



Arts and the GDP: Value Added by Selected Cultural Industries

Key Findings

National

- ⇒ As a group, the performing arts, sports, and museum industries contributed **\$70.9 billion** to the U.S. economy in 2009.
- ⇒ The motion-picture and sound-recording industries contributed **\$59.8 billion**, while publishing (including software) added **\$147.7 billion**.
- ⇒ Real value added by performing arts, sports, and museums contracted 5.5 percent in 2009, after having doubled over a 12-year period.

States

- ⇒ New spending on the performing arts contributes more value to states with large and diverse economies. For each new dollar of “value added” by the performing arts industry in **California**, for example, the state’s economy gains \$1.38. For **Texas**, the comparable figure is \$1.28.
- ⇒ The performing arts industry generates a greater number of new jobs in **Georgia**, **North Carolina**, **Ohio**, and **Utah** than in other states. In each case, more than 45 new jobs would result from an additional million dollars in performing-arts spending.

Value-added refers to the amount an industry adds to Gross Domestic Product through labor and capital (plus taxes on production).

Overview

This Research Note uses data from the Department of Commerce’s Bureau of Economic Analysis (BEA) to examine the value added by selected cultural industries to the U.S. economy. For 2009, the most recent year of data, estimates are shown for (1) performing arts, sports, and museums; (2) motion pictures and sound recording; and (3) publishing (including software).¹ Long-term trend analyses of value added by those industries are also provided.

The term “value-added” has entered the popular lexicon, but has a specific meaning in macroeconomics. With reference to a nation’s economy, value-added describes an industry’s contributions through labor and capital. Value-added is estimated by using a method similar to that for computing the nation’s gross domestic product (GDP). To prevent double-counting, value-added excludes “intermediary costs”—or costs incurred by other industries to produce goods and services used by the industry in question.

For example, outlays for toe shoes (worn by ballet dancers when dancing on the tips of their toes, or *en pointe*) are excluded from the

value added by dance companies because the shoes were produced with the labor and capital of shoe manufacturers. Energy costs are also excluded from value-added.

When discussing national estimates of value-added, this Note fuses several cultural industries. The performing arts and museum industries are considered together, along with sports, because **annual BEA data do not permit disaggregation**. Similarly, the motion-picture and sound-recording industries are combined for the purpose of analysis.

Disaggregation of value-added trends for these industries *is* possible—but only every five years, when the BEA releases more detailed, “benchmark” statistics. The most recent of these estimates emerged in 2007, based on 2002 data. In 2002, value added by sports was \$16.9 billion—over two times greater than for the performing arts (\$7.2 billion). Value added by museums was \$4.7 billion in 2002.

Although the BEA’s national value-added figures for 2009 do not separate the performing arts industry from museum or

sports industries, the BEA’s five-year, benchmark data do allow researchers to produce relatively recent estimates of value added by individual industries at the *state* level.

For each state, the BEA has released “multipliers” of the value added by those individual industries to the state’s economy, as well as the number of jobs created. The

BEA achieves this reporting by revising its 2002 “benchmark” figures to reflect 2008 regional economic conditions.

Consequently, the second part of this Note examines patterns of value added to state economies, including job creation, and how certain states appear better-positioned to support cultural industry growth.

How Much Do Cultural Industries Add to the U.S. Economy?

In 2009, the performing arts, sports, and museums added \$70.9 billion to the U.S. economy. That year, the motion-picture and sound-recording industries contributed \$59.8 billion, while publishing (including software)

added \$147.7 billion. Combined, **the three selected cultural industries contributed a total of \$278.4 billion to the U.S. economy in 2009.**

Value Added by Selected Cultural Industries, 2009

(in billions)

Total for selected cultural industries	\$278.4
Performing arts, sports, and museums	\$70.9
Motion picture and sound recording	\$59.8
Publishing (including software)	\$147.7

Source: Bureau of Economic Analysis, U.S. Department of Commerce

Travel and Tourism

In addition to its main industry accounts, the BEA produces estimates of value-added for several “satellite accounts,” which combine estimates for selected industries in correspondence with the account’s subject, such as healthcare, research and development, and travel and tourism.

Sponsored by the Office of Travel and Tourism Industries of the International Trade Administration, the travel and tourism satellite account provides estimates of value added by industries such as air and rail transportation, taxi services, and traveler accommodations.

*The travel and tourism account also includes estimates of value added by selected cultural industries. This account shows that **in 2008**, the most recent data available, **the performing arts and movies (combined) added \$38.9 billion to the U.S. economy**. Spectator sports added a similar amount (\$32.5 billion). Scenic and sightseeing transportation (such as sightseeing buses and trolleys and horse-drawn carriage rides) added \$1.6 billion.*

For more information on the travel and tourism account, please see Zemanek, S. and Rzeznik, S. (November 2010). U.S. Travel and Tourism Satellite Accounts for 2004–2009, Survey of Current Business, are available at http://www.bea.gov/scb/pdf/2010/11%20November/1110_travel.pdf

The 2007-2009 U.S. Economic Recession

Over time, cultural industries have contributed growing amounts to the U.S. economy. Between 1987 and 2009, for example, the inflation-adjusted value added by the performing arts, sports, and museums nearly doubled.

