



About This Study: A Description of Methodology, Frequently Asked Questions, and Frequently Used Terms

This document is taken directly from the final report from our previous national study—*Arts and Economic Prosperity III*—which was published in June 2007. It is included in the Study Welcome Packet to provide background about the project and help you answer questions that you may receive about the study in your community.

Because your study will employ the same methodology, these materials are relevant and may prove helpful to you.

About This Study

The **Arts & Economic Prosperity III** study was conducted by Americans for the Arts to document the economic impact of the nonprofit arts and culture industry in 156 communities and regions (116 cities and counties, 35 multicounty regions, and five states), representing all 50 states and the District of Columbia.

The diverse communities range in population (four thousand to three million) and type (rural to urban).

The study focuses solely on nonprofit arts and culture organizations and their audiences. Public arts councils and public presenting facilities/institutions are included, as are select programs embedded within another organization (that have their own budgets and play substantial roles in the cultural life of communities).

The study excludes spending by individual artists and the for-profit arts and entertainment sector (e.g., Broadway or the motion picture industry).

Detailed expenditure data was collected from 6,080 arts and culture organizations and 94,478 of their attendees. The project economists, from the Georgia Institute of Technology, customized input/output

analysis models for each study region to provide specific and reliable economic impact data about the nonprofit arts and culture industries, specifically full-time equivalent jobs, household income, and local and state government revenue.

156 LOCAL AND REGIONAL STUDY PARTNERS

Americans for the Arts published a Call for Participants in 2005, seeking communities interested in participating in the **Arts & Economic Prosperity III** study. Of the more than 200 participants that expressed interest, 156 agreed to participate and complete four participation criteria: 1) identify and code the universe of nonprofit arts and culture organizations in their study region; 2) disseminate, collect, and review for accuracy expenditure surveys from those organizations; 3) conduct audience-intercept surveys at a minimum of 18 diverse arts events; and 4) pay a modest cost-sharing fee (no community was refused participation for an inability to pay).

The arts have been and continue to be an important part of Arizona's culture. By igniting the mind, the arts can spark new ways of thinking, communicating, and doing business.

JANET NAPOLITANO
 Governor of Arizona
 Chair, National Governors Association

SURVEYS OF ORGANIZATIONS

Each of the 156 study regions attempted to identify its complete universe of nonprofit arts and culture organizations using the Urban Institute's National Taxonomy of Exempt Entity codes as a guideline.^{vi} Eligible nonprofit arts and culture organizations—those whose primary purpose is to promote appreciation for and understanding of the visual, performing, folk, and media arts—received a web-based survey. Sent via e-mail, the survey collected detailed information about their fiscal year 2005 expenditures in more than 40 expenditure categories, including labor, local

and nonlocal artists, operations, materials, facilities, and asset acquisition. Data was collected from 6,080 organizations for this study. Response rates for the 156 communities averaged 41.3 percent and ranged from 10.4 percent to 100 percent. Responding organizations had budgets ranging from a low of \$0 to a high of \$159.2 million. Each study region's results are based solely on the actual survey data collected, not on fiscal projections. The less-than-100 percent response rates suggest an understatement of the economic impact findings in most of the individual study regions.

THE FOLLOWING NTEE^{vi} CATEGORIES OF NONPROFIT ARTS, CULTURE, AND HUMANITIES ORGANIZATIONS WERE INCLUDED IN THIS STUDY:

A02 Management and Technical Assistance Organizations	A31 Film and Video Organizations	A57 Science and Technology Museums	A6B Singing or Choral Organizations
A03 Professional Societies and Associations	A32 Public Access Television Studios	A58 Sports and Hobby Museums	A6C Music Groups, Bands, or Ensembles
A05 Research Institutes and Policy Analysis Organizations	A40 Visual Arts Organizations	A59 Specialized Museums	A6D Music Composition Organizations
A11 Single Support Organizations	A45 Architectural Organizations	A61 Performing Arts Centers	A6E Performing Arts Schools
A12 Fund Raising and Fund Distributing Organizations	A46 Drawing Organizations	A62 Dance Organizations	A71 Art History Organizations
A23 Cultural and Ethnic Awareness Organizations	A47 Ceramic Arts Organizations	A63 Ballet Organizations	A76 Literary Service Organizations and Activities
A24 Folk Arts and Traditional Arts Organizations	A48 Art Conservation Organizations	A64 Choreography Organizations	A82 Historical Societies
A25 Arts Education Organizations	A51 Art Museums	A65 Theaters	A84 Fairs, Festivals, and other Commemorative Events
A26 Arts Councils and City Presenting Facilities	A52 Children's Museums	A66 Playwriting Organizations	A91 Artist Service Organizations
	A53 Folk Arts and Ethnic Museums	A67 Musical Theaters	
	A54 History Museums	A68 Music Organizations	
	A55 Marine and Maritime Museums	A69 Symphony Orchestras	
	A56 Natural History and Natural Science Museums	A6A Theaters	

