

The Economic Value of Arts, Cultural, and Heritage Organizations to the Central Iowa Economy

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Overview of Findings

This is an analysis of the regional economic contributions attributable to organizations receiving financial support from Bravo Greater Des Moines. The analysis is based on a survey of those organizations that was completed in 2012. That survey provided information about operational costs, employment, payroll, and visitorship. Those data were then analyzed using an input output model of the regional economy. Among the findings for fiscal 2011:

- There were 30 organizations that were primarily arts or entertainment oriented
- Those organizations had \$33.02 million in total spending, which supported 1,125 jobs
- In all, 1.983 million visitors patronized those venues

- There were 23 organizations that were mainly cultural, heritage, or educational institutions
- Those organizations had \$22.46 million in expenditures, which supported 422 jobs
- 1.61 million visits were recorded at those organizations

- Combined, Bravo-funded organizations directly provided 1,547 jobs and \$19.12 million in earnings for the workers holding those jobs

The survey information was next used to estimate the total economic contribution of these organizations to the central Iowa economy. Considering all linkages to the regional economy Bravo-funded venues supported

- 2,144 total jobs regionally earning \$41.26 million in labor income
- In so doing, they supported a total industrial output amounting to \$114.14 million which yielded \$57.2 million in value added (the equivalent of GDP)
- Lastly, expected fiscal contributions were calculated: total labor income supported by Bravo-funded projects generated an estimated \$6.64 million in own-source revenues for state and local governments

All of these organizations are sources of artistic, cultural, and educational enrichment, and they have value as intrinsic and important components of the regional economy. These organizations produce services that employ and pay workers, require inputs from regional businesses, and are consumed by households, schools, and other regional and statewide institutions that serve Iowa.

These institutions are also strong components of the collective quality of life to be enjoyed in the region. It is widely recognized that an important component to regional livability includes access to an array of artistic, entertainment, and cultural opportunities. Vibrant modern urban economies have strong cultural, artistic, and entertainment foundations. This study measures their economic value to the region. Their total worth to the region and to the state is much greater and, in large part, immeasurable.

Introduction

This study estimates the regional economic value of the many regional organizations supported by Bravo Greater Des Moines (hereafter Bravo) in the Des Moines / West Des Moines Metropolitan Statistical Area comprised of Dallas, Guthrie, Madison, Polk, and Warren County.¹ The values are estimated using an input-output model of the regional economy, which estimates the value of activity in the funded organizations along with all associated linkages those organizations have with the remainder of the central Iowa economy.

This evaluation looked at 53 entities which are or recently have been supported by Bravo resources and which completed a survey allowing for an itemization of their overall financial operations for the purposes of this evaluation. This evaluation is provided as a for-fee service of Iowa State University in support of regional economic development and community economic education.

¹ Guthrie and Madison County were added to the Des Moines MSA county list after the 2000 census. West Des Moines attained a core population in excess of 50,000 in 2002, according to U.S. Census estimates. Soon thereafter the region was classified as the Des Moines / West Des Moines Metropolitan Statistical Area. New MSA definitions are due in 2013, which might increase the number of counties in this MSA.

Table 1 lists the surveyed organizations. They are divided into those primarily providing artistic or entertainment services to the community, of which there were 30, and the 23 providing cultural, heritage, or educational services to the region. This classification has a functional purpose as it allows for summing the characteristics in alignment with the industrial classifications that are contained within the modeling system used for this study. Subsequent tables will describe the overall contributions of each subdivision to the regional economy as well as combined values to determine the overall economic effects of these regional assets.

