related economic development efforts. Texas can no longer rely on in-migration to fill the workforce gap because the recession and housing downturn has slowed migration throughout the U.S. As more people stay in the same place, Texas must work harder to ensure its existing residents have the skills needed to fill jobs in the creative sector. Without this contribution, Texas risks its position as one of the country's leading creative regions.

In this context, the Texas Cultural Trust retained Texas Perspectives, Inc. (TXP) to evaluate the current state of Texas' creative sector. The purpose of this analysis is to provide policymakers and stakeholders a common framework for discussing the creative sector, its contribution to the state's economy, and long-term growth potential. TXP has divided the report into three sections:

1. **Connection between Culture and the Economy** – *A number of national reports have analyzed the link between economic prosperity, nonprofit cultural arts organizations, arts in education, and talent attraction. This section highlights common themes and findings from the various studies.*

2. **The Situation in Texas** – *This report offers a definition of the creative sector using occupational profiles that capture the importance of the creative sector without overstating its role. Texas and its metropolitan areas are compared against peer regions.*

3. **Texas Cultural Sector Employment Forecast** – *Using the creative sector definition, Texas Workforce Commission employment projections by occupation are examined to forecast statewide sector employment in 2016. Moreover, this forecast provides education leaders and policymakers the ability to ensure that Texas' education system (K-12 and higher education) equips students with the skills needed to fill these jobs.*

Connection between Culture and the Economy

The creative economy has been under examination for some time. Richard Florida's well-known book, *The Rise of the Creative Class*[2], details the growing economic role of creativity. According to Florida, our economy is shifting from a corporate-centered system to a more people-driven one. Under these circumstances, it is hardly surprising that most of the leading economic regions are places that offer high levels of lifestyle amenities, including the arts:

> Access to talented and creative people is to modern business what access to coal and iron ore was to steelmaking. It determines where companies will choose to locate and grow, and this in turn changes the ways cities must compete.[3]

What sets a city or region apart when it comes to attracting new businesses and talented workers? The answer lies in the interaction between the individual and the character of the community. In the past, people defined themselves by a narrow range of social categories: occupation, employer, and family status. Now more and more people are building a lifestyle around their creative experiences. A person may now identify himself as an amateur musician, programmer, gourmet cook, theater buff, and bicyclist.

The literature revealed an emerging concept that describes a creative lifecycle comprised of four interrelated parts. Each aspect not only influenced the others, but the success of an area's creative sector had spillover effects on those working in other segments of the economy. A clear picture emerged illustrating the connection between economic progress, cultural arts, and an innovative workforce. The components of the creative lifecycle are as follows:

1. **Creative Arts as an Economic Engine** – *the cultural arts' substantial and growing economic impact on the American economy.*

2. **Cultural Arts are a Cornerstone of Economic Development Planning** – *how successful economic development professionals incorporate the cultural arts, downtown revitalization, and tourism attraction with business recruitment.*

3. **Talent Attractor – Innovative Workers Want Diverse Cultural Amenities** – *the link between cultural vitality, talent attraction, and economic success.*

---

[2] Richard Florida, *The Rise of the Creative Class: and How it is Transforming Work, Leisure, Community, and Everyday Life* (New York: Basic Books, 2002).
[3] Ibid,6.

4. **The Role of the Arts in Education and Workforce Readiness** *–the connection between students engaged in arts education and successful workforce preparedness.*

Creative Arts Sector as an Economic Engine

A series of studies conducted by Americans for the Arts revealed that the nonprofit and cultural arts industry had grown consistently over the past 15 years. Arts and culture organizations became increasingly profitable while the expenditures made by consumers prior to and following events grew as well. The industry not only generates commerce but also creates jobs that cannot be outsourced, while supporting and re-circulating money within the community.

In these studies, researchers took a comprehensive look at the economic impact of the arts on 156 communities of varying sizes across all 50 states and the District of Columbia. Americans for the Arts collected detailed expenditure data from 6,080 arts organizations and 90,478 arts attendees. The studies focused only on nonprofit arts organizations and their audiences; for-profit arts and entertainment businesses (e.g., Broadway) were excluded, as were arts produced by non-arts organizations (schools or community centers).

On a national level, the study found the nonprofit arts industry generates $166.2 billion in total economic activity and supports 5.7 million jobs. The industry also generates $29.6 billion in federal, state, and local government revenues annually. This is far more than the $4 billion spent collectively by these governmental bodies on support for the arts.

Table 1: National Economic Impact of Nonprofit Arts & Culture Industry (2005)*

Total Expenditures	$166.2 billion
Full-Time Equivalent Jobs	5.7 million
Resident Household Income	$104.2 billion
Total Government Revenue	**$29.6 billion**
Local Government Revenue	$7.9 billion
State Government Revenue	$9.1 billion
Federal Income Tax revenue	$12.3 billion

Source: Americans for the Arts

* Expenditures by both organizations and audiences

Revenue generated by the arts is not only beneficial for employees because local and state governments also reap rewards.[4] The Mayor of Trenton, New Jersey and President of the United States Conference of Mayors, Douglas H. Palmer, stated:

> Mayors understand well the connection between the arts industry and city revenues. Besides providing thousands of jobs, the arts industry generates billions in government and business revenue. Additionally, the arts have played an important role in the economic revitalization of many of our nation's cities.[5]

The message is that a vibrant cultural environment is a key element of long-term economic success. As noted in the Americans for the Arts study:

> When governments reduce their support for the arts, they need to understand that they are not cutting frills. They are undercutting a nonprofit industry that is a cornerstone of tourism and downtown revitalization. When governments increase their support for the arts, they are generating tax revenue, jobs, and the creative energies that underlie much of what makes America so extraordinary.

A number of Texas metro areas have also commissioned studies highlighting the economic impact of cultural industries and related spending on their communities. While the magnitude of the impact varies, the results are the same – the cultural arts sector is an important economic engine that generates more local tax revenue than is provided by the public sector. (See Appendix 1 for the mini-case studies.)

Cultural Arts are a Cornerstone of Economic Development Planning

Enlightened business and government leaders recognize that investment in the arts is something more than simply a sign of personal or corporate virtue. Rather, there are real economic returns associated with this investment. These returns extend beyond the ability to attract and retain high-quality employees. The name recognition and the image of a corporate citizen associated with these investments make many consumers more receptive to the products of these firms. More than a third of all businesses that supported the arts in 1997 believed the public was more likely to purchase products and services from companies they knew provided such support. They also tend to fortify the regional economy by drawing dollars in from outside the community and increasing local disposable income. This creates a

---

[4] Americans for the Arts, *Arts and Economic Prosperity:The Economic Impact of Nonprofit Arts and Culture Organizations and their Audiences*, 2007. Downloaded from http://www.artsusa.org/information_services/research/services/economic_impact/default.asp.

[5] Ibid, 4.

boon for the businesses, because the regional economy is often the core of a company's client base.

The arts are also an important part of the life and texture of a city. The presence of major arts organizations serves as a magnet for many smaller arts organizations and individuals, providing scaffolding for the growth of the creative community. As such, the overall role of the arts in the economy is disproportionately large to their narrowly defined impact.

A study undertaken by the New England Foundation for the Arts concluded that high concentrations of cultural workers and cultural attractions make any area more attractive by improving overall quality of life and therefore attracting economic investment.[6] National surveys show that the average income of cultural workers exceeds that of the national average. The study also found members of the cultural sector attained higher levels of education and were likely to be married to an individual with a similar level of education. Therefore, the presence of a cultural worker in a family increased the family's earning potential and brought other highly educated professionals to the cities in which they chose to live.[7]

In a keynote address delivered in 2007, Bruce Katz, Vice President and Director of the Brookings Institution Metropolitan Policy Program, cited art museums and other cultural attractions as essential to the economic revitalization of Ohio's old industrial cities. Katz posited that the renewal and support of the arts in downtown areas attracts younger residents and results in an expanded urban population. A larger downtown population attracts business and tourism while stemming the exodus from urban centers.[8]

A separate study sponsored by the Brookings Institution found that the arts were an important element in the creation of attractive downtown areas. The expansion of entertainment is essential to urban renaissance.

> The vast array of arts organizations, particularly music performers and visual artists, has a natural affinity for downtown. They are generally the vanguard of urban dwellers. Art festivals, galleries, museums, and workshops are among the best and earliest entertainment providers.[9]

---

[6] Douglas DeNatale and Gregory H. Wassall, *Creative Economy: A New Definition.* New England Council for the Arts, 2007, 6. Downloaded at http://www.nefa.org/pubs/.

[7] Ibid, 39.

[8] Bruce Katz, *Restoring Prosperity: The State Role in Revitalizing Ohio's Older Industrial Cities*, May 29, 2007. http://www.brookings.edu/speeches/2007/0529metropolitanpolicy_katz.aspx

[9] Christopher B. Leinberger, *Turning Around Downtown: 12 Steps to Economic Revitalization.* http://www.brookings.edu/reports/2005/03downtownredevelopment_leinberger.aspx

Louise M. Slaughter, state representative from New York identified the arts as imperative to economic revitalization efforts:

> Across America, cities that once struggled economically are reinventing and rebuilding themselves by investing in art and culture. Both are proven catalysts for growth and economic prosperity. By creating cultural hubs, nonprofit art businesses help cities define themselves, draw tourists, and attract investment. Federal support for America's nonprofit cultural organizations must go on if we hope to continue enjoying the substantial benefits they bring.[10]

The economic development benefits of a thriving cultural arts scene and creative class are not restricted to large urban areas. In a report prepared for the U.S. Department of Agriculture, David A. McGranahan and Timothy R. Wojan examined the impact of the creative class on the growth of rural economies. McGranahan and Wojan applied a different set of criteria than Florida in defining the creative class, yet they found that the presence and growth of the creative class was also beneficial to economies in nonmetropolitan areas:

> In all, the results for the metropolitan counties suggest a process of growth similar to that identified for nonmetropolitan counties. However, in metropolitan counties, instead of the quality of natural amenities being a key driver, rurality itself appears to be the driver, as the creative class seeks a lower density environment in which to live ... The creative class moves into less dense metropolitan counties in search of a higher (more rural) quality of life; the building of a creative class creates an environment for job growth; and this leads to further in-migration. The process may then lead to further outward expansion of the creative class, perhaps into adjacent nonmetropolitan counties.[11]

McGranahan's and Wojan's analysis confirms Florida's findings that the establishment and enrichment of urban centers are important and beneficial for growth even in small, rural communities. Attracting members of the creative class to nonmetropolitan communities is largely predicated upon the presence and preservation of cultural heritage, civic associations, and public events.

---

[10] Americans for the Arts, *Arts and Economic Prosperity:The Economic Impact of Nonprofit Arts and Culture Organizations and their Audiences*, 2007. Downloaded from http://www.artsusa.org/information_services/research/services/economic_impact/default.asp, 8.

[11] David A. McGranahan and Timothy R. Wojan, *Recasting the Creative Class to Examine Growth Processes in Rural and Urban Counties*. Downloaded at http://www.nycreativeeconomy.cornell.edu/downloads/events/Recasting_Creative_Class.pdf.

