



The Economic and Social Impact of Mississippi Philanthropic Grants



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The Economic and Social Impact of Mississippi Philanthropic Grants Foreword

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In 2015, the Mississippi Association of Grantmakers published the first comprehensive analysis of the scope and scale of philanthropy in the state. That study was updated in 2019 with the publication of *Philanthropic Giving in Mississippi*. While these reports are vital to understanding the role philanthropy plays in funding needed services and supports in Mississippi, they do not provide information about the economic and social impact of grantmaking.

We intuitively know there is an economic multiplier effect from philanthropic grants in that those resources provide jobs, products, and purchasing power that positively impact businesses outside of the grantee organization. Prior to now, that economic impact has not been measured in Mississippi before; so as a companion piece to the 2019 *Philanthropic Giving in Mississippi* report, The Mississippi Alliance of Nonprofits and Philanthropy is pleased to present this report, *The Economic and Social Impact of Mississippi Philanthropic Grants*.

This report examines the impact grantmaking has on Mississippi's economy, and it further shows the return on investment from philanthropic grants. It is very important information because it provides data showing that philanthropic investments are not only good because they provide services and supports to children, families, and communities (social impact), but they also contribute significantly to the local and state economic well-being. In other words, there is a strong business case to be made for philanthropic investments.

Our thanks to the researchers that made this report a reality—The LSU Policy and Research Group, The University of Louisiana Kathleen Babineaux Bianco Policy Center, and Mississippi State University's Social Science Research Center.

Sammy Moon

Executive Director

The Mississippi Alliance of Nonprofits and Philanthropy



Executive Summary

Key Findings of the Economic Analysis

- ▶ Total grant dollars from foundations received in Mississippi in 2016 was \$106.6 million.
- ▶ Grant dollars supported 1,710 jobs in direct employment and 2,330 jobs including indirect and induced jobs in that year.¹
- ▶ Grant dollars supported \$106.6 million in direct output, and \$184.3 million including indirect and induced effects in 2016.
- ▶ The average multiplier effect, or spillover effect, estimated from treating nonprofits as for-profit businesses is 1.7 generating \$1.70 of economic activity for every \$1 of expenditure.

Key Findings from the Return on Investment Analysis Literature Review Approach

- ▶ Return on Investments (ROIs) varied by category from a 1:1 ratio at the low end to \$17.4 saved or created per dollar invested at the high end.
- ▶ The total social benefit for \$106.6 million spent is \$882.3 million.
- ▶ Average ROI in Mississippi is 8.3, or \$8.28 of benefit for each \$1 invested in grantmaking and philanthropic activity.

¹ Indirect Effects represent the sum of business to business impacts while induced effects represent the total impact of household spending based on labor income created. See <https://implanhelp.zendesk.com/hc/en-us/articles/115009505707-Understanding-Multipliers> for details.

Introduction

This study examines the economic and social impact of philanthropic grants in Mississippi on the wider society and economy of Mississippi. In 2016, Mississippi philanthropic organizations made over \$60.2 million in grants, \$48.5 million directly targeting activities in Mississippi. National organizations contributed another \$58.1 to benefit Mississippi groups, leading to a total of \$106.6 million of grants given to Mississippi recipients. Given this lofty amount, one key question is what economic and social benefits are generated by these grants?

This study examines this question in two distinct ways. The first approach is to conduct an economic impact study for Mississippi grants. This assessment treats the activities supported by grants in the same manner as any other business spending dollars in Mississippi. For the purposes of that analysis, the impact of expenditures at a school is similar to expenditures by a retail store – both inject funds into the economy. The basic economic impact analysis focuses only on the jobs, earnings and output supported by the new funds injected into the Mississippi economy through philanthropic grants.

The challenge of limiting the analysis to only the economic effect of grant spending lies in the fact that the activities supported by most philanthropic grants differ from a typical business. For example, grants in education are often granted to improve educational outcomes, and while the first approach in our analysis accounts for the spending from the grants such as salaries of teachers, it does not account for increased achievement by the students benefitting from those teachers or other educational enhancements. This, in many cases may be far greater than the more immediate benefits of grant-related expenditures. When grants are successful and desired impact is achieved, recipients' lives are improved. Some grants may increase the probability of graduation, improve transitions to post-secondary education, and increase lifetime salaries of students. Healthcare grants may focus on improved health outcomes. The research goal in the second approach is to compute a return on investment (ROI) for different types of grant activities, which account for these broader social benefits not accounted for in the standard economic impact study.

In addition to education and healthcare, grants support a variety of areas such as arts and culture and economic development. Given the diversity of objectives, no single methodology is appropriate for assessing the broader social benefits of grants. Likewise, it is not feasible to conduct a study of the return on investment of every philanthropic grant in Mississippi within a single study. For this reason, this study employs an approach similar to Shapiro and Mathur's (2008) "The Social and Economic Value of Private and Community Foundations." Shapiro and Mathur (2008) provided an extensive literature review of studies evaluating the return on investment for different types of grants and compute a weighted average of these returns within each category of grant activity.² While based on the general approach used in Shapiro and Mathur (2008), researchers in this study evaluated more recent research to update the literature review and apply the average return on investment in each category to Mississippi's grants within that category. Though some studies focus only on social benefits, the results often account for economic as well as social benefits.