Table 1

Area Organizations Surveyed for This Analysis

Primarily Arts & Entertainment	Primarily Cultural, Heritage, or Educational
After School Arts Program	Blank Park Zoo
Ballet Des Moines	City of WDM Parks & Rec
City of Clive Public Arts Commission	City of Windsor Heights
Civic Center of Greater Des Moines	Clive Historical Society
Civic Music Association	Culture All
Des Moines Art Center	Des Moines Community Radio Foundation
Des Moines Arts Festival	Fort Des Moines Museum
Des Moines Choral Society	Greater Des Moines Botanical Garden
Des Moines Community Orchestra	Historic Valley Junction
Des Moines Community Playhouse	I'll Make Me a World in Iowa
Des Moines Diversity Chorus	Iowa Asian Alliance
Des Moines Gay Men's Chorus	Iowa Gold Star Military Museum
Des Moines Metro Opera	Iowa Hall of Pride
Des Moines Social Club	Iowa Irish, Inc.
Des Moines Symphony	Italian-American Cultural Center
Des Moines Vocal Arts Ensemble	Latino Resources
Downtown Events Group	Living History Farms
Gateway Dance Theatre	Salisbury House Foundation
Greater Des Moines Music Coalition	Science Center of Iowa
Greater Des Moines Public Art Foundation	State Historical Museum of Iowa
Heartland Youth Choir	Urbandale Historical Society
Hoyt Sherman Place	West Des Moines Historical Society
Iowa Shakespeare Experience	World Food Prize
Iowa Youth Chorus	
Metro Arts Alliance	
Music Under the Stars	
Repertory Theatre of Iowa	
Stage West Theatre Company	
Tall Grass Theatre Company	
Waukee Area Arts Council	

Though we value these organizations as the sources of artistic, cultural, and educational enrichment, they all have value as intrinsic and important components of the regional economy. These organizations produce services that employ and pay workers, require inputs from regional businesses, and are consumed by households, schools, and other regional and statewide institutions that serve Iowa. These institutions are also strong components of the collective quality of life to be enjoyed in the region. It is widely recognized that an important component to regional livability includes access to an array of artistic, entertainment, and cultural opportunities. Vibrant modern urban economies have strong cultural, artistic, and entertainment foundations.²

Compiling the Direct Values

This study uses a current input output model of the regional economy. The “inputs” into that model are the overall annual operational characteristics of the organizations that were surveyed. Table 2 contains those values. In all, the arts and entertainment organizations had \$34.71 million in total revenue and \$33.02 million in total expenditures in Fiscal 2011; the cultural and educational organizations had \$22.36 million in total revenue and \$22.46 million in expenditures. The arts and entertainment group paid 1,125 job holders of all types \$9.51 million in labor incomes, while the cultural and educational group paid 422 job holders \$9.61 million in labor incomes. These are among the primary direct inputs used to model the value of these organizations to the regional economy.

For informational purposes only, not for modeling purposes, the table also lists the total volunteers and an estimate of the total volunteer value to those organizations. Each volunteer was assumed to contribute 33 hours priced at the minimum wage³. The value of those efforts was \$1.54 million for the arts and entertainment group and \$1.37 million for the cultural and educational group.⁴

² The most notable recent argument for the importance of nurturing creative activities is found in Florida, Richard, *The Rise of The Creative Class* (Basic Books, 2002). He talks about the importance of a wide array of creative activities when profiling modern economic growth, not just the artistic or cultural subset of that total. Many, however, narrowly reduce his treatise as one arguing that the arts create the conditions for broader economic growth. Florida’s work in fact concludes there is a very strong coincidence of many creative groupings to include the necessary talents of scientists, educators, professionals, as well as artists or performers in healthy and dynamic metropolitan economies.

³ In the 2007 study of Bravo-funded organizations, the number of hours donated was a separate survey question. There, however, is no systematic accounting of volunteer hours to gauge the reliability of those responses, and that question was not asked in this survey. The 2007 survey estimated average hours per volunteer as 46. I now judge that number as high. A reduction to 33 hours seemed prudent, if not still generous, for this assessment. That 2007 survey also counted directors’ and other unpaid officers’ volunteer hours. While it may rankle some to have that effort priced at minimum wage, it is important to note that the average job for the entire group of organizations, as measured in Table 2, pays, were the job evaluated on an annual basis, less than the minimum wage.