In addition to providing a cultural context for creative expression and making a community a more desirable place to live, the arts as an industry is also an economic generator. A 2001 study for the Tucson Arts Odyssey by economists at the University of Arizona on the impact of the arts on the city's economy illustrates the shifting nature of how the arts are viewed in an economic context:

> Thinking about arts from an economic perspective is a response to a policy environment that has become increasingly concerned with jobs, the economy, and community economic development. In response to questions of public subsidies, of whether government should support the arts and what is the collective impact of the arts industry, the focus of the relationship of the economy to the arts has shifted. But this focus on the economies of the arts also is an outgrowth of changes in the arts industry itself. Expansion in the size and complexity of the arts industry has encouraged arts groups to see themselves as partners in one industry and potentially as economically significant players in the local economy at large.[12]

In addition to the overall benefits provided to the community, cultural attractions stimulate the growth of tourism. Individuals visiting an area rich in the arts were likely to stay longer and spend more money than the area's residents. A 2003 study undertaken by the Travel Industry Association generated the following data:

> Cultural, arts, historic, and heritage activities or events are quite popular among U.S. travelers today. In fact, most (81%) U.S. adults who took at least one trip of 50 miles or more, one way, away from home in the past year included at least one such activity or event while traveling. This equates to more than half (56%) of the U.S. adult population who indicate they included at least one cultural, arts, historic, or heritage activity or event while on a trip in the past year. This represents 118.1 million adult historic/cultural travelers. These historic/cultural traveling households took over 216.8 million historic/cultural person-trips in 2002 (one person-trip equals one person on one trip 50 miles or more, one-way, away from home or including an overnight stay) or one in five (21%) of all domestic person-trips. One quarter of historic/cultural travelers are frequent historic/cultural travelers taking three or more of these trips a year.[13]

[12] The University of Arizona: Office of Economic Development, *Arts in Tucson's Economy: An Economic and Tax Revenue Impact Study*, May 2001.

[13] Travel Industry Association, *The Historic/Cultural Traveler*, 2003. Downloaded at http://www.tia.org/researchpubs/executive_summaries_historic_cultural.html

In Texas, Austin's South by Southwest (SXSW) interactive, film, and music festival exemplifies how a small regional show can mature into an internationally renowned event. In 2008, SXSW featured:

- nine days of industry conference activities
- six days of trade shows
- five-night music festival featuring over 1,800 artists in more than 80 venues
- nine days and nights of film festival with more than 370 screenings in seven venues
- three nights of free concerts
- three day poster art show with 120 stands and 75 top artists
- two-day video-gaming arcade

According to SXSW, the economic impact of its 2008 event and operations had a direct and indirect economic impact of approximately $103 million on the Austin regional economy.[14]

An active and vibrant cultural tourism sector creates a sense of local identity, fosters volunteerism and philanthropy while making communities more aesthetically attractive. These three factors improve quality of life and thus attract interest and capital to the area.[15]

Talent Attractor – Creative Workers Want Diverse Cultural Amenities

The role of creativity and innovation has been explored elsewhere, as it is clear that much of the incremental growth of the local economy has been in sectors of the economy that rely on knowledge and creativity to generate value. At the same time, quality of life, an umbrella term that loosely covers variables such as recreational and cultural amenities, overall cost of living, diversity of local residents, and a sense of place is an increasingly important asset to economic development. Of necessity, companies have become more sensitive to the needs and wishes of their employees in worksite location decisions.

As creativity plays a larger role in our day-to-day lives, creative experiences become more valued. Communities that offer a wide variety of cultural amenities are more likely to attract quality workers. At the same time, creative people have always clustered in certain types of communities. Successful communities are those that are multidimensional and diverse; in addition to offering employment, they offer a wide range of lifestyle amenities and a climate that encourages and cultivates creative expression. The arts are a significant part of this equation, as noted by Florida:

---

[14] Angelou Economics Global Economic Development, *SXSW Economic Impact Analysis*. Report available at http://sxsw.com/files/u6/SXSW_2008_Economic_Impact_-_Final.pdf.

[15] Creative Economy Research Center

> Cultural offerings such as music, theater, and visual arts are a strong draw for creative workers . . . a flourishing arts scene seems to suggest a region values and supports creativity in all its forms – technological and economic as well as artistic and cultural.[16]

To test the correlation between talent attraction and cultural amenities, the Maricopa Partnership for Arts and Culture and the Greater Phoenix Economic Council commissioned the Institute for Social Science Research at Arizona State University to conduct four surveys to understand what talented, specialized, and educated individuals want from a metropolitan area. Based on surveying over 900 individuals, the report reached the following conclusions regarding the role of cultural arts in talent attraction:

> The availability of a strong arts and cultural sector ranks in the top three for young professionals already living and working in Greater Phoenix in their determination of where to live and work…Talented young professionals in the region not only want those arts and cultural amenities currently available but also want even more choices and opportunities. [17]

The Michigan Economic Development Corporation found similar results in its 2004 survey of current university students and recent college graduates. Based on over 13,500 survey responses, the study identified characteristics required for its "Cool Cities" initiative. When considering the importance of quality of life attributes for recent college graduates, the survey found:

> While job opportunities are important when choosing a place to live, quality of life is significantly more important than many have previously thought. It might be more important to some than jobs.[18]

The Role of the Arts in Education and Workforce Readiness

In recent years, there has been increasing concern among policymakers, educators, and businesses leaders about students' level of preparation to enter the labor force—especially the ability to translate educational skills into occupational domains.[19] The rapidly changing economy creates a need for a worker that is more highly skilled than ever before. Workers

---

[16] Richard Florida, *The Rise of the Creative Class: and How it is Transforming Work, Leisure, Community, and Everyday Life* (New York: Basic Books, 2002), 6.

[17] Maricopa Partnership for Arts and Culture, *Creative Connections '06: Arts, Ideas, and Economic Progress in Greater Phoenix,* 2006. Report available at http://www.mpacarts.org/publications.php.

[18] Cool Cities Initiative: Michigan Department of Labor & Economic Growth, *Michigan's Cool Cities: A Reinvestment Strategy*, 2003. Report available at http://www.coolcities.com/heard/results.

[19] R. W. Lent, & R. L. Worthington, "Applying career development theories to the school-to-work transition process." *The Career Development Quarterly*, 1999, 291.

today must operate in company environments that are less focused on mass production, and more focused on new ideas, innovation, and high performance.[20] Studies have found a noticeable overlap between the skills required for innovative occupations and the skills fostered by K-12 arts curriculum. Individuals who excel in the fine arts are increasingly leading private sector firms producing a wide range of goods and service.

Smart organizations also realize that maintaining creativity and innovation in the workplace requires ready access to a vibrant, renewing cultural environment. Even traditional manufacturing firms have long recognized that most new value is created through a process that utilizes creativity as a crucial raw material. John D. Ong, Chairman Emeritus of the B.F Goodrich Company, speaking to a group of business students as part of the Business Committee for the Arts Lecture Series, observed that:

> People who create in our companies – whether they be scientists, marketing experts or business strategists – benefit from exposure to the arts. People cannot create when they work and live in a culturally sterile environment. The economic benefits of the arts greatly transcend and outlive any of the normal cycle. That is why business invests in the arts – even when times are tough, and when there is increased pressure to manage money carefully.[21]

In his groundbreaking book *A Whole New Mind*, Daniel Pink identifies three trends that are having a profound effect on the workplace: abundance, Asia, and automation. For much of history, human lives were defined by scarcity and the race to acquire more. Recent Western prosperity has created a standard of living unfathomable to our ancestors. However, this abundance has led to an overstocked marketplace where it is difficult to differentiate between goods and services, thereby lessening their significance. As Pink notes:

> For businesses, it's no longer enough to create a product that's reasonably priced and adequately functional. It must also be beautiful, unique, and meaningful, abiding what author Virginia Postrel calls "the aesthetic imperative." Perhaps the most telling example of this change…is the new middle-class obsession with design.[22]

The outsourcing of professional jobs such as computer programming, law, and accounting has likewise forced workers to reexamine their aptitudes and skills sets and try to figure out how to fashion a job that cannot easily be moved overseas. Design is a high-concept aptitude

---

[20] P. A. Galagan, "Beyond hierarchy: The search for high performance," *Training and Development*, 8 (1992), 21-25.
[21] Quote appears in *The Role of the Arts in Economic Development: Issue Brief*. NGA Center for Best Practices, June 2001, p. 6. Report available at http://www.nga.org.
[22] Daniel Pink, *A Whole New Mind* (New York: Riverhead Books, 2005), 33.

that is difficult to outsource or automate – and that increasingly confers a competitive advantage in business. Because of cheaper overseas labor, Pink notes that many MBA graduates are becoming this century's blue-collar workers – people who entered the workforce full of promise, only to see their jobs move overseas. In fact, more Americans today work in arts, entertainment, and design than work as lawyers, accountants, and auditors.[23] The number of students obtaining an MFA (Master of Fine Arts) has dramatically increased in recent years, and corporate recruiters now routinely visit the top arts graduate schools in search of talent. The high-concept abilities of an artist are often more valuable than the easily replicated skills of an entry-level business graduate.

> A sign of these new times is a young venture in Alexandria, Virginia. When routine legal research goes overseas and basic legal information is available online, what's left for the litigious? High-concept work like that done by Animators at Law, a graphic design firm staffed by law graduates that prepares exhibits, videos, and visual aids to help top trial attorneys persuade juries.[24]

How schools are educating the future workforce is changing as well. The curriculum at medical schools, which for so long solely rewarded those with the best test scores and keen analytical thinking, is undergoing some of the biggest changes in decades. At the Yale School of Medicine, students are learning to become better observers (key to becoming an effective diagnostician) by studying painting at the Yale Center for British Art. It turns out that medical students who study painting excel at noticing subtle details about a patient's condition.[25]

Research has overwhelmingly shown that the arts can also provide effective learning opportunities to the K-12 student population, resulting in increased academic performance, reduced absenteeism, and better skill-building. The report, *Champions of Change: The Impact of the Arts on Learning* reviewed research conducted by scholars from Columbia University Teachers College, Harvard University, Harvard's Project Zero, Stanford University, the University of California at Los Angeles, and the University of Connecticut.[26] The researchers found that arts education can enhance academic achievement, reach students on the margins of the educational system, create an effective learning environment, and connect

---

[23] *2002 National Cross-Industry Estimates of Employment and Mean Annual Wage for SOC Major Occupational Groups* (2002). Occupational Employment Statistics Program, Bureau of Labor Statistics, available at www.bls.gov/oes/home.htm, cited in Pink.
[24] Ibid, p. 55.
[25] Ibid.
[26] Fiske, Edward B., Ed. (1999). *Champions of Change: The Impact of the Arts on Learning*. Arts Education Partnership and the President's Committee on the Arts and Humanities. http://aep-arts.org/files/publications/ChampsReport.pdf.

learners' experiences to the world outside of school. Multiple studies cite strong positive impacts across socioeconomic groups with respect to both academic and personal success.[27]

In an analysis of 2005-2007 data from Texas public schools, researchers examined fine arts course enrollment, campus academic achievement rating, campus attendance rates, and campus dropout rates. Campuses with higher percentages of student enrollment in fine arts courses achieved higher academic ratings, lower dropout rates, and higher attendance rates.[28]

Other studies of the effects of art instruction on learning have found that children who study the arts are:[29]

- Four times more likely to be recognized for academic achievement
- Four times more likely to participate in a math and science fair
- Three times more likely to win an award for school attendance
- Four times more likely to win an award for writing an essay or poem

Even more compelling, however, is the effect of art-based education programs on disadvantaged populations. In general, at-risk children lack the resources available to other children, are less likely to be introduced to the arts, and miss out on the important educational advantages the arts can provide. As reported by the National Governor's Association:[30]

> For at-risk youth, that segment of society most likely to suffer from limited lifetime productivity, the arts contribute to lower recidivism rates; increased self-esteem; the

---

[27] The Impact of Arts Education on Workforce Preparation (May 1, 2002). Issue Brief of the NGA Center for Best Practices. Downloaded on November 4, 2008 from www.nga.org/cda/files/050102ARTSED.pdf.