Simply stated, the first section of this study should be interpreted as providing a lower bound on the social and economic benefit of Mississippi's grants, obtained by treating activities supported by grants like any other business activity and capturing the more immediate economic benefits of grant expenditures. The second section generally provides a more comprehensive measure of the social and economic return from Mississippi's philanthropic grants accounting for long-run benefits of those participating in grant-funded programs, or receiving other grant-funded social supports.

² Weights are based on the dollar value of grants covered in each study.

Part 1: Regional Impact Analysis

Part 1 of this study analyzes the regional economic impact of philanthropic giving in Mississippi using an input-output model on employment, labor income, and output. It explores the direct, indirect, and induced effects on the economy of investment in Mississippi grantmaking foundations. The data breaks down grant funding by category, and the model estimates the economic impacts for each category.

Methodology

Like a rock dropped into a pond, an injection of new dollars into an economy ripples throughout that economy. Spending by the firm and its employees directly creates new sales in the community. Area businesses that benefit from those expenditures in turn hire additional workers. Spending by those businesses and their employees then creates another round of sales for other businesses and the process continues. Economic impact analysis provides us with the tools to quantify the full impact of these ripple effects within an economy using jobs, earnings, and value-added multipliers.

Wassily Leontief was awarded the 1973 Nobel Prize in Economics “... for the development of the input-output method and for its application to important economic problems.”³ Not surprisingly, input-output models have advanced considerably over the five decades since Leontief’s award. However, the same fundamental principles apply. The methodology relies on the assumption of linear relationships (and technology) to capture commodity flows from producers to intermediate and final consumers.

The model is attractive because it allows economists to quantify the spillovers from additional activity in one sector. For instance, an expansion in one industry leads to greater income for workers and other industries. These groups in turn spend more in the economy, creating another round of activity. This input-output analysis provides a method to quantify the sum total of these ripples through the economy. Miller and Blair (2009) provide a full overview of input-output analysis. This study uses Implan software (2019) for computations.⁴

Data and Results

The data used in this report are based on an analysis of foundation grants by the Mississippi Alliance of Nonprofits and Philanthropy (2019). These data are based on a sample 1,921 grants from Mississippi Foundations and an additional 2,400 grants from other U.S. based foundations. The data were provided to the Mississippi Alliance of Nonprofits by Candid and were indexed by Candid’s Philanthropy Classification System (PCS) using a modified version of the National Taxonomy of Exempt Entities (NTEE) classification scheme. Note, Candid’s database does not capture all grants issued by foundations as some grants do not have sufficient information provided on IRS-990 forms to be classified in this system. Therefore, the total economic impact of grantmaking in Mississippi is likely underestimated.⁵

Grant money in Mississippi in a variety of areas, from Agriculture to Sports and Religion to Science and Health, goes to both in-state and out-of-state philanthropic organizations. In 2016, \$48.5 million of grants from Mississippi-based philanthropies were granted to in-state recipients. In addition, another \$12 million of grants awarded by Mississippi foundations were awarded to out-of-state recipients. Summaries of these awards by subject area are listed in Table 1. The table includes figures for grants assigned to a single purpose (unduplicated) and in multiple areas. The Mississippi Alliance of Nonprofits and Philanthropies reports subject area results with grants indexed

³Miller, Ronald E. and Peter D. Blair (2009), *Input-Output Analysis*, New York: Cambridge University Press.

⁴IMPLAN Group, LLC, IMPLAN System (data and software), 16740 Birkdale Commons Parkway, Suite 206, Huntersville, NC 28078 www.IMPLAN.com.

⁵ See <https://taxonomy.candid.org/> for a detailed description of Candid’s classification system.

in multiple subject areas where appropriate. The Total Grants figures in the columns below match figures from the The Mississippi Alliance of Nonprofits and Philanthropies reports subject area results. In some cases, a grant may impact multiple subject areas which would result in double counting in this study. For this reason, we focus on the columns labeled Unduplicated Grants which are based on the primary purpose of each grant.⁶ These data were provided by the Mississippi Alliance of Nonprofits and Philanthropy.