⁴ Earlier studies by this analyst added volunteer values to the total output value. That addition imputed a higher amount for output for reporting purposes; however, the actual modeling was done excluding the volunteer contributions. While volunteer contributions in fact represent “value” to the recipients, those values are not recorded in a manner that allows entry into a modeling system. They can be used, for example, as match for

Table 2

Selected Direct Economic Values

	Arts and Entertainment	Cultural and Educational	Total
Income			
All Contributions	11,562,796	9,731,780	21,294,576
Other Income	23,146,941	12,623,872	35,770,813
Total Income	\$ 34,709,737	\$ 22,355,652	\$ 57,065,389
Expenses			
Personnel Expenses	9,512,340	9,609,375	19,121,715
Other Expenses	23,504,806	12,850,820	36,355,626
Total Expenses	\$ 33,017,146	\$ 22,460,195	\$ 55,477,341
Employment			
Full Time	140	171	311
Part-Time, Temp., or Seasonal	985	251	1,236
Total Jobs	1,125	422	1,547
Volunteers	6,431	5,725	12,156
<i>Imputed value of volunteer contributions (see footnotes 3 and 4)</i>	<i>\$ 1,538,617</i>	<i>\$ 1,369,615</i>	<i>\$ 2,908,232</i>

The next component of the economic analysis involves visitorship. According to the survey results, an estimated 3.6 million people from central Iowa and beyond visited these venues in fiscal 2011.⁵ Visitorship has an important role to play when calculating regional economic values. While local residents would be expected to patronize local arts, entertainment, or cultural facilities, visitors from outside of the region can be considered otherwise indifferent as to where they seek and obtain these services. Accordingly, those visitors have a discernible impact on the regional economy when they choose to patronize arts and cultural facilities in the Des Moines area. They represent service exports, i.e., sales to non-local persons, and the additional spending they make on travel, lodging, and other necessities is added to the impact estimates.

grants in some instances, but the value of the assistance is not reflected as an actual quantifiable boost to organizational output. Accordingly, the inclusion of the value of volunteering is an informational exhibit here only.

⁵ A few improbable visitor values were either thrown out or adjusted downward.

Table 3

Overall Visitors, 2011			
	Arts and Entertainment	Cultural and Educational	Total
Total Attendance	1,983,311	1,609,031	3,592,342
Greater Des Moines Area	1,651,763	1,184,814	2,836,577
Other Iowa	217,278	346,677	563,955
Other U.S.	109,950	73,655	183,605
Other Countries	4,320	3,885	8,205
<i>Estimated Additional Regional Spending by Non-local Visitors</i>	\$ 5,328,589	\$ 6,817,951	\$12,146,540

Table 3 also provides the estimate of boosted visitor spending attributable to these institutions. For fiscal 2011, the value is \$12.15 million. That value was arrived at by using historical surveys and analyses of spending in the Des Moines region.⁶ For each visitor, spending was allocated across dining, miscellaneous retail, and transportation costs. The probability of an overnight stay is also addressed where 75 percent of all other U.S. and other country visitors are assumed to require lodging in the region, but only 25 percent of other Iowa visitors. Finally, the institutions were scored as to whether they would be expected to be the primary reason for the visit to the region or part of a bundle of activities associated with the visit. The sum of those values and weights produced the expected increment to spending, which also are included in the economic modeling.

Computing the Total Economic Values

Input-output models (IO) are detailed compilations of a region's industrial structure, and they are used to evaluate the size of an industry or a group of industries and the value of those industries to a regional economy considering all regional inter-industrial transactions. The IO model for this analysis is made up of all of the industries and institutions contained within the five-county Des Moines / West Des Moines MSA. There are four kinds of economic values that are reported out of the modeling exercise:

- Industrial output: This is the value of what is produced by industries as measured on an annual basis. For many firms, it is analogous to gross sales.
- Value added: This represents payments to workers, to proprietors, to investors, and the indirect taxes that are part of production. Value added is analogous to gross regional product (GDP).
- Labor income: This is a subset of value added. It includes all wages, salaries, and benefits that are paid to workers and proprietors.

⁶ The visitor spending values reflect my own research, and they are significantly lower than values that are assumed by local tourism officials or by state surveys. It is important to note that my values also include a probability that the visit is the primary reason for a visit or a secondary reason; hence, the visitor values are adjusted downward to reflect that probability.

- Jobs. These are the actual number of full-time and part-time positions in industries, not the number of employed persons. Many employed persons have more than one job; hence, there are always more jobs in an economy than employed persons.

These economic values are reported by four levels:

- Direct values: These are the values that are attributed to the firm or firms that are being assessed.
- Indirect values: All of the firms that are assessed require inputs from the regional economy. The degree to which the direct firms link to regional suppliers constitutes the indirect values.
- Induced values: When the workers in the direct firms and the workers in the supplying (indirect) industries convert their paychecks to household spending, they induce more economic activity in the region to meet household needs.
- Total values: The sum of direct, indirect, and induced values equals the total value or economic effect of an industry or group of industries to the region.