SURVEYS OF AUDIENCES

Audience-intercept surveying, a common and accepted research method, was completed in 152 of the 156 study regions to measure spending by audiences at nonprofit arts and culture events. Patrons were asked to complete a short survey while attending an event. A total of 94,478 attendees completed the survey for an average of 673 surveys per community. The randomly selected respondents provided itemized expenditure data on attendance-related activities such as meals, souvenirs, transportation, and lodging. Data was collected throughout the year (to guard against seasonal spikes or drop-offs in attendance) as well as at a broad range

of events (a night at the opera will typically yield more spending than a Saturday children's theater production, for example). Using total attendance data for 2005 (collected from the organization surveys), standard statistical methods were then used to derive a reliable estimate of total expenditures by attendees in each community. The survey respondents provided information about the entire party with whom they were attending the event. With an average travel party size of three people, this data actually represents the spending patterns of more than 280,000 attendees, significantly increasing the reliability of the data.

The arts benefit communities as well as individuals. Cities and towns with flourishing cultural activities attract business and tourists and provide tremendous incentives for families. There are wonderful models in Massachusetts and across the country of communities that have integrated cultural institutions into revitalization efforts. They have strengthened their economies and greatly improved quality of life in their neighborhoods.

Edward Kennedy

U.S. Senate (MA)

Co-Chair, Senate Cultural Caucus



ECONOMIC ANALYSIS

A common theory of community growth is that an area must export goods and services if it is to prosper economically. This theory is called economic-base theory, and it depends on dividing the economy into two sectors: the export sector and the local sector. Exporters, such as automobile manufacturers, hotels, and department stores, obtain income from customers outside of the community. This "export income" then enters the local economy in the form of salaries, purchases of materials, dividends, and so forth, and becomes income to local residents. Much of it is spent locally; some, however, is spent for goods imported from outside of the community. The dollars spent locally have a positive economic impact as they continue to circulate through the local economy. This theory applies to arts organizations as well as to other producers.

On a personal level, I recognize the joyous celebration I experience from the arts and as a policy-maker, I recognize the tremendous economic contribution of the arts, from the most sophisticated urban center to the most precious rural community.

Leticia Van de Putte

Texas State Senate

President, National Conference of State Legislatures



We in the public sector need to keep in mind what an important role the arts play in economic development. Part of a community's vibrancy is defined by its arts and culture quality and diversity. All the things we do at county level to support the arts can make a difference, and I encourage county officials to step up to make sure their communities understand the linkage between local economic development and the arts.

Linda Langston

Linn County Supervisor (IA)

Chair, Arts Commission, National Association of Counties

STUDYING ECONOMIC IMPACT USING INPUT/OUTPUT ANALYSIS

To derive the most reliable economic impact data, input/output analysis is used to measure the impact of expenditures by nonprofit arts and culture organizations and their audiences. This is a highly regarded type of economic analysis that has been the basis for two Nobel Prizes in economics. The models are systems of mathematical equations that combine statistical methods and economic theory in an area of study called econometrics. The analysis traces how many times a dollar is respent within the local economy before it leaks out, and it quantifies the economic impact of each round of spending. This form of economic analysis is well suited for this study because it can be customized specifically to each community.

An input/output model was customized for each of the 156 participating study regions based on the local dollar flow between 533 finely detailed industries within its economy. This was accomplished by using detailed data on employment, incomes, and government revenues provided by the U.S. Department of Commerce (e.g., County Business Patterns, Regional Economic Information System, Survey of State and Local Finance), local tax data (sales taxes, property taxes, and miscellaneous local option taxes), as well as the survey data from the responding nonprofit arts and culture organizations and their audiences.

