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**White Paper
A New Perspective on Public Library Value**

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Executive Summary

The value of public libraries and the contributions they make to the individuals and communities they serve seem readily apparent. Demand is strong for their products and services. They are currently visited over a billion times a year, and they circulate two and one half billion items annually. Library users are vocal and passionate regarding the importance of their local libraries as symbols of community and instruments of literacy and learning.

There is also a longstanding and powerful consensus regarding the inherent value of public libraries as instruments of education and inspiration and as places of civic integration and equal access to information. This argument, based on humanistic values and intuition, still stands. But in today's environment it is often insufficient, particularly when competition for public funds and societal expectations for concrete measurements are part of the assessment equation.

As a result, a body of research has emerged that suggests new evidence regarding the economic value of public libraries. The studies vary in scope and depth, in the types of libraries or library systems examined, and in their geographic and economic contexts. They also vary in their rigor, their methods for gathering and analyzing data, and the reporting of their findings. Yet, individually and as a group, they provide an important perspective that complements the traditional qualitative approaches familiar to library advocates. This value increases when systematic statistical analysis is used to produce a more unified body of evidence.

This White Paper summarizes the results of the IMLS funded University of South Carolina META project that was undertaken in order to explore the feasibility of developing this more robust and unified perspective. It approaches this topic with two fundamental questions: (1) whether the studies reviewed provide mounting evidence concerning the contributions that public libraries make to the economic prosperity of the communities they serve, and (2) what steps need to be taken in order to strengthen this assertion. The results of the initial analysis performed to answer these questions suggest that Americans typically receive five to six dollars for every dollar they spend on public library services. The results also lead to recommendations concerning strategies that could add strength to this assertion and provide a powerful new argument for the continuance of public library services: more detailed reporting practices, greater methodological consistency, and systematic consideration of intangible benefits.

Historic Overview

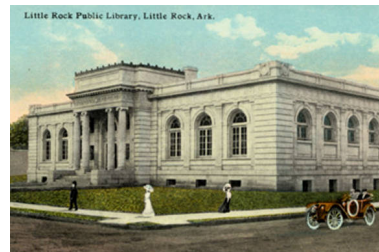
The value of public libraries has been a subject of interest for more than a century in the United States. In the mid 1800's, the newly appointed Trustees of the Boston Public Library supported their case with persuasive imagery, linking public libraries to the common school cause and Horace Mann's arguments for public education. The rich imagery found in these statements portrayed public libraries as proponents of literacy, learning, civic pride, prosperity, and the cultural achievements of classical antiquity.



As the urban landscape continued to be transformed by waves of immigrants, public libraries were seen as acculturation instruments. Progressive urban public libraries became prominent community centers and active social agents. In rural areas, public libraries were valued for the relief their wares brought to weary farm families.

Political and social values also figure in these assessments. *During periods of labor unrest, public libraries were credited with the ability to act as forces for social order and seen as proponents of unalloyed democratic spirit.*

As the numbers of public library buildings increased, the role of place became more prominent in value assessments, linking libraries more directly to the benefits of civic engagement and the development of local identity. During periods of war, somewhat conflicting images emerged. Value statements emphasized the patriotic contributions of encouraging materials and questioned the value of alien viewpoints.



A close examination of modern public library mission statements suggests that these traditional value images have endured and progressed with timely adaptations. *Today's public libraries continue to be valued as classroom extensions and important alternatives to formal education. They are seen as vehicles for self-development and pathways to social, intellectual, and moral improvement. They are equally praised for their role as agents of socialization, considered wellsprings of democratic spirit, and seen as important contributors to community formation and social stabilization. Taken together or individually, these images suggest an array of individual and community benefits that range from sustenance of the spirit to social advantage.*

Value Perspectives

The current problem is one of measurement. Although intuitive judgments have been adequate for many years to assure public approval and occasionally generous funding, in today's increasingly quantitative world, advocacy arguments are more likely to be successful when accompanied by metrics that speak to the needs of policy makers who are held accountable for balancing the requirements of competing constituencies and apportioning public funds for the overall good of their communities.