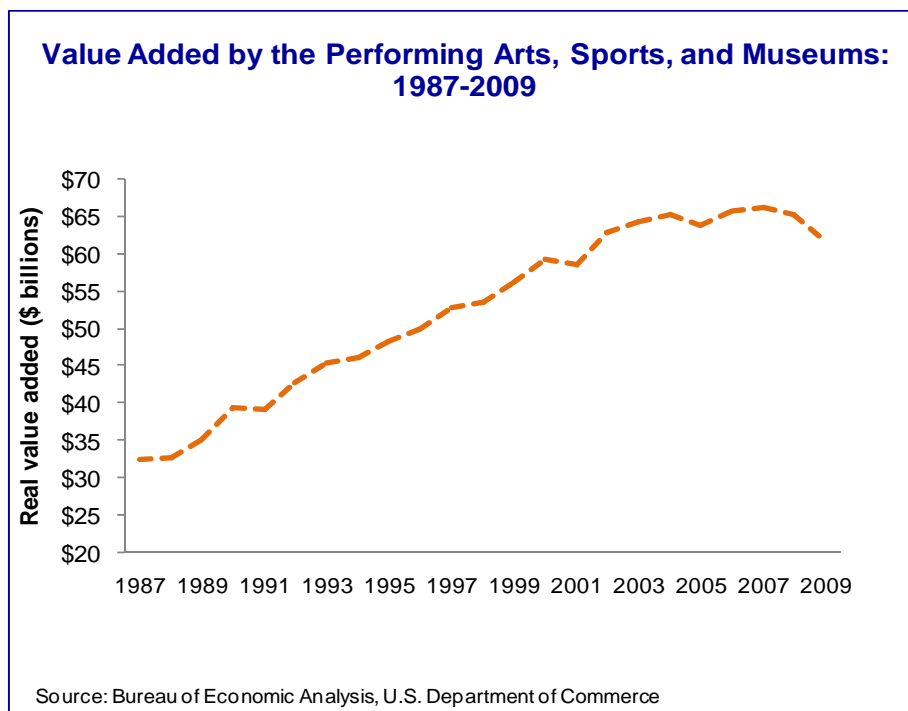
Examining value-added over time also reveals that cultural production exhibits business-cycle fluctuations, including

contractions stemming from the U.S. economic recession that began in December 2007 and ended in June 2009. **Real value added by the performing arts, sports, and museums fell by 1.4 percent in 2008; it dipped 5.5 percent the following year.**

Contractions also occurred in the motion-picture and sound-recording industries and in publishing. Real value added by motion

pictures and sound recording fell by 3.5 percent and 2.4 percent in 2008 and 2009, respectively. After growing in 2007 and

2008, real value added by the publishing industry contracted 7 percent in 2009.



Value Added by Source

By definition, value-added is an industry’s contribution to the economy through its labor and capital (plus taxes on production).² As the table below shows, **the majority, 57 percent, of the value added by performing arts, sports, and museums derives from labor (compensation of employees).** Only

34 percent stems from capital (gross operating surplus). The motion-picture and sound-recording industries, by contrast, are comparatively capital-intensive—nearly 51 percent of their value-added stems from gross operating surplus.

Value Added by Source, 2009

(Dollars in millions)

Selected cultural industries	Labor		Capital		Taxes	
	Compensation of employees	Share of total value added	Gross operating surplus	Share of total value added	Taxes on production	Share of total value added
Performing arts, sports, and museums	\$40,473	57.1%	\$24,424	34.4%	\$6,050	8.5%
Motion picture and sound recording	\$26,474	44.3%	\$30,180	50.5%	\$3,101	5.2%
Publishing (including software)	\$80,328	54.4%	\$65,309	44.2%	\$2,092	1.4%

Source: Bureau of Economic Analysis, U.S. Department of Commerce

Trends in Value Added by Labor

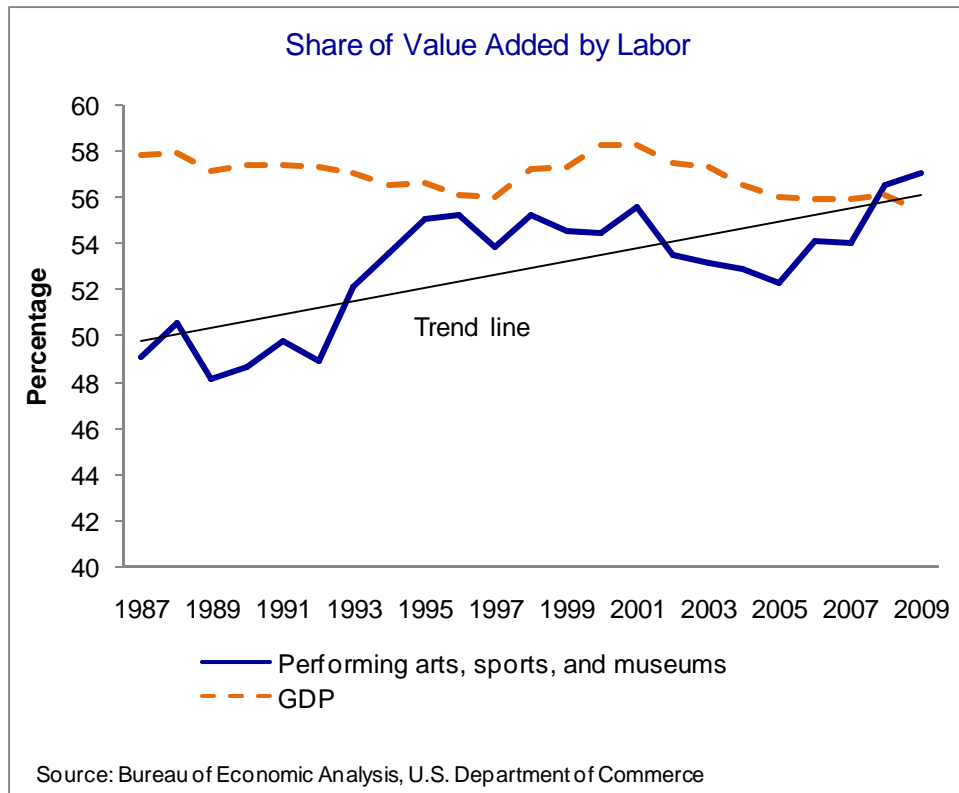
Although more labor-intensive than movie and sound-recording production, the performing arts, sports, and museum industries, until recently, were more capital-intensive than the overall economy. In 1987, the share of value added by labor was 49.1 percent for performing arts, sports, and museums—well below the 57.8 percent that labor contributed to the total U.S. GDP.

Over time, however, labor’s share of value added by performing arts, sports, and museums has risen. In 2008, the share of value added by labor in these cultural industries reached 56.5 percent—comparable to the 56.1 percent added by labor to the general economy. In 2009, labor from cultural industries added 55.4 percent—

nearly two percentage points higher than the share of labor used to produce all U.S. goods and services.