[28] *Academic Performance, Dropout Rates and Attendance Rates in Texas Public Schools Correlated to Fine Arts Course Enrollment* (March 7, 2007). An analysis of 2005-2007 data reported by Texas public school campuses completed by the Texas Music Educators Association and the Texas Coalition for Quality Arts Education, available at http://www.tmea.org/025_Advocacy/FineArtsCourseImpactPressReleaseandSummary.pdf

[29] Heath, Shirley Brice (November 1998). *Living the arts through language + learning: a report on community-based youth organizations.* Americans for the Arts. As reported in The Impact of Arts Education on Workforce Preparation issue brief.

[30] *The Impact of Arts Education on Workforce Preparation* (May 1, 2002). Issue Brief of the NGA Center for Best Practices. Downloaded on November 4, 2008 from www.nga.org/cda/files/050102ARTSED.pdf.

acquisition of job skills; and the development of much-needed creative thinking, problem solving, and communication skills.

Examples of Cultural Education Programs

Big Thought, an organization based in Dallas, offers a diverse array of creative learning and culture-based programs to north Texas communities, serving children from preschoolers to teens. Their programs help students achieve academic success, develop essential life and learning skills, and offer opportunities for children and their families to learn together.[31] One of their programs, Thriving Minds, is a city-wide partnership that surrounds children and their families with high-quality arts and cultural experiences that stimulate creativity and learning. Big Thought researchers have found that much of what children learn in the arts takes place in three separate, but related, areas:[32]

- In-School Creative Learning - Providing each Dallas public elementary student with equal access to quality arts education
- Integrated Creative Learning - Integrating arts and cultural experiences into Dallas ISD elementary curriculum
- Out-of-School Time Creative Learning - Connecting learning in and out of school and helping community and educational institutions work together

Learners benefit most when strategies and activities in each area are coordinated and connected. Thriving Minds' strategy is to strengthen each area and connect them into a system.

Dallas is not alone; public schools around the country are increasingly using the arts to enhance educational experience. In Philadelphia, the Charter High School for Architecture and Design (CHAD) opened in 1999 as the country's first public high school with a design-centered curriculum. Although students, the vast majority of whom are racial minorities, spend 100 minutes a day in the design studio, the curriculum incorporates design in core academic subjects. For example, when they study the Roman Empire, rather than only read about the Roman water delivery process, the students build a model aqueduct. The result of this type of curriculum is a student who learns to bring disparate elements together to form a solution. Since good design is inherently interdisciplinary, the school is producing people who think holistically. Eighty percent of the students will go on to a two- or four-year college. And, whereas the typical Philadelphia public high school has a daily attendance rate of 63 percent, at CHAD it's 99 percent.

---

[31] Information from www.bigthought.org

[32] Ibid.

Another example is the Chicago Arts Partnerships in Education (CAPE), which developed innovative arts-integrated curricula for 14 high-poverty schools. When compared to arts-poor schools in the same neighborhoods, the CAPE schools improved student performance at a much higher rate and showed a significant difference in achievement along multiple dimensions.[33]

In another study of dozens of after-school programs for disadvantaged youth, programs were broadly clustered into three categories – sports/academic, community involvement, and the arts. Although the research showed that the youth in all the programs were doing better in school and in their personal lives than their peers, the youth in the arts programs were doing the best. The results of the study were surprising particularly because the youth in the arts programs were actually at greater "risk," the researchers concluded that characteristics particular to the arts made these programs more effective.[34]

---

[33] Fiske, Edward B., Ed. (1999). *Champions of Change: The Impact of the Arts on Learning*. Arts Education Partnership and the President's Committee on the Arts and Humanities. http://aep-arts.org/files/publications/ChampsReport.pdf.

[34] Heath, Shirley Brice (November 1998). *Living the arts through language + learning: a report on community-based youth organizations.* Americans for the Arts.

The Situation in Texas

While the global economic environment has grown both more competitive and complex, Texas is well positioned to succeed over the longer-term. The state's economic history is the story of evolution and reinvention, with the rise of advanced manufacturing and technology alongside traditional sectors such as cotton, cattle, and oil. Texas communities of all sizes are aggressively seeking to capture the benefits associated with this evolution, as the creative sector is now the cornerstone of many economic development plans. Specific strategies designed to improve a region's competitive position for attracting businesses and workers include downtown revitalization, funding museums and performing arts centers, special incentives for emerging technologies, and talent attraction marketing campaigns.

The importance of the creative sector and innovation workforce to long-term economic prosperity has only recently emerged. Therefore, most research efforts to date have focused on national trends or the local impact of a specific subsector. From a statewide perspective, it is crucial that policymakers and stakeholders understand the current footprint of the sector and the future role the creative sector can play in the Texas economy. Key considerations include:

- How should policymakers define, measure, and evaluate the creative sector?
- What are the employment and wage trends for these occupations?
- Is the creative sector growing faster or slower compared to other industries?
- Which metropolitan areas have the highest concentrations of this sector?
- Are nonprofit cultural organizations thriving in Texas?
- Has the State of Texas adequately funded the cultural arts – a key component of the creative economy infrastructure?

The following analysis highlights key trends within the state's creative sector, identifies which metro areas are succeeding, and forecasts the workforce needs of this sector. Charts and tables follow the written findings to illustrate the results and provide additional context.

Defining the Creative Sector

Since the creative sector does not map directly to standard industrial codes, measuring its role in an economy necessitates classification decisions by the researcher. Some studies have used a narrow definition that only includes nonprofit arts or culture institutions such as ballet companies, museums, theaters, and symphonies. While data on these organizations is an important indicator of the overall creative sector, it fails to capture the ripple effects the nonprofit arts community has on attracting innovation workers at for-profit businesses.

Other studies relying on employment statistics by industry sector suffer from not being able to disaggregate the workforce by job function and risk overstating the size of the creative sector. An administrative assistant at a software company, for example, carries the same weight as an engineer. In addition, it is difficult to determine what activities take place at a particular site when a firm has multiple locations. Does a firm classified as manufacturing actually produce the good onsite or is the location staffed only with design engineers?

Complicating the decision about whether to use occupation categories or industry classification is the availability of annual datasets produced by federal and state agencies. Information regarding employment in a certain sector, for example, might be withheld to avoid disclosing the data of individual companies. The lack of consistent data makes creating a time series or benchmarking regions difficult.

Based on the literature review and data availability, this study defines the creative sector based on occupation codes that focus on the innovation workforce – job types that rely heavily on critical thinking, innovation, and creativity. Special attention was given to occupations that are in high demand, are portable, and are found in a diverse set of industry sectors. The definition excludes occupations that are largely a function of population size and not an underlying comparative advantage such as doctors, lawyers, and K-12 teachers. In addition, higher-education employment is excluded because the geographic location of most major universities was made decades ago or was based largely on political considerations. Including higher education statistics would also skew the results for smaller college towns that do not have a diversified economic base. Table 2 identifies the occupations included in the creative sector. See Appendix 2 for a detailed definition of each major category.

Table 2: Creative Sector by Major Occupation Division

Major Group Code	Occupations
15-0000	Computer and mathematical occupations
17-0000	Architecture and engineering occupations
19-0000	Life, physical, and social science occupations
27-0000	Arts, design, entertainment, sports, and media occupations

Source: TXP

Texas Creative Sector Employment & Wages

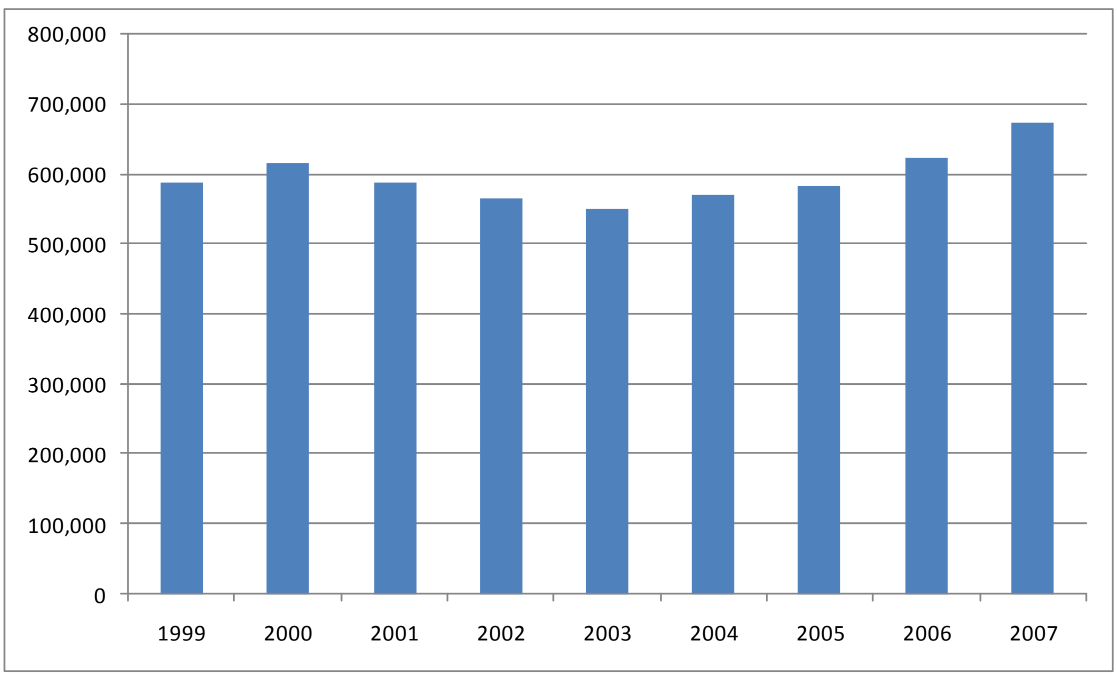
- Texas' creative sector currently employs nearly 675,000 innovation workers. This represents a growth rate of 20 percent over the past five years or 110,000 more employees than in 2002.

- From 2002 to 2007, the creative sector has grown at a compound annual growth rate (CAGR) of 3.6 percent versus 1.7 percent for non-creative occupations. This growth rate is even more remarkable when one considers the number of innovation workers laid off during the high-tech sector collapse from 2000 to 2001.