THE INPUT/OUTPUT PROCESS

The input/output model is based on a table of 533 finely detailed industries showing local sales and purchases. The local and state economy of each community is researched so the table can be customized for each community. The basic purchase patterns for local industries are derived from a similar table for the U.S. economy for 2002 (the latest detailed data available from the U.S. Department of Commerce). The table is first reduced to reflect the unique size and industry mix of the local economy, based on data from County Business Patterns and the Regional Economic Information System of the U.S. Department of Commerce. It is then adjusted so that only transactions with local businesses are recorded in the interindustry part of the table. This technique compares supply and demand and estimates the additional imports or exports required to make total supply equal total demand. The resulting table shows the detailed sales and purchase patterns of the local industries. The 533-industry table is then aggregated to reflect the general activities of 32 industries plus local households, creating a total of 33 industries. To trace changes in the economy, each column is converted to show the direct requirements per dollar of gross output for each sector. This direct-requirements table represents the "recipe" for producing the output of each industry.

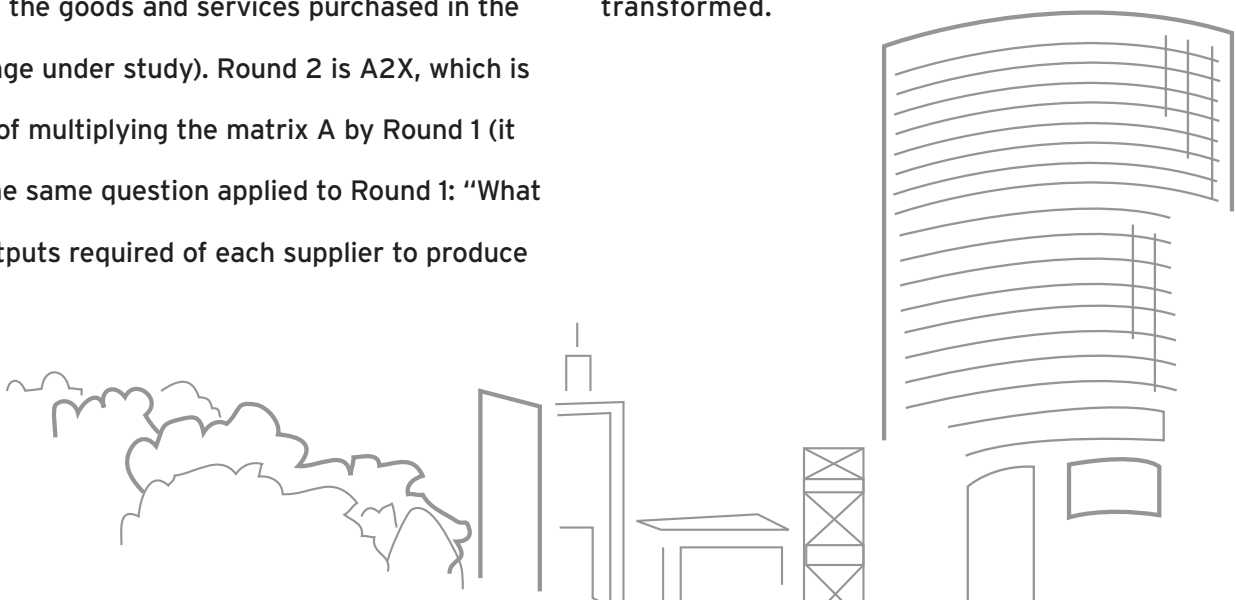
The economic impact figures for **Arts & Economic Prosperity III** were computed using what is called an “iterative” procedure. This process uses the sum of a power series to approximate the solution to the economic model. This is what the process looks like in matrix algebra:

$$T = IX + AX + A^2X + A^3X + \dots + A^nX.$$

T is the solution, a column vector of changes in each industry’s outputs caused by the changes represented in the column vector X. A is the 33 by 33 direct-requirements matrix. This equation is used to trace the direct expenditures attributable to nonprofit arts organizations and their audiences. A multiplier effect table is produced that displays the results of this equation. The total column is T. The initial expenditure to be traced is IX (I is the identity matrix, which is operationally equivalent to the number 1 in ordinary algebra). Round 1 is AX, the result of multiplying the matrix A by the vector X (the outputs required of each supplier to produce the goods and services purchased in the initial change under study). Round 2 is A²X, which is the result of multiplying the matrix A by Round 1 (it answers the same question applied to Round 1: “What are the outputs required of each supplier to produce

the goods and services purchased in Round 1 of this chain of events?”). Each of columns 1 through 12 in the multiplier effects table represents one of the elements in the continuing but diminishing chain of expenditures on the right side of the equation. Their sum, T, represents the total production required in the local economy in response to arts activities.