Several factors likely contribute to this pattern. First, labor’s historically low share of value-added for these cultural industries may reflect the high percentage of artists who are self-employed.³ The incomes of the self-employed are not counted in the national accounts as employee compensation, but rather as gross operating surplus (capital).

Second, the rising share of labor may reflect higher earnings among professional athletes resulting from the “free agent” system. And third, musical groups, such as pop, rock, and country bands, may now derive more profits from labor-intensive touring than from capital-intensive recording.⁴



Dollars and Jobs Added to State Economies by the Performing Arts

In addition to national estimates of value added by cultural industries, the BEA also produces regional economic multipliers through its RIMS II (regional industrial multiplier system). Included in these calculations are both value-added and employment multipliers.⁵

The BEA provides both annual and “benchmark” RIMS II multipliers. *Annually* revised regional multipliers, although timely, capture less industry detail. Regional *benchmark* multipliers, on the other hand, are produced less frequently, but provide greater industry detail. The most recent regional

benchmark multipliers reflect results from the 2002 Economic Census; however, the BEA has adjusted the estimates to reflect regional economies in 2008. Consequently, the current regional benchmark multipliers are labeled 2002/2008.

Value-Added State Multipliers

Looking across states, the BEA performing-arts multipliers are higher for **California, Colorado, Georgia, Illinois, Colorado, Tennessee, Texas, New Jersey, and Utah**. In each of these states, an additional dollar in value added generated by the performing arts industry adds \$1.25 or more to gross state

product (GSP). In California, for example, each new dollar of value added by the performing arts increases the California economy by \$1.38. In Georgia that multiplier is \$1.32, and in Texas it is \$1.28.

The performing arts multiplier is also comparatively high in **Florida**—every additional \$1 in value added by the performing arts in that state contributes \$1.23 to Florida’s economy. Similar multipliers are reported for New York and Pennsylvania (\$1.22). In **Ohio, Michigan, and Minnesota**, a \$1 increase in performing arts’ value-added raises the GSP by \$1.17-\$1.18.

At the other end of the spectrum are states where the performing arts value-added multipliers are less than \$1. In Wyoming, for example, each additional dollar in value added by the performing arts increases GSP by \$0.83. Performing arts value-added multipliers are \$0.87 and \$0.86 for North Dakota and South Dakota, respectively.

Why the Performing Arts Contribute More to Some State Economies and Less to Others

With few exceptions, the BEA’s state multipliers show that a new dollar in value added by the performing arts contributes more to larger state economies and less to economically smaller states. California and

Texas, for example, are among the highest in value added by the performing arts industry. They also rank first and second, respectively, in GSP.⁶

Alternatively, each new dollar of value added by the performing arts industry contributes less to the economies of North and South Dakota. These states are also among the lowest in GSP—less than \$40 billion each.

This pattern—higher value-added multipliers in economically large states—is common to most industries, not just the performing arts. As a rule, the larger a state is economically, the larger its value-added multiplier is.

For instance, we have seen that, compared with other states, Texas reports a higher addition to GSP from a \$1 increase in value added by the performing arts. This development occurs because Texas’ economy is large and diverse enough to supply the “inputs” needed to boost performing arts production. To a larger degree than is true for most other states, Texas does not need to import goods and services such as stage curtains, lighting, sound equipment, scenery materials, and advertising and printing services from other states—to name just a few examples.

North Dakota's economy, on the other hand, is smaller. An increase in performing arts production in that state is more likely to require imports of performing arts-related goods and services from other states. Imports, also known as leakages, reduce the importing state's value-added multipliers.

Consequently, states with large and diverse economies benefit more from an increase in value added by the performing arts **because they have the inputs needed to support such an increase**. Economically smaller states, however, must import goods and services to sustain an increase in production by the performing arts industry. These imports serve to reduce the value-added multipliers for the performing arts.

Employment State Multipliers

The BEA also generates regional *employment* multipliers, which report the number of jobs created in all industries within a region by each additional million dollars in output by a particular industry.⁷ The 2002/2008 performing-arts employment multiplier for Texas, for example, shows that an additional \$1 million in performing arts production is expected to create 39 new jobs in that state.

Comparing multipliers across states reveals that **job creation resulting from additional production by the performing arts industry is greatest in Utah, North Carolina, Colorado, Indiana, and Ohio**. In Utah, for example, each additional million dollars of output is estimated to generate 54 new jobs in that state. The corresponding multiplier for Colorado is 49 jobs, and in Ohio, it is 47.

Job creation is also comparatively high in **Georgia, Oklahoma, and Michigan**. An additional \$1 million in state performing arts production is expected to generate approximately 45 jobs, per state. In **North Dakota**, an additional \$1 million in performing arts production will create 43 jobs—a figure comparable to **Illinois'** performing arts employment multiplier.

At the other end of this spectrum are New York, South Dakota, Wyoming, and the District of Columbia. The performing arts employment multipliers in these states range from 20 in New York to only 10 in the District.

Changing Rank in Multipliers

At first glance, it may appear odd that some states with high value-added multipliers rank low in job creation, while other states place low in value-added but high in job creation. New York, for example, ranks fairly high in gains to gross state product stemming from a \$1 increase in value added by its performing arts industry. Yet New York's job creation resulting from additional performing arts production is among the lowest in the nation. North Dakota displays the opposite pattern—low in value-added but high in job creation.

The answer to this seemingly unusual pattern lies in the calculation of the employment multiplier. As part of its multi-stage calculation, the employment multiplier includes an employment-to-earnings ratio. The ratio for New York, where new spending on the performing arts contributes comparatively more to the economy, but less to job creation, reveals that working New Yorkers earn more than workers in other states (i.e., high earnings pull the employment-to-earnings ratio down). The opposite is true in North Dakota—its low value-added but high job-creation status suggests that earnings in that state are below average.