- The 2007 average annual wage for the creative sector was approximately $65,000 compared to $35,962 for non-creative industries. This represents an 80.8 percent wage premium for creative sector workers.

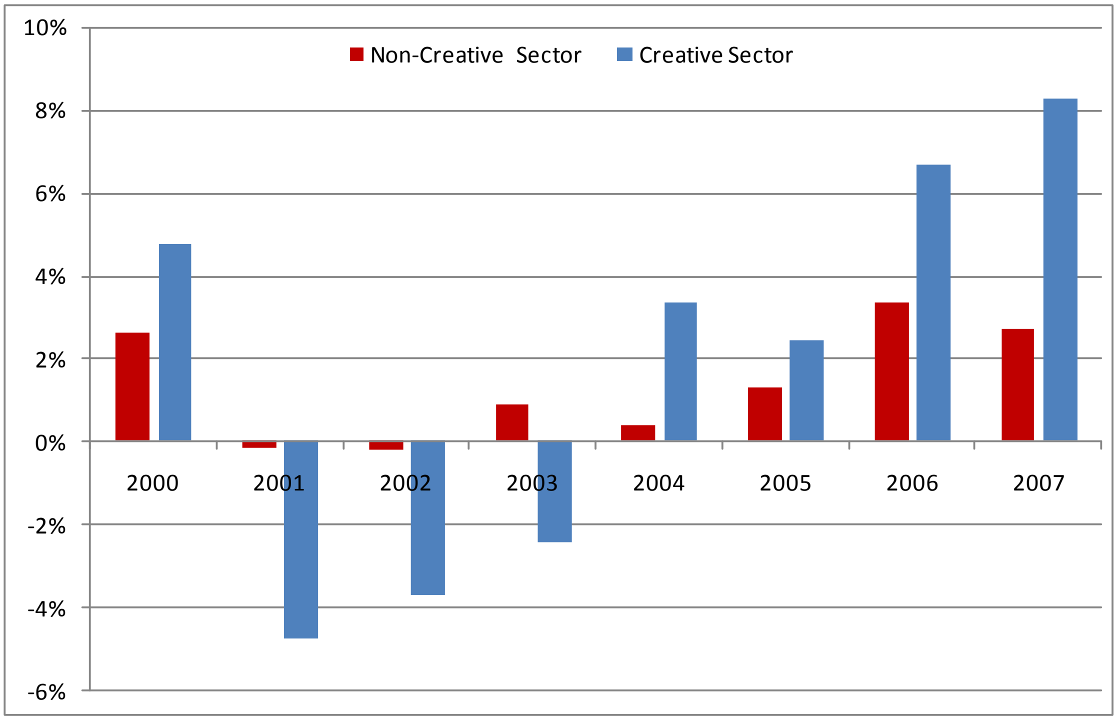
- Since 2002, the creative sector's CAGR for wages has also outpaced the non-creative industries, registering 3.1 percent and 2.2 percent respectively.

Figure 1: State of Texas Creative Sector Employment



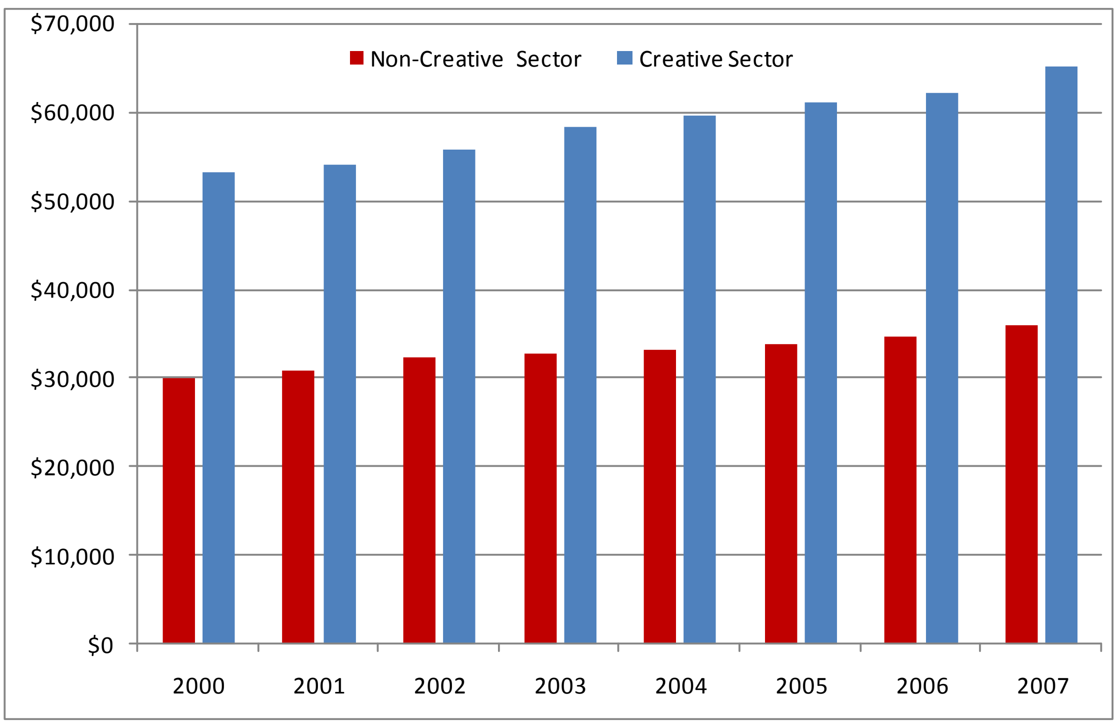
Source: TXP, US Bureau of Labor Statistics

Figure 2: State of Texas Employment Growth: Creative Sector vs. Non-Creative Sector



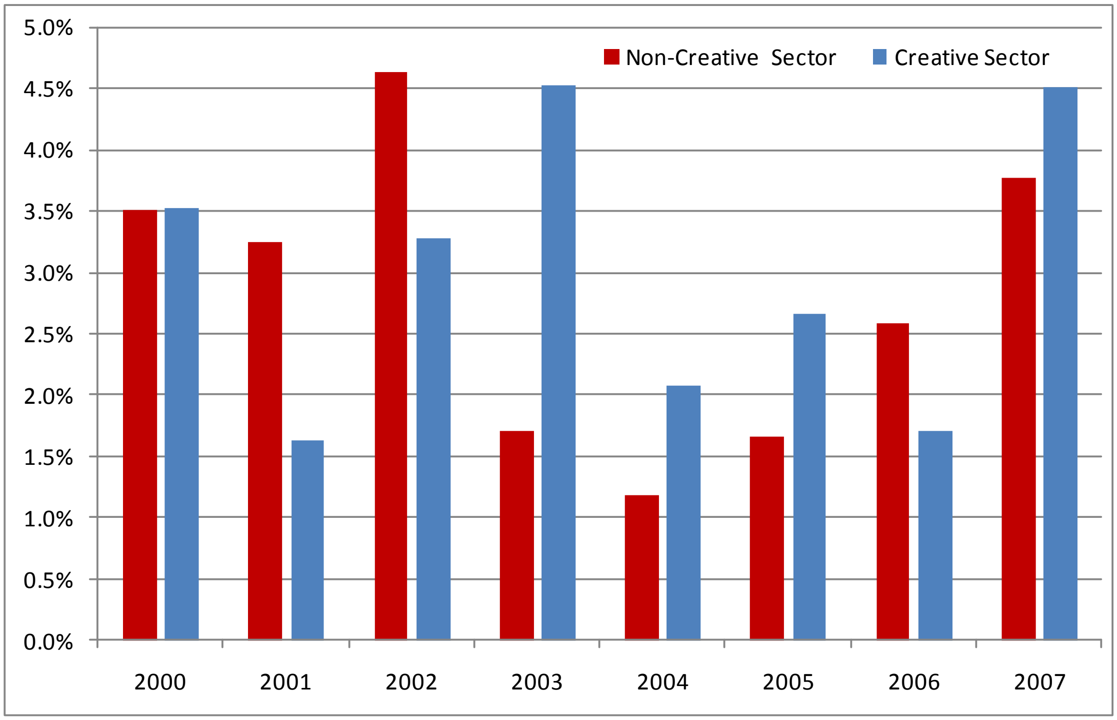
Source: TXP, US Bureau of Labor Statistics

Figure 3: State of Texas Average Wage: Creative Sector vs. Non-Creative Sector



Source: TXP, US Bureau of Labor Statistics

Figure 4: State of Texas Wage Growth Rate: Creative Sector vs. Non-Creative Sector



Source: TXP, US Bureau of Labor Statistics

- In 2007, 6.7 percent of total Texas employment was in the creative sector. This figure is on par with the national average, but well below other strong economic regions such as California (7.7 percent) and Massachusetts (9.1 percent).

- The majority of its peer regions' creative sectors have grown slower than Texas this decade. From 2000 to 2007, Texas' Creative Sector increased 9.3 percent compared to the national figure of 7.7 percent. Losses in the high-tech sector this decade have been largely offset by gains in the oil and gas sector, which requires a substantial amount of engineering and science talent.

Table 3: Creative Employment as Percent of Total Employment

	2000	2001	2002	2003	2004	2005	2006	2007
California	7.7%	7.5%	7.3%	7.5%	7.7%	7.8%	7.8%	7.7%
Florida	5.3%	5.2%	5.2%	5.3%	5.3%	6.6%	5.4%	5.3%
Massachusetts	8.4%	8.2%	8.0%	8.3%	8.4%	8.9%	8.9%	9.1%
New York	6.4%	6.4%	6.2%	6.4%	6.4%	6.7%	6.6%	6.8%
North Carolina	5.2%	5.4%	5.2%	5.3%	5.4%	5.3%	5.4%	5.4%
Pennsylvania	5.3%	5.3%	5.2%	5.2%	5.3%	5.5%	5.7%	5.9%
Texas	6.7%	6.4%	6.2%	6.0%	6.1%	6.2%	6.4%	6.7%
US Total	6.6%	6.5%	6.5%	6.5%	6.6%	6.7%	6.8%	6.9%

Source: TXP

- In 2007, the Austin metro area had the highest percentage of total local employment in the creative sector registering 11.8 percent. This figure is well above the values for any other metro region in the state.

- In terms of total creative sector employment, Dallas and Houston lead the state's metro areas. Each metro region employs about 180,000 creative workers with an average salary of $70,000.

- Compared to peer metro regions, only the Austin metro area ranks in the top ten for creative sector employment as a percentage of total employment.