Characterizing public services in this manner is always a challenging endeavor. However, a good number of quantitative public library valuation studies have been completed by states, communities, and advocacy organizations. The majority use cost-benefit type measures that monetize the contributions that one or a group of libraries make to the communities they serve. In some cases, this approach is relatively straightforward, particularly when benefits are easily

quantifiable in standardized or recognizable monetary units. Calculations become significantly more difficult when costs are not consistently defined, values are intangible, and benefits are not confined to those directly participating in the transaction of interest or using the library.



Contingent valuation techniques have been used in public library studies to begin to address these problems. In most cases, this approach relies on survey questions that ask users and clients how much they would be willing to pay for a service or willing to accept as payment for its loss. Although this method is not without its critics, it remains an important tool for obtaining client and user viewpoints, and there are examples of its use to develop economic assessments of natural resources, health care options, and public education practices.

Economic modeling software, including the Bureau of Economic Analysis (BEA) Regional Input-Output Modeling System (RIMS II), can also be used to explore the economic impact of

public agencies. These studies typically use two types of data. The first describes the input and output structure of nearly 500 U.S. industries. The second provides a more granular picture of a region's industrial structure and trading patterns. The results of this type of analysis have been used to inform decisions related to military base realignment and closure, airport construction, and shopping center development.



Source: <http://blog.bea.gov/tag/rims-ii/>

A third approach uses administrative data of the type collected for the Public Libraries in the United States Survey. In this case, public library benefits are described using figures such as the number of books circulated over a given time frame, the number of library programs provided, and the use of library computers.



Costs are calculated using figures that indicate the amount of financial support each library receives from local, state, and federal sources.

A powerful fourth approach, meta-analysis, provides a tool for combining the results of multiple studies.



This type of statistical analysis is used in fields such as public health and medicine to determine whether a body of research is providing mounting evidence that a certain outcome or event is occurring. When the answer to this question is positive, the conclusions of the individual studies are strengthened. When the answer is negative or the results are indeterminate, the results maintain their individual value, but further research is needed to explore the reasons that their conclusions are not more widely supported

Meta-analysis also produces more robust and precise valuation point estimates, creates more useful confidence intervals, and facilitates methodological comparisons. However, to perform these calculations, certain information must be present, including means, standard deviations, and sample sizes. When these are absent, the benefits of meta-analysis are lessened and the arguments meta-analysis could support are weakened.

Project META

The libraries in the cost-benefit studies we reviewed varied significantly in terms of location, size, and governmental unit. However, it did not seem to matter whether the results were developed using a single library, library system, state, or country-wide

perspective. The inflation-adjusted economic benefits reported in the studies that focused primarily on direct benefits ranged somewhat widely between \$2.70 and \$13.50. The average benefit per dollar expenditure was \$6.59. The median was \$5.37.

Study	Date of Study	Date of Data	CBA	Inflation Adjusted CBA	Inflation Adjusted CBA (2011 Dollars)
Public Library Benefits Valuation Study - Birmingham Public Library, AL ^a	2000	1999	\$2.00	\$1.20	\$2.70
Charlotte Mecklenburg Library	2010	2008-2009	\$3.14	\$1.46	\$3.29
St. Louis Public Library, MO ^a	2000	1999	\$3.75	\$2.25	\$5.06
San Francisco Public Library ^a	2007	2005-2006	\$4.74	\$2.39	\$5.37
Baltimore County Public Library, MD ^a	2000	1999	\$4.50	\$2.70	\$6.08
King County Library System, WA ^a	2000	1999	\$7.50	\$4.50	\$10.13
Phoenix Public Library, AZ	2000	1999	\$10.00	\$6.00	\$13.50
				Mean	\$6.59
^a Mean ROI					
Consumer Price Index Source: All Urban Consumers, All Items, U.S. Department of Labor, Bureau of Labor Statistics. Available at ftp://ftp.bls.gov/pub/special.requests/cpi/cpia1.txt					

Several studies reported both direct and indirect benefits. In these cases, the inflation adjusted median was \$6.14. The

average was \$8.76 when all the studies were considered and \$6.57 when the largest and smallest values are removed.