Table 4 presents the modeled results of the arts and entertainment sub-set of the survey. Those institutions had an estimated \$33.02 million in output in 2011, which required 1,125 jobs making \$9.51 million in labor income. Those Bravo-supported institutions required \$13.77 million in regionally-supplied inputs, which in turn supported an additional 145 jobs making \$5.95 million in labor income. When the direct and the indirect workers converted their labor incomes into household spending, they induced \$14.2 million in additional output in the region, which in turn required 128 jobs making \$4.87 million in labor income. Summed, then, the arts and entertainment group accounted for \$59.93 million in regional economic total output, \$28.27 million in total value added (or GDP), \$20.34 million in labor income, and 1,389 jobs.

Table 4

Arts and Entertainment Total Economic Values

	Direct +	Indirect +	Induced =	Total	Total Multiplier
Total output \$	33,017,146	13,765,608	13,150,576	59,933,329	1.82
Value added \$	11,204,931	8,667,232	8,402,575	28,274,738	2.52
Labor income \$	9,512,340	5,949,360	4,874,833	20,336,532	2.14
Jobs	1,125	145	119	1,389	1.23

There is also a column of multipliers with the table. The total multiplier represents the total change in regional output relative to a unit change in the direct value – it is, therefore, the total value divided by the direct value. Thus, an output multiplier of 1.82 means that for every dollar of output

in the direct industries, the arts and entertainment institutions, there is \$.82 in output supported in the rest of the economy. The value added multiplier of 2.52 means that for every \$1 of value added in these institutions, another \$1.52 in value added is realized in the rest of the economy. The labor income multiplier of 2.14 means that for every dollar of labor income in the direct organizations, there is \$1.14 in labor income supported in the rest of the economy. Finally, the jobs multiplier of 1.23 means that for every direct job, 23/100th of a job is supported elsewhere in the regional economy. Readers are cautioned to not over- infer from the comparatively high value added and labor income multipliers: they are high because the direct values are low for this group of organizations. Stated bluntly, the average pay per job is very low in these industries, most if not all are tax exempt and do not generate indirect tax contributions to value added, and most generate very slim operating surpluses if at all; hence, value added is comparatively small relative to other service industries.

Table 5 contains the very same type of estimates for the cultural, heritage, and educational organizations. Looking only at the total values, those entities supported \$41.3 million in regional industrial output, \$21.92 million of value added (or GDP), \$16.62 million in total labor income, and 591 jobs. The value added multiplier, like the previous example, is high owing to all of the characteristics itemized above, but the labor income multiplier is somewhat lower as the average pay in these industries per job is greater than in the preceding example.

Table 5

Cultural, Heritage, and Education Total Economic Values					
	Direct +	Indirect +	Induced =	Total	Total Multiplier
Total output \$	22,460,195	8,302,703	10,530,365	41,293,263	1.84
Value added \$	9,504,833	5,691,099	6,725,408	21,921,339	2.31
Labor income \$	9,609,375	3,096,059	3,916,071	16,621,505	1.73
Jobs	422	74	95	591	1.40

Table 6 presents the combined results. Overall, Bravo-funded Des Moines area organizations accounted for \$101.23 million in regional economic output, supported \$50.2 million in value added, and explained \$36.96 million in area labor income to 1,980 jobs in 2011.

Table 6

Combined Bravo Supported Programs Total Economic Values

	Direct +	Indirect +	Induced =	Total	Total Multiplier
Total output \$	55,477,341	22,068,311	23,680,941	101,226,593	1.82
Value added \$	20,709,764	14,358,331	15,127,982	50,196,077	2.42
Labor income \$	19,121,715	9,045,419	8,790,904	36,958,038	1.93
Jobs	1,547	219	213	1,980	1.28

The next table (Table 7) presents the regional economic impacts of visitorship. Readers will remember that out-of-region visitors were estimated to have spent \$12.15 million in retail purchases, transport, dining and drinking, and for lodging coincident with their visits. Spending was allocated for retail, transport related, dining and drinking, and lodging. When those values were entered into the modeling system, they resulted in \$7.65 million in direct regional output requiring 119 jobs making \$2.28 million in labor incomes. When all rounds of economic activity worked their way through the economy, visitor spending supported \$12.91 million in total regional output, \$6.97 million in value added, \$4.3 million in labor income, and 164 jobs.