Table 4: Texas Metro Area Creative Sector Employment & Wages (2007)

Metro Area	Creative Employment	% of Total Workforce	% of TX Creative	Creative Wage	Non-Creative Wage
Austin	87,550	11.8%	13.0%	$67,939	$37,779
Dallas	181,940	8.9%	27.0%	$68,874	$40,241
El Paso	10,390	4.0%	1.5%	$49,864	$31,085
Fort Worth	50,510	6.0%	7.5%	$64,586	$36,939
Houston	191,730	7.7%	28.4%	$70,602	$38,545
San Antonio	44,150	5.4%	6.5%	$56,742	$33,338
State of Texas	674,780	6.7%	100.0%	$65,020	$35,962

Source: TXP

Table 5: Top Metro Areas by Creative Sector Employment as % of Total Employment (2007)

Metro Area	Rank	Creative Employment	% of Total Workforce	Creative Wage
United States	NA	8,596,710	6.6%	$64,803
San Jose-Sunnyvale-Santa Clara, CA	1	156,040	17.1%	$92,748
Durham, NC	2	38,800	14.5%	$71,513
Washington DC-Arlington, VA	3	325,640	14.2%	$81,088
Bethesda-Gaithersburg-Frederick, MD	4	74,340	13.1%	$78,386
Seattle-Bellevue-Everett, WA	5	183,440	13.0%	$75,363
Austin-Round Rock, TX	6	87,550	11.8%	$67,939
Boston-Cambridge-Quincy, MA	7	190,170	11.3%	$76,368
San Francisco-San Mateo, CA	8	109,530	11.1%	$82,164
Madison, WI	9	33,960	10.2%	$56,149
Colorado Springs, CO	10	25,810	10.2%	$66,918
Dallas-Plano-Irving, TX	14	181,940	8.9%	$68,874
Houston-Sugar Land-Baytown, TX	31	191,730	7.7%	$70,602
Fort Worth-Arlington, TX	59	50,510	6.0%	$64,586
San Antonio, TX	74	44,150	5.4%	$56,742
El Paso, TX	96	10,390	4.0%	$49,864

Source: TXP

Texas Arts, Culture, and Humanities Nonprofits Organizations

- Based on the National Taxonomy of Exempt Entities (NTEE) used by the IRS to classify nonprofits, it is possible to analyze nonprofit organizations based on annual federal tax filings. This analysis focuses on nonprofits with over $25,000 in annual gross receipts and classified as NTEE A - Arts, Culture & Humanities.

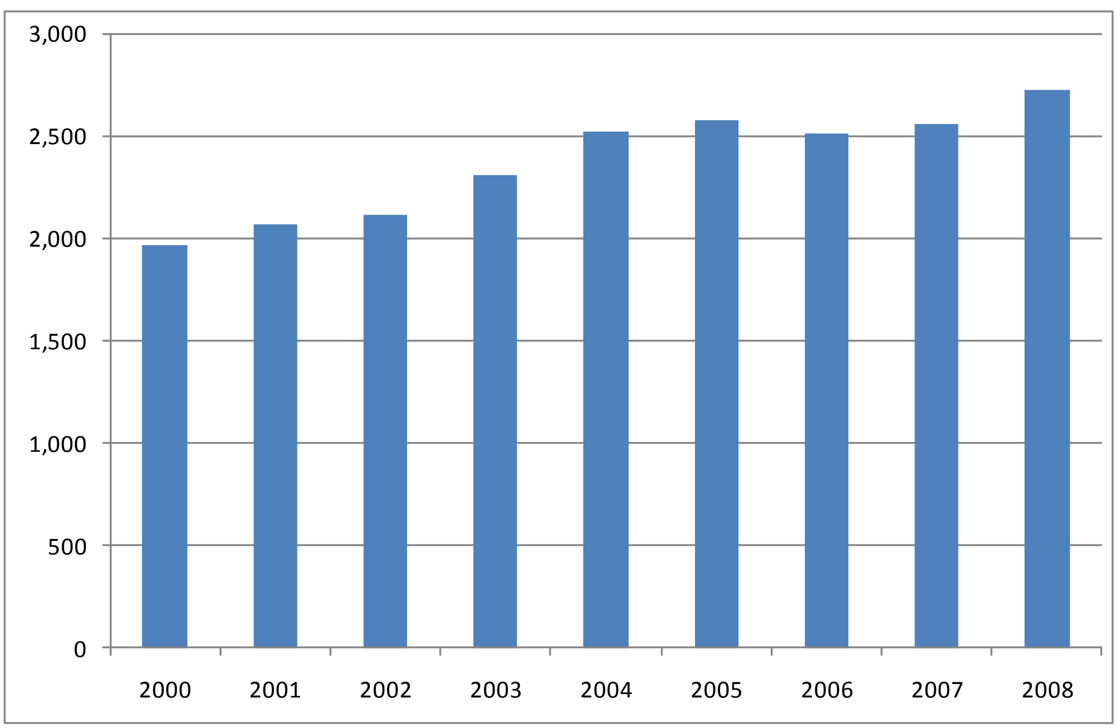
- In 2008, Texas was home to over 35,000 nonprofit organizations. Arts, Culture & Humanities organizations represented only 7.7 percent of the nonprofit base.

- From 2000 to 2008, Arts, Culture & Humanities organizations increased by 38.6 percent. Total statewide registered nonprofit organizations expanded by 32.6 percent.

- Even though Arts, Culture & Humanities organizations represent 7.7 percent of the total nonprofit base, their revenue is falling behind. Since 2000, Arts, Culture & Humanities organizations' revenues have grown 54.6 percent compared to 86.0 percent for Texas nonprofit average.

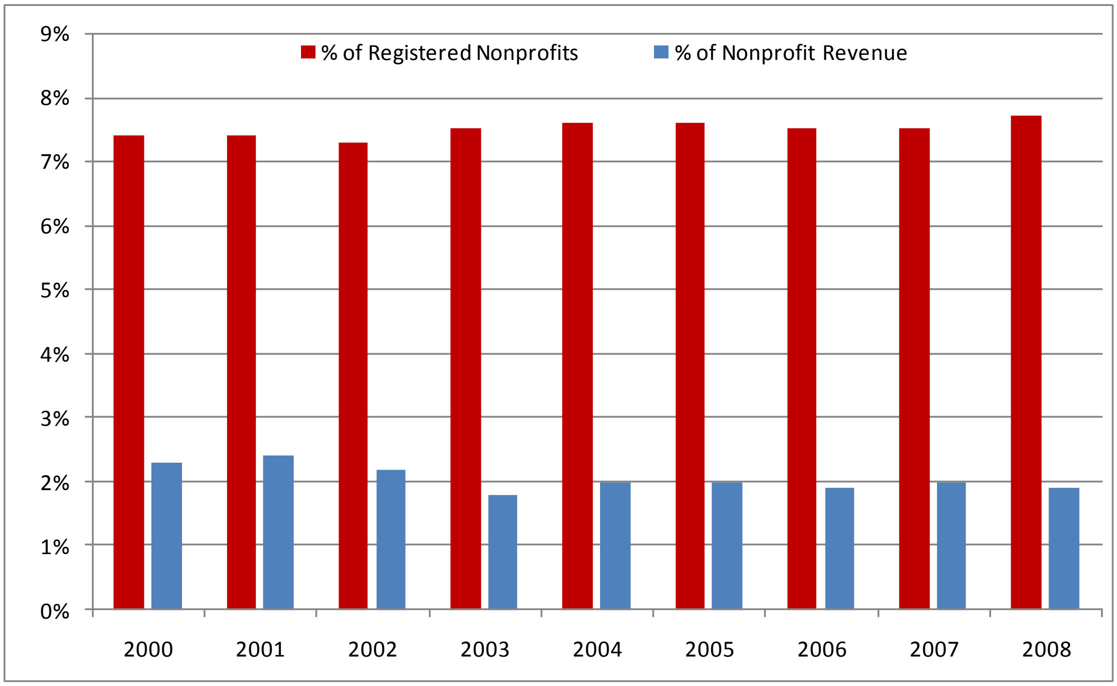
- In 2007, less than 2.0 percent of all Texas nonprofit revenue went to Arts, Culture & Humanities organizations.

Figure 5: Arts, Culture, and Humanities Nonprofits Filing IRS Form 990



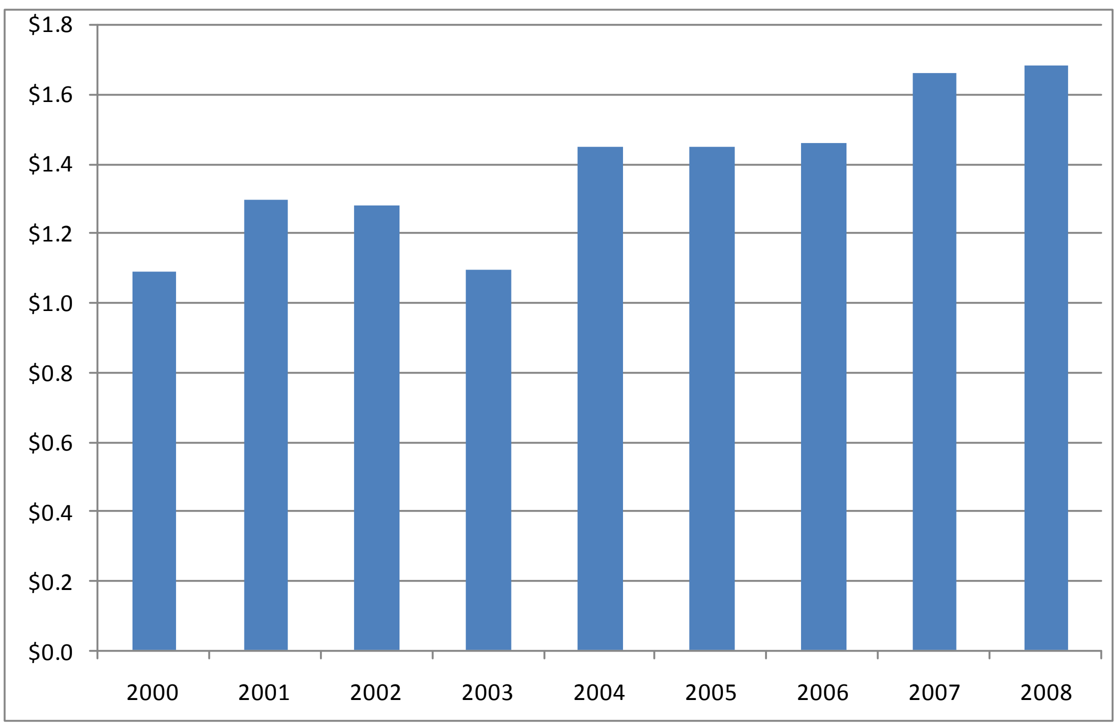
Source: National Center for Charitable Statistics

Figure 6: Arts, Culture, and Humanities Nonprofits as % of Total Nonprofit Revenue



Source: National Center for Charitable Statistics

Figure 7: Annual Arts, Culture, and Humanities Nonprofits Revenue ($ billions)



Source: National Center for Charitable Statistics

State of Texas Funding for the Cultural Arts

- The State of Texas primarily funds and supports the cultural arts via the Texas Commission on the Arts (TCA). The state agency provides grants to nonprofit organizations throughout Texas. Every dollar granted through TCA requires a dollar-per-dollar match that doubles the state's investment.

- Over the past seven years, Texas legislative appropriations for TCA have been about 22 cents per capita, well below the national average of $1.14 per capita.