Study	Date of Study	Date of Data	CBA	Inflation Adjusted CBA (2011 Dollars)
Eagle Valley Library District, CO	2007	2006	\$4.28	\$4.78
Mesa County Public Library District, CO	2007	2006	\$4.57	\$5.10
Rangeview Library District, CO	2007	2006	\$4.81	\$5.37
Denver Public Library, CO	2007	2006	\$4.96	\$5.53
Charlotte Mecklenburg Library, NC ^a	2010	2008-2009	\$5.32	\$5.57
Douglas County Libraries, CO	2007	2006	\$5.02	\$5.60
Montrose Library District, CO	2007	2006	\$5.33	\$5.95
Pennsylvania Public Libraries	2006	2006	\$5.50	\$6.14
Florida Public Libraries	2004	2003-2004	\$6.54	\$7.89
Florida Public Libraries ^b	2010	2008	\$8.32	\$8.69
Fort Morgan Public Library, CO	2007	2006	\$8.80	\$9.82
Cortez Public Library, Co ^c	2007	2006	\$31.07	\$34.67
^a Mean ROI ^b Mode value was used to reflect the distribution of the responses most accurately ^c The Cortez Public Library has unusually high levels of users outside of funding unit.			Mean	\$8.76

Value estimates developed using administrative data, such as circulation statistics, harmonized well with the study figures. Taken together, the libraries in these studies received investment funds that approached 11.4 billion dollars. The total 2011 direct benefit per dollar invested using the S C

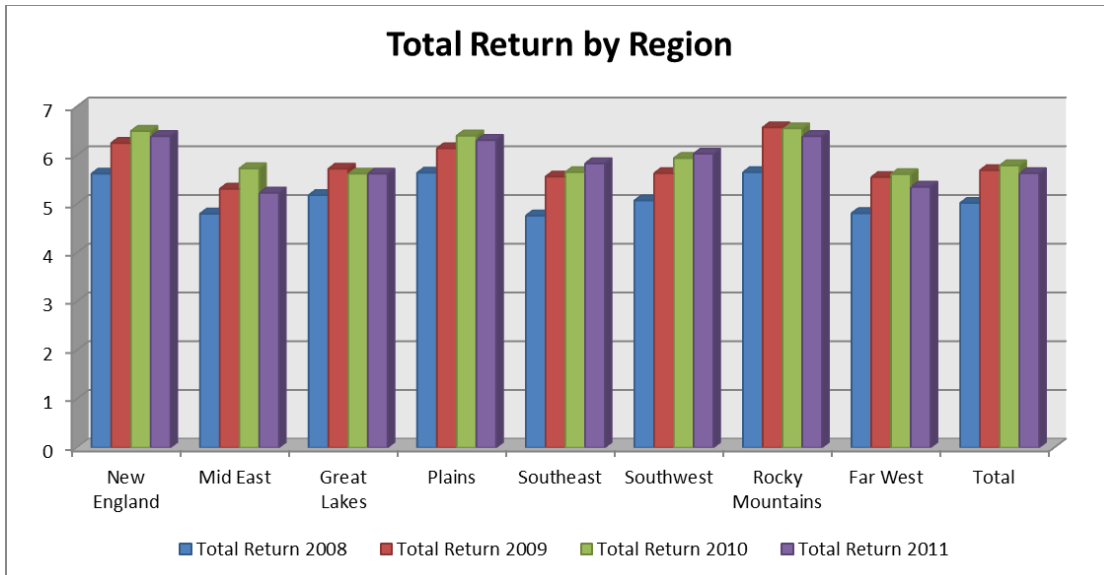
Economic Impact model was \$4.11. This figure rose to \$5.63 when indirect returns were also considered. The direct return was highest in the Rocky Mountain and Plains states. The total direct and indirect benefit was highest in the Rocky Mountain, New England, and Plains regions.