Calculation of the total impact of the nonprofit arts on the outputs of other industries (T) can now be converted to impacts on the final incomes to local residents by multiplying the outputs produced by the ratios of household income to output and employment to output. Thus, the employment impact of changes in outputs due to arts expenditures is calculated by multiplying elements in the column of total outputs by the ratio of employment to output for the 32 industries in the region. Changes in household incomes, local government revenues, and state government revenues due to nonprofit arts expenditures are similarly transformed.



NATIONAL ESTIMATES

To derive the national estimates, the 116 city and county study participants—multiregions and states are excluded from this analysis—were first stratified into six population groups, and an economic impact average was calculated for each group. Second, the nation's largest 12,662 cities were assigned to one of the six groups based on its population, as supplied by the U.S. Census Bureau. Third, each city was assigned the economic impact average for its population group. Finally, the values of the cities were added together to determine the national economic impact findings. The two largest U.S. cities, New York and Los Angeles, each with more than \$1 billion in organizational expenditures, were excluded from this study to avoid inflating the national estimates. In addition, Laguna Beach, CA, and Teton County, WY, were removed when calculating the national estimates due to their comparably high levels of economic activity in the population category.

North Dakota's participation in this study shows the economic impact the arts can have in rural and urban economies alike. We look forward to the state arts council further exploring the role of arts in rural economic development.

Jack Dalrymple
Lieutenant Governor of North Dakota
Chair Elect, National Lieutenant Governors Association

LEARN MORE ABOUT

ARTS & ECONOMIC PROSPERITY III

Visit www.AmericansForTheArts.org/EconomicImpact to access free resources you can use to help make the economic case for arts funding and arts-friendly policies in your community:

- A downloadable and customizable PowerPoint presentation that effectively communicates this study's findings.
- **Arts & Economic Prosperity III Highlights Pamphlet.**
- **Arts & Economic Prosperity III Summary Report.**
- **Arts & Economic Prosperity III National Report,** complete with national and local findings, background, scope, and methodology.
- A press release announcing the study results.
- Sample Opinion-Editorials.

The Arts & Economic Prosperity Calculator is a handy tool that enables users to estimate the economic impact of their organization.

ENDNOTES

¹ This figure includes only income tax paid on the \$104.2 billion in resident household income at the rate of 12.1 percent, the average percentage of adjustable gross income paid to the Internal Revenue Service in 2004 (latest data available).

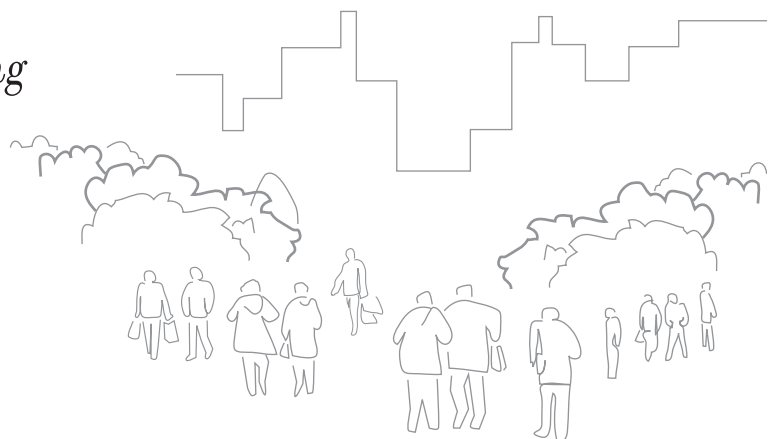
² The U.S. Department of Labor Bureau of Labor Statistics reports that there were 130,307,840 nonself-employed individuals in the U.S. workforce during 2005.

³ The Historic/Cultural Traveler, 2001 (TravelScope Survey).

⁴ Americans for the Arts, 2002.

⁵ Independent Sector, 2007.

⁶ National Taxonomy of Exempt Entities—developed by the National Center for Charitable Statistics at the Urban Institute—is a definitive classification system for nonprofit organizations recognized as tax exempt by the Internal Revenue Code. This system divides the entire universe of nonprofit organizations into 10 broad categories, including "Arts, Culture, and Humanities." The Urban Institute reports that 94,314 nonprofit arts and culture organizations were registered with the IRS in 2005, up from 74,446 in 1999.