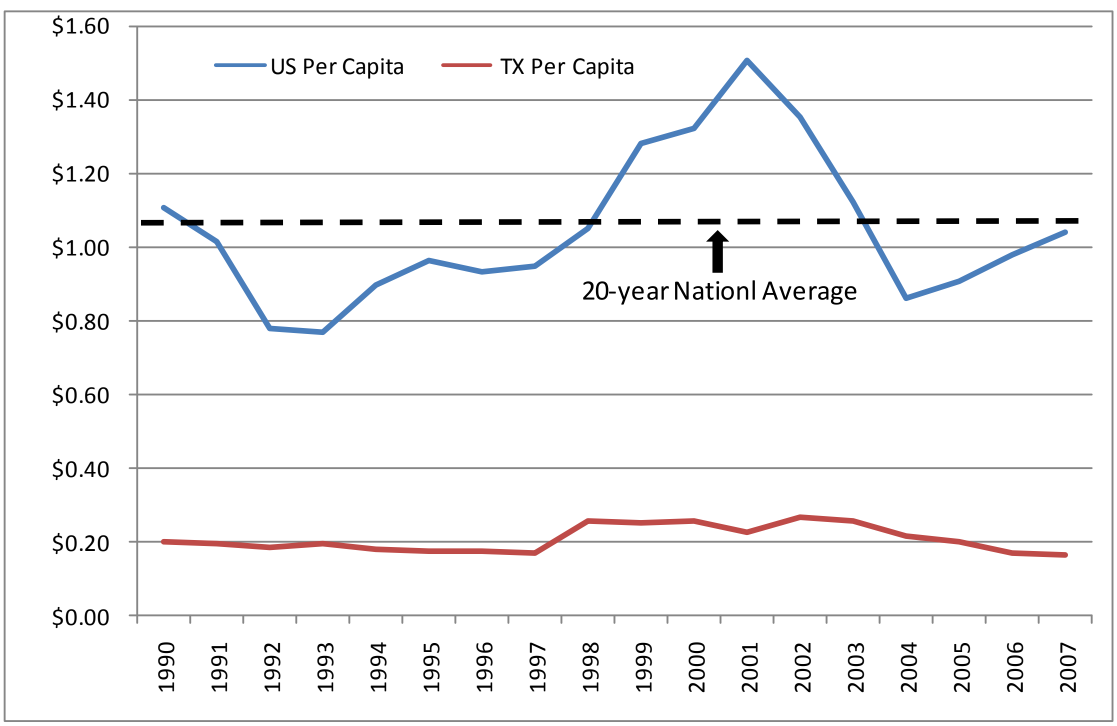
- Compared to its peer states, Texas legislative appropriations for the cultural arts are dramatically below the majority of its peer regions.

- For fiscal year 2008, the National Assembly of State Arts Agencies ranks Texas 49th for legislative appropriations for state art agencies.

- State funding has dropped steadily over the past seven years. In fact, Texas spent more per capita on the cultural arts in 1990 than in 2008.

- Less than 1.0 percent of Texas Arts, Culture & Humanities nonprofits revenue comes from TCA.

Figure 8: State of Texas vs. U.S. Per Capita Funding (Total Legislative Appropriation)



Source: TXP, US Bureau Census Bureau, and National Assembly of State Art Agencies

Table 6: Per Capita Funding (Total Legislative Appropriation)

	2000	2001	2002	2003	2004	2005	2006	2007
California	$1.44	$1.97	$1.24	$0.57	$0.05	$0.06	$0.06	$0.11
Florida	$1.75	$2.26	$1.97	$1.77	$0.39	$0.85	$1.63	$2.24
Massachusetts	$2.76	$2.77	$2.98	$1.13	$1.18	$1.30	$1.51	$1.88
New York	$2.64	$2.97	$2.69	$2.68	$2.32	$2.31	$2.35	$2.34
North Carolina	$0.93	$0.95	$0.72	$0.67	$0.66	$0.68	$0.90	$0.94
Pennsylvania	$0.98	$1.14	$1.14	$1.11	$1.13	$1.17	$1.17	$1.22
Texas	$0.25	$0.22	$0.26	$0.25	$0.21	$0.20	$0.17	$0.16
US Total	**$1.32**	**$1.50**	**$1.35**	**$1.12**	**$0.86**	**$0.91**	**$0.98**	**$1.04**

Source: TXP, National Assembly of State Art Agencies

Texas Creative Sector Employment Forecast

By combining employment forecast data produced by the Texas Workforce Commission with the creative sector definition, it was possible to create a creative sector forecast for the State of Texas and Workforce Development Areas (WDA). Between 2006 and 2016, Creative Sector employment is projected to increase by 22.4 percent or 140,000 net new jobs. This growth rate is above the non-creative figure of 21.4 percent. To fill these high-paying jobs, Texas must ensure that its labor force has the appropriate skill sets required or risk losing these opportunities to other states. A map of WDAs can be found in Appendix 3.

Table 7: Creative Sector Employment Forecast (2016)

Workforce	Creative			Non-Creative		
Development Area	2006	2016	Growth	2006	2016	Growth
Panhandle WDA	7,241	8,276	14.3%	188,334	216,843	15.1%
South Plains WDA	7,500	8,836	17.8%	175,465	205,383	17.1%
North TX WDA	4,095	4,741	15.8%	92,711	106,613	15.0%
North Central WDA	44,266	57,154	29.1%	684,672	857,226	25.2%
Tarrant Co WDA	45,516	56,119	23.3%	720,789	870,705	20.8%
Dallas Co WDA	113,230	135,859	20.0%	1,369,485	1,614,601	17.9%
North East WDA	3,190	3,534	10.8%	119,717	137,799	15.1%
East TX WDA	11,336	13,793	21.7%	305,139	360,089	18.0%
West Central WDA	5,129	5,690	10.9%	136,812	154,331	12.8%
Upper Rio WDA	11,422	13,965	22.3%	267,002	317,444	18.9%
Permian Basin WDA	8,103	10,043	23.9%	163,113	194,064	19.0%
Concho Valley WDA	2,198	2,500	13.7%	63,216	72,657	14.9%
Heart of TX WDA	6,293	7,457	18.5%	142,777	166,683	16.7%
Capital Area WDA	56,852	69,610	22.4%	496,103	609,479	22.9%
Rural Capital WDA	11,939	15,775	32.1%	209,892	268,317	27.8%
Brazos Valley WDA	7,112	8,491	19.4%	126,996	150,526	18.5%
Deep East TX WDA	4,138	4,698	13.5%	117,556	136,249	15.9%
South East TX WDA	8,793	10,517	19.6%	154,519	183,450	18.7%
Golden Crescent WDA	2,457	2,629	7.0%	83,600	95,106	13.8%
Alamo WDA	46,378	57,714	24.4%	827,778	1,016,676	22.8%
South TX WDA	2,198	2,672	21.6%	88,719	110,417	24.5%
Coastal Bend WDA	10,215	11,767	15.2%	224,263	263,527	17.5%
Lower Rio WDA	6,422	8,060	25.5%	219,848	282,501	28.5%
Cameron Co WDA	3,233	3,664	13.3%	119,153	146,722	23.1%
Texoma WDA	2,284	2,629	15.1%	68,383	80,500	17.7%
Central TX WDA	6,121	7,241	18.3%	133,196	158,605	19.1%
Middle Rio WDA	905	905	0.0%	51,381	60,915	18.6%
Gulf Coast WDA	173,185	213,529	23.3%	2,383,296	2,960,792	24.2%
Texas	623,260	762,696	22.4%	9,760,970	11,847,111	21.4%

Source: TXP, Texas Workforce Commission

Table 8: Creative Sector Wage vs. Non-Creative Wage (2006)

Workforce Development Area	Creative Average Wage	Creative % Total Wages	Creative % Total Emp	Non-Creative Average Wage	Non-Creative % Total Wages	Non-Creative % Total Emp
Panhandle WDA	$49,098	6.8%	3.7%	$28,036	93.2%	96.3%
South Plains WDA	$43,794	6.8%	4.1%	$27,694	93.2%	95.9%
North TX WDA	$47,245	8.2%	4.2%	$25,536	91.8%	95.8%
North Central WDA	$53,546	10.1%	6.1%	$33,703	89.9%	93.9%
Tarrant Co WDA	$62,388	10.7%	5.9%	$35,708	89.3%	94.1%
Dallas Co WDA	$65,342	12.8%	7.6%	$39,982	87.2%	92.4%
North East WDA	$38,737	4.2%	2.6%	$25,632	95.8%	97.4%
East TX WDA	$47,512	6.2%	3.6%	$28,917	93.8%	96.4%
West Central WDA	$42,282	6.4%	3.6%	$25,218	93.6%	96.4%
Upper Rio WDA	$43,202	6.2%	4.1%	$30,243	93.8%	95.9%
Permian Basin WDA	$54,543	8.4%	4.7%	$32,000	91.6%	95.3%
Concho Valley WDA	$41,815	5.9%	3.4%	$25,461	94.1%	96.6%
Heart of TX WDA	$47,336	7.2%	4.2%	$29,438	92.8%	95.8%
Capital Area WDA	$63,063	17.6%	10.3%	$36,817	82.4%	89.7%
Rural Capital WDA	$43,314	8.1%	5.4%	$30,437	91.9%	94.6%
Brazos Valley WDA	$37,492	6.9%	5.3%	$30,530	93.1%	94.7%
Deep East TX WDA	$44,879	6.2%	3.4%	$26,095	93.8%	96.6%
South East TX WDA	$43,545	7.6%	5.4%	$32,514	92.4%	94.6%
Golden Crescent WDA	$49,429	5.8%	2.9%	$25,737	94.2%	97.1%
Alamo WDA	$52,881	9.0%	5.3%	$32,509	91.0%	94.7%
South TX WDA	$44,251	4.0%	2.4%	$28,868	96.0%	97.6%
Coastal Bend WDA	$49,290	7.5%	4.4%	$30,213	92.5%	95.6%
Lower Rio WDA	$41,198	4.5%	2.8%	$28,062	95.5%	97.2%
Cameron Co WDA	$40,430	4.2%	2.6%	$27,349	95.8%	97.4%
Texoma WDA	$45,484	5.7%	3.2%	$27,326	94.3%	96.8%
Central TX WDA	$45,876	7.1%	4.4%	$30,204	92.9%	95.6%
Middle Rio WDA	$46,291	2.9%	1.7%	$29,980	97.1%	98.3%
Gulf Coast WDA	$67,072	12.3%	6.8%	$37,614	87.7%	93.2%
Texas	$59,241	10.6%	6.0%	$34,115	89.4%	94.0%

Source: TXP, Texas Workforce Commission

Conclusion

The performance of a region's creative sector is essential for economic growth and prosperity. Once narrowly defined as entertainment and the fine arts, the creative sector is now seen in a broader and more robust context. The current definition of this sector includes a range of occupations across many industries whose common denominator is reliance on innovation as the basis of creating value.

The key element of the creative sector is not land or capital, but an innovative workforce. When it comes to attracting and retaining an innovative workforce, the study findings confirmed that successful communities focus on the three areas they can directly influence: vitality and diversity of nonprofit cultural arts, a well-rounded curriculum in public schools, and economic development efforts that emphasize quality of place. The building of this infrastructure often requires financial partnerships between state and local government as well as private and nonprofit organizations.