Table 7

Visitorship Economic Impacts

	Direct +	Indirect +	Induced =	Total	Total Multiplier
Total output \$	7,649,891	2,538,123	2,726,759	12,914,736	1.69
Value added \$	3,631,123	1,597,270	1,741,541	6,969,928	1.92
Labor income \$	2,276,165	1,008,375	1,013,823	4,298,357	1.89
Jobs	119	21	25	164	1.38

Readers will notice that the direct output value of \$7.65 million is much less than the estimated \$12.15 million in sales. When modeling visitor spending, total spending on retail goods (gasoline, general merchandise, etc.) is not entered into the model. The portion that represents the cost of the good that is sold, to include all in-transport costs, is first excluded as it is not counted as a component of retailers' output; however, all other retail costs (inputs, labor, O&M, etc.) are counted as output.

Finally, Table 8 summarizes the Bravo-funded organization total values with the visitor values. In all, \$114.14 million in regional output, \$57.17 million in value added, \$41.26 million in labor income, and 2,144 jobs are supported.

Table 8

Total Regional Economic Activity Supported by Bravo-Funded Activities

	Bravo-Funded Organizations	Visitor Effects	Total Economic Effects
Total regional output \$	101,226,593	12,914,736	114,141,329
Total value added \$	50,196,077	6,969,928	57,166,005
Total labor income \$	36,958,038	4,298,357	41,256,395
Total jobs	1,980	164	2,144

Conclusions and Context

The artistic, entertainment, cultural, heritage, and educational institutions receiving assistance from Bravo make important contributions to the regional economy. They directly or indirectly support 2,144 jobs and \$41.26 million in labor income. The combined regional economy is, however, very large. In 2011, there were 405,400 jobs in the region, and total personal income was \$24.5 billion.

Readers may notice that the phrase “economic impact” was only used when describing the visitorship outcomes. The vast majority of the activities studied provide services and enrichment opportunities to regional residents primarily – more than three-quarters of patronage is local. As such, these venues serve a regional market overwhelmingly. The fractions that serve non-local markets – patronage by non-residents, for example – constitute export sales and, therefore, an increment to regional economic activity based on service exports.

The total economic value of the organizations to the regional economy is contained in Table 8. Nearly 21 percent of visitors were from out of the region. It is appropriate, then, to apportion 21 percent of the values reported in Table 6 plus all of the values in Table 7, the visitor effects, as the economic impact values. Combined, just on a jobs basis, 580 of the jobs, about 27 percent of total jobs supported, are supported by non-local patronage. The remaining 73 percent of jobs exist to serve regional demands.

Modern urban economies require a wide array of economic, social, cultural, artistic, and natural amenities to sustain population levels and support growth. It is increasingly the case that a region’s artistic and cultural foundations are important quality of life elements in the bundle of amenities that urban settlers value. While this study quantifies the economic value of these amenities using conventional measures, their overall worth to society is wholly intangible: it simply cannot be priced in the market.

Appendix: State and Local Fiscal Impacts

All employment contributes to government accounts. Workers pay state and local taxes, fees, and charges. Those contributions, in turn, pay for the government services that workers and their families rely on.

As reported in Table 8, all Bravo-funded organizations ultimately supported \$41.26 million in labor incomes in 2011. Those labor incomes, in turn, supported own-source revenues for state and local governments. The accompanying table provides those estimates. State revenue support amounted to \$2.73 million in taxes coupled with \$945,949 in charges and fees for a total of \$3.67 million. All local government tax collections were \$1.92 million plus \$1.043 million in charges for a total of \$2.96 million. Combined state and local own-source receipts were \$6.64 million.

State and Local Government Own Source Revenues Generated from the Total Labor Income Effects

	State Government	All Local Governments
All Taxes	2,728,641	1,916,957
Income Taxes	1,159,240	37,016
Sales Taxes	1,278,236	310,799
Property Taxes	-	1,541,580
All Other Taxes	291,166	27,562
Charges and Fees	945,949	1,043,512
Total Own Source Revenues	\$ 3,674,591	\$ 2,960,469