Indeed, among all states and the District of Columbia in 2008, New York ranked 7th in earnings, while North Dakota was in 43rd place.⁸

Other states rank highly in value-added *and* job creation. In states exhibiting this pattern, earnings are often close to the average earnings of all states. Ohio, for instance, ranks fairly high in both value-added and job creation. In 2008, Ohio was 22nd (close to the middle among all states) in average earnings.⁹

Then, too, there are states with both low value-added multipliers *and* low employment multipliers. States exhibiting this pattern are likely importing comparatively more labor from other states. A case in point is the District of Columbia, where the performing arts employment multiplier is the lowest in the nation (10 new jobs resulting from an additional \$1 million in performing arts production). Although the BEA treats D.C. as a state for calculation purposes, the District is a city that draws many of its workers from nearby Virginia and Maryland.

Selected Patterns in Performing Arts Multipliers		
Multiplier pattern	Indication	Example state
High value added/low employment	High state earnings	New York
Low value added/high employment	Low state earnings	North Dakota
High value added/high employment	Average state earnings	Ohio
Low value added/low employment	State imports labor from other states	District of Columbia

Dollars and Jobs Added by Museums, Historical Sites, Zoos, and Nature Parks

Although this Note has focused on state-level performing arts multipliers, the accompanying tables report states’ value-added and employment multipliers for other selected cultural industries, including (in aggregate) museums, historical sites, zoos, and nature parks.

At \$1.46, Texas and Illinois top the list of value-added multipliers for this group of industries. Georgia, Colorado, and California closely follow—in each of these states, a new dollar of value added by this industry group adds \$1.44 to their respective economies.

At the other end of the spectrum are a number of economically small states such as North and South Dakota and Wyoming. For

museums, historical sites, zoos, and parks, the value-added multipliers in these states are at approximately \$0.98. Just as we witnessed in the performing arts industry, increases in production by museums (and related industries) in these smaller states often requires the import of goods and services from other states. Such imports serve to reduce the value-added multipliers for museums in these states.

An additional \$1 million in production by the museums-and-related industries generates the highest number of new jobs in Utah (35 new jobs) and Alabama and South Carolina (32 new jobs in both states). As discussed above, the BEA uses an employment-to-earnings ratio to calculate state employment

multipliers. Consequently, the high rank of Alabama and South Carolina's job creation likely reflects low earnings in those states—Alabama and South Carolina ranked 40th and 42nd in 2008 earnings.

Additional Cultural Multipliers

The tables at the end of this Note also include value-added and employment multipliers for spectator sports; motion picture and sound recording; and publishing.

Considerations about BEA State Multipliers

There are a number of considerations and assumptions built into the BEA regional multipliers. To begin with, the \$1 in new performing arts spending must be initiated by at least one of four sources: government, investors, exports (e.g., touring performances), or households outside the state. Also, the BEA computes its multipliers through economic models that assume no changes in the combination of goods and services used to generate additional performing arts production. This combination (i.e., the inputs) used to generate new production is assumed to be constant.

It should also be noted that the multipliers shown above assume that states can provide the labor and capital to sustain an increase in cultural production. In Maryland, for example, an additional \$1 million in performing arts production is expected to generate 41 new jobs in that state. This estimate assumes that Maryland can supply the workers needed to fill those new positions.

Moreover, state economic gains stimulated from additional cultural production are temporary. Long-term economic growth stems not from temporary increases in spending, but from the quantity and quality of labor and capital, and from new technologies that employ those resources to develop new systems and products.

An additional aspect to the BEA state multipliers is that they do not reveal whether one industry is larger than another. The multipliers merely show a particular industry's interaction with other industries within a region—in this case, a state. The performing arts industry, for example, may have a very different "production function" (the array of inputs required to generate output) from those of other industries.

Industry size comparisons are better ascertained by examining revenue and number of employees. The table below, which draws on

data from the 2007 Economic Census, shows that, of the selected cultural industries shown

for the state of Texas, spectator sports is the largest in revenue and number of employees.

**Revenue and Employees for Selected Cultural Industries
Texas, 2007**

Establishments ¹	Revenue (\$1,000)	Number of employees
Arts and entertainment:		
Performing arts	\$555,160	5,378
Spectator sports	\$1,624,110	6,812
Museums	\$489,835	4,419
Historical sites	\$17,939	301
Zoos and botanical gardens	\$179,202	2,341

¹ Taxable and tax-exempt establishments

Source: 2007 Economic Census, U.S. Census Bureau, U.S. Department of Commerce

Conclusion

NEA Research Note #102, released in April 2011, surveyed a variety of ways to assign value to the arts, including: the total revenues and expenditures of arts and cultural industries; the size of their workforce; consumer spending on arts and cultural activities; and time spent attending arts and cultural events. The estimates of value added presented here extend that field of inquiry.

Nevertheless, as suggested in Note #102, such empirical accounts of “value,” while inherently useful, omit consideration of the arts’ impact on multiple domains of American life. Ideally, analysis of the arts’ “value-added” (in the colloquial sense) would cap-

ture benefits associated with the arts’ role in enhancing civic engagement, health and educational outcomes, creativity and innovation, and a variety of other social goods.

Even so, there remains the arts’ subjective value proposition to individuals, which, to some extent, has been measured through studies of arts’ “intrinsic impact,” hedonic housing-price models, and contingent valuation (i.e., “willingness-to-pay” studies).¹⁰ Further research is needed to clarify the comparative benefits and drawbacks of each approach, and whether some unforeseen method may yet be preferable.

For Further Reading

Streitwieser, M. (2009). *A Primer on BEA's Industry Accounts*. BEA Briefing. Retrieved from http://www.bea.gov/scb/pdf/2009/06%20June/0609_indyaccts_primer_a.pdf.

Harris, T., Joliff, W., Lyndaker, A., & Schroeder, M. (2011). "Annual Industry Accounts: Revised Statistics for 2007-2009," *Survey of Current Business*. Retrieved from http://www.bea.gov/scb/pdf/2011/01January/0111_indy_accts.pdf.

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Americans for the Arts (2005). *Arts and Economic Prosperity III: The Economic Impact of Nonprofit Arts and Cultural Organizations and Their Audiences*. Retrieved from http://www.artsusa.org/pdf/information_services/research/services/economic_impact/aepiii/national_report.pdf.