Table 1: Indexed Grant Dollars, by Subject Area

Subject Area	Total Grants		Unduplicated Grants	
	Grant Dollars	Number of Grants	Grant Dollars	Number of Grants
Education	\$26,420,828	556	\$22,359,048	498
Health	\$9,729,557	284	\$8,923,823	252
Human Services	\$8,511,448	431	\$7,468,499	384
Community and Economic Development	\$3,582,406	31	\$5,543,892	69
Philanthropy	\$4,378,748	79	\$4,325,448	72
Arts and Culture	\$3,946,215	183	\$3,180,215	170
Religion	\$4,286,565	229	\$3,002,688	200
Sports and Recreation	\$1,922,088	70	\$1,443,865	46
Agriculture, Fishing and Forestry	\$851,882	5	\$863,882	8
Environment	\$725,240	89	\$658,859	80
Science	\$537,807	10	\$535,307	9
Public Affairs	\$874,110	39	\$526,610	30
Not Classified*	\$530,439	8	\$486,249	33
Information and Communications	\$509,829	40	\$415,850	29
Public Safety	\$544,825	42	\$403,354	17
International Relations	\$137,760	19	\$53,260	9
Human Rights	\$379,300	21	\$38,800	13
Social Sciences	\$37,945	6	\$18,695	2
Total	\$67,906,992	2142	\$60,248,344	1921

*These grants were difficult to classify. These were put into a more generic industry called “grantmaking, giving, and social advocacy organizations.”

While these data provide a base for the types and subject area of grants awarded by Mississippi philanthropies, this regional impact analysis describes the impact of all grants awarded to Mississippi recipients. In addition to the \$48.5 million awarded by Mississippi foundations to Mississippi recipients,⁷ an additional \$58.1 million was awarded to Mississippi recipients by other U.S. based foundations, for a total of \$106.6 million. This report uses the data on subject area from the Mississippi Alliance of Nonprofits and Philanthropy in Table 1 to determine what economic

⁶ Another idea would be to proportion grants by category.

⁷ A portion of Mississippi foundation grants go to out of state recipients just as out of state foundations contribute significantly to Mississippi recipients.

sectors are impacted by this giving and the proportion of the total \$106.6 million in Mississippi that goes into each category. These dollars are then entered into the IMPLAN model to determine the regional impact analysis results, given in Table 2.

Table 2. Regional Impact Analysis Results

Impact Type	Employment	Labor Income (millions)	Output (millions)
Direct Effect	1,710	\$ 50.3	\$ 106.6
Indirect Effect	290	\$ 8.8	\$ 36.4
Induced Effect	330	\$ 11.5	\$ 41.3
Total Effect	2,330	\$ 70.5	\$184.3

Note: Labor income, and output rounded to the nearest hundred thousand.

The direct effect measures the direct economic impact of giving by foundations to Mississippi recipients. Output represents the direct grants, which we estimate to support 1,710 jobs annually and create \$50.3 million in earnings directly. The indirect effect measures the impact created by spending of the Mississippi grant recipients to make purchases necessary to achieve their goals. The induced effect measures the impact of the spending by the grants recipients on their employees. Grants indirectly create 290 jobs, \$8.8 million in earnings and \$36.4 million in output and the induced impact leads to 330 jobs, \$11.8 million of earnings and \$41.3 million of economic output.⁸

As a result of the direct employment and the ripples through the economy driven by these grants, grantmaking organizations in Mississippi support over 2,000 jobs and \$70.5 million in labor income, primarily in service industries like education, health care, and legal services. They also drive a total of \$184 million in output. Output includes both sales for for-profit companies and operating revenues or expenses for non-profit and government entities. Results by subject area are presented in the Appendix.

⁸ Note that all direct, indirect, and induced impacts are measured on an annual basis.

Part 2: Literature Review-Based Analysis

The second part of this analysis focuses on a literature review-based approach to account for both the economic and social benefits. It is modeled after the 2008 Shapiro and Mathur report, which divides grants in the United States into 11 categories: Arts and culture, Education, Environment and Animals, Health, Human Services, International Affairs, Public Affairs, Science and Technology, Social Sciences, Religion, and Other. A literature review on the return on investment is conducted for each of these categories and a weighted average is developed to determine the total social benefit derived from grants in each category of nonprofit and philanthropic organizations.

Background

Table 3: Total US Private and Community Foundation Activity in 2006, By Category, Based on Foundation Center Sample

Category	Sample, 2006	Share
Arts and Culture	\$ 2,329,708,000	12.2%
Education	\$ 4,306,090,000	22.5%
Environment and Animals	\$ 1,145,100,000	6.0%
Health	\$ 4,394,462,000	23.0%
Human Services	\$ 2,645,895,000	13.8%
International Affairs	\$ 1,019,739,000	5.3%
Public Affairs/Society Benefit	\$ 2,042,490,000	10.7%
Science and Technology	\$ 550,591,000	2.9%
Social Sciences	\$ 259,092,000	1.4%
Religion	\$ 429,967,000	2.2%
Other	\$ 16,912,000	0.09%
Total	\$ 19,140,046,000	100.0%
Source: Shapiro & Mathur 2008		

The Mississippi Alliance of Nonprofits and Philanthropy data are based on similar but not exactly the same categories, with data only from Mississippi foundations. The following is a mapping from the Mississippi Alliance subject area to the 11 major categories above, which are used in the literature review.