The creative sector's significant contribution to the Texas economy is highlighted by its performance compared to non-creative occupations. The creative sector is also projected to grow more rapidly than non-creative occupations over the next 5 to 10 years. Furthermore, this sector builds upon the state's comparative advantage– innovation and creativity. This in turn has a significant impact on overall business recruitment, retention, and expansion, as well as local entrepreneurship.

Texas' economic creativity and cultural diversity serves to both attract and retain talented people. However, challenging economic times create the risk that the arts will be under-funded. This could be shortsighted, as failure to invest in programs and policies that maintain the nonprofit cultural arts and a well-rounded curriculum in public schools could undermine an important foundation required by tomorrow's innovation economy.

Appendix 1 – Texas Case Studies

Case Study 1: Economic Impact of San Antonio's Creative Industry[35]

An economic impact assessment of the creative economy for the city of San Antonio was completed in 2003. An ad-hoc oversight committee appointed by a group of local businesses and interested parties oversaw the study. For the purposes of that study:

> The creative industry is defined as encompassing activities and business efforts that include individual, independent, working artists; museums and other cultural organizations; advertising and design firms; and the performing arts and other businesses that involve general or specific creative activities.

Economic analyses were based upon the Texas Workforce Commission wage and employment data, which utilized the guidelines established by the North American Industrial Classification System. The data compiled for the study included the contributions of four sectors of the economy; schools, design and advertising, museums and collections, performing arts, and visual arts and photography.

The San Antonio study is useful because it adopted a conservative approach by strictly defining the scope and industries to be included yet still found creative industry to have a large, quantifiable economic impact on the city's economy. The study concluded that the Creative Industry had generated $2.2 million in local sales tax, paid 11,888 employees over $319 million in wages, and created an overall economic impact of $1.2 billion for the city of San Antonio. If the study had utilized a broader approach and included businesses such as printing and publishing it would have resulted in an additional $2.3 billion in economic benefits.[36]

Increased volunteerism was an additional benefit generated by the creative economy. Roughly 4,000 individuals contributed volunteer hours to a variety of arts and culture organizations. These unpaid workers provided a vital service to the institutions for which they worked. If they had been paid employees, they would have earned $1.3 million in additional wages.

By 2006, the economic impact of the creative industries in San Antonio had significantly increased. The total economic output of the artistic workforce had increased to $3.5 billion.

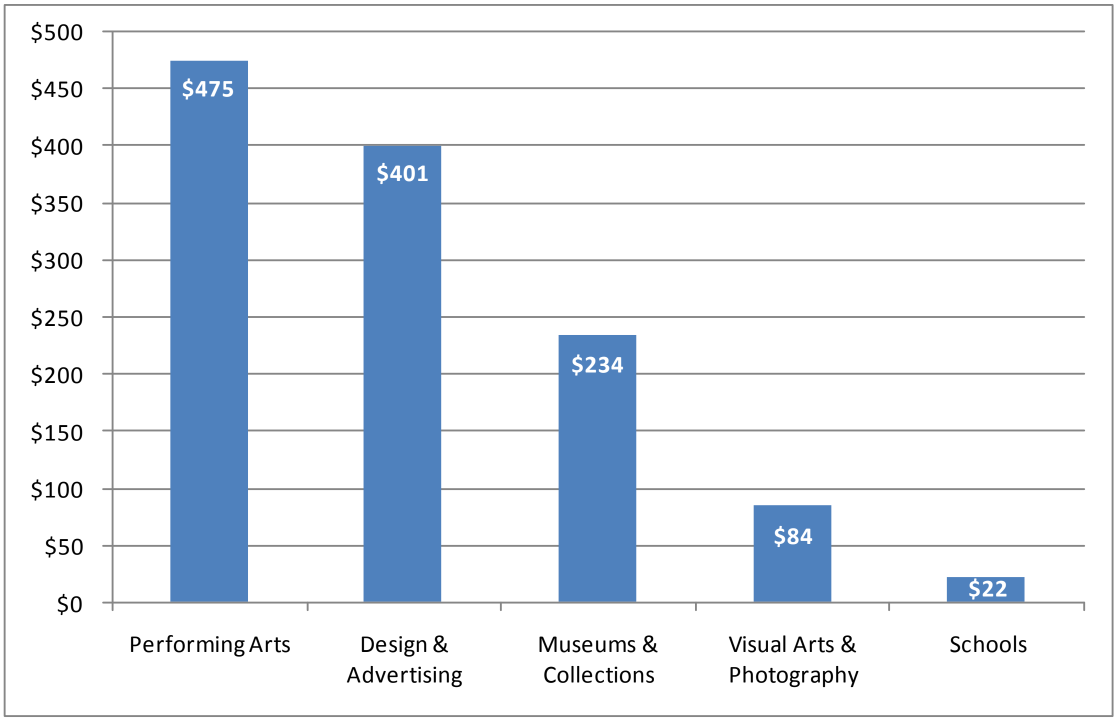
---

[35] San Antonio Hearts, *The Economic Impact of San Antonio's Creative Industry: An Assessment of the Economic Impact in 2003*, 2003. http://www.sahearts.com/Portals/0/creativeindustrypdf.pdf

[36] Ibid.

City officials attributed the increased financial gains to the city's increased funding for the arts.[37]

Figure A1-1: Economic Impact of the San Antonio Economy Creative Industry ($millions)



Source: The Economic Impact of San Antonio's Creative Industry, 2003

The benefit to local government was also significant. In addition to the revenue generated by sales tax, businesses associated with the creative industry paid property taxes and utilized a considerable amount of electricity and natural gas purchased from the City Public Service.

Table A1-1: San Antonio Creative Industry Local Tax Impact

Tax Contributions			
Sector	**City (1%)**	**Aquifer (.125%)**	**Total**
Design and Advertising	$342,487	$42,811	$385,298
Museums & Collections	$19,320	$2,415	$21,735
Performing Arts	$1,256,453	$157,057	$1,413,510
Schools	$2,838	$355	$3,193
Visual Arts & Photography	$358,788	$44,848	$403,636
Total	**$1,979,886**	**$247,486**	**$2,227,372**

Source: The Economic Impact of San Antonio's Creative Industry, 2003

[37] Donna J. Tuttle, "San Antonio Arts Community has a Big-Dollar Impact on the City," *San Antonio Business Journal*, September 5, 2008.

Case Study 2: Houston's Nonprofit Arts and Culture Organizations Economic Impact[38]

The Houston study brought together economic data compiled by Americans for the Arts with locally conducted surveys with business owners, artists, and institutions directly and indirectly impacted by cultural organizations. AMS Planning & Research conducted the study, which was funded by a number of foundations and overseen by a broad-based steering committee comprised of local community leaders in a variety of areas.

The study analyzed the impact of the cultural arts on economy, cultural tourism, employment, volunteerism, and community development. The study's authors also attempted to quantify the qualitative impact of the arts on the lives of the city's residents and those living in close proximity to the city.

In the city of Houston, the nonprofit arts sector generated $626.3 million in economic impact, supported 14,115 full-time jobs, and contributed $69.5 million tax dollars to local and state government. The study evaluated both direct and indirect economic impact defined as follows:

> Direct economic impact refers to the initial economic effect of expenditures. These direct economic impacts create an additional indirect economic impact on the Houston economy. Consider this example: A theatre company purchases a gallon of paint from the local hardware store for ten dollars (that is the "direct economic impact"). The hardware store then uses a portion of the ten dollars to pay the sales clerk's salary; the sales clerk re-spends some of the money for groceries; the grocery store in turn uses some of the money to pay its cashier; the cashier spends some for to pay his utility bill; and so on (these are the "indirect economic impacts"). Thus, the original ten dollars from the theatre has been "re-spent" several times. The local expenditures will continue to have an economic impact on the local economy until the money eventually "leaks out" of the community (i.e., is spent non-locally). The total economic impact is the combination of the direct impact and the indirect impact.[39]

---

[38] AMS Planning & Research, *Cultural Impact Study: Houston, Texas*, January 2007.

[39] AMS Planning & Research, *Cultural Impact Study: Houston, Texas*, January 2007, vi.

Table A1-2: Houston Nonprofit Arts and Culture Organizations Direct Economic Impact

	Artists	Nonprofit Arts Industry	Total
Total Expenditures	$147,600,000	$626,328,061	$773,928,061
Full Time Jobs	1,666	8,477	10,143
Resident Household Income	$39,403,000	$180,232,000	$219,635,000
Local Government Revenues	$2,361,000	$19,020,000	$21,381,000
State Government Revenues	$1,181,000	$21,153,000	$22,334,000

Source: Cultural Impact Study: Houston, Texas, 2007

Table A1-3: Total Economic Impact of Houston Nonprofit Arts and Culture Organizations

	Artists	Nonprofit Arts Industry	Total
Total Expenditures	$147,600,000	$626,328,061	$773,928,061
Full Time Jobs	3,422	14,115	17,537
Resident Household Income	$109,650,000	$406,133,000	$515,783,000
Local Government Revenues	$5,756,000	$33,248,000	$39,004,000
State Government Revenues	$4,870,000	$36,291,000	$41,161,000

Source: Cultural Impact Study: Houston, Texas, 2007.

The study found that the arts were a significant factor in attracting new residents and tourists to the Houston area. It also found that the audience for the arts was broad and not limited to the wealthier segments of the population. Additionally, more individuals attended arts and culture events than went to a major league sporting event.

The study also concluded that the $14.4 million in direct government support for the arts in Houston was profitable and resulted in a 2 to 1 return on the investment of funds.

Case Study 3: The Role of the Cultural Sector in the Austin MSA Economy[40]

In Austin, there is a growing understanding of the connection between the arts and the economy. The City of Austin retained TXP to measure the economic impact of music in 2001, not-for-profit arts groups in 2003, and film in 2004. A final report was commission in 2006 to fully "paint the picture" of Austin's entire cultural sector by updating the findings contained in the previous three studies, as well as further extending the analysis to better capture the local connection between the arts and tourism. TXP used five broad categories of activity as comprising the "cultural" sector:

- music (which includes production, music video, industry, tour, and recording services, performers, and commercial music)

[40] Texas Perspectives, Inc. *The Role of the Cultural Sector in the Local Economy, Austin, TX,* January 2006.

- film and visual media (including film and commercial production)
- not-for-profit arts groups
- visual arts (including galleries, photographers, and other commercial visual artists)
- culture-related tourism (broken down into tourism influenced by music and other culture-influenced tourism)

These categorizations are by no means definitive, but represented TXP's best effort to capture the range and scope of Austin's cultural economic activity in a manner that is both reasonably comprehensive and consistent with our previous local work in this area.

The role of the cultural sector in Austin's economy is significant, with just over $2.25 billion in economic activity, $827.7 million in labor compensation, over $48 million in City tax revenues, and almost 44,000 permanent jobs that can be ascribed to its collective influence during 2004. Not surprisingly, the economic impact of the cultural sector is most evident in tourism; as the Live Music Capital of the World, there are a number of high profile events each year that draw thousands, as well as several major film festivals. On any given weekend, those in Austin (residents and visitors) can take part in a wide variety of cultural activities that extend well beyond these high-profile events to theatre productions, gallery openings, food festivals, rodeos, and other offerings that fall under the broad heading of "cultural events." As a result, "retail arts," i.e., those offerings designed to be experienced first-hand, are a dominant influence on Austin's cultural scene.