Frequently Used Terms

This section provides a glossary of economic impact terminology, sorted alphabetically in ascending order.

CULTURAL TOURISM

Travel directed toward experiencing the arts, heritage, and special character of a place.

DIRECT ECONOMIC IMPACT

A measure of the economic effect of the initial expenditure within a community. For example, when the symphony pays its players, each musician's salary, the associated government taxes, and full-time equivalent employment status represent the direct economic impact.

DIRECT EXPENDITURES

The first round of expenditures in the economic cycle. A paycheck from the symphony to the violin player and a ballet company's purchase of dance shoes are examples of direct expenditures.

ECONOMETRICS

The process of using statistical methods and economic theory to develop a system of mathematical equations that measures the flow of dollars between local industries. The input/output model developed for this study is an example of an econometric model.

ECONOMETRICIAN

An economist who designs, builds, and maintains econometric models.

FULL-TIME EQUIVALENT (FTE) JOBS

A term that describes the total amount of labor employed. Economists measure FTE jobs—not the total number of employees—because it is a more accurate measure of total employment. It is a manager's discretion to hire one full-time employee, two half-time employees, four quarter-time employees, etc. Almost always, more people are affected than are reflected in the number of FTE jobs reported due to the abundance of part-time employment, especially in the nonprofit arts and culture industry.

INDIRECT IMPACT

Each time a dollar changes hands, there is a measurable economic impact. When people and businesses receive money, they respense much of that money locally. Indirect impact measures the effect of this respensing on jobs, household income, and revenue to local and state government. It is often referred to as secondary spending or the dollars "rippling" through a community. When funds are eventually spent nonlocally, they are considered to have "leaked out" of the community and therefore cease to have a local economic impact. Indirect impact is the sum of the impact of all rounds of spending.

INPUT/OUTPUT ANALYSIS

A system of mathematical equations that combines statistical methods and economic theory in an area of economic study called econometrics. Economists use this model (occasionally called an interindustry model) to measure how many times a dollar is respensed in, or "ripples" through, a community before it leaks out (see Leakage). The model is based on a matrix that tracks the dollar flow between 533 finely detailed industries in each community. It allows researchers to determine the economic impact of local spending by nonprofit arts and culture organizations on jobs, household income, and government revenue.

LEAKAGE

The money that community members spend outside of a community. This nonlocal spending has no economic impact within the community. A ballet company purchasing shoes from a nonlocal manufacturer is an example of leakage. If the shoe company were local, the expenditure would remain within the community and create another round of spending by the shoe company.

MULTIPLIER (often called Economic Activity Multiplier)

An estimate of the number of times that a dollar changes hands within the community before it leaks out of the community (for example, the theater pays the actor, the actor spends money at the grocery store, the grocery store pays its cashier, and so on). This estimate is quantified as one number by which all expenditures are multiplied. For example, if the arts are a \$10 million industry and a multiplier of three is used, then it is estimated that these arts organizations have a total economic impact of \$30 million. The convenience of a multiplier is that it is one simple number; its shortcoming, however, is its reliability. Users rarely note that the multiplier is developed by making gross estimates of the industries within the local economy with no allowance for differences in the characteristics of those industries, usually resulting in an overestimation of the economic impact. In contrast, the input-output model employed in **Arts & Economic Prosperity III** is a type of economic analysis tailored

specifically to each community and, as such, provides more reliable and specific economic impact results.

RESIDENT HOUSEHOLD INCOME (often called Personal Income)

The salaries, wages, and entrepreneurial income residents earn and use to pay for food, mortgages, and other living expenses. It is important to note that resident household income is not just salary. When a business receives money, for example, the owner usually takes a percentage of the profit, resulting in income for the owner.

REVENUE TO LOCAL AND STATE GOVERNMENT

Local and state government revenue is not derived exclusively from income, property, sales, and other taxes. It also includes license fees, utility fees, user fees, and filing fees. Local government revenue includes funds to city and county government, schools, and special districts.

Frequently Asked Questions

This section answers some common questions about this study and the methodology used to complete it.

HOW WERE THE 156 PARTICIPATING COMMUNITIES AND REGIONS SELECTED?