Table 4: Crosswalk from Mississippi Foundation to Literature Review Categories

Mississippi Subject Area	Major Category
Arts and culture	Arts and culture
Sports and recreation	Arts and culture
Education	Education
Agriculture, fishing and forestry	Environment and Animals
Environment	Environment and Animals
Health	Health
Human services	Human Services
Community and economic development	Human Services
Philanthropy	Human Services
Human rights	Human Services
International relations	International Affairs
Public safety	Public Affairs
Public affairs	Public Affairs
Information and communications	Public Affairs
Science	Science and Technology
Social sciences	Social Sciences
Religion	Religion
Not Classified*	Other

Table 5 displays the total and share of grant dollars in each of the major categories of grants. This Table includes grants to Mississippi recipients from foundations both inside and outside Mississippi. Thus, the total in Table 5 does not match that in Table 1. In comparison to the older, national dataset, grants in Mississippi are more likely to be based on Education (37 versus 22 percent) or Human Services (29 versus 14 percent), and less likely to be related to Health (15 versus 23 percent).

Table 5: Mississippi Grants by Dollar and Share

Major Category	Share	Sum of Grant Dollars
Arts and culture	8%	\$8,181,631
Education	37%	\$39,561,056
Environment and Animals	3%	\$2,694,267
Health	15%	\$15,789,396
Human Services	29%	\$30,745,414
International Affairs	0%	\$94,236
Public Affairs	2%	\$2,381,221
Religion	5%	\$5,312,816
Science and Technology	2%	\$947,147
Social Sciences	0%	\$33,078
Other	1%	\$860,346
Total	100%	\$106,600,609

The following sections investigate each of these categories in depth. For each category, a weighted average is developed with weights based on total funding or donor dollars and a median return on investment from a large panel of new research on nonprofits. Also provided for comparison is the return on investment calculated in Shapiro & Mathur.

Arts & Culture

The first category of grants is Arts & culture, which comprises 8% of Mississippi grants in 2016 and a total of \$8.1 million, as seen in Table 5. Grants in the arts & culture category include funding to improve quality and maintain public access to museums and performing arts entities in Mississippi as well as arts education programs in the state. The primary source for the arts and culture literature review is the SMU DataArts, a large database of fundraising returns for the arts, 2014-2017 (DataArts 2019). The database has estimates for arts education, art museums, community, dance, music, opera, PACs, symphony orchestras, theater, other museums, and performing arts. Total dollar amounts for each subcategory of grants in this database range from \$9 million for performing arts to \$64 million for art museums. The return on investment estimate was relatively high, ranging between 6.1 and 10.5 for different subcategories of art.

In addition to the SMU cultural data, the impact of culture and art tourism are estimated by three state or metro authorities in Colorado, Florida, and Illinois. (Colorado Business Committee for the Arts 2016, The Florida Legislature Office of Economic and Demographic Research 2018, Terpstra & Clary 2015) Estimated return on investment from these studies ranged from 2.2 to 4.0 for every dollar invested. These state tourism studies were larger than the SMU cultural data studies, with a total of \$380 million grant dollars evaluated. The weighted average ROI across these studies of arts and culture activities is 5.4 and median is 8.4. These studies provide a more conservative estimate than the earlier Shapiro & Mathur (2008) study return on investment of 9.7.

Table 6: Return on Investment for Arts

Program	Description	Return on Investment
Economic Activity Study of Metro Denver Culture	Arts – multipurpose	2.91
Return on Investment of VISIT Florida	Arts – multipurpose	2.15
The Value of the Nonprofit Arts and Culture Field in Illinois	Arts – multipurpose	4
SMU Cultural Data	Arts Education	8.77
SMU Cultural Data	Art Museums	8.38
SMU Cultural Data	Community	10.53
SMU Cultural Data	Dance	8.81
SMU Cultural Data	Music	7.75
SMU Cultural Data	Opera	9.53
SMU Cultural Data	PACs	9.9
SMU Cultural Data	Symphony Orchestras	8.42
SMU Cultural Data	Theater	7.35
SMU Cultural Data	Other Museums	8.65
SMU Cultural Data	Performing Arts - General	6.11
Weighted Average		5.41
Median		8.40

Education

Table 6 contains the return on investment estimates for a diverse group of education studies. Education grants can include funding for educational programs ranging from pre-school to post-secondary institutions, libraries, as well as scholarships and financial aid to assist students in attaining additional education. Approximately 87% of the total grant dollars in these studies are specifically related to higher education, which corresponds well with the Mississippi Alliance data, where 83% of the education grants awarded in Mississippi in 2016 were to higher education. Estimated returns on investment varied from study to study, ranging from a return on investment of 2.2 for a preschool program in New Hampshire to a return on investment of 10 for the University of Toledo system. Relative to Shapiro and Mathur (2008), this research found a larger number of studies on higher education and have a smaller emphasis on libraries. However, the overall estimated return on investment from the studies identified in this report is quite similar to the 5.08 computed in Shapiro and Mathur (2008), and more accurately reflects the composition of Mississippi grants.