Table A1-4: Cultural Sector-Related Total Economic Activity in Austin

	Sales/ Shipments/ Receipts	Labor Compensation	Employment	City Tax Revenue
Music	$419,208,316	$159,203,078	5,639	$4,731,171
Film & Visual Media	$281,021,016	$79,927,770	2,689	$1,072,500
Not-For-Profits	$330,220,253	$184,821,416	8,916	$3,758,605
Visual Arts	$201,595,212	$87,571,770	3,874	$2,294,580
Arts-Related Tourism	$1,032,600,716	$324,244,133	22,994	$36,372,276
-Influenced by Music	$580,242,172	$182,200,261	12,921	$20,438,421
-Other	$452,358,544	$142,043,872	10,073	$15,933,855
TOTAL	**$2,251,745,804**	**$827,761,366**	**43,744**	**$48,075,521**

Source: The Role of the Cultural Sector in the Local Economy, Austin, TX

Case Study 4: Economic Impact of North Texas Arts and Culture Organizations[41]

The North Texas Business for Culture and the Arts (NTBCA) has commissioned a series of studies regarding the economic impact of the arts in the metropolitan area, which includes the cities of Dallas, Fort Worth, and smaller communities in the region. The study was based upon answers generated by a survey:

> The survey was distributed to approximately 230 cultural arts organizations in the North Texas area. Ninety-eight, or approximately 43%, of the organizations surveyed responded. In addition, 47 of the 98 respondents, or 62%, also participated in the 2003 study. The respondents were geographically dispersed between Dallas (45), Fort Worth (21), Richardson (9), Denton (6), Plano (5), Irving (4), McKinney (3), Mesquite (2), Garland (1), Grand Prairie (1), and Addison (1). . . A major portion of the survey data captured involved detailed operating income, operating expense and capital expense information. [42]

The authors of the study extrapolated economic data from responses provided on the survey as well. The monetary contribution of the arts has grown steadily over the years. In 2006, the arts generated $828.5 million in economic activity, indirect audience spending, and construction and capital expenditures on existing facilities.[43]

Table A1-5: Economic Impact of North Texas Arts and Culture Organizations ($ millions)

	2004	2005	2006
Direct/Indirect Spending Impact	$394.6	$413.5	$422.7
Indirect audience spending	$279.3	$314.1	$327.7
Construction impact	$26.9	$67.8	$78.1
Total fiscal year economic impact	**$700.7**	**$795.4**	**$828.5**

Source: 2006 Economic Impact Study of the Arts and Culture Organizations in North Texas

The study concluded that the nonprofit arts and culture sector exhibited sustained productivity over the course of three years and increased in profitability incrementally. The arts provide both direct economic impact and indirect economic impact, i.e. money that is spent or generated by arts organizations and the recirculation of funds paid to employees.

In addition, the arts contributed significantly to the local economy by providing full-time, part-time, and contract employment. Those employees then contributed directly to local businesses.

---

[41] North Texas Business for Culture and the Arts, *2006 Economic Impact Study of the Arts and Culture Organizations in North Texas*, 2006.

[42] Ibid III-1.

[43] The data provided for 2006 is projected, not actual numbers.

Appendix 2 – Detailed Creative Sector Definition

Table A2-1: Computer & Math Occupations (SOC 15-0000)

Code	Occupation Description
15-1011	Computer and information scientists, research
15-1021	Computer programmers
15-1031	Computer software engineers, applications
15-1032	Computer software engineers, systems software
15-1041	Computer support specialists
15-1051	Computer systems analysts
15-1061	Database administrators
15-1071	Network and computer systems administrators
15-1081	Network systems and data communications analysts
15-1099	Computer specialists, all other
15-2011	Actuaries
15-2021	Mathematicians
15-2031	Operations research analysts
15-2041	Statisticians
15-2091	Mathematical technicians
15-2099	Mathematical scientists, all other

Table A2-2: Architecture & Engineering Occupations (SOC 17-0000)

Code	Occupation Description
17-1011	Architects, except landscape and naval
17-1012	Landscape architects
17-1021	Cartographers and photogrammetrists
17-1022	Surveyors
17-2011	Aerospace engineers
17-2021	Agricultural engineers
17-2031	Biomedical engineers
17-2041	Chemical engineers
17-2051	Civil engineers
17-2061	Computer hardware engineers
17-2071	Electrical engineers
17-2072	Electronics engineers, except computer
17-2081	Environmental engineers
17-2111	Health and safety engineers, except mining safety engineers and inspectors
17-2112	Industrial engineers
17-2121	Marine engineers and naval architects
17-2131	Materials engineers

17-2141	Mechanical engineers
17-2151	Mining and geological engineers, including mining safety engineers
17-2161	Nuclear engineers
17-2171	Petroleum engineers
17-2199	Engineers, all other
17-3011	Architectural and civil drafters
17-3012	Electrical and electronics drafters
17-3013	Mechanical drafters
17-3019	Drafters, all other
17-3021	Aerospace engineering and operations technicians
17-3022	Civil engineering technicians
17-3023	Electrical and electronic engineering technicians
17-3024	Electro-mechanical technicians
17-3025	Environmental engineering technicians
17-3026	Industrial engineering technicians
17-3027	Mechanical engineering technicians
17-3029	Engineering technicians, except drafters, all other
17-3031	Surveying and mapping technicians

Table A2-3: Life, Physical, & Social Science Occupations (SOC 19-0000)

Code	Occupation Description
19-1011	Animal scientists
19-1012	Food scientists and technologists
19-1013	Soil and plant scientists
19-1021	Biochemists and biophysicists
19-1022	Microbiologists
19-1023	Zoologists and wildlife biologists
19-1029	Biological scientists, all other
19-1031	Conservation scientists
19-1032	Foresters
19-1041	Epidemiologists
19-1042	Medical scientists, except epidemiologists
19-1099	Life scientists, all other
19-2011	Astronomers
19-2012	Physicists
19-2021	Atmospheric and space scientists
19-2031	Chemists
19-2032	Materials scientists
19-2041	Environmental scientists and specialists, including health
19-2042	Geoscientists, except hydrologists and geographers

19-2043	Hydrologists
19-2099	Physical scientists, all other
19-3011	Economists
19-3021	Market research analysts
19-3022	Survey researchers
19-3031	Clinical, counseling, and school psychologists
19-3032	Industrial-organizational psychologists
19-3039	Psychologists, all other
19-3041	Sociologists
19-3051	Urban and regional planners
19-3091	Anthropologists and archeologists
19-3092	Geographers
19-3093	Historians
19-3094	Political scientists
19-3099	Social scientists and related workers, all other
19-4011	Agricultural and food science technicians
19-4021	Biological technicians
19-4031	Chemical technicians
19-4041	Geological and petroleum technicians
19-4051	Nuclear technicians
19-4061	Social science research assistants
19-4091	Environmental science and protection technicians, including health
19-4092	Forensic science technicians
19-4093	Forest and conservation technicians
19-4099	Life, physical, and social science technicians, all other

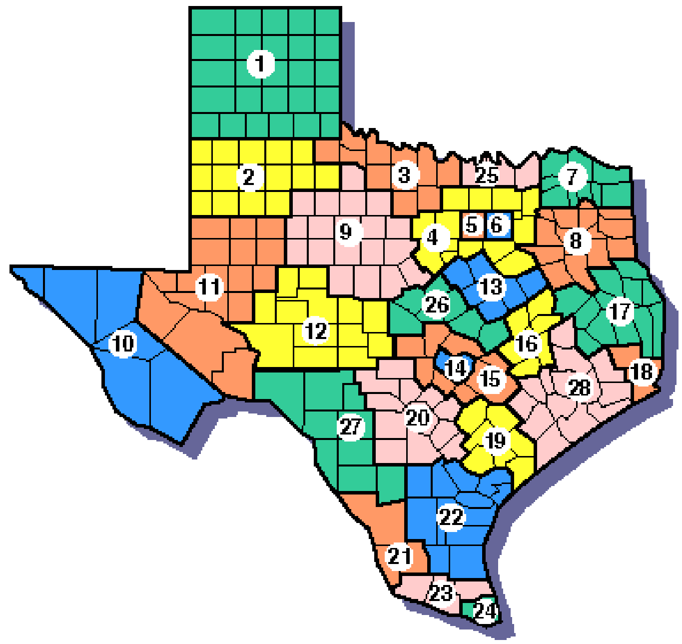
Table A2-4: Arts, Design, Entertainment, Sports, &Media Occupations (SOC 27-0000)

Code	Occupation Description
27-1011	Art directors
27-1012	Craft artists
27-1013	Fine artists, including painters, sculptors, and illustrators
27-1014	Multi-media artists and animators
27-1019	Artists and related workers, all other
27-1021	Commercial and industrial designers
27-1022	Fashion designers
27-1023	Floral designers
27-1024	Graphic designers
27-1025	Interior designers
27-1026	Merchandise displayers and window trimmers
27-1027	Set and exhibit designers

27-1029	Designers, all other
27-2011	Actors
27-2012	Producers and directors
27-2031	Dancers
27-2032	Choreographers
27-2041	Music directors and composers
27-2042	Musicians and singers
27-2099	Entertainers and performers, sports and related workers, all other
27-3011	Radio and television announcers
27-3012	Public address system and other announcers
27-3021	Broadcast news analysts
27-3022	Reporters and correspondents
27-3031	Public relations specialists
27-3041	Editors
27-3042	Technical writers
27-3043	Writers and authors
27-3091	Interpreters and translators
27-3099	Media and communication workers, all other
27-4011	Audio and video equipment technicians
27-4012	Broadcast technicians
27-4013	Radio operators
27-4014	Sound engineering technicians
27-4021	Photographers
27-4031	Camera operators, television, video, and motion picture
27-4032	Film and video editors
27-4099	Media and communication equipment workers, all other

Appendix 3 – Texas Workforce Commission WDA Map

1. Panhandle
2. South Plains
3. North Texas
4. North Central
5. Tarrant County
6. Dallas
7. North East
8. East Texas
9. West Central
10. Upper Rio Grande
11. Permian Basin
12. Concho Valley
13. Heart of Texas
14. Capital Area
15. Rural Capital
16. Brazos Valley
17. Deep East Texas
18. South East Texas
19. Golden Crescent
20. Alamo
21. South Texas
22. Coastal Bend
23. Lower Rio Grande Valley
24. Cameron County
25. Texoma
26. Central Texas
27. Middle Rio Grande
28. Gulf Coast



Legal Disclaimer

TXP reserves the right to make changes, corrections, and/or improvements at any time and without notice. In addition, TXP disclaims any and all liability for damages incurred directly or indirectly as a result of errors, omissions, or discrepancies. TXP disclaims any liability due to errors, omissions, or discrepancies made by third parties whose material TXP relied on in good faith to produce the report.

Any statements involving matters of opinion or estimates, whether or not so expressly stated, are set forth as such and not as representations of fact, and no representation is made that such opinions or estimates will be realized. The information and expressions of opinion contained herein are subject to change without notice, and shall not, under any circumstances, create any implications that there has been no change or updates.