In 2005, Americans for the Arts published a Call for Participants for communities interested in participating in the **Arts & Economic Prosperity III** study. Of the more than 200 participants that expressed interest, 156 agreed to participate and complete four participation criteria: (1) identify and code the universe of nonprofit arts and culture organizations in their study region; (2) disseminate, collect, and review for accuracy expenditure surveys from those organizations; (3) conduct audience-intercept surveys at a minimum of 15 diverse arts events; and (4) pay a modest cost-sharing fee (no community was refused participation for an inability to pay).

HOW WERE THE ELIGIBLE NONPROFIT ARTS ORGANIZATIONS IN EACH COMMUNITY SELECTED?

Local partners attempted to identify their universe of nonprofit arts and culture organizations using the Urban

Institute's National Taxonomy of Exempt Entity (NTEE) codes as a guideline. Eligible organizations included those whose primary purpose is to promote appreciation for and understanding of the visual, performing, folk, and media arts. Public arts councils, public presenting facilities or institutions, and embedded organizations that have their own budget also were included if they play a substantial role in the cultural life of the community.

WHAT TYPE OF ECONOMIC ANALYSIS WAS DONE TO DETERMINE THE STUDY RESULTS?

An input/output analysis model was customized for each of the participating communities and regions to determine the local economic impact their nonprofit arts and culture organizations and arts audiences. Americans for the Arts, which conducted the research, worked with a highly regarded economist to design the input/output model used for this study.

WHAT OTHER INFORMATION WAS COLLECTED IN ADDITION TO THE ARTS SURVEYS?

In addition to detailed expenditure data provided by the surveyed organizations, extensive wage, labor, tax, and commerce data were collected from local, state, and federal governments for use in the input/output model.

WHY DOESN'T THIS STUDY USE A MULTIPLIER?

When many people hear about an economic impact study, they expect the result to be quantified in what is often called a multiplier or an economic activity multiplier. The economic activity multiplier is an estimate of the number of times a dollar changes hands within the community (e.g., a theater pays its actor, the actor spends money at the grocery store, the grocery store pays the cashier, and so on). It is quantified as one number by which expenditures are multiplied. The convenience of the multiplier is that it is one simple number. Users rarely note, however, that the multiplier is developed by making gross estimates of the industries within the local economy and does not allow for differences in the characteristics of those industries. Using an economic activity multiplier usually results in an overestimation of the economic impact and therefore lacks reliability.

HOW IS THE ECONOMIC IMPACT OF ARTS AND CULTURE ORGANIZATIONS DIFFERENT FROM OTHER INDUSTRIES?

Any time money changes hands there is a measurable economic impact. Social service organizations, libraries, and all entities that spend money have an economic impact. What makes the economic impact of arts and culture organizations unique is that, unlike most other industries, they induce large amounts of related spending by their audiences. For example, when patrons attend a performing arts event, they may purchase dinner at a restaurant, eat dessert after the show, and return home and pay the babysitter. All of these expenditures have a positive and measurable impact on the economy.

WILL MY LOCAL LEGISLATORS BELIEVE THESE RESULTS?

Yes, this study makes a strong argument to legislators, but you may need to provide them with some extra help. It will be up to the user of this report to educate the public about economic impact studies in general and the results of this study in particular. The user may need to explain (1) the study methodology used; (2) that economists created an input/output model for each community and region in the study; and (3) the difference between input/output analysis and a multiplier. The good news is that as the number of economic impact studies completed by arts organizations and other special interest areas increases, so does the sophistication of community leaders whose influence these studies are meant to affect. Today, most decision-makers want to know what methodology is being used and how and where the data were gathered.

You can be confident that the input/output analysis used in this study is a highly regarded model in the field of economics (the basis of two Nobel Prizes in economics). However, as in any professional field, there is disagreement about procedures, jargon, and the best way to determine results. Ask 12 artists to define art and you will get 24 answers; expect the same of economists. You may meet an economist who believes that these studies should be done differently (for example, a cost-benefit analysis of the arts).

HOW CAN A COMMUNITY NOT PARTICIPATING IN THE ARTS AND ECONOMIC PROSPERITY III STUDY APPLY THESE RESULTS?

Because of the variety of communities studied and the rigor with which the **Arts & Economic Prosperity III** study was conducted, nonprofit arts and culture organizations located in communities that were not part of the study can estimate their local economic impact. Estimates can be derived by using the **Arts & Economic Prosperity III** Calculator (found at www.AmericansForTheArts.org/EconomicImpact). Additionally, users will find sample PowerPoint presentations, press releases, Op-Ed, and other strategies for proper application of their estimated economic impact data.