Table 6: Return on Investment for Education

Program	Description	Return on Investment
The Economic Impacts of Investing in Early Childhood Education in Indiana	Elementary/Secondary	3.92
Economic Impact of the University of Maine System	Higher Education	8.23
Rutgers Grows the Garden State: Our Impact on the Economy of New Jersey	Higher Education	6.7
University of Massachusetts Economic Contribution Analysis FY 2013	Higher Education	1.72
Economic Impact of the Vermont Law School on the Vermont State Economy	Higher Education	1.66
Reinvesting and Renewing for the 21st Century	Libraries	7.15
Economic Impacts of the University of Toledo	Higher Education	10
Analysis of the Economic Impact and Return on Investment of Education	Higher Education	6.3
Minnesota Public Libraries' Return on Investment	Libraries	4.62
The Economic Returns from Investing in Early Childhood Programs in the Granite State	Elementary/Secondary	2.24
Weighted Average		5.92
Median		5.46

Environment and Animals

Research into giving for the environment and animals focuses on park systems, wildlife, and natural resources like water and forests. Studies identified in this research effort indicate a much higher return on investment in social and economic benefit than simply treating those dollars as purely business cash injections. In particular, the two largest studies included in this review are a study of the impact on the National Park System, which found a very high ROI of 10, and a more modest but still substantial impact of efforts to clean and protect the water supply, with a ROI of 2.7 (National Parks Conservation Association 2016, The Value of Water Campaign 2017). Other studies generally lie in between these, with a look at Louisiana, Wyoming, Vermont, Alabama, and Michigan park systems, and the Maryland Zoo (Chacko et al 2006, Taylor et al 2011, The Trust for Public Land 2018, Rainer 2017, Caltrone et al 2019, Maryland Department of Business and Economic Development 2011).

As in Shapiro and Mathus (2008), the results of this study suggest a higher return on investment for grants in the Environment and Animals category. The larger weighted average is driven primarily by one study, the study of return on investment in U.S. National Parks.

Table 7: Return on Investment for Environment and Animals

Program	Return on Investment
Louisiana State Parks	2.09
Economic Contributions of the Wyoming Wildlife and Natural Resource Trust	4
The Economic Benefits of Investing in Water Infrastructure	2.68
Working Assets: Reinvesting in National Parks to Create Jobs and Protect America's Heritage	10
Vermont's Return on Investment in Land Conservation	9
Forever Wild	5
Economic Impact of Chicago Zoos	1.78
Economic Impact of Hunting, Fishing and Trapping in Michigan	1.47
The Economic Impact of the Maryland Zoo in Baltimore	7.49
Weighted Average	9.6
Median	4

Health

The weighted average ROI for grants in the Health category is one of the highest and also the most variable of the subjects studied. Estimating the average ROI for health is a unique challenge. One reason for the variation in estimates across studies is the difference in focus, which can be calculated only for the health service provider (such as a new method of diabetes control avoiding costly hospital interventions), or the ROI can include benefits to others such as the patients themselves. There is also the question of whether the health investment has a significant effect on mortality rates. The methodology used to account for this can lead to notable differences in the final result. The weighted average for this category identified through this research effort is driven by a few high-impact, large grant dollar studies to an ROI of 17.4, but the median is only 2.3 due to the large amount of variability.

This section begins with a systematic review of 34 different studies in high-income countries on the return on investment for public health interventions (Masters et al 2017), which found a median ROI of 14.3, an estimate similar to the weighted average estimate computed in Table 8. One study in this review includes two high-impact interventions on childhood obesity, estimated at returns of 38 and 55 per dollar spent (Gortmaker et al 2015). In comparison, studies 4-6 in Table 8 are lower impact programs aimed to improve treatments for chronic conditions like diabetes and asthma, with 1.0 to 2.3 dollars saved for every 1 dollar invested. Five studies about improvements in access to care, four in rural areas, and one in a Massachusetts school health program, gave ROIs of 1.1 – 7.9 (National Rural Health Resource Center 2019, Desisto 2014). A tobacco cessation program resulted in an ROI of 2.1, and a clean syringe exchange for HIV prevention estimated an ROI of 7.0. (Richard et al 2012, Nguyen et al 2014)

Table 8: Return on Investment for Health

Program	Subcategory	Return on Investment
Return on investment of public health interventions: a systematic review	Meta analysis	14.3
Cost Effectiveness of Childhood Obesity Interventions	Obesity	55
Cost Effectiveness of Childhood Obesity Interventions	Obesity	38
Improvements in diabetes control in Washington County	Chronic disease	1.37
Improvements in asthma control among children in Kennebec County	Chronic disease	1.03
Improving control of chronic conditions for individuals with high health care use in Aroostook County	Chronic disease	2.31
ROI of Medicaid Tobacco Cessation Program in Massachusetts	Substance use	2.12
Connecting underserved individuals to services in the Lewiston area	Access	1.54
Economic Evaluation of Syringe Exchange	Substance use	7
Cost benefit Analysis of School Nursing Services	Access	2.2
National Rural Health Resource Center -Technical Assistance and Services Center	Access	5.22
National Rural Health Resource Center -Small Rural Hospital Transition Project	Access	1.09
Rural Network Allied Health Training	Access	7.89
Weighted Average		17.4
Median		2.3