Region	Direct Return 2008	Direct Return 2009	Direct Return 2010	Direct Return 2011	Indirect Return 2008	Indirect Return 2009	Indirect Return 2010	Indirect Return 2011	Total Return 2008	Total Return 2009	Total Return 2010	Total Return 2011
New England	\$3.90	\$4.52	\$4.78	\$4.70	\$1.72	\$1.73	\$1.72	\$1.70	\$5.62	\$6.25	\$6.50	\$6.39
Mid East	\$3.20	\$3.71	\$4.00	\$3.65	\$1.60	\$1.60	\$1.73	\$1.59	\$4.80	\$5.31	\$5.73	\$5.23
Great Lakes	\$3.68	\$4.23	\$4.18	\$4.16	\$1.50	\$1.49	\$1.44	\$1.46	\$5.18	\$5.72	\$5.62	\$5.62
Plains	\$4.13	\$4.63	\$4.83	\$4.80	\$1.51	\$1.51	\$1.57	\$1.52	\$5.64	\$6.14	\$6.40	\$6.31
Southeast	\$3.36	\$4.09	\$4.20	\$4.35	\$1.40	\$1.47	\$1.45	\$1.48	\$4.76	\$5.56	\$5.65	\$5.83
Southwest	\$3.66	\$4.17	\$4.45	\$4.49	\$1.41	\$1.46	\$1.49	\$1.55	\$5.07	\$5.63	\$5.94	\$6.03
Rocky Mountains	\$4.13	\$4.99	\$5.04	\$4.91	\$1.52	\$1.58	\$1.51	\$1.48	\$5.65	\$6.57	\$6.55	\$6.39
Far West	\$3.31	\$4.01	\$4.09	\$3.90	\$1.50	\$1.54	\$1.52	\$1.45	\$4.81	\$5.55	\$5.61	\$5.35
Total	\$3.51	\$4.15	\$4.25	\$4.11	\$1.51	\$1.54	\$1.54	\$1.51	\$5.02	\$5.69	\$5.79	\$5.63

These results were also somewhat dynamic between 2008 and 2011, with changes

reflecting the recent recession.

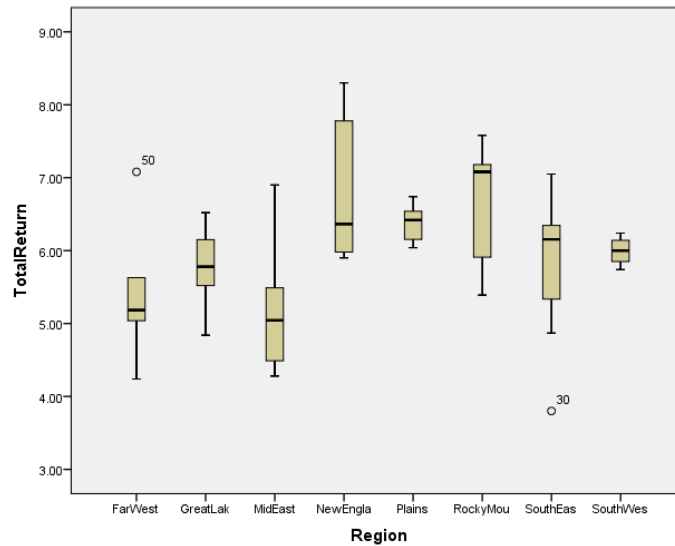
Figure 1 Total Return by Region



However, almost all the cost benefit studies lacked one or more of the elements needed for statistical meta-analysis, including 1) operational definitions of each of the variables, 2) means and standard deviations, 3) the number of responses for each variable, 4) a clear description of the relationships between the variables, including the precise level of significance associated with the effect size observed, and (5) an explicit description of the study population and the unit of analysis.

The Public Libraries in the United States State Summary file data were more promising and amenable to meta-analysis. The units of analysis in the surveys were uniform and consistent. The means and standard deviations could be calculated, and outliers could be detected. The variables were accompanied by operational definitions. The number of responses for each variable was known, and for the most part these data were well described and documented.

Figure 2: Dispersion of Regional Values Developed Using SC impact Study Algorithm



When a meta-analysis was conducted using the SC Public Library Economic Impact Study algorithm, the results indicated that the

regional benefits likely to result from a one dollar investment ranged from \$5.99 to 6.24.