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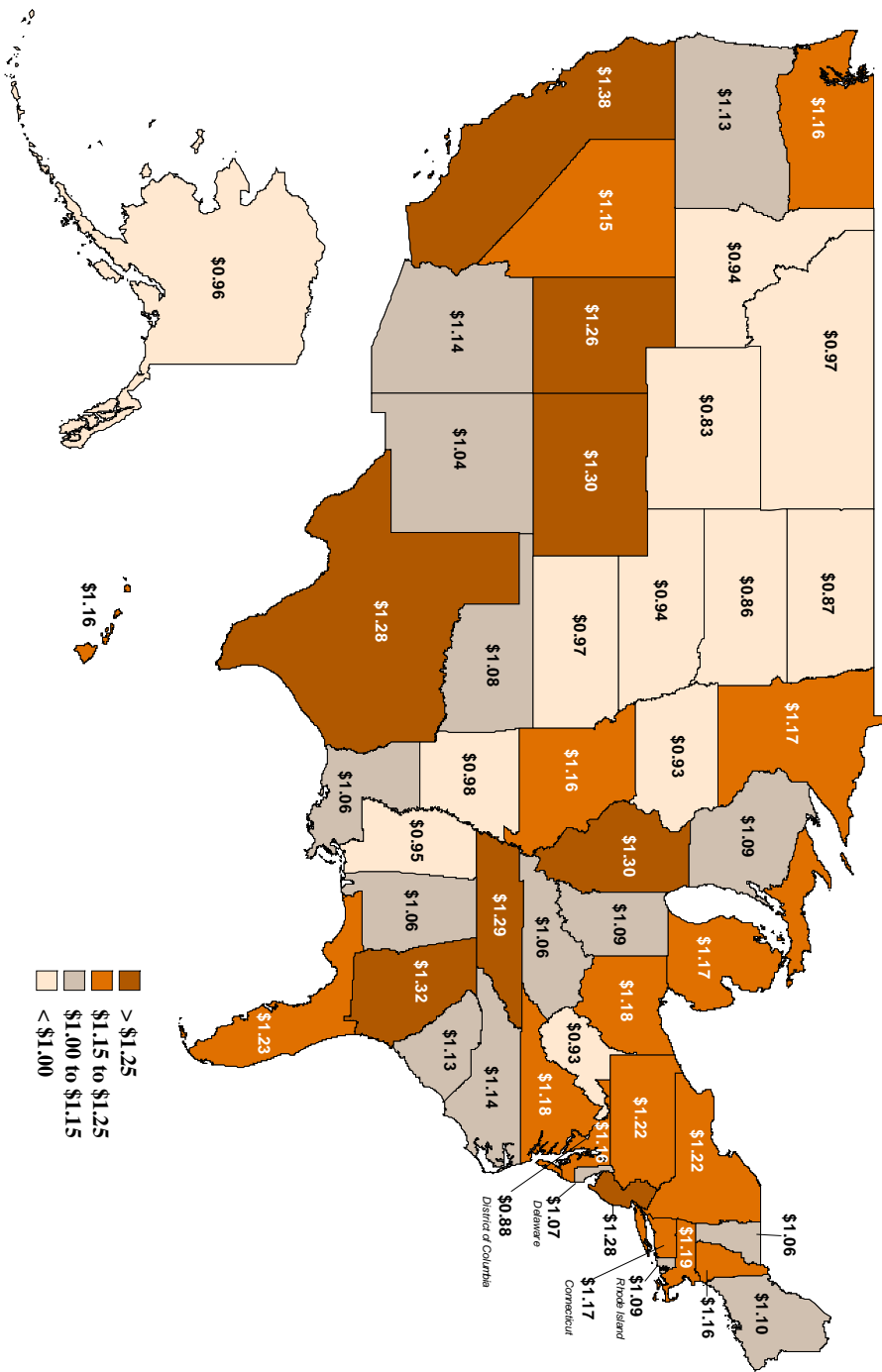
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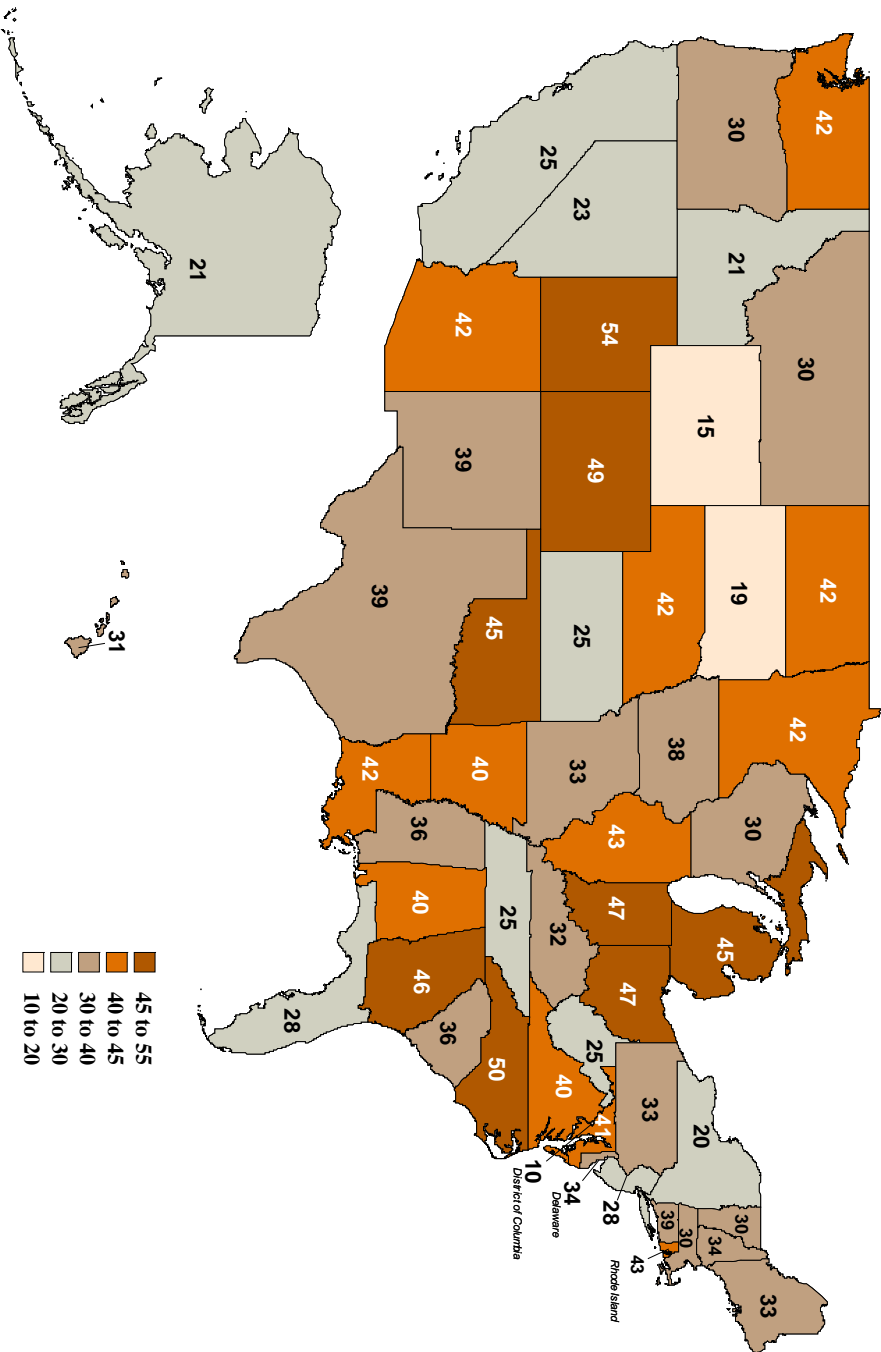
Dollars Added to State Economies by the Performing Arts, 2002/2008
 Increase in Gross State Product from an Additional Dollar of Value Added by the Performing Arts



Source: RIMS II, Type II Multipliers, Bureau of Economic Analysis, U.S. Commerce Department

Jobs Added to State Economies by the Performing Arts, 2002/2008

Increase in Jobs from an Additional \$1 Million in Production by the Performing Arts



Source: RIMS II, Type II Multipliers, Bureau of Economic Analysis, U.S. Commerce Department

Real Value Added by Selected Cultural Industries

(Billions of chained 2005 dollars)

Year	Selected cultural industries (1+2+3)	Percentage change	Performing arts, sports, and museums (1)	Percentage change	Motion picture and sound recording (2)	Percentage change	Publishing (including software) (3)	Percentage change
1987	\$119.0		\$32.4		\$34.7		\$51.9	
1988	\$119.2	0.2%	\$32.7	0.9%	\$33.0	-4.9%	\$53.5	3.1%
1989	\$131.3	10.2%	\$34.9	6.7%	\$38.1	15.5%	\$58.3	9.0%
1990	\$132.5	0.9%	\$39.4	12.9%	\$34.8	-8.7%	\$58.3	0.0%
1991	\$128.4	-3.1%	\$39.1	-0.8%	\$32.6	-6.3%	\$56.7	-2.7%
1992	\$136.7	6.5%	\$42.7	9.2%	\$32.5	-0.3%	\$61.5	8.5%
1993	\$145.0	6.1%	\$45.3	6.1%	\$36.5	12.3%	\$63.2	2.8%
1994	\$151.7	4.6%	\$45.9	1.3%	\$35.6	-2.5%	\$70.2	11.1%
1995	\$159.4	5.1%	\$48.1	4.8%	\$39.1	9.8%	\$72.2	2.8%
1996	\$171.5	7.6%	\$49.8	3.5%	\$40.9	4.6%	\$80.8	11.9%
1997	\$185.8	8.3%	\$52.8	6.0%	\$41.8	2.2%	\$91.2	12.9%
1998	\$203.7	9.6%	\$53.5	1.3%	\$47.4	13.4%	\$102.8	12.7%
1999	\$246.3	20.9%	\$56.1	4.9%	\$57.7	21.7%	\$132.5	28.9%
2000	\$203.3	-17.5%	\$59.1	5.3%	\$42.6	-26.2%	\$101.6	-23.3%
2001	\$208.2	2.4%	\$58.4	-1.2%	\$52.0	22.1%	\$97.8	-3.7%
2002	\$234.7	12.7%	\$62.8	7.5%	\$54.6	5.0%	\$117.3	19.9%
2003	\$239.4	2.0%	\$64.1	2.1%	\$51.4	-5.9%	\$123.9	5.6%
2004	\$264.5	10.5%	\$65.2	1.7%	\$58.1	13.0%	\$141.2	14.0%
2005	\$271.3	2.6%	\$63.8	-2.1%	\$56.3	-3.1%	\$151.2	7.1%
2006	\$255.3	-5.9%	\$65.7	3.0%	\$58.4	3.7%	\$131.2	-13.2%
2007	\$274.2	7.4%	\$66.1	0.6%	\$59.6	2.1%	\$148.5	13.2%
2008	\$274.8	0.2%	\$65.2	-1.4%	\$57.5	-3.5%	\$152.1	2.4%
2009	\$259.0	-5.7%	\$61.6	-5.5%	\$56.1	-2.4%	\$141.3	-7.1%

Note: Estimates are measured in 2005 chained dollars

U.S. Economic recession dates: July 1990-March 1991; March 2001-November 2001; December 2007-June 2009

Source: Bureau of Economic Analysis, U.S. Department of Commerce

Performing Arts State Multipliers, 2002/2008

State	Performing arts multipliers		Gross state product in 2008 (millions)
	Value added ¹	Employment ²	
Alabama	\$1.06	40	\$169,694
Alaska	\$0.96	21	\$49,186
Arizona	\$1.14	42	\$260,454
Arkansas	\$0.98	40	\$99,497
California	\$1.38	25	\$1,911,741
Colorado	\$1.30	49	\$254,218
Connecticut	\$1.17	39	\$225,958
Delaware	\$1.07	34	\$58,674
District of Columbia	\$0.88	10	\$97,361
Florida	\$1.24	28	\$747,770
Georgia	\$1.32	46	\$405,269
Hawaii	\$1.16	31	\$66,119
Idaho	\$0.94	21	\$55,212
Illinois	\$1.30	43	\$637,037
Indiana	\$1.09	47	\$263,616
Iowa	\$0.93	38	\$134,959
Kansas	\$0.97	25	\$125,333
Kentucky	\$1.06	32	\$155,592
Louisiana	\$1.06	42	\$213,441
Maine	\$1.10	33	\$49,972
Maryland	\$1.16	41	\$281,659
Massachusetts	\$1.19	30	\$365,623
Michigan	\$1.17	45	\$375,436
Minnesota	\$1.17	42	\$262,758
Mississippi	\$0.95	36	\$96,713
Missouri	\$1.16	33	\$241,344
Montana	\$0.97	30	\$35,838
Nebraska	\$0.94	42	\$84,884
Nevada	\$1.15	23	\$132,270
New Hampshire	\$1.16	34	\$58,780
New Jersey	\$1.28	28	\$483,560
New Mexico	\$1.04	39	\$77,168
New York	\$1.22	20	\$1,109,080
North Carolina	\$1.14	50	\$403,927
North Dakota	\$0.87	42	\$31,677
Ohio	\$1.18	47	\$470,640
Oklahoma	\$1.08	45	\$151,850
Oregon	\$1.13	30	\$174,454
Pennsylvania	\$1.22	33	\$545,198
Rhode Island	\$1.09	43	\$47,378
South Carolina	\$1.13	36	\$159,500
South Dakota	\$0.86	19	\$38,293
Tennessee	\$1.29	25	\$247,796
Texas	\$1.28	39	\$1,202,104
Utah	\$1.26	54	\$112,353
Vermont	\$1.06	30	\$24,636
Virginia	\$1.18	40	\$402,853
Washington	\$1.16	42	\$334,477
West Virginia	\$0.93	25	\$59,039
Wisconsin	\$1.09	30	\$239,150
Wyoming	\$0.83	15	\$38,917

¹ Dollar increase in gross state product from each additional dollar of value added by the performing arts industry.

² Total increase in number of jobs that occurs in all industries within the state for each additional million dollars of production by the performing arts industry.

Source: RIMS II, Type II Multipliers, 2002/2008, Bureau of Economic Analysis, U.S. Department of Commerce

While the BEA provided the multipliers presented in this Note, all analysis was conducted by the NEA's Office of Research & Analysis.

State Multipliers for Museums, Historical Sites, Zoos, and Parks and for Spectator Sports, 2002/2008

State	Museums, historical sites, zoos, and parks		Spectator sports	
	Value added ¹	Employment ²	Value added ¹	Employment ²
Alabama	\$1.22	32	\$1.16	20
Alaska	\$1.12	21	\$1.07	23
Arizona	\$1.33	27	\$1.28	17
Arkansas	\$1.11	24	\$1.08	32
California	\$1.44	24	\$1.49	23
Colorado	\$1.44	28	\$1.48	19
Connecticut	\$1.26	23	\$1.23	23
Delaware	\$1.19	21	\$1.16	17
District of Columbia	\$0.91	5	\$0.93	4
Florida	\$1.38	28	\$1.37	20
Georgia	\$1.44	27	\$1.44	22
Hawaii	\$1.27	27	\$1.19	31
Idaho	\$1.07	28	\$1.02	30
Illinois	\$1.46	25	\$1.47	21
Indiana	\$1.24	27	\$1.30	26
Iowa	\$1.05	29	\$1.03	32
Kansas	\$1.12	28	\$1.04	15
Kentucky	\$1.21	29	\$1.23	33
Louisiana	\$1.18	26	\$1.25	20
Maine	\$1.23	27	\$1.19	35
Maryland	\$1.33	25	\$1.32	21
Massachusetts	\$1.35	22	\$1.35	14
Michigan	\$1.29	31	\$1.37	23
Minnesota	\$1.32	26	\$1.38	17
Mississippi	\$1.10	30	\$1.03	17
Missouri	\$1.28	24	\$1.36	16
Montana	\$1.10	30	\$1.05	19
Nebraska	\$1.04	28	\$1.04	32
Nevada	\$1.22	25	\$1.17	26
New Hampshire	\$1.27	28	\$1.21	31
New Jersey	\$1.37	24	\$1.42	19
New Mexico	\$1.14	25	\$1.10	19
New York	\$1.28	20	\$1.29	16
North Carolina	\$1.26	30	\$1.31	25
North Dakota	\$0.98	26	\$0.97	16
Ohio	\$1.33	28	\$1.39	23
Oklahoma	\$1.21	30	\$1.21	37
Oregon	\$1.29	28	\$1.28	24
Pennsylvania	\$1.37	26	\$1.41	19
Rhode Island	\$1.22	25	\$1.20	32
South Carolina	\$1.30	31	\$1.19	33
South Dakota	\$0.98	28	\$0.96	24
Tennessee	\$1.37	29	\$1.43	18
Texas	\$1.46	29	\$1.43	21
Utah	\$1.39	35	\$1.43	27
Vermont	\$1.15	26	\$1.10	19
Virginia	\$1.34	26	\$1.29	24
Washington	\$1.33	26	\$1.35	20
West Virginia	\$1.03	20	\$1.02	23
Wisconsin	\$1.23	31	\$1.30	21
Wyoming	\$0.97	20	\$0.90	12

¹ Dollar increase in gross state product from each additional dollar of value added by the selected industry.

² Total increase in number of jobs that occurs in all industries within the state for each additional million dollars of production by the selected industry.

Source: RIMS II, Type II Multipliers, 2002/2008, Bureau of Economic Analysis, U.S. Department of Commerce

While the BEA provided the multipliers presented in this Note, all analysis was conducted by the NEA's Office of Research & Analysis.

State Multipliers for Motion Pictures and Sound Recording and for Publishing, 2002/2008

State	Motion pictures and sound recording		Publishing	
	Value added ¹	Employment ²	Value added ¹	Employment ²
Alabama	\$0.94	22	\$0.95	15
Alaska	\$0.86	21	\$0.83	15
Arizona	\$1.03	19	\$1.07	14
Arkansas	\$0.88	18	\$0.86	14
California	\$1.22	12	\$1.25	12
Colorado	\$1.13	19	\$1.22	13
Connecticut	\$0.98	13	\$1.06	10
Delaware	\$0.92	15	\$0.91	11
District of Columbia	\$0.83	3	\$0.73	2
Florida	\$1.13	14	\$1.12	15
Georgia	\$1.16	16	\$1.23	15
Hawaii	\$0.96	15	\$0.92	13
Idaho	\$0.85	8	\$0.83	13
Illinois	\$1.17	14	\$1.20	13
Indiana	\$0.97	22	\$0.96	14
Iowa	\$0.84	21	\$0.81	12
Kansas	\$0.86	22	\$0.89	11
Kentucky	\$0.94	22	\$0.98	16
Louisiana	\$0.95	15	\$0.96	15
Maine	\$0.97	14	\$0.96	17
Maryland	\$1.10	15	\$1.09	12
Massachusetts	\$1.05	13	\$1.16	10
Michigan	\$1.04	17	\$1.08	14
Minnesota	\$1.06	18	\$1.07	12
Mississippi	\$0.90	8	\$0.85	16
Missouri	\$1.01	17	\$1.04	11
Montana	\$0.87	24	\$0.84	18
Nebraska	\$0.86	8	\$0.82	13
Nevada	\$1.06	14	\$0.93	12
New Hampshire	\$0.90	11	\$1.05	10
New Jersey	\$1.09	12	\$1.15	11
New Mexico	\$0.99	14	\$0.87	14
New York	\$1.16	9	\$1.02	9
North Carolina	\$1.00	18	\$1.03	13
North Dakota	\$0.78	6	\$0.76	9
Ohio	\$1.04	20	\$1.10	14
Oklahoma	\$0.96	20	\$0.99	16
Oregon	\$1.00	15	\$1.07	13
Pennsylvania	\$1.09	15	\$1.16	14
Rhode Island	\$0.94	14	\$1.01	12
South Carolina	\$1.00	22	\$1.01	15
South Dakota	\$0.77	19	\$0.74	15
Tennessee	\$1.33	13	\$1.11	15
Texas	\$1.33	16	\$1.23	14
Utah	\$1.12	21	\$1.18	16
Vermont	\$0.97	22	\$0.90	14
Virginia	\$1.02	14	\$1.10	11
Washington	\$1.04	17	\$1.11	11
West Virginia	\$0.87	9	\$0.81	14
Wisconsin	\$1.03	17	\$1.01	14
Wyoming	\$0.82	22	\$0.75	17

¹ Dollar increase in gross state product from each additional dollar of value added by the selected industry.

² Total increase in number of jobs that occurs in all industries within the state for each additional million dollars of production by the selected industry.

Source: RIMS II, Type II Multipliers, 2002/2008, Bureau of Economic Analysis, U.S. Department of Commerce

While the BEA provided the multipliers presented in this Note, all analysis was conducted by the NEA's Office of Research & Analysis.

Endnotes

¹ Estimates of value added by performing arts, sports, and museums include the related industries of promoters, agents, and independent artists, writers, and performers.

² Taxes on production consist largely of general sales and property taxes. Taxes on production exclude corporate income taxes, which tax profits rather than production. For more information on the three components of value-added, please see the BEA's *Gross Domestic Product by State Estimation Methodology* (2006), available at <http://www.bea.gov/regional/pdf/gsp/GDPState.pdf>.

³ In 2010, 6.9 percent of the civilian labor force was self-employed. Among writers and authors alone, the proportion self-employed was 41.7 percent. Current Population Survey, Annual Averages for 2010, Bureau of Labor Statistics.

⁴ French, D. (2011, Jan. 21). "What Mick Jagger Knows About Making Money in Music." *The Christian Science Monitor*. Retrieved from <http://www.csmonitor.com/Business/Mises-Economics-Blog/2011/0121/What-Mick-Jagger-knows-about-making-money-in-music>

⁵ The state-level BEA multipliers presented in this Note are not comparable to those used in several well-known studies of the economic impact of the arts—for example, *Arts and Economic Prosperity III*, a 2005 publication by Americans for the Arts. AFTA's figures are based on 156 participating communities, and capture the impact of additional spending by nonprofit arts and cultural organizations. In terms of job creation, AFTA focused on full-time equivalents, or FTEs.

The BEA state multipliers, meanwhile, are based on nationally representative surveys, as well as the U.S. Economic Census. The multipliers discussed here reflect specific cultural industries, such as the performing arts or publishing. The BEA multipliers also make no distinction between nonprofit and for-profit establishments. Finally, the state-level employment multipliers capture all jobs, full-time and part-time alike.

⁶ In 2010, California's GSP was \$1.9 trillion. Texas' GSP was \$1.2 trillion. For a list and ranking of GSP, please see BEA's Gross State Product Interactive Map, available at <http://www.bea.gov/regional/gdpmap/>.

⁷ "Output" is defined as change in final demand, or change in output delivered to final users.

⁸ National Occupation Employment and Wage Estimates by Industry, Bureau of Labor Statistics, U.S. Department of Labor.

⁹ Not all states ranking highly in both performing arts value-added and employment multipliers exhibit average earnings. Colorado, a state with high value-added and employment multipliers, ranked 10th in the nation in 2008 earnings. This ranking suggests that factors other than earnings influenced Colorado's comparatively high performing arts employment multiplier. Colorado may import fewer inputs from other states, or it may have more part-time cultural workers, which would increase the employment-to-earnings ratio used to calculate its employment multiplier.

¹⁰ Please see the "Other Models, Other Measures" section of NEA Research Note #102, available at <http://www.nea.gov/research/Notes/102.pdf>.