Human Services

The category of human services includes grants supporting programs for children and youth development, elder care, legal services, and other humanitarian causes. The largest study in this group estimates the ROI for Boys & Girls Clubs, a large provider of youth services and programs, with some \$1.4 billion of annual operating costs (Eisenberg & Hutton 2015). Positive financial impacts of Boys & Girls clubs include improved physical activity and health, increased retention and graduation rates, decreased substance use, decreased rates of crime and arrests, and increased parental earnings, for a total return on investment of 9.6. Other studies aimed at improving outcomes of children at risk found ROIs ranging from 2.6 for the Georgia Statewide Afterschool Network to 5 for a home visiting program for low income first time mothers and their child to an estimated ROI of 11 from a meta-analysis of school based therapy and a coaching and mentoring program for kids in low-income communities (Georgia Statewide Afterschool Network, Karoly 2017, Taylor et al 2017, UP2US Sports). Legal aid groups provide an ROI of 6.37 to 6.7 (Coalition for Court Access 2018, Community Services Analysis 2013). Sports initiatives, many of them grants to build facilities, by the Florida Sports Foundation have been found to be less effective (Florida Legislature Office of Economic and Demographic Research 2018). The heavy weighting from the Boys & Girls Club studies

drives the weighted average ROI of 9.3 for grants in the Human Services category, while the median for this group is 5.

Table 9: Return on Investment for Human Services.

Program	Return on Investment
Return on Investment for the Florida Sports Foundation Grants and Related Programs	4.72
Return on Investment for the Florida Sports Foundation Grants and Related Programs	0.32
Return on Investment for the Florida Sports Foundation Grants and Related Programs	0.22
Return on Investment for the Florida Sports Foundation Grants and Related Programs	0.12
The Economic Returns from Investing in Early Childhood Programs in the Granite State	5
Investing in Georgia’s Youth: Why Afterschool Makes ‘Cents’ for Georgia	2.64
Estimating the Return on Investment for Boys & Girls Clubs	9.6
Promoting Positive Youth Development through School-Based Social and Emotional Learning Interventions	11
About Up2US: Coaching for Change	11
Colorado Legal Services: Legal Assistance for Low-Income Coloradans	6.35
Indiana’s Civil Legal Aid Services Economic Impact and Social Value Return on Investment Analysis	6.7
Weighted Average	9.3
Median	5

International Affairs

International Affairs is a much smaller group of grants both in terms of total grant dollars (less than 0.5% of total grant dollars awarded in Mississippi in 2016) and the number of studies available that estimate an ROI. One study on International Alert, an international peacebuilding organization, found a social return on investment of only 1:1 (International Alert 2018). This category and two others which also received ROIs of 1, Social Sciences and Religion, actually have economic impacts based on business needs and the input-output methodology greater than estimated social impacts because of the limited number of studies available for them.

Table 10: Return on Investment for International Affairs.

Program	Return on Investment
International Alert	1.0

Public Affairs

Giving in the area of public affairs was found to have a weighted average ROI of 2.9 and a median of 2.9. These were based on studies of community development programs in various places, ranging from 1.4 for Virginia Community Capital to 15 for the much smaller Local Community Services Association in four communities in England: St. Giles, Brighton, Dewsbury Moor, and Cleobury Mortimer.

Table 11: Return on Investment for Public Affairs

Program	Return on Investment
The Economic Impact of Community Development Corporations within the City of Philadelphia and the Commonwealth of Pennsylvania	2.29
Catalysts for Community Action and Investment	15
Return on Investment Report	1.4
Community Development Foundation	3
Value What Matters: Measuring Program Value with Social Return on Investment	3.3
Value What Matters: Measuring Program Value with Social Return on Investment	1.8
Value What Matters: Measuring Program Value with Social Return on Investment	2.7
The Economic, Social, and Cultural Value of Volunteering to Western Australia	4.5
Weighted Average	2.9
Median	2.9

Science and Technology

Grants in the science and technology category include funding for STEM education. The literature review for Science and Technology comes primarily from six studies by the U.S. Department of Energy: Energy storage techniques for electric and hybrid cars and trucks (3.63 ROI), Photovoltaic energy Systems (1.83), Geothermal technologies (4.9), wind energy (2.1), and vehicle combustion engine (53). Another large U.S. based research funder, the National Institutes of Health, reports their R&D funds to have a 2.45 return on investment. Other studies came from Canadian R&D laboratory TRIUMF, Canadian satellite earth observation RADARSAT, the Technology Partnerships Canada, a group which provides funding support for strategic research and development, and state-funded Australian agricultural research. This category has a weighted average of 5.3 and a median of 3.

Table 12: Return on Investment for Science and Technology.

Program	Return on Investment
TRIUMF	1.7
RADARSAT	1.4
Technology Partnerships Canada	8.6
Energy Storage Technologies for Hybrid and Electric Cars and Trucks	3.63
Photovoltaic Energy Systems	1.83
Geothermal Technologies R&D Program Investments	4.9
Wind Energy R&D Program	2.1
Vehicle Combustion Engine R&D Program	53
National Institute of Health	2.45
Returns on Australian Agricultural Research	4.4
Weighted Average	5.3
Median	3.0

Social Sciences

Social Sciences is another category with few studies on return on investment. While all studies in previous categories are newer studies compared to Shapiro & Mathur 2008, the studies in this category are from Shapiro & Mathur, with no newer studies to add.

Table 13 Return on Investment for Social Sciences.

Program	Sub-Category	Return on Investment
Center for Economic and Policy Research	Social Sciences and Economics	1.0
The Aspen Institute	Social Sciences and Economics	1.0
Alliance for Justice	Interdisciplinary/Other	1.0
Center for Strategic and International Studies	Interdisciplinary/Other	1.0

Religion and Other

Religious programs are dedicated to organizing outreach and participation in their faith and grantmaking in this area helps expand organizational capacity and public access to these services. While they provide spiritual and community support for faith members, there are no studies that provide robust estimates of that value in economic terms. Therefore, this category of grants is assigned an ROI value of 1.

Table 14 Return on Investment for Religion.

Program	Sub-Category	Return on Investment
Acts 1:8 Ministry	Religion	1.0
Knox Fellowship	Religion	1.0
Chabad	Religion	1

Total Results

Data from previous tables comparing the Shapiro & Mathur ROI with the weighted average and median ROI from new studies are compiled in Table 15. A comparison of results reveals that our updated ROI estimates are generally similar to Shapiro and Mather (2008), with only a few notable differences. The largest increase occurs in the Health category while the largest decrease in estimated ROI is for Public Affairs. Both of these changes were driven by an effort to better align the studies used to calculate ROI with the particular activities in Mississippi supported by grants included in this study.

Table 15: Compiled ROIs, by Category

Major Category	Estimated Return on Investment (2008 Alliance Report)	Weighted Average ROI (2016)	Median ROI (2016)
Arts and culture	9.8	5.4	8.4
Education	5.1	5.9	5.5
Environment and Animals	6.7	9.6	4.0
Health	7.6	17.4	2.3
Human Services	10.9	9.3	5.0
International Affairs	1.0	1.0	1.0
Public Affairs	22.0	2.9	2.9
Religion	1.0	1.0	1.0
Science and Technology	5.0	5.3	3.0
Social Sciences	1.0	1.0	1.0
Other	1.0	1.0	1.0

Using this study's preferred ROI metric, the weighted average ROI (2016) and the total grant dollars awarded in Mississippi in 2016, we find a total value of social benefits from philanthropy in Mississippi to be \$882 million from \$106.6 million invested. Totals by category are shown in Table 16. The total ROI is 8.3.

Table 16. Results by Category

Major Category	Share	Sum of Grant Dollars	Weighted Average ROI (2016)	Value of Direct Benefits
Arts and culture	8%	\$8,181,631	5.4	\$44,180,810
Education	37%	\$39,561,056	5.9	\$233,410,233
Environment and Animals	3%	\$2,694,267	9.6	\$25,864,962
Health	15%	\$15,789,396	17.4	\$274,735,492
Human Services	29%	\$30,745,414	9.3	\$285,932,353
International Affairs	0%	\$94,236	1	\$94,236
Public Affairs	2%	\$2,381,221	2.9	\$6,905,539
Religion	5%	\$5,312,816	1	\$5,312,816
Science and Technology	2%	\$947,147	5.3	\$5,019,880
Social Sciences	0%	\$33,078	1	\$33,078
Other	1%	\$860,346	1	\$860,346
Total	100%	\$106,600,609	8.3	\$882,349,745

Conclusions

The most general and central conclusion of this study is that philanthropic grants in Mississippi have a large economic and social impact. A direct analysis that treats Mississippi grant recipients as any other business shows that grants support 2,330 jobs and underpin \$184.4 million in Mississippi output. Employing a more comprehensive approach to account for the unique activities of those receiving grants and the broader social impacts of those benefiting from grant activities leads to an average estimated return on investment of \$8.28 per dollar invested in philanthropic grants. This translates into \$882.3 million in total Mississippi benefits from philanthropic grants in 2016.

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Appendix

Impact Type	Employment	Labor Income	Output
Agriculture			
Direct Effect	25	\$ 200,000	\$ 1,500,000
Indirect Effect	10	\$ 200,000	\$ 900,000
Induced Effect	2	\$ 100,000	\$ 300,000
Total Effect	37	\$ 500,000	\$ 2,700,000
Arts and Culture			
Direct Effect	67	\$ 1,200,000	\$ 5,600,000
Indirect Effect	32	\$ 700,000	\$ 2,800,000
Induced Effect	11	\$ 400,000	\$ 1,300,000
Total Effect	109	\$ 2,300,000	\$ 9,700,000
Community and Economic Development			
Direct Effect	140	\$ 3,000,000	\$ 9,800,000
Indirect Effect	30	\$ 1,000,000	\$ 4,000,000
Induced Effect	22	\$ 800,000	\$ 2,800,000
Total Effect	193	4,700,000	\$ 16,600,000
Education			
Direct Effect	652	\$ 20,500,000	\$ 39,500,000
Indirect Effect	97	\$ 2,900,000	\$ 13,400,000
Induced Effect	131	\$ 4,600,000	\$ 16,400,000
Total Effect	880	\$ 28,000,000	\$ 69,400,000
Environment			
Direct Effect	16	\$ 800,000	\$ 1,200,000
Indirect Effect	4	\$ 100,000	\$ 400,000
Induced Effect	5	\$ 200,000	\$ 700,000
Total Effect	25	\$ 1,100,000	\$ 2,200,000
Health			
Direct Effect	115	\$ 6,300,000	\$ 15,800,000
Indirect Effect	41	\$ 1,400,000	\$ 5,300,000
Induced Effect	43	\$ 1,500,000	\$ 5,400,000
Total Effect	200	\$ 9,200,000	\$ 26,500,000

Impact Type	Employment	Labor Income	Output
Human Rights			
Direct Effect	1	\$ 30,000	\$ 70,000
Indirect Effect	0	\$ 10,000	\$ 20,000
Induced Effect	0	\$ 10,000	\$ 20,000
Total Effect	1	\$ 40,000	\$ 110,000
Human Services			
Direct Effect	436	\$ 9,800,000	\$ 13,200,000
Indirect Effect	26	\$ 800,000	\$ 3,400,000
Induced Effect	59	\$ 2,100,000	\$ 7,400,000
Total Effect	521	\$ 12,700,000	\$ 24,000,000
Information and Communications			
Direct Effect	2	\$ 100,000	\$ 700,000
Indirect Effect	3	\$ 100,000	\$ 300,000
Induced Effect	1	\$ 40,000	\$ 100,000
Total Effect	6	\$ 200,000	\$ 1,200,000
International Relations			
Direct Effect	1	\$ 40,000	\$ 90,000
Indirect Effect	0	\$ 10,000	\$ 30,000
Induced Effect	0	\$ 10,000	\$ 30,000
Total Effect	1	\$ 60,000	\$ 160,000
Philanthropy			
Direct Effect	48	\$ 1,700,000	\$ 7,700,000
Indirect Effect	17	\$ 500,000	\$ 1,800,000
Induced Effect	13	\$ 400,000	\$ 1,600,000
Total Effect	77	\$ 2,700,000	\$ 11,000,000
Public Affairs			
Direct Effect	13	\$ 300,000	\$ 900,000
Indirect Effect	1	\$ 50,000	\$ 200,000
Induced Effect	2	\$ 100,000	\$ 200,000
Total Effect	16	\$ 400,000	\$ 1,300,000

Impact Type	Employment	Labor Income	Output
Religion			
Direct Effect	114	\$ 4,600,000	\$ 5,300,000
Indirect Effect	16	\$ 500,000	\$ 2,100,000
Induced Effect	28	\$ 1,000,000	\$ 3,500,000
Total Effect	158	\$ 6,000,000	\$ 10,900,000
Science			
Direct Effect	5	\$ 300,000	\$ 900,000
Indirect Effect	3	\$ 100,000	\$ 400,000
Induced Effect	2	\$ 100,000	\$ 300,000
Total Effect	10	\$ 500,000	\$ 1,600,000
Social Sciences			
Direct Effect	1	\$ 20,000	\$ 30,000
Indirect Effect	-	\$ 2,000	\$ 10,000
Induced Effect	0	\$ 5,000	\$ 20,000
Total Effect	1	\$ 30,000	\$ 60,000
Sports and Recreation			
Direct Effect	60	\$ 900,000	\$ 2,600,000
Indirect Effect	7	\$ 200,000	\$ 1,000,000
Induced Effect	6	\$ 200,000	\$ 800,000
Total Effect	74	\$ 1,300,000	\$ 4,300,000
Unknown			
Direct Effect	5	\$ 200,000	\$ 900,000
Indirect Effect	2	\$ 100,000	\$ 200,000
Induced Effect	1	\$ 50,000	\$ 200,000
Total Effect	9	\$ 300,000	\$ 1,200,000
Total			
Direct Effect	1,707	\$ 50,300,000	\$ 106,600,000
Indirect Effect	292	\$ 8,800,000	\$ 36,400,000
Induced Effect	329	\$ 11,500,000	\$ 41,300,000
Total Effect	2,328	\$ 70,500,000	\$ 184,300,000

Appendix: Regional Impacts by Subject Area