Figure 3: Meta-Analysis of Total Value by Region

Model	Region	Statistics for Each Study							Mean and 95% CL					Relative Weight	
		Mean	Standard Error	Variance	Low Limit	Upper Limit	Z-Value	pValue	-1.00	-0.50	0.00	0.50	1.00		
	Far West	5.393	0.385	0.148	4.639	6.148	14.009	0.000						2.73	
	Grt Lakes	5.762	0.286	0.082	5.202	6.322	20.158	0.000						4.95	
	Mid East	5.208	0.382	0.146	4.460	5.957	13.639	0.000						2.78	
	NewEng	6.782	0.413	0.170	5.973	7.591	16.430	0.000						2.38	
	Plain	6.370	0.100	0.010	6.174	6.566	63.807	0.000						40.61	█
	Rocky	6.628	0.416	0.173	5.812	7.444	15.927	0.000						2.34	
	S East	5.809	0.252	0.064	5.315	6.304	23.032	0.000						6.36	
	S West	5.995	0.103	0.011	5.792	8.198	57.979	0.000						37.86	█
Fixed		6.119	0.064	0.004	5.994	6.244	96.185	0.000							

Major Findings

- *The economic value of public libraries continues to be of strong interest to those responsible for public library services and the advocates who work diligently to preserve the quality and availability of these services. This need is particularly important in instances where public officials are routinely faced with decisions concerning the use of public funds and the need to maximize the benefit of those funds.*
- *The literature review and analysis performed for project META suggest a pattern of positive and mounting evidence concerning the contributions that public libraries make to the prosperity of their communities. Based on this work, it is reasonable to assert that Americans typically receive benefits in the range of \$5 to \$6 for every \$1 they spend on public library services.*
- *It is also reasonable to assert that these figure may undervalue their target and that more accurate and persuasive figures could be developed through 1) closer attention to the intangible benefits, such as improvements in childhood literacy and community engagement, which have traditionally figured in advocacy arguments, 2) the development of improved reporting standards, and 3) greater methodological consistency.*
- *These critical improvements in reporting and analysis are important for several reasons. Based on recent experiences, it possible to say that we have moved to a point where single arguments are no longer persuasive. Administrators and library advocates arriving at meetings holding a single card, whether economic or traditional, are unlikely to walk away winners. Those who draw from a deck of complementary measures are more likely to be successful, and those who can fashion a shrewd hand that corresponds to the needs and interests of their funding bodies and community leaders are likely to take the prize.*
- *With this in mind, we are not suggesting that the preliminary results concerning the economic value of public libraries described in this paper are adequate to make the case for public libraries. We do suggest that they can be influential when added to the powerful narratives and arguments that have sustained U.S. public libraries for nearly one and one-half centuries.*

Recommendations

The results of the META Project suggest that the field of library valuation has a promising future that can be strengthened through additional research and expected to provide meaningful information that will be useful to library professionals, advocates, and decision-makers. To realize this promise and to build upon the findings of this report, the following steps are recommended:

- *The first, **the production of a new group of studies** that are suitable for meta-analysis, requires an ongoing research agenda that results in a new research corpus that meets more rigorous reporting standards and statistical requirements, including variables that are adequately defined and measured, accurate reports of the sample sizes that figure in the analyses, the magnitude of test statistics observed, and other relevant information.*
- *The second, **adoption of a more collaborate approach**, has much to offer. The SC economic impact model used in this report was chosen as a matter of convenience and for the purpose of example, but is not necessarily the best or right one for these types of calculations. A more versatile or encompassing group of calculations could be developed through professional consensus, and a cooperative approach could result in an interview protocol that would produce more comparable data and results that would be more generalizable.*
- *The third, and perhaps most fruitful step, **a more careful look at the intangible outcomes and benefits**, would result in more accurate value assessments. These factors are typically not taken into account in cost benefit estimates because they are considered more difficult to measure. However, they tend to resonate in discussions of local policy objectives and have been successfully explored in other academic disciplines. Further attention to these studies and the development of interdisciplinary partnerships consequently appear to have much to